WA.TAG

WESTERN AUSTRALIAN THERAPEUTIC ADVISORY GROUP

ANNUAL REPORT 2016/2017

Incorporating the annual reports of the:

- Western Australian Therapeutics Advisory Group
- Western Australian Medication Safety Group
- Western Australian Psychotropic Drugs Committee
- Western Australian Committee for Antimicrobials
- Western Australian Drug Evaluation Panel

WA Therapeutics Advisory Group
Office of the Chief Medical Officer
WA Department of Health
189 Royal Street
EAST PERTH WA 6004
www.watag.org.au

Contents

Chief Medical Officer's Foreword

I am delighted to share with you the Western Australian Therapeutic Advisory Group 2016/2017 Annual Report.

The WA Therapeutic Advisory Group (WATAG) and subsequently the WA Drug Evaluation Panel, the WA Medication Safety Committee, the WA Psychotropic Drug Committee and the WA Committee for Antimicrobials have assisted the Department of Health with medicines and therapeutics related issues for over 20 years.

Following the restructure and decentralisation of the WA health system the committees continue to provide independent expert advice and important forums for discussion and exchange of knowledge and information between Health Service Providers (HSPs) and the Department of Health.

In addition, advice from the committees assists in ensuring a coordinated and informed response by the Department on behalf of HSPs to national bodies and initiatives.

Expert clinical leadership is crucial to ensuring safe and high quality care is provided to all WA patients. The new statewide medicines formulary and the impetus for electronic medicines management systems coupled with ongoing policy development, research, strong local governance systems and audit work are central to achieving this aim.

I would like to acknowledge the contribution of hospital based staff, primary care practitioners and consumer members of the WATAG committees, whose substantial works have contributed to the achievements highlighted in this report.

I also thank the Chairs of the respective committees for their vision and leadership in driving this work. Finally, I would like to thank project officers from the Office of the Chief Medical Officer for their continued commitment and contribution to this work.

Prof Gary Geelhoed

CHIEF MEDICAL OFFICER

ASSISTANT DIRECTOR GENERAL – CLINICAL SERVICES AND RESEARCH

August 2017

WATAG Chair's Foreword

On behalf of the WATAG members, subcommittee members and secretariat I am delighted to commend WATAG's 2016/2017 annual report to you.

Following the restructure of the WA health system with the establishment of HSP Boards as statutory authorities and the Department of Health as System Manager, the function of advisory committees in providing independent, expert guidance and clinical leadership has never been more important.

A major benefit of the continued engagement with advisory committees and expert groups is supporting partnerships and collaboration between the Department and HSPs, to enable service delivery and achievement of WA health system objectives of delivering high quality, safe and sustainable health services.

This year has seen the culmination of substantial works to deliver the new Statewide Medicines Formulary and its electronic platform 'Formulary One'. The formulary which is entering its initial 3 months 'trial period' launch encompasses the quality, equitable and cost-effective use of medicines in Western Australia to optimise the value obtained from them.

I am extremely grateful to the Chairs and committee members who in service of their patients and colleagues volunteer their expert opinion and dedication for the advancement of medicines use in the WA health system. I would also like to acknowledge the committee secretariats who have once again achieved substantial outcomes despite their small number.

In an evolving and changing environment, the WATAG committees continue to provide stable governance and assurance of system-wide safe and high quality medicines use in Western Australia.

Dr Christopher Etherton-Beer
CHAIR, WATAG

August 2017

The WATAG Committees

The Western Australian Therapeutic Advisory Group has operated for over 20 years in the WA public health system. WATAG is sponsored by the Clinical Excellence Division as a multidisciplinary clinical advisory group on matters related to medicines and therapeutics in WA Health. WATAG is guided by the principles of:

- Equity: Equity of access to medicines across health services
- Safety: Medicines are used with care to avoid or reduce side-effects or harm
- Quality: The appropriate medicine is used each time.

Four specialty medication advisory committees operate under the umbrella of WATAG:

- WA Medication Safety Group (WAMSG)
- WA Psychotropic Drugs Committee (WAPDC)
- WA Committee for Antimicrobials (WACA)
- WA Drug Evaluation Panel (WADEP)

Other subcommittees and working groups (for example the formulary Expert Advisory Groups, symposium organising committees and the WAMSG Analgesia Management Working Group, Continuum of Care Working Group and Patient Literacy Group) are established in response to need.

WATAG Staff Changes

Mr Cale Padgett was appointed as Project Coordinator in April 2017 for WADEP, covering maternity leave for Ms Rebecca Godfrey.

Committee Annual Reports

WATAG Annual Report

WATAG Membership

The WATAG met on four occasions during 2016/2017. Dr PK Loh who has been a longstanding member of WATAG and is a previous past chairman, resigned from the Group in November 2016.
Dr Terry Bayliss another longstanding member of WATAG resigned from the Group in February 2017.
The Group welcomed new members Ms Stephanie Dowden, an acute care nurse practitioner and Dr Pat Coleman who is a consultant and clinical lead (anaesthesia) with the WA Country Health Service. Mr Peter Smart deputy head of the pharmacy department at Sir Charles Gairdner Hospital was appointed to the Group in his capacity as the newly elected Chair of the Drug Evaluation Panel.
Dr Pat Coleman left the Group in May 2017 citing work commitments as the reason for his resignation.

WATAG Projects

Critical Medicines List Review

Each year WATAG oversees the review of the Critical Medicines List for WA public hospitals.
The list, which includes antidotes and antivenoms, administration guidelines and dantrolene stockholdings held in sites across WA, is reviewed by Dr Jessamine Soderstrom, emergency physician at Royal Perth Hospital and members of the WA Toxicology Service and is published on the WATAG website.

Complementary and Alternative Medicines Consumer Information Leaflet

Complementary and alternative medicines (CAM) are popular, self-prescribed (or CAM practitioner recommended) treatment options used by patients. Many Australians who use complementary medicine do not disclose this information to their treating clinicians.
There is substantial disparity between consumer beliefs around CAM, and the evidence supporting their safety and effectiveness. Many CAM are promoted as being ‘natural’ or ‘herbs’ which may be interpreted by some consumers to mean they are ‘safe’.
Benefits purported for many CAM are far in excess of the available scientific evidence and information about adverse effects and potential for interaction with conventional medicines is often lacking.
There is also the significant risk that consumers who take CAM may avoid or abandon conventional medicines, diminishing their chances of recovery or cure.
Consumers may also not be aware that most therapies with ‘proven’ substantial clinical benefits are incorporated in healthcare systems as ‘evidence-based’ conventional medicines.

Effective partnerships with consumers and carers exist when they are treated with dignity and respect, and when information is shared.
A 'Complementary and Alternative Medicines' patient information leaflet was thus developed and endorsed by WATAG to accompany the *WATAG CAM Guidelines* produced in 2016.

Guidelines for the Pharmacological treatment of Neuropathic Pain

Neuropathic pain is often refractory or inadequately managed by common analgesics; in particular paracetamol and NSAIDs are usually ineffective. These updated guidelines provide clinicians with a choice of therapeutic agents for a range of conditions that can cause neuropathic pain.
WATAG acknowledges the contribution of Professor Stephan Schug and Associate Clinical Professor Roger Goucke in developing these guidelines.

Medicines shortages: Best Practice Standards for Managing Medicines Shortages in WA public hospitals

Medicines shortages are occurring in Australia and globally for a variety of reasons posing a significant ongoing challenge for health service providers. Concerns have been raised by a number of WA health professionals about specific problems relating to medicines shortages that have arisen in the WA public health system. A working party formed by the Therapeutic Goods Administration is currently looking at this problem from a national perspective. The Chief Pharmacist, Neil Keen and Lesley Gregory represent Western Australian public hospitals on that working party. The Australian Health Ministers Advisory Committee (AHMAC) has also been involved in the consultation for the TGA review.

The WATAG 'Best Practice Standards for Managing Medicines in WA public hospitals' were developed to provide some guidance on how medicines shortages should be managed in Western Australia. The Standards were submitted to the WA Chief Pharmacists Forum and work is currently underway to 'operationalise' specific aspects of the Standards.

Clozapine report

The Clozapine report was commissioned by the East Metropolitan Health Service following clinical incidents involving patients treated with clozapine that occurred in 2016. Although none of the incidents related directly to clozapine, the report noted the poor physical health status of some mental health patients, and the potential to improve their care.

An 'Implementation Steering Committee' was formed to investigate strategies to implement the recommendations outlined in the report.

Professor Christopher Etherton-Beer was elected to the Steering Committee on behalf of WATAG.

Ms Marani Hutton was appointed as a 'project officer' to undertake a project to develop a number of resources to aid and assist clinicians and other health professionals in the management of patients taking clozapine.

The WA Psychotropic Drug Committee (WAPDC) was also involved in working with the Steering Committee and the project officer in the development of the resources.

The developed resources include:

- Clozapine monitoring form
- Guidelines for completing the clozapine monitoring form
- Side effects associated with clozapine therapy
- Clinician prompt checklist to assess clozapine side effects
- Guidelines for the safe and quality use of clozapine therapy in the WA health system
- An eLearning module including PowerPoint presentation and self-assessment 'quiz'

A clozapine resource steering committee chaired by Dr Duy Tran consultant psychiatrist with Kimberley Mental Health and Drug Service, has been formed to oversee initial implementation of the resources at a number of metropolitan and regional mental health facilities across Western Australia.

Medicines utilisation project

Work done previously by WATAG investigating variation in health care recognised that this is a patient quality, safety and cost issue. Unwarranted variation may indicate that scarce health resources are not being used efficiently. Medicines are the most common therapeutic intervention in healthcare, thus pharmaceuticals are an important component of measured variation in the quality and costs of services within and between hospitals. To address the need for a coordinated approach to evaluate medicines use in WA Health in December 2015 the State Health Executive Forum (SHEF) endorsed the Western Australian Therapeutic Advisory Group (WATAG) discussion document 'Variation in Medicines Utilisation'. The document proposed scoping projects that utilise existing data sets to measure variation in utilisation of pharmaceuticals.

The scoping work was undertaken to identify the existing WA Health data sets relevant to medicines utilisation, understand the potential for analysis of existing datasets to evaluate medicines utilisation in WA Health and build consensus among stakeholders about how to progress a coordinated approach to analysing data sets to measure variation in utilisation of pharmaceuticals in WA Health

Following this scoping work a project collaboratively engaging stakeholders to utilise existing iPharmacy and other WA Health data sets in partnership with the Chief Pharmacists Forum (CPF) was proposed. The project deliverables include regular analysis of the utilisation of pharmaceuticals in WA Health and regular dissemination of agreed WA Health Medicines Utilisation Reports.

A 'Medicines utilisation project briefing document' was presented to the CPF at their December 2016 meeting. The project was endorsed by the CPF and investigations are currently being undertaken to develop a detailed project proposal. It is recognised that comprehensive work will be required to achieve the business changes required to facilitate meaningful comparison of data between sites. It is hoped that work that is currently being done by North Metro Health Services (NMHS), will be adapted to deliver a 'dashboard' that is able to capture state-wide medicines utilisation data.

WATAG Endorsed Guidance and Consultations

During the 2016/2017, its twentieth year of operation, the WATAG reviewed and endorsed the following publications:

- WA Antibiotic Surgical Prophylaxis Guidelines
  These popular ready-reference guidelines which were previously developed in 2007 were updated by the WACA in accordance with the Therapeutic Guideline 'Antibiotic' version 14 with adjustments to reflect local sensitivity patterns: WACA 2016
- Clozapine guidelines
  The WAPDC reviewed these guidelines and provided specific feedback in their development to Ms Marani Hutton, project coordinator: WAPDC 2017
- Cannabis-based products for medicinal use: WADEP 2016
- Living with a NOAC patient information booklet review: WAMSG 2016.
- Hepatitis A and B vaccination and prophylaxis against Hepatitis B reactivation in non-HIV immunosuppressed adults: Guideline WACA 2016
- Safety alert: high concentration insulin: WAMSG 2017
- Agitation and arousal 'prn' medication chart: WAPDC 2016
- Recommendations for prescribing analgesia on discharge following surgery or acute injury: WAMSG 2017
- Pain relief medications following surgery and injury. Patient discharge information: WAMSG 2017
- Guidelines for the Pharmacological treatment of Neuropathic Pain: WATAG 2017
- Vaccination and prophylaxis guidelines for Asplenia: Adults: WACA 2016
- Vaccination and prophylaxis guidelines for Asplenia: Children: WACA 2016
- Antidepressant Therapy in Children and Adolescents 'Position Statement': WAPDC 2016
- Ketamine Advisory Note: WAPDC 2017
- Clinician's quick guide to cannabis-based products in WA hospitals: WADEP 2016
- WATAG Guideline for the pharmaceutical management of osteoporosis: WADEP 2017

Communication

WATAG website

The WATAG website continues to serve as an effective repository for information about medicines and the WATAG committees. Information that is posted on the website includes Advisory Notes, the WA Critical Medicines List, Clinical Guidelines, Operational Circulars, Formulary Advisory Notes and the WA High-Cost Drug Formulary. The new WATAG website can be found at http://ww2.health.wa.gov.au/Articles/U_Z/Western-Australian-Therapeutics-Advisory-Group-WATAG

WATAG eNewsletter

The WATAG eNewsletter is a weekly communication that includes excerpts from the NSW TAG mailing and provides succinct information related to therapeutic issues to relevant sites across WA Health.

WATAG National Collaborations

The Council of Australian Therapeutic Advisory Groups (CATAG)

CATAG continues to have an active role in communication and information sharing between jurisdictions, and two face-to-face meetings and a teleconference with representation from all jurisdictions occurred during the 2016/17 reporting period.

CATAG has made significant progress in meeting its strategic goals and the deliverables of its NPS Services Agreement 2016/17:

- Survey and report submission to DUSC on antifungals for systemic use in Australian hospitals
- Survey and report submission to PBS post market review on pulmonary arterial hypertension (PAH)
- Survey and report submission to the Expert reference group for the post-market review of medicines for chronic obstructive pulmonary disease (COPD)
- Development of a cost recovery framework for Medicines Access Programs
- Publication of overseeing biosimilar use: Guiding Principles for the governance of biological and biosimilars medicines in Australian hospitals. Version 2 September 2016
- Commonwealth engagement regarding Health Technology Assessments, biosimilars and hep C
- Joint submission to the TGA review of the changes to accessing unapproved therapeutic goods through the Authorised Prescriber (AP) and Special Access Scheme (SAS).
- Contribution to the Biosimilar 2020 forum report

By working with our members and stakeholders, particularly the Commonwealth Department of Health, CATAG has continued to progress work to identify and address issues concerning medicines use in hospitals and the wider community across jurisdictions.

CATAG governance

Professor Christopher Etherton-Beer (Western Australia) was elected as Chairman of CATAG for a 2-year period. Professor Etherton-Beer has been instrumental in CATAG progressing work in key areas of importance such as the sharing of health technology assessments and improving the management of medicine shortages.

Submissions to PBS post market reviews

The purpose of this aspect of CATAG work is to provide information about national hospital utilisation of specific medicines to the review process. This type of utilisation information is not readily available to reviewers and enables the PBS post market review panel to have a more complete picture of medicines utilisation within Australia, and understand where the drivers for utilisation exist

Pulmonary arterial hypertension (PAH)

CATAG sought early engagement with the Pulmonary Hypertension Society of Australia and New Zealand PHSANZ to potentially make a joint submission. CATAG had ongoing discussions with PHSANZ to understand the issues surrounding PAH treatment and to enable access to their national database.

CATAG made a submission to the PBS post –market review of pulmonary arterial hypertension medicines enabling the acute care perspective to be considered by the review panel. CATAG surveyed public hospitals through its member networks regarding the following items:

- Formulary listings for each PAH medicine and where these listings were as per the PBS, listing, expanded on the PBS or not formulary listed.
- Formulary listings which allowed combination therapy, the utilisation of more than one PAH medicine
- Individual patient requests for PAH medicines and decisions to approve or not approve these requests
- Estimated cost of IPU PAH medicines
- PAH Medicine Access Programs
- Clinician concerns regarding PAH medicine utilisation

Feedback from CATAG members demonstrated there is significant inequity of access to PAH medicines and the current PBS restrictions do not reflect current practice as they do not allow for sequential or initial combination therapy in any PAH WHO functional class.

Publication:

CATAG submission: Public consultation on the Post-market Review Pulmonary Arterial Hypertension (PAH) Medicines – April 2017

Biological and biosimilars

The CATAG Biosimilar Guiding Principles were published in May 2015. The Principles serve as a framework for safe, effective and cost-effective biosimilar utilisation within the acute care sector. The Guiding Principles have been implemented into jurisdictional, district and hospital policy according to local circumstances and practices.

There has been considerable interest from stakeholders. Communication has been received from the Department of Health, Medicines Australia and ACSQHC.

The TGA Regulation of Biosimilars was updated in December 2015; the previous TGA version is referenced throughout the CATAG Guiding Principles. Given the considerable changes to the TGA's stance particularly with regard to switching at the dispensing level, CATAG has reviewed and updated the Guiding Principles. An options paper was drafted and discussed at the March 2017 CATAG meeting. Members agreed to make changes to Guiding Principle 4 (guidance regarding substitution of biologic medicines at time of dispensing) and insert an additional Guiding Principle which highlights the importance of communicating details of the specific biologic medicine to all relevant health care providers across all care settings.

CATAG has continued to be involved in national policy discussions relating to biosimilar utilisation and has provided feedback on the Commonwealth Implementation Framework of the Biosimilar Awareness Initiative. CATAG continues to engage with the Commonwealth in this emerging and important area.
Publication:
Council of Australian Therapeutic Advisory Groups. Overseeing biosimilars use. Guiding Principles for the governance of biological and biosimilars medicines in Australian hospitals. CATAG September 2016.

Invited Submissions

Pharmaceutical Evaluation Branch - Eculizumab

The Commonwealth requested a CATAG response to proposed changes to the PBS listing for the treatment of eculizumab (Soliris) for atypical haemolytic uraemic syndrome (aHUS). CATAG provided a considered response to the request which included comment on the challenges of aHUS diagnosis and eculizumab treatment, a response to the PBAC considerations, feedback in relation to the potential removal of PBS subsidy of public inpatients and suggestions for future use.

Drug Utilization Sub-Committee (DUSC)

Antifungals

DUSC approached CATAG to provide insight into the hospital based prescription and utilisation of intravenous (IV) fluconazole and the influence hospital-based prescription of IV fluconazole may have on PBS utilisation of IV fluconazole. CATAG requested jurisdictions to provide information regarding any changes to local guidelines, which are used in clinical practice, which could influence IV fluconazole prescribing. CATAG determined the most appropriate pathway to obtain the requested information was to survey hospitals and health networks. A survey was developed and disseminated; responses were received from all jurisdictions. In addition CATAG pursued a number of other avenues such as assessing changes in national therapeutic guidelines, changes to aseptic manufacturing and requesting information from third parties. CATAG was able to determine there was no correlation between the dramatic increase seen in PBS utilisation of IV fluconazole and the data CATAG reviewed. CATAG could not directly identify the reason for an increase in the PBS utilisation of IV 200mg fluconazole.
Publication: Council of Australian Therapeutic Advisory Groups Submission. Drug Utilisation Sub-Committee (DUSC), Antifungals for systemic use, September 2016.

Chronic Obstructive Pulmonary Disease (COPD)

DUSC approached CATAG to provide insight into the public hospital formulary listings of COPD combination inhalers, COPD medicines provided to patients on discharge, the quantity of tiotropium provided on discharge, concerns regarding COPD devices, the process for listing a COPD inhaler on hospital formularies and the availability of placebo devices. CATAG determined the most appropriate pathway to obtain the information was via an email discussion using its members' networks. All states and territories contributed data and information to the report. The report highlighted the proliferation of COPD medicines and devices available in the Australian market have increased the complexity of COPD management for clinicians and patients. The proliferation of devices concerns clinicians with regard to

clinician and patient knowledge in being able to educate and utilise devices correctly. A concerted effort to provide education to staff is required.
Publication: Council of Australian Therapeutic Advisory Groups Submission. Expert Reference Group request for the Post-Market Review of Medicines for Chronic Obstructive Pulmonary Disease (COPD), April 2017

WAMSG Annual Report 2016/2017

WAMSG Membership

WAMSG met on six occasions during 2016/2017, during which Mr Neil Keen was the Chair.

WAMSG membership and attendance for 2016/2017 are shown in Appendix 2. There were a number of requests for membership during the year from HSPs and consumers, which were not pursued because of the uncertainty pending the implications from transitioning roles and responsibilities between HSPs and the System Manager, under the *Health Services Act 2016, (*the *Act),* which potentially impacts WAMSG's role and responsibilities. WAMSG is currently reviewing their Terms of Reference, as the roles and responsibilities become clearer between the new entities. The review is expected to be completed towards the end of 2017.

2016 WAMSG Symposium

On 22nd September 2016 WAMSG hosted its symposium 'Designing out errors: working towards system solutions'. The key focus was on system-wide technology and system approaches in addressing medication safety.

This was the first symposium with lightning and poster presentations, which were well received. The posters included information on medication safety in relation to reflective learning, empowerment, promoting a culture of personal performance, and providing innovative, interdisciplinary, site-specific education.

A question and answer panel session was developed to include a senior representative from medicine, nursing, pharmacy and a consumer. Hypothetical questions were presented to the panel and questions invited from the audience, relevant to medication safety scenarios being discussed.

A total of 162 people registered to attend the symposium. Of those registered 14 were medical professionals (e.g. medical registrars, medical researchers, consultant physicians, medical administrators, psychiatrists, paediatricians); 47 pharmacists or pharmacy technicians; 75 in the nursing or midwifery profession (e.g. staff development nurses, registered nurses, midwives, nurse practitioners, practice nurses) and 4 identified themselves as consumers, carers or in related advocacy roles. The remainder included various roles in quality and safety improvement, government inter-relationships, project coordination, clinical governance, practice improvement, licencing and clinical procurement.

The registrations indicated there was interest from a wide variety of public and private health services and the not-for-profit sector. These included private hospitals and care centres such as, St John of God Health Care (Subiaco, Mt Lawley and Murdoch), aged care homes, independent medical centres, nursing

agencies and various non-clinical community groups. Most Western Australian Country Health Service (WACHS) regions registered for the event via the videoconferencing. Staff at smaller WACHS sites were observed to attend sessions when able and rotating between sessions with other staff members.

The evaluations were overwhelmingly positive, with the quality and applicability of presentations receiving notable commendation. The feedback received highlighted the popularity of the sessions addressing the human factors within the complex hospital system and how it can impact medication reporting. In this context key features explored included: the culture of medical profession on junior doctor's reporting practices, propensity for the health-system and health professionals to focus on individual blame, and improving awareness of the clinical incidence reporting software used by the WA Department of Health (Datix-CIMs).
Symposium presentations can be found at http://ww2.health.wa.gov.au/Articles/U_Z/Western-Australian-Therapeutics-Advisory-Group-WATAG

WAMSG Projects

Working groups

During 2016/2017 WAMSG had three working groups addressing differing projects. The Analgesia Management Working Group, Continuum of Care Working Group and Safe Handling of Medications Working Group.

Analgesia Management Working Group

WAMSG identified analgesia management post-surgery or acute injury (specifically managing and ceasing opioids), in the transition period from hospital to home as a priority safety issue for patients and the community. Guidance for the use of analgesia post-surgery at discharge was limited for consumers and health professionals.

The deliverables included a booklet for patients being discharged from hospital following surgery or acute injury and another for health practitioners discharging patients from hospital following surgery or acute injury. Extensive consultation and refinement of the documents has occurred and the documents are being formatted for publication.

Continuum of Care (COC) Working Group

Many COC issues evolve from a disparity between Commonwealth and State funded entities. As an example, Hospital Initiated Home Medicines Reviews (HIMR) are not reimbursed under the Medicare Benefits Schedule (MBS) in circumstances whereby they are most needed, by vulnerable people. Members of the working group met with Western Australian Primary Health Alliance (WAPHA) to foster communication and relationship building in relation to collaboration on continuum of care issues, such as in-reach, out-reach, MedsCheck, Health Pathways, Aboriginal and Torres Strait Islander (ATSI) access to medicines and Transfer of Care Envelopes (TCE) availability and use inbetween discharge and residential-care. WAPHA are identifying if these issues can be addressed under their funded programs.

How to manage your medicines after going home from hospital: The working group's goal was to address communication and/or information gaps when a patient is discharged from an acute public hospital setting to a community setting, and conversely the provision of information or better communication when a patient is coming from a community setting to an acute hospital setting. They published an information sheet, poster and pamphlet on 'How to manage your medicines after going home from hospital', which addressed the gap in guidance for patients to review their medicines, when discharged from an acute health service. Queensland Health praised the publication and requested to be able to rebrand and use it for their health service. Feedback from their health service and HSPs about the resource has been positive. The information has been distributed and made available on the WATAG website.

Aboriginal and Torres Strait Islander (ATSI) patient health journey: The working group identified there were gaps between Commonwealth and State, when the patient is transitioning from acute hospital care to the community. Under the Integrated Team Care (ITC) program, only the patient's usual general practitioner is eligible to provide the client fee-free prescription or dose administration aids. It therefore becomes problematic when ATSI patients who live in remote regions, are discharged from metropolitan hospitals with the directive to remain within the metropolitan area where they have no general practitioner. Most Perth metropolitan hospitals provide discharge medications free of charge for just the first few days to ATSI patients.

Many hospitals have undertaken 'work-around' options to providing prescriptions to ATSI patients upon discharge. They include the pilot project at Royal Perth Hospital (RPH) whereby funding was obtained to provide prescriptions to a nearby pharmacist to dispense the medicines in Webster-paks. Aboriginal Directors for Aboriginal Heath Strategy in Area Health Services; Aboriginal Health Council of WA, WACHS, WA Department of Health; WAPHA were included in discussions on progressing a solution. A submission highlighting the issues was submitted by WA's DoH Aboriginal Health Division to the National Aboriginal and Torres Strait Islander Health Standing Committee's (NATSIHSC) annual meeting on Closing-the-Gap (CtG), in late 2016. It was not a preferred topic at this forum and since this date the Commonwealth were to commence reviewing the CtG prescriptions. WAMSG's direction is pending the outcome of this review.

Safe Handling of Medications Working Group

Monoclonal Antibodies (MABs) safety concerns were being expressed from staff due to inconsistencies in approach to reconstitution of MABs. Some MABs are being reconstituted on the wards and others in the pharmacy department. WAMSG explored the most efficient method to communicate safety information to HSPs in this rapidly evolving area. During the process it was identified there were other immunosuppressant medication and inadequate information available on safe handling for the staff administrating the medications and dealing with the patient's daily care post administration.

The evolution of new medications and lack of clarity in manufacturer's guidelines was the catalyst for WAMSG to form a working group to develop guidelines for staff handling these medicines. The

multidisciplinary working group aims to develop guidelines for the medicines requiring special handling (excluding chemotherapy agents) for staff administering the medications in a public hospital environment.

Guiding Principles for Developing Medication Charts

WAMSG is increasingly approached to provide guidance or endorsement of medication charts produced by health services. Noticeably, there is an absence of accompanying information on the governance process for the development, implementation or evaluation of medication charts.

WAMSG continues to advise against development of medication charts, preferring adoption of the Australian Commission on Safety and Quality in HealthCare's (ACSQHC) National Inpatient Medication Charts (NIMC). WAMSG recognises medication charts will continue to be developed and, on occasion these may be considered appropriate if there is significant clinical risk. The 'Guiding principles for developing medication charts' document completed in 2016 is being reviewed in line with the introduction of the *Act* and completion is pending clarity over the roles and responsibilities being finalised between the System Manager and HSPs.

During 2016/17 advice was sought from WAMSG by HSPs on how and if, to standardise charts state-wide, such as post-operative nausea and vomiting charts (PONV). In an attempt to standardise practice a survey of HSPs was undertaken by a WAMSG member to ascertain if other HSPs would like to work together to standardise the PONV chart. The results indicated some HSPs thought their charts were vastly different from others and standardisation was not possible; there was no consensus on the medications to be used; differences in PONV guidelines between sites necessitated differences in charts and not all HSPs used PONV charts.

WAMSG Consumer Information Booklets

Living with Non-Vitamin K Antagonist Oral Anticoagulant (NOACS)

WAMSG revised and updated the 'Living with a Non-Vitamin K Antagonist Oral Anticoagulant (NOAC): Information for patients' booklet. There were a number of changes required in the document. Notably, the emergence of nurse practitioners able to prescribe these medications required updating the terminology used in the document. A total of 6,000 booklets were printed and distributed to country and metropolitan areas, with electronic access provided via the WATAG website.

Medication Safety Posters

WAMSG worked with the WA Medication Safety Network (WAMSN) to develop five posters for Western Australia's Medication Safety Week 19th -23rd September 2016. They included the titles:

- **'Do you know what you're taking?':** advising patients to ask their pharmacist or clinician about the medicines they are taking before leaving hospital.

- **Reporting medication-related clinical incidents:** advising clinicians on how to use the Datix-CIMS program to report medication related clinical incidents.

- **What to do when an adverse drug reaction occurs:** the poster was developed to accompany the pamphlet titled 'Adverse drug reaction information' pamphlet for consumers developed by the Office of Safety and Quality, in collaboration with WAMSN and WAMSG. The poster advised patients to report any adverse drug reaction to their pharmacist or clinician while in hospital and have it recorded in the patient pamphlet for future reference.

- **Bring your medicines with you to hospital:** encouraging patients to bring their medicines to hospital, so clinicians and pharmacists are made aware of all medications being taken by the patient.

- **How to manage your medicines after going home from hospital? :** the poster was developed to accompany a pamphlet titled 'How to manage your medicines after going home from hospital', which addressed how medications were recorded upon discharge and how patients could obtain assistance with their medicines when they have gone home.

Safety alerts and advisory notes

- **Safety alert on high concentration insulin:** two newer formulations of insulin (Toujeo® and Humulin R-500 KwikPen®) were made available on the market. WAMSG developed an alert for HSPs to assist in the safe use and storage of the formulations, which will be placed on the new SMF.
- **Hydromorphone**: A new high concentration hydromophone is to be released onto the market. WAMSG developed an alert to warn HSPs of the new formulation, which will also be accessible via the new SMF. WAMSG provided a request to WADEP not list the high concentration formulation on the formulary, because of concern over the high-risk of overdoses.

Key medication safety issues arising in 2016/17

During the reporting period key issues addressed by WAMSG included:

Volumetric infusion pump procurement process: In 2015/16 WAMSG advocated for the inclusion of key clinical personnel in the procurement process for the new volumetric infusion pumps. They provided a briefing note to the procurement working group to support the inclusion of dose error reduction software (DERS) capacity in the new pumps which can assist in reducing the incidence of medication errors. WAMSG has continued to correspond with the working group when requested and the briefing note provided has been included in the procurement business case for the 'Supply of infusion pumps with a dose error reduction system (DERS) capability to Western Australian health providers'.

New Public-Private Hospital Medication Charts: To enable public and private hospitals to use the same medication chart, the Commonwealth government introduced a 'Public-Private Hospital Medication Chart' (PPHMC). The chart can be used for prescribing, dispensing and claiming Pharmaceutical Benefit Scheme (PBS) items without the requirement of a separate prescription. WA's approved NIMC charts currently have the Warfarin information removed and replaced with the venous thromboembolism (VTE) assessment tool. WAMSG is working with WAMSN and the Australian Commission on Safety and Quality in HealthCare (ACSQHC) on these changes with the new PPHMCs. The pending update in iPharmacy and roll-out of the Notifications and Clinical Summaries (NaCS) program has further delayed the roll-out of the charts. Unlike 2005 when funding was available to provide promotion and education of the chart, no funding is available for this version. WAMSG is currently working towards strategies to communicate and implement the chart in WA public hospitals.

Midazolam labelling: A WAMSG member brought to WAMSG's attention midazolam 145mg/3mL dosages were being covered by a tamper-proof label occluding the dosage. A letter was written to the manufacturer to amend the packaging. The response from the manufacturer was that the packaging was re-designed to provide a blank area for the tamper evident seal, so it could prevent covering of the text on the box in future.

Chemotherapy charts and incidents: Off-protocol prescribing of chemotherapy in NSW, promoted review of the WA situation. The potential for errors was raised with WAMSG. There were known to be 149 existing oncology protocols with more than 40 in development in WA Health. Chemotherapy incidents continue to be a medication safety issue. The WAMSG Chair consulted with WACHS to assist them to navigate unique issues related to chemotherapy prescribing that were highlighted as being particularly problematic in rural areas. A briefing note and chemotherapy incidents were sent to the Medical Director's Forum (MDF) to alert HSPs to address charting issues locally and to invite the health services to work with WAMSG on any proposed statewide improvements. WAMSG was informed the information was noted at the MDF, but no action taken.

Patients own medication (POM): It was brought to WAMSG's attention that dealing with patients bringing their own medicines to hospitals was a common theme which HSPs had difficulty in identifying the best strategies in which to address the various potential medication safety issues. WAMSG is supportive of identifying a solution and awaiting the outcome of research being undertaken by Sir Charles Gardiner Hospital (SCGH) to assist in formulating guidance for WA health. This is due to be completed in the latter part of 2017.

Transdermal patches: Buprenorphine patch incidences from Datix-CIMS identified patches falling-off, replaced without removal of the old patch and being placed at incorrect times. The WAMSN developed a pilot for a transdermal patch check sticker to assist in mitigating some of these incidents. WAMSG undertook the logistics of the pre and post audit collection and staff surveys from HSP sites and collated the data for WAMSN. The information indicated the sticker assisted in reducing the risk of a patch not

being identified on a patient, removed and/or replaced at the correct time and was generally well received by nursing staff who had implemented the sticker.

Clinical Incident Monitoring: WAMSG continues to monitor key trends from the Datix-CIMs information. Concerns emerged with chemotherapy incidents. In consultation with the Chair of WAMSG, these issues were highlighted with the specific HSPs, as requiring intervention at HSP level.

Incidents were identified involving excessive administration of opioids, when prescribed as 'prn'. WAMSG advised a maximum dose limit should be documented as part of the 'prn' order on the NIMC; and, recommended using the National Patient Sedation Scoring System and monitoring vital signs rather than relying on a maximum ceiling dose, for non-cancer patients. Care also needs to be taken not to prescribe and administer oral opioid medications concurrently with intrathecal/epidural opioid.

Medication Safety Advice

WAMSG's professional advice was sought for, or action undertaken in relation to:

- **Medical Gas Cylinders:** a coronial investigation into the gases in a birthing suite in NSW subsequently identified a number of errors. The Therapeutic Advisory Group (TAG) guidelines highlighted a safety alert as part of a risk management strategy for using medical gas cylinders. WAMSG confirmed HSP Chief Executives (CEs) had received this information.
- **Dose calculations for drugs cleared by glomerular filtration:** a member sought to propose the use of excel calculator developed locally be included in WAMSG documentation. The validation could not be confirmed and it was advised it should not be used without ensuring validation of the tool.
- **New labelling stickers:** current oxygen labels were covering important information when applied to the NIMC. HSPs sought clarification on the statewide requirement to place these onto the NIMC. The use of the stickers deemed not mandatory. The new NIMC guidelines will have information to advise on a consistent manner in which to use these stickers.
- **eNIMC medication chart:** rural general practitioners were wishing to use the ACSQHC's eNIMC medication chart for their admitted patients in public hospitals. Potential safety issues were raised with WAMSG related to version control. WAMSG highlighted the identified issues with WACHS representatives who reviewed the potential safety issues and elected not to adopt this option in the regions.
- **Azathioprine and mercaptopurine labelling:** HSP members were concerned over the potential for error with the name change from cysteamine to mercaptamine and requested an alert on the labelling because of the potential for bone marrow suppression. WAMSG is exploring if this is the most appropriate strategy to avert potential errors.
- **Apomorphine:** production of apomorphine (Movapo®) by Stada pharmaceuticals, was stopped in early 2016 allowing Pfizer to manufacture its own brand (Apomine®). Stada

pharmaceuticals have since recommenced manufacturing Movapo®. Each company has their own consumables which are not interchangeable. Apomine® has a new pre-diluted product which will be available on the PBS next April, though available for authorized prescribers sooner. Advice was sought from WAMSG on safety and possibility of raising the issue of tendering for one brand to assist in reducing incompatibility issues. These safety issues are being explored with the manufacturer's representatives.

- **Prescribing:** clarity was requested from HSPs over issues such as prescribing. For example, adhering to Therapeutic Goods Administration (TGA) recommendations on the use of percentage in documenting all injectable medicines. The information suggested percentage was no longer recommended for prescribing injections or mixtures and prescribers were required to write the prescriptions in mg/mL, including medications with strengths commonly referred to by their percentage e.g. lidocaine 1%, sodium chloride 0.9%. WAMSG provided clarification over the TGA orders, which enables exemptions with certain branded products labelled with a percentage.
- **Take 5:** upon request, WAMSG members provided input into the content of the Take 5 educational program piloted at Royal Perth Hospital (RPH). The project supports educational updates for time-poor staff who cannot attend face-to face education. It is an e-learning tool available via the intranet and provides only the key points on differing subjects.
- **Documenting Hospital Occurring ADRs in Datix-CIMS:** feedback was sought from WAMSG to determine whether adverse drug reactions, which occur during hospitalisation would be recorded as a clinical incident in Datix-CIMS, to assist in meeting the National Safety and Quality Health Service Standards (NSQHCS). The logistics of including ADR information is being explored.
- **Hospital discharge summaries:** an audit was undertaken to determine of the accuracy of discharge summaries amongst HSPs. The summary of the data was compiled and returned to HSPs. Release of the information is pending feedback from HSPs.
- **Statewide Medication Formulary:** WAMSG continues to provide advice on medication safety issues related to medications proposed for the new formulary as a key advisory committee.

New Partnerships 2016/2017

WAMSG continued to foster relationships with HSPs, numerous government and non-government organisations, consumers and carers despite the uncertainty in proposed governance changes with the introduction of the *Health Services Act 2016* on the 1st July 2016.

Medication safety groups throughout WA share the minutes of their meetings with WAMSG, which is reciprocated to promote and foster an ongoing open and transparent forum to address medication safety issues. The partnership has enabled WAMSG to become regarded by the medication safety community as a key advisory group providing consultation on medication safety issues when independent advice,

direction or a whole of health system solution is deemed appropriate. In return the collegial relationship has enabled early identification of medication safety issues occurring within the health system to be identified, explored and addressed to assist in preventing adverse outcomes for patients.

In 2016/17 WAMSG extended its partnerships with key stakeholders concerned with the equitable access to medicines for ATSI people (including, Directors of Aboriginal Health Strategy in area health services, Aboriginal Health Council of WA [AHCWA], WACHS, WA Primary Health Alliance [WAPHA], Health Consumer Council [HCC]).

WAPDC Annual Report 2016/2017

The Western Australian Psychotropic Drug Committee provides independent advice on use and practices related to psycho-pharmacological agents to health services in Western Australian, the Chief Psychiatrist of Western Australia and professions prescribing psychotropic drugs, such as medical practitioners and nurse practitioners.

WAPDC Membership

The Western Australian Psychotropic Drug Committee (WAPDC) met on five occasions during 2016/2017. Dr Yulia Zyrianova consultant psychiatrist in Child and Adolescent Mental Health joined the committee in August 2016. Dr Duy Tran consultant psychiatrist for Kimberley Mental Health and Drug Service at Broome joined the committee in September 2016.
WAPDC membership and attendance for 2016/2017 are shown in Appendix 3.

WAPDC Projects

The agitation and arousal 'prn' medication chart

This 'whole of system chart' was developed from existing charts used in a number of mental health sites in Western Australia. The chart which assists in initiation and documentation of administration of 'when required' ('prn') medication used to treat acute agitation and arousal, was developed by Darren Schwartz senior pharmacist at Graylands hospital in consultation with the WAPDC. The chart was endorsed for use in WA public hospitals by the WATAG.

Pharmacological management of acutely aroused adult patients' guidelines

Darren Schwartz has undertaken background work to support the WAPDC's review and updating of this guideline. The developed guidelines were submitted to a number of the Emergency Medicines (EM) physicians for comment. In attempting to be a 'one size fits all' document it was determined by the EM physicians that the guidelines were too conservative. WAPDC will engage with the EM physicians to ensure that the guideline is as broadly applicable as possible.

Ketamine use in the management of acutely aroused adult patients outside of emergency departments – 'Advisory Note'

Concerns had been raised by some clinicians that there was no clear guidance around the use of ketamine for patients with mental health issues in rural and remote settings who required acute sedation prior to transfer to a mental health inpatient unit.

The use of ketamine to treat acutely aroused adult patients outside of emergency departments should only be undertaken in accordance with approved local or national treatment protocols and by experienced clinicians who have the necessary monitoring, resuscitation and pharmacological knowledge to rescue a patient from sedation that is causing airway obstruction and/or cardiorespiratory deterioration.

A safety alert about the use of ketamine to treat acutely aroused patients outside of emergency departments was developed by WAPDC and was subsequently endorsed for release to WA public hospitals by the WATAG.

Antidepressant therapy in children and adolescents – Position statement

The treatment of depression and anxiety in children and adolescents is complicated by the fact that there is limited or variable research around the use of antidepressants in this cohort. It is acknowledged that depression itself carries some risk of suicide for children and adolescents, and that this must be considered when deciding on appropriate therapy. The Chief Psychiatrist recommends caution when prescribing antidepressant medications for children and adolescents. Although antidepressants can be valuable medications in the correct circumstances, the possible clinical benefits must be considered against the potential risks of harm in the context of inconclusive efficacy data regarding antidepressant medications in the younger population.

A position statement iterating the Chief Psychiatrist's recommendations was developed by WAPDC and subsequently released following endorsement by the WATAG.

CAMHS 'prn' medication chart and agitation and arousal guidelines: Paediatric and adolescent inpatient mental health wards.

WAPDC (this project led by Dr Yulia Zyrianova and Ms Shalini Kassam) is developing a 'prn' medication chart and guidelines to assist in the management of acutely aroused children and adolescents. Feedback given by the Princess Margaret Hospital Medication Safety Review Group (MSRG) is being reworked into the draft. The 'guideline', the chart and how to use it will be incorporated into a broader guideline including therapeutic crisis intervention and de-escalation measures.

Clozapine report and recommendations implementation

A report commissioned by the East Metro Health Service (EMHS) following five deaths of patients taking clozapine was released in late 2016. While the investigation did not find any evidence that clozapine was directly causal of any of the deaths, it made a number of recommendations to improve the governance of clozapine use and to introduce steps to improve the physical health of individuals with severe mental illness.

Ms. Marani Hutton was appointed as project coordinator for 12 weeks to oversee the development of some clozapine guidelines and a number of resources to improve the management of patients taking clozapine in Western Australia. Dr Chris Etherton-Beer, Chair of WATAG, took an active role in the development of these resources. WAPDC provided guidance and feedback in the development of the resources which include:

- Clozapine monitoring form
- Guidelines for completing the clozapine monitoring form
- Side effects associated with clozapine therapy
- Clinician prompt checklist to assess clozapine side effects
- Guidelines for the safe and quality use of clozapine therapy in the WA Health system

Ms Kerry Fitzsimons will be responsible for managing the guidelines and resources which will be included as 'supporting documents' in the High Risk Medicines Policy. WAPDC will have oversight going forward of the clozapine guidelines and resources and will work with mental health units and an appointed steering committee, to be chaired by Dr Duy Tran, to ensure successful communication and adoption of the developed guidelines and resources.

National quality use of medicines indicators for Australian hospitals – acute mental health indicators

Ms Lesley Gregory, project coordinator for WAPDC, has developed two project proposals for psychotropic medicines audits based on the National Quality Use of Medicines mental health indicators.

One project *'A multi-mental health site study of adherence to metabolic monitoring in patients receiving antipsychotic agents'* was developed using the 'National QUM Mental Health Indicator 7.4.' The other project *'Antipsychotic polypharmacy and high-dose prescribing in acute mental health services in Western Australia'* was developed based on National QUM Mental Health Indicator 7.5.

One of the recommendations of the EMHS clozapine report was that an audit be undertaken to assess antipsychotic polypharmacy and high-dose prescribing. It was thus proposed that the 'Antipsychotic polypharmacy and high-dose prescribing' project be undertaken first to address the clozapine report's recommendation. WAPDC will oversee the audit of antipsychotic prescribing behaviours in mental health units across Western Australia.

'My Medicines and Me' M3Q questionnaire

The WAPDC has previously endorsed this locally developed and validated tool, the 'My Medicines and Me' (M3Q) side effect questionnaire for assessing the subjective experience of psychotropic medications in mental health consumers. The questionnaire is a communication tool to encourage dialogue between physicians and patients about concerns and issues with side effects to antipsychotic medicines.

The M3Q is not mandated, but its use in practice is strongly supported by the Chief Psychiatrist and the WAPDC. It assists in meeting national and the Chief Psychiatrist's Standards of Care; services who are not using either the M3Q or a similar process may not be meeting standards of care. To facilitate uptake and use of the resource the Chief Psychiatrist and WAPDC embarked upon a product 'launch' in 2016/2017 in consultation with its author Dr Deena Ashoorian, in mental health facilities across WA. Nathan Gibson, the Chief Psychiatrist, Dr Deena Ashoorian and Ms Lesley Gregory project officer visited mental health units in Osborne Park, Subiaco and Bentley to promote the M3Q questionnaire to a range of mental health professionals. Discussions with the groups were very positive. Further meetings with other mental health units are to be arranged over the coming year.

National Interface consultations- Safety and Quality Partnership Standing Committee (SQPSC), Royal Australian and New Zealand College of Psychiatrists (RANZCP)

The SQPSC is the national mental health safety and quality interjurisdictional committee that reports to the national Mental Health Drug and Alcohol Principal Committee. The Reducing Adverse Medication Events in Mental Health Working Party (RAMEMHWP) is a subcommittee of SQPSC. WAPDC provided advice with regards to a number of national projects including the RAMEMHWP framework and the Safety and Quality Partnership Standing Committee (SQPSC) and the Mental health Information Strategy Standing Committee (MHISSC) audit of 'Acute Injectable Medications' in mental health inpatient units across Australia.

WACA Annual Report 2016/2017

WACA Membership

The Western Australian Committee for Antimicrobials (WACA) met on four occasions during 2016/2017. Dr Owen Robinson was the Chair for WACA and elected for a further two years.

WACA welcomed five new members during 2016-17.

- Dr Ravi Krishnamurthy, Consultant- ICU, WACHS-South West
- Dr Susan Benson, Consultant Pathologist, Armadale Health Service
- Dr Claire Italiano, Infectious Diseases Physician, Royal Perth Hospital
- Jason Seet, Pharmacist, Sir Charles Gairdner Hospital
- Geoff Ham, Pharmacist, Princess Margaret Hospital

WACA membership and attendance for 2016/2017 are shown in Appendix 4.

WACA continues to advocate for the increased implementation of Antimicrobial Stewardship (AMS) programs in health services and support the development and implementation of the SMF. They provided specific advice surrounding antimicrobial use to HSPs, which have whole of health service implications, advice on the approved use of restricted antimicrobials agents on the SMF, monitor antimicrobial prescribing and resistance via national and any locally available sources and continue to advocate for the availability of electronic guidelines for prescribing decisions, to effect change in antimicrobial prescribing. WACA is the only statewide 'body' present in WA to assist in coordinating AMS education, liaison at a national level and information sharing.

WACA Projects

Hepatitis A and B vaccination and prophylaxis against hepatitis B reactivation in non-HIV immunosuppressed adults: Guidelines

WACA recognised a need for statewide guidelines for prophylactic treatment to prevent hepatitis B reactivation in patients receiving immunosuppressive therapy.

WACA's preference is to adopt a National document and is in close contact with the Australasian Society for Infectious Diseases (ASID) and Gastroenterological Society of Australia (GESA), who are developing these documents. In the interim WACA modified information from locally available guidelines to create a document which best fitted the whole of WA Health's needs. The document is titled 'Hepatitis A and B vaccination and prophylaxis against Hepatitis B reactivation in non-HIV immunosuppressed adults: Guidelines for clinicians' and was made available from March 2017 on the WATAG website.

Vaccination and prophylaxis for Asplenia

Avenues to provide access to the Spleen Australia Registry for Western Australians were not brought to realisation, despite consistent efforts from WACA in trying to progress the importance of inclusion in a

national registry. As a measure to best meet a gap in specific information pertinent to WA health WACA developed separate guidelines on vaccination and prophylaxis for asplenia for adults and for children.

A patient information sheet was developed to support the clinician information and all documents were made available on the WATAG website from December 2016.

Antimicrobial prescribing and resistance

Antimicrobial resistance (AMR) is a global issue. There is broad consensus that costs and impacts to patients, service providers and health systems relating to AMR are likely to be significant in the short to medium term because of longer treatment and recovery times, increased use of medicines, and increased risk of complications. The recently released first Australian report on Antimicrobial Use and Resistance in Australia (AURA) indicates WA is not immune to emerging resistance to common pathogens, such as *Escherichia coli*, *Klebsiella pneumoniae* and *Enterobacter cloacae* [1].

The statewide 2015 National Antimicrobial Prescribing Survey (NAPs) information, published in December 2016 continues to indicate surgical prophylaxis is the largest indicator for antimicrobial prescribing. This collection period included only 19 public and 8 private hospitals in WA, which was lower than the 25 public and 9 private hospitals participating in the 2014 survey[2] [3]. In 2017 many HSPs shared their identifiable NAPs information with WACA to foster openness and transparency, and for WACA to assist individual health services with their AMS, based on identifiable trends or anomalies.

The release of the Director General's recommendations from the 2016 Clinical Senate titled 'Superbugs', which focused on the global issue of antimicrobial resistance further supported WA hospitals in partaking in NAPs. Since the recommendations were released the *Act*, now requires HSPs to be accountable for their own AMS outcomes, which WACA will continue to offer assistance with in the system manager role.

Surgical Antibiotic Prophylaxis Guideline: Adults

In WA surgical prophylaxis is an area where the NAPs results indicate antimicrobials are still being used inappropriately [1,2]. The 'Surgical antibiotic prophylaxis guidelines', for adults, developed by WACA, is a quick reference guide to key antimicrobials for common surgical procedures. It provides details on the indication, dose, duration and when to cease the treatment dose. It was made available on the WATAG website in February 2017.

[1] AURA 2016, First Australian report on antimicrobial use and resistance in human health. Australian Commission on Safety and Quality in Healthcare. Commonwealth of Australia 2016 [available from: https://www.safetyandquality.gov.au/wp-content/uploads/2017/01/AURA-2016-First-Australian-Report-on-Antimicrobial-use-and-resistance-in-human-health.pdf]

[2] Antimicrobial prescribing practice in Australian hospitals: result of the 2014 Hospital National Antimicrobial Prescribing Survey; December 2015, Commonwealth of Australia 2015 [available from: https://www.safetyandquality.gov.au/wp-content/uploads/2015/09/2014-NAUSP-Report-AU-Australian-Hospitals.pdf]

[3] Antimicrobial prescribing practice in Australian hospitals: result of the 2015 Hospital National Antimicrobial Prescribing Survey; December 2016, Commonwealth of Australia 2016 [available from: https://www.safetyandquality.gov.au/wp-content/uploads/2017/01/Antimicrobial-prescribing-practice-in-Australian-hospitals-Results-of-the-2015-National-Antimicrobial-Prescribing-Survey.pdf]

Safety alerts and advisory notes

- **Antimicrobial shortages:** a number of antimicrobial shortages affected WA health during 2016/17; notably, IV vancomycin and IV metronidazole. WACA members received requests about how to address the situation. In response, WACA released an advisory note providing direction on alternatives, strategies and relevant contact details for further advice. The information was circulated to HSPs and made available on the WATAG website.

- **Renal toxicity-vancomycin and piperacillin/tazobactam:** WACA members identified higher rates of acute kidney injury (AKI) from combined use of vancomycin and piperacillin-tazobactam. WACA wrote to each AMS group alerting them to the potential risk and provided information and direction to assist in the development of alerts or guidelines, for their health service.

- **Alert high dose antibiotics:** WACA wrote to HSP's CEs to alert renal physicians to consider developing a collaborative approach to establishing safe prescribing practices for peritoneal dialysis related peritonitis, after being alerted to guidelines supporting the prescribing of higher doses of antibiotics than deemed safe.

Key antimicrobial issues arising in 2016/2017

WACA's professional advice was sought for the following:

- **Statewide Medication Formulary (SMF):** WACA continue to act as an advisory group to the SMF team. Providing advice on the appropriate listing, indications and restrictions for antimicrobials on the SMF. Out-of-session specific advice was requested on the listing of ceftolozane/tazobactam; ceftriaxone, valaciclovir PO, new intraconazole formulation Lozanoc ®, use of topical antibiotics, IV amoxicillin and clavulanic acid, ketoconazole and tenofovir.
- **Antimicrobial impregnated devices:** Product Evaluation and Standardisation Committee (PeakPESC) sought updated advice on the merits of using antimicrobial-coated suture material within WA Health. WACA does not support antimicrobial use which is not in accordance to the manufacturer's instructions, current Therapeutic Guidelines (TG): Antibiotics or guidelines endorsed by the local DTC. The WACA advisory note on 'Inappropriate extemporaneous or novel use of antimicrobials' remains relevant, as the collateral damage to antimicrobial resistance from use of these products remains unknown.
- **High cost infrequently used antimicrobials:** There is safety and cost-saving potential in having ease of access to information on the availability of rarely-used, high-cost antimicrobials across the State. Quick access for HSPs to this information has the potential to assist clinicians to source the required antimicrobial in a timely manner and reduce expense from the expiration of these high-cost medicines, which can be thousands of dollars per dose. WACA explored the logistics of providing real-time, live inventory options using a number of approaches. The concept became problematic with the introduction of the *Act* and subsequent changes in roles and

responsibilities. WACA will continue to advocate for a solution to promote the sharing of this information between HSPs.

- **Aminoglycoside guideline, upper limit:** The current TG: Antibiotics v15 guidelines clearly outlines the use of weight based dosing using ideal body weight (not actual body weight). Incidents were brought to WACA's attention of actual body weight being used resulting in patients receiving high-doses and resultant toxicity. When developing the 'Surgical antibiotic prophylaxis guidelines' for adults, WACA recognised this issue. In response WACA's guidelines suggested there is an upper limit of 320 mg for gentamicin and 'to seek advice from the pharmacist/infectious disease physician for patients with a BMI > 30'. WACA requested the Therapeutic Guidelines Limited (TGL) review the information for the new TG: Antibiotic guidelines. The TGL acknowledged the review would consider WACA's concerns.

New Partnerships 2016/17

WACA continues to be recognised by HSPs for its independent advice on the use and practices related to antimicrobial agents. It continues to foster relationships with metropolitan and country AMS committees.

The infections and Immunology Health Network (I&IN), West Australian Multi-Resistant Organism (WAMRO) group and some of the AMS groups entered into an informal agreement to share their meeting minutes with WACA in a reciprocal arrangement, for the purpose of identifying commonalities in priorities, projects and strengthen networks.

During 14th- 20th November WACA promoted World Antibiotic Awareness Week and shared information amongst their partnered-networks.

WADEP Annual Report 2016/2017

Panel Membership

The Western Australian Drug Evaluation Panel (WADEP) met on eight occasions during the 2016/17 financial year. During this time there were four resignations and five new appointments:

- Dr Alison MacLean, Director of Clinical Services at Armadale Health Service resigned as a general/specialist hospital senior medical staff member
- Mr Roy Finnigan, Chief Pharmacist of Broome Hospital joined the panel representing WACHS
- Ms Ann Berwick, Senior Pharmacist from Royal Perth Hospital
- Mr Scott Jones, Emergency Department Nurse Practitioner from Kalgoorlie Hospital joined the panel representing WACHS
- Mr Richard Wojnar-Horton resigned as the Panel Chair having been a long serving panel member since 2004 and the chair since 2009
- Mr Peter Smart, Sir Charles Gairdner Hospital (SCGH) Deputy Chief Pharmacist and panel voting member since 2014 was elected as WADEP Chair
- Mr Cale Padgett joined the panel as a Senior Pharmacist representative from SCGH. His membership was put on hold as he took over the secretariat role from Rebecca Godfrey for the duration of her maternity leave
- Mr Ben Ware joined the panel in replacement of Cale Padgett
- Ms Helena Halton resigned from WADEP in December 2016
- Professor Johan Rosman resigned from WADEP in June 2017
- The WADEP Terms of Reference were adapted to include a representative from PMH as a Rotational position as a voting member
- The WADEP Terms of Reference were also adapted to include the WA Therapeutics Advisory Group (WATAG) Chair as a voting member

WADEP membership and attendance for 2016/17 are shown in Appendix 5.

WADEP Outcomes

In addition to work done in listing medicines on the Statewide Medicine Formulary (SMF), WADEP formally received and evaluated six full submissions during the year; a summary of these submissions and outcomes are presented below.

Idarucizumab (Praxbind®) **Boehringer Ingelheim**	Indication for formulary listing 1. Dabigatran treated patients who exhibit signs and symptoms of life-threatening or uncontrolled bleeding requiring urgent intervention, or 2. Dabigatran treated patients who require emergency surgery or other procedure necessitating rapid reversal of the anticoagulant effect prior to surgery / procedure
	Estimated annual cost The estimated cost to WA Health was estimated to be low due to the low incidence of dabigatran prescribing ($10,000- $15,000 per annum)
	Outcome • Idarucizumab was given a positive recommendation for the indications requested • While there was not data reported in the pivotal trials suggesting a survival benefit, idarucizumab was shown to effectively reverse the pharmacological action of dabigatran • The submission was approved with the mandate that approval is granted from the institutions haematology service prior to initaiton of treatment
Melatonin (Circadin®) **RAD Data**	**Indication for formulary listing** 1. Refractory insomnia in patients with neurological co-morbidity where melatonin was initiated in the Child and Adolescent Health Services (CAHS)
	Estimated medication cost For the specific indication mentioned, the estimated cost to the adult service was $21,915. The WADEP review also noted a Drug Usage Evaluation (DUE) carried out at PMH in 2015 identified melatonin expenditure at $200,000.
	Outcome • Primary sleep disorder studies are either poorly designed or have results that are too small to be statistically significant • Most trials suggest that 2mg doses are insufficient and were often increased to 6-12mg in order to be efficacious • WADEP concluded that melatonin will be a cost risk to the state and did not consider it to be cost effective • WADEP also did note the difficulties for patients, carers and providers when transition from CAHS to the adult service • To allow establishment of a relationship in these groups, the continuation of melatonin for transitioning patients with refractory

	insomnia who have neurological co-morbidity from CAHS is enabled for a period of up to six months. • The treating physician is encouraged to use this transition period to either support the patient in stopping or seek approval from the local hospitals DTC via IPA
Zoledronic Acid (DBL®) **Pfizer**	**Indication for formulary listing** For use in patients with symptomatic metastatic bone disease secondary to solid cancers
	Estimated annual cost To treat one patient for one year, the cost is $740. For the estimated 500 patients per annum that would require zoledronic acid, the estimated cost to WA health is $370,000 per annum.
	Outcome • Zolendronic acid is not cancer specific and at the time of the request only patients with prostate and breast cancer could receive zoledronic acid via PBS reimbursement • The submission originally requested a dosing schedule of 9 weekly infusions. In collaboration with the applicant, the submission was changed to request infusions every 3-4 weeks more in line with the regimens studied in the literature • While zolendronic acid will not confer any survival benefit, the costs of its use will largely be offset by preventing complications with skeletal related events secondary to metastatic disease • Zoledronic acid was given a positive recommendation and a treatment algorithm was also developed and endorsed by the panel
Ephedrine (SAS) **Medsurge**	**Indication for formulary listing** Post-operative hypotension
	Estimated annual cost Maximum anticipated cost to WA Health is $3680
	Outcome • It was noted that the practice suggested in the submission as not common practice across all of WA health • WADEP supported the submission based on a reasonable evidence base, low cost to the state and other cost incentives, namely potentially reducing LOS in critical care / HDU areas • This submission prompted a more broad discussion regarding the listing of SAS medications on SMF and the role WADEP and local HSPs play making sure sites are compliant with TGA definitions of SAS drugs

Ketoconazole and Metyrapone **Ketoconazole Medsurge** **Metyrapone Clinect**	Indication for formulary listing Hypercortisolism in patients who: • Are not surgical candidates • Have failed surgery • Cannot undergo surgery immediately • Have ectopic ACTH production Ketoconazole is first line, metyrapone is second line if ketoconazole fails or cannot be tolerated
	Estimated annual cost Maximum anticipated cost to WA Health is $26,000
	Outcome • Cost of ketoconazole to the state is minimal due to low cost and patient numbers. Toxicity concerns with ketoconazole raised as it carries a black box warning. Reference to black box warning must be included in the restriction • Metyrapone is significantly more expensive and proposed to be used second line. Patient numbers and therefore metyrapone cost to state less clear however patients who would progress to metyrapone as second line still considered low • Endocrinology EAG consulted and the submission approved for comment on role in therapy each drug offers and potential benefit a treatment algorithm would offer

Rituximab Review on the WA SMF

During the SMF review process, it was noted that the amount of non-PBS rituximab restrictions for WA was significantly more than other states. As a result, WADEP commissioned a revision of the various non-PBS rituximab indications put forward for listing. Revision included assessing robustness of original submission and contacting original applicants to requests update on role of therapy rituximab played. Three indications were assed in the 2016/2017 financial year for inclusion on the SMF:

- Glomerulonephritis
- Myasthenia Gravis
- Neuromyelitis Optica Spectrum Disorder

Due to paucity in evidence, non-standardised dosing regimens, unclear starting and stopping criteria and potential for leakage, it was decided to not list these three indications on the upcoming SMF. WADEP would be happy to reconsider listing these three indications if a resubmission was lodged with the incorporation of treatment algorithms and a tool that would allow HSP to audit usage against the algorithm. Working with WA clinicians to standardise a process that supports standardised algorithm and audit tool will be focus for WADEP moving into the new financial year.

List of PBS Medications approved for SMF listing 2016/2017

Medicaton	Indication
Lurasidone	Schizophrenia
Paliperidone 3 monthly Depot	Schizophrenia
Elbasvir + grazoprevir (Zepatier)	Chronic Hepatitis C infection
Lipegfilgrastim	Chemotherapy induced neutropenia
Evolocumab	Familial Homozygous hypercholesterolaemia
Sacubitril / valsartan	Chronic Heart Failure with reduced ejection fraction

Report of 2015/2016 Formulary Recommendations

In the 2015/16 year WADEP formally evaluated five high-cost submissions, three were given positive recommendations and two, bendamustine and defibrotide, were given recommendations to not list. This indication requested for bendamustine was later added to the PBS.

Arsenic trioxide (Phenasen®) **Phebra** **Positive Recommendation**	Indication for formulary listing Acute promyelocytic leukaemia
	Estimated annual cost Drug costs alone were estimated to range from $46,000 - $120,000 per patient depending on weight and treatment course. The submission estimated that 6 patients would be eligible for treatment at 'steady-state' in WA; the estimated total drug cost was $277,000 - $722,000.
	Actual annual cost in 2015/2016 $10,474 of non-PBS Arsenic Trioxide was dispensed in WA Public Hospitals during this period. Extrapolated to a year, this equates to $12,568
	Outcome Arsenic trioxide was given a positive recommendation for listing on hospital formularies. Arsenic trioxide was recommended for low – intermediate risk, newly diagnosed APL. The condition must be characterised by the presence of t(15:17) translocation or the PML/RAR-alpha fusion gene. ATO may be prescribed by a Clinical Haematologist in combination with all-trans retinoic acid (ATRA): • Induction: ATO 0.15mg/kg/day and ATRA 45mg/m2/day for 28 days

	concurrently until bone marrow remission (<5% blasts and no abnormal promyelocytes) or a maximum of 60 days, whichever occurs first. • Consolidation: ATO 0.15mg/kg/day for 5 days per week, 4 weeks on/ 4 weeks off and ATRA 45mg/m2/day for 15 days each 4 week cycle for a total of 28 weeks. Arsenic trioxide was given a positive recommendation by PBAC at their November 2015 meeting and has subsequently been listed on the PBS.
Bendamustine (Ribomustin®) **Janssen – Cilag** **Negative Recommendation**	**Indication for formulary listing** Three indications were submitted for bendamustine: 2. chronic lymphocytic leukaemia (CLL), 3. indolent non-Hodgkin's lymphoma (iNHL) or mantle cell lymphoma (MCL) in combination with rituximab, and 4. relapsed/refractory indolent NHL.
	Estimated medication cost The cost for bendamustine treatment is dependent on the indication's dosing regimen and the patient's Body Surface Area (BSA), an average BSA of 1.8m^2 was used to estimate cost: • CLL: $13,000/patient • First-line iNHL and MCL: $11,600/patient • Relapsed/refractory iNHL: $15,500 – $20,700/patient Patient numbers were not included in the submission.
	Actual annual cost in 2015/2016 $56,536 of non-PBS bendamustine was dispensed in WA public hospitals during this period Extrapolated to a year, this equates to $67,843
	Outcome A negative recommendation was given for bendamustine in CLL and relapsed/refractory iNHL due to a lack of local patient information and questionable cost-effectiveness. The applicant was given the opportunity to provide further evidence however this was not pursued. The Panel noted that at the time of the review the PBAC had made a positive recommendation for bendamustine in first-line iNHL and MCL; a statewide decision was to be deferred until PBS listing.
Rituximab (Mabthera®) **Roche Products** **Positive Recommendation**	**Indication for formulary listing** Recurrent or refractory inflammatory myositis
	Estimated annual cost The cost per course of rituximab for this indication is $9,054. An estimated 20 patients would qualify for treatment per annum across the state at a total

drug cost of $181,080.

Actual annual cost in 2015/2016
It is difficult to separate out usage across different rituximab indications. Non-PBS usage of rituximab equated to 2,582,803 for WA.

Outcome

Rituximab was given a positive recommendation for use on week 0 and 2 where patients met one of the following criteria and according to the treatment algorithm:

1. Patient has failed standard treatment options where there is ongoing clinical and laboratory or radiological evidence for active myositis despite treatment with:
   a) prednisolone at a minimum dose of 1 mg/kg/day for four weeks, and
   b) a trial of methotrexate, azathioprine, mycophenolate or tacrolimus for a minimum of 12 weeks where there has been an attempt to optimise treatment.
2. Patient is steroid -dependent where prednisolone cannot be tapered below 10 mg per day without relapse or recurrence of disease 3 months after starting steroids, despite steroid-sparing agents.
3. Standard treatment of corticosteroid and/or conventional immunosuppressants is contraindicated or treatment success is limited by toxicity.
4. Patient has necrotising autoimmune myositis, based on biopsy or antibody results, which fails to respond to:
   a) prednisolone at a minimum dose of 1 mg/kg/day for four weeks, and
   b) intravenous immunoglobulin infusion course at a minimum dose of 1 g/kg/month four weeks after treatment.

A treatment algorithm was developed in collaboration with key WA Immunologists, Neurologists and Rheumatologists.

Defibrotide Jazz Pharmaceuticals (Link Healthcare, Australian distributor) **Negative Recommendation**	**Indication for formulary listing** Hepatic veno-occlusive disease
	Estimated annual cost Defibrotide costs $73.40/kg for a minimum of 21 days. For a 70 kg patient the drug cost for a minimum treatment course would be $107,898. An estimated 3 patients per annum would require treatment for VOD at a minimum cost of $323,695. The pharmaceutical sponsor offered a 50% price reduction; the cost with this discount would be $53,949.
	Actual annual cost in 2015/2016 $233,865 of defibrotide was dispensed across PMH and FSH via IPA during this period
	Outcome Following two rounds of review, WADEP gave a negative recommendation due to the lack of evidence supporting clinical efficacy and subsequent cost-effectiveness.
Ribavirin (Ibavyr®) Clinect **Positive Recommendation**	**Indication for formulary listing** In combination with PBS listed direct acting antivirals (DAA), for the treatment of hepatitis C: • Genotype 1 treatment experienced or decompensated cirrhotics • Post-transplant patients • Genotype 3 decompensated cirrhotic patients
	Estimated annual cost A 24 week course of ribavirin costs $1,999 for an individual less than 75 kg and $2,995 for those equal or over 75 kg. The submission estimated patient numbers for all three indications would be 500 – 1000 initially and 50 – 100 in subsequent years. Total drug cost was estimated to range from $999,500 to $2,995,000 for the initial cohort and $99,950 to $299,500 per annum subsequently.
	Actual annual cost in 2015/2016 For the period Feb – June 2016, the cost to WA health was $28,702. Extrapolated for one year, this equates to $68,884
	Additional information • Ribavirin is now PBS listed for the indications requested in the formulary submission to WADEP

WADEP Cannabis Based Products – Clinician Quick Guide

In 2016 the Commonwealth government amended the *Narcotic Drugs Act 1967* to create a license and permit scheme allowing the cultivation of cannabis and manufacture of cannabis-based products for medicinal and research purposes.
Following release of the WA Health Cannabis-Based Products for Medicinal Use, WADEP created the condensed 'Clinicians Quick Guide to Cannabis-Based Products in WA hospitals' following feedback from local DTCs.

The guiding document provides concise advice to key stakeholders involved in the medication management cycle who may be involved in the prescription, dispensing or administration of medicinal cannabis;

- Hospital Governance Structures and local DTCs,
- Prescribers
- Pharmacy departments
- Patients admitted to a public hospital already self-administering a cannabis based product

WADEP Guidelines for the Pharmaceutical Management of Osteoporosis in Adult WA Public Hospitals

Based on an existing guideline from Fiona Stanley Hospital, the WADEP guideline was produced in consultation with endocrinology and rheumatology departments across two tertiary sites.

The guideline provides algorithms on:

- Fracture Risk assessment using either the FRAX or GARVAN tools
- Pharmacological treatment options for patients assessed to be at moderate – high risk of fracture

WADEP Formulary Submission Form Change

In anticipation of the roll out of the SMF, WADEP updated the formulary submission documents. The main changes are outlined as follows;

- The PBS Streamlined form was incorporated into the submission form as one single submission document. The form has still been designed with necessary prompts to streamline the PBS listing process and encourage collaboration with clinicians across health services
- The new single form has been designed to easily illicit the required information from the applicant to assist WADEP in their deliberations
- A separate streamlined submission form for minor changes to existing formulary listings was also implemented

The WA Statewide Medicines Formulary Project

Summary

The initial framework for the WA Statewide Medicines Formulary (SMF) initially received endorsement from the then acting Director General in February 2015. Western Australia was the fourth state to implement a Statewide medicines formulary.

The SMF vision is to deliver optimal patient outcomes in an equitable manner through a single list of approved medicines for all WA public hospitals; evaluated, implemented and managed in a state-wide approach.

The SMF has been a collaborative initiative; during the development phase, 25 Expert Advisory Groups (EAGs) were formed to review the respective medications relative to their speciality. The EAGS reviewed over 2000 medicines and recommended over 3800 restrictions for listing on the SMF to WADEP.

During the consultation period, WADEP drew on the expertise of the following;

- Adult EAGs; 67 Consultants and 42 senior pharmacists
- Paediatric EAG; 23 Consultants and 6 senior pharmacist
- Neonatal EAG; 3 Consultants and 3 senior pharmacists

Formulary One

Formulary One is the electronic platform that will carry the SMF to the WA Health workforce. This contract was awarded to Health Care Solutions (HSC) following a tendering process. The Tasmanian health service offers their Statewide Medicines Formulary via the same electronic platform.

Apart from offering the single list of Medicines, the Formulary One platform will offer all users the following which are anticipated to eliminate many of the current inefficiencies that exist around prescribing while also promoting the quality use of medicines;

- Single list of approved medications for use in WA public hospitals
- Information on PBS prescribing including indication(s), quantities and repeats,
- Abbreviated Product Information and Consumer Medicines Information (CMI) via eMIMMs,
- Local and state approved guidelines relating to medication use,
- Preferred agents in therapeutic class

Completion of development activities

At the time of writing, the following development activities had been completed;

- Tendering for electronic platform completed and contract with vendor signed
- All Expert Advisory groups had completed the review of their relevant medication lists
- WADEP had reviewed and made decisions on all recommendations from EAGs

Implementation activities

A communication strategy was developed in April 2017 outlining the various roles and responsibilities of relevant stakeholders in assisting with the implementation of the SMF across WA.

Stakeholder	Communication Requirements	Communications Method	Responsibility	When	Status
Director General DEC	Purpose, availability and outcomes of F1 and the SMF	Formal letters Briefing notes Project outcome reports	SMF Team via Assistant Director General (CSR Division)	April 2017	Completed
HSP Board Members HSP Chief Executives Safety and Quality Committees MDF	Purpose, availability and outcomes of F1 and the SMF	Formal letters Briefing notes Project outcome reports	SMF Team via Assistant Director General (CSR Division)	April 2017	Completed
DTCs CPF	Purpose, availability and outcomes of F1 and the SMF Procedures, risks mitigation, project timelines Phase out of DFS How to use the app	Face-face presentations/ consultation Project briefing notes Formal letters Annual report Emails	SMF Team and WADEP Chair	March – May 2017	Completed
Heads of Departments, business administrators	Purpose, availability and outcomes of F1 and the SMF Procedures, risks mitigation, project timelines How to use the app	Face-face presentations Emails	SMF Team and WADEP Chair	June – July 2017	In progress
Pharmacy staff members	Purpose, availability and outcomes of F1 and the SMF Procedures, risks mitigation, project timelines	Face-face presentations/training Emails Train the trainer sessions	SMF Team	June – July 2017	In progress

	Phase out of DFS How to use the app	Posters in clinical areas Inbuilt tutorials and user manuals			
Users	Purpose, availability and outcomes of F1 and the SMF Procedures, risks mitigation, project timelines Phase out of DFS How to use the app	Face-face presentations Emails Advertisement on HealthPoint Posters in clinical areas Inbuilt tutorials and user manual	SMF Team and WADEP Chair	June – July 2017	Planned

A three month open consultation and soft launch period is planned from August 2017. During the soft launch, individual health services are expected to review the content of SMF relevant to their service delivery. SMF drugs or restrictions that do not align with current clinical practice should be raised with WADEP who will consider the change.

The official hard launch is planned for November 2017. At this time, all WA health services will be required to follow the SMF.

SMF Policy

The SMF Policy was approved in June 2017. The SMF policy will not be auditable until 2018. The SMF Policy will come into effect in November once the open consultation phase of the SMF is closed.

SMF Framework

The SMF framework document supports the SMF policy and outlines;

- Background, rationale and objectives of the SMF
- Role and responsibilities of The WA Drug Evaluation Panel (WADEP) and scope of the medications and medicinal products that fall under its governance
- Governance processes for listing and review of formulary applications
- Communication objectives
- Monitoring and review of medications listed on SMF
- How the SMF will be evaluated

By dissemination via Hospital Boards, local DTCs and the Chief Pharmacist Forum, feedback regarding the content of the framework were received from multiple sites and incorporated into the framework.

Post implementation activities

Following implementation of the SMF, the following have been identified as areas of focus for WADEP and the Formulary Management Team.

- Neonatal and Paediatric sub formularies
  The first update from the vendor will include the neonatal and paediatric sub-formularies. Similar to the initial consultation process of the adult formulary this will require engagement from the relevant EAGs and DTCs
- SMF and Pharmaceutical Tendering
  One of the principle objectives for the SMF is to highlight and increase the efficiencies in medication procurement that can be gained from the implementation of a single list of medications across the state. Preliminary conversations have begun with key stakeholders involved in the management of these contracts. Core to the success of this strategy with be the;
    - development of a framework for recommending when a therapeutic group may have a preferred agent identified from Group B medications
    - Assessment of the feasibility of centralised Group A negotiations with CPF and the contract panel

WADEP Medicines Usage and Expenditure Report 2016/2017

Due to the identification of significant deficits in the quality and validity of medication expenditure data generated by the state wide dispensing software iPharmacy, changes to the way data would be reported on for the 2016/17 financial year were required. Until these short falls can be addressed, it has unfortunately made the identification of areas in medication expenditure such as non-PBS usage which potentially require intervention by WADEP difficult.

The significant increase in expenditure compared to FY 15/16 is likely due to the PBS availability of the Direct Acting Antivirals (DAAs). These were first listed in March 2016 and it is expected that patient numbers have reach steady state.

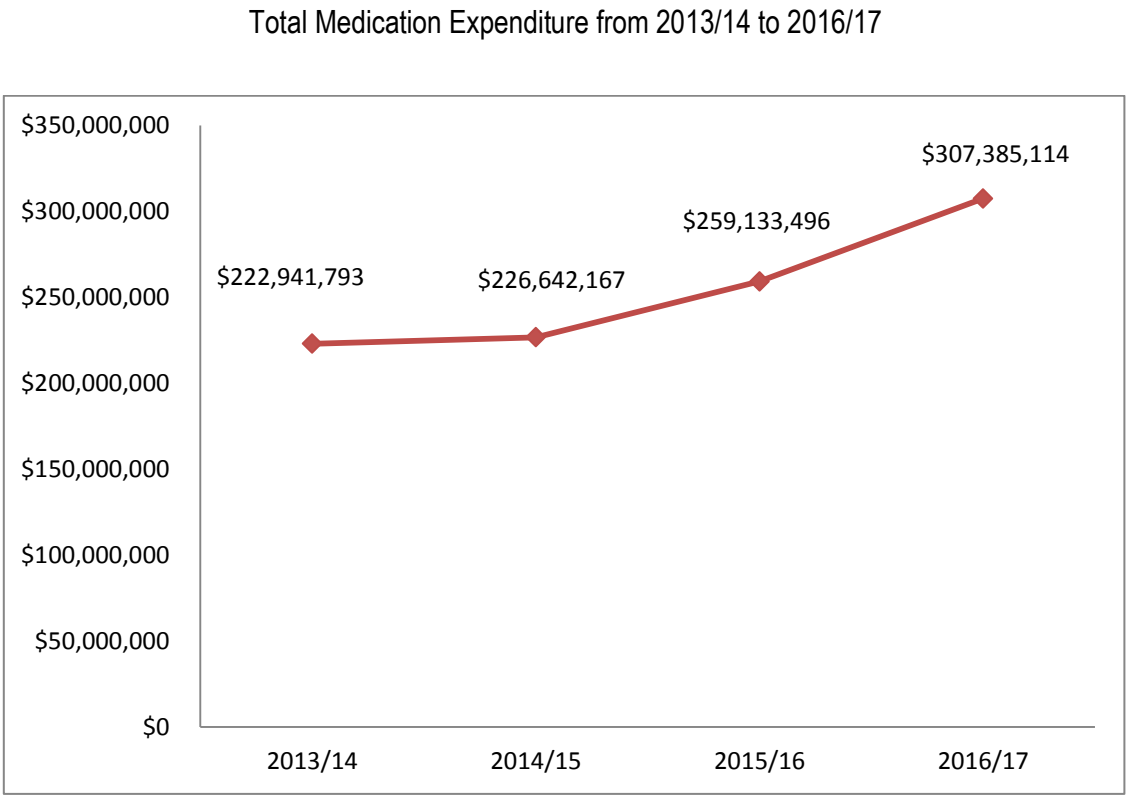

Figure 1. WA Health medication expenditure from 2013/14 to 2016/17.

High Cost Medicines Report

Table 1. Top twenty medications according to total cost in 2016/17

	Generic medication*	Total Cost ($)	Change in Total Cost from 2015/16 (%)
1	Sofosbuvir	66,297,129	138
2	Daclatasvir	12,301,355	56
3	Rituximab	7,041,159	-4.2
4	Infliximab	6,272,823	-14
5	Pembrolizumab	5,984,663	38
6	Cobicistat – Elvitegravir, Emtricitabine & Tenofovir (Stribild)	5,560,398	102
7	Ivacaftor	5,377,500	12
8	Trastuzumab	5,249,234	-9
9	Dolutegravir – Abacavir & Lamivudine (Triumeq)	3,698,610	46
10	Lenalidomide	3,683,617	12
11	Natalizumab	3,185,438	24
12	Filgrastim – Pegylated	3,024,632	-21
13	Darbepoetin Alfa	2,924,189	-6
14	Bevacizumab	2,894,574	1
15	Posaconazole	2,853,512	4
16	Ipilimumab	2,844,923	203
17	Bortezomib	2,703,458	-10
18	Valganciclovir	2,700,779	-7
19	Epoetin Alfa	2,696,452	4
20	Tenofovir – Emtricitabine & Rilprivine	2,634,941	-13

*Includes all formulation and strengths, unless otherwise stated does not include combination products

Table 1 shows the top 20 medications according to cost to WA Health and the percentage change in cost to WA Health from the previous financial year.

Appendices

Appendix 1: WATAG members and attendance 2016/2017

Member	24 August 2016	23 November 2016	22 February 2017	24 May 2017
Prof. Chris Etherton-Beer (*Chair*)	✓	✓	✓	✓
Ms Gillian Babe	×	✓	✓	✓
Dr Terry Bayliss	×	×	d×	-
Dr Pat Coleman	a×	×	×	f-
Ms Stephanie Dowden	b✓	✓	✓	✓
Ms Kerry Fitzsimons	✓	✓	✓	×
Prof. David Fletcher	×	×	×	×
Dr Nathan Gibson	✓	✓	×	✓
Prof. Gary Geelhoed	×	×	×	×
Mr Neil Keen	✓	✓	×	×
Ms Kwi Moon	✓	✓	✓	✓
Ms Naomi Lillywhite	✓	✓	✓	✓
Dr PK Loh	c×	-	-	-
Dr David McCoubrie	×	×	×	×
Dr Tony Ryan	✓	✓	✓	×
Mr Peter Smart	-	-	e✓	✓
Dr David Speers	✓	×	✓	✓
Dr Nicole Staples	✓	✓	×	✓
Dr Justin Yeung	×	✓	✓	✓
Ms Lesley Gregory (*Executive officer*)	✓	✓	✓	✓
In attendance	1	2	3	4

a. Dr Pat Coleman was appointed to WATAG
b. Ms Stephanie Dowden was appointed to WATAG
c. Dr PK Loh resigned from WATAG
d. Dr Terry Bayliss resigned from WATAG
e. Mr Peter Smart was appointed to WATAG
f. Dr Pat Coleman resigned from WATAG

1. Mr Cale Padgett as proxy for Ms Gillian Babe, Ms Rebecca Godfrey, Mr Dominic Goodwin, Ms Kathy Irwin
2. Ms Rebecca Godfrey, Mr Dominic Goodwin, Ms Kathy Irwin
3. Ms Rebecca Godfrey, Ms Kathy Irwin
4. Ms Kathy Irwin, Mr Dominic Goodwin

Appendix 2: WAMSG members and attendance 2016/2017

Member	02/08/2016	11/10/2016	06/12/2016	28/02/2017	04/04/2017	13/06/2017
Ms Alison MacLean	×	×	—	—	—	—
Ms Amanda Bryce	×	×	×	×	j×	—
Dr Arankanathan Thillainathan	×	×	✓VC	×	×	×
Ms Christine Proctor	✓	✓	✓	✓	✓	×
Mr David McKnight	×	×	d✓	✓	×	×
Ms Deirdre Criddle	✓	✓	✓	×	✓TC	✓
Ms Elvira Caporn	×	×	×	×	k×	—
Dr Geoffrey Williamson	×	b×	—	—	-—	—
Mr Graham Stannard	×	×	✓VC	×	l×	-
Ms Helen Lovitt	✓	✓	✓	×	×	×
Dr Ioana Vlad	×	×	×	e×	—	—
Mr John Gourlay	×	×	×	×	×	×
Ms Katherine Birkett	×	×	×	✓	×	×
Ms Kathy Irwin *(Executive officer)*	✓	✓	✓	✓	✓	✓
Mr Ken Tam	×	×	×	f×	—	—
Ms Kerry Fitzsimons	✓	c✓	✓VC	✓	✓	✓VC
Ms Lesley Gregory (*Executive officer*)	✓	✓	✓	×	✓	✓
Ms Margaret England	a×	×	×	✓	✓	✓
Dr Mark Newman	×	×	×	×	m×	—
Ms Melinda Leeder	✓	✓	✓	✓	✓	×
Ms Nancy Pierce	×	×	✓VC	✓ VC	×	×
Mr Neil Keen (*Chair*)	✓	×	×	✓	✓	✓
Mr Nick May	✓	✓	✓	✓	✓	✓
Ms Nicole Harwood	✓	✓	×	✓VC	×	×
Ms Nikki Perry	×	×	×	g ×	-—	-—
Ms Peggy Briggs	✓	✓	✓	×	✓VC	×
Dr Pradeep Jayasuriya	✓	✓	✓	✓	✓	✓
Dr Roger Goucke	×	×	×	`×	×	—
Ms Sally Simpson	×	×	✓	×	✓	✓
Ms Shirilee Kerrison	×	×	✓	×	✓	✓
Ms Stephanie Teoh	✓	✓	×	h×	—	—
Ms Sue Yin Yee	×	×	×	×	n×	—
Ms Yvonne Bagwell	×	×	×	×	o×	—
Mr Zeyad Ibrahim	✓	✓	×	i×	—	—
In attendance	1	2	3	4	5	6

During 2016/17 members regularly not attending were requested to reconsider their membership. This accounts for the higher number of members resigning in 2016/17.

a. Ms Margaret England officially voted as a member
b. Dr Geoffrey Williamson (no longer working in Health)
c. Ms Kerry Fitzsimons proxy Chair for Neil Keen
d. Mr David McKnight proxy Chair for Neil Keen
e. Dr Ioana Vlad not able to make meetings on Mondays; nominated to be a corresponding member and continues to provide input into the Analgesia Management Working Party.
f. Mr Ken Tam resigned and nominated to be a corresponding member
g. Ms Nikki Perry was unable to attend at the nominated meeting times, and submitted her resignation.
h. Ms Stephanie Teoh resigned and nominated to be a corresponding member
i. Mr Zeyad Ibrahim resigned due to work commitments
j. Ms Amanda Bryce resigned
k. Ms Elvira Caporn resigned
l. Mr Graham Stannard resigned and nominated to be a corresponding member.
m. Dr Mark Newman resigned (moved out of the Safety and Quality area and working part-time)
n. Ms Sue Yin Yee officially resigned.
o. Ms Yvonne Bagwell resigned

1. Ms Leanne Newman, was proxy for Ms Shirilee Kerrison
2. Ms Lani Miller was proxy for Ms Shirilee Kerrison

Appendix 3: WAPDC members and attendance 2016/2017

Member	15 August 2016	28 Oct 2016	19 Dec 2016	13 Feb 2017	12 June 2017
Dr Nathan Gibson(Chair)	✓	✓	✓	✓	✓
Dr Chacko Varughese	×	×	×	×	✓
Dr Siva Bala	×	×	×	×	×
Ms Sue Bascombe	×	✓	×	×	✓
Mr Mechaiel Farag	×	×	×	×	×
Ms Shalini Kassam	✓	×	✓	×	×
Dr Mathew Martin-Iverson	✓	×	×	✓	×
Dr Peter Melvill-Smith	×	×	×	×	×
Mr Michal Milczarek	×	✓vc	×	×	✓vc
Mr Trevor Norton	×	×	✓	✓	×
Mr Darren Schwartz	✓	✓	✓	✓	✓
Dr Urvashnee Singh	×	×	×	×	×
Dr Duy Tran	-	b×	×	✓vc	×
Dr Yulia Zyrianova	a×	✓	×	✓	✓
Ms Lesley Gregory (Executive officer)	✓	✓	✓	✓	✓
In attendance	1	2	3	4	5

a. Dr Yulia Zyrianova appointed to WAPDC
b. Dr Duy Tran appointed to WAPDC

4 Ms Daphine Makore as proxy for Sue Bascombe, Marani Hutton project officer for the clozapine report recommendations

Appendix 4: WACA members and attendance 2016/2017

Member	08/08/2016	28/11/2016	28/02/2017	22/05/2017
Ms Anna Allmann	×	d×	—	—
Mr Cale Padgett *(Executive officer)*	—	—	—	✓
Dr Clare Italiano	a✓	✓	✓	✓ VC
Dr Duncan McClellan	×	×	g×	—
Mr Jason Seet	—	e×	×	×
Dr John Dyer	b ×	—	—	—
Ms Kathy Irwin *(Executive officer)*	✓	✓	✓	✓
Ms Kerry Fitzsimons	✓	✓	✓	i×
Ms Lesley Gregory *(Executive officer)*	✓	✓	×	✓
Mr Matt Rawlins	✓ VC	✓ VC	h✓	✓
Dr Michelle Porter	×	×	×	×
Dr Naru Pal	c×	—	—	—
Dr Owen Robinson(*Chair*)	✓	✓	✓	✓
Dr Paul Ingram	✓ VC	✓ VC	✓ VC	✓ VC
Dr Ravi Krishnamurthy	—	f×	×	×
Ms Rebecca McCann	×	✓ VC	×	✓
Dr Ronan Murray	✓	✓	×	×
Dr Sue Benson	—	—	—	j×
Ms Tamara Lebedevs	×	×	✓	✓ VC & TC
Dr Tom Snelling	✓ VC	✓ VC	✓ VC	×
Ms Zoy Goff	✓	✓	—	—
In attendance	1	2	3	4

a. Dr Clare Italiano became a member
b. Dr John Dyer resigned due to work commitments and will remain a corresponding member
c. Dr Naru Pal resigned due to work commitments
d. Ms Anna Allmann resigned and nominated to become a corresponding member
e. Mr Jason Seet accepted the nomination to become a member
f. Dr Ravi Krishnamurthy accepted the nomination to become a member
g. Dr Duncan McClellan resigned
h. Mr Matt Rawlins resigned
i. Ms Kerry Fitzsimons resigned due to workload, but will remain a corresponding member.
j. Dr Sue Benson accepted nomination to be a member

1. Ms Tamara Lebedevs was a proxy for Ms Michelle Porter
2. Ms Tamara Lebedevs was a proxy for Ms Michelle Porter. Guests Dr Andrew Jamison, Dr Katherine Templeman, Dr Peter Barratt, Dr Kelvin Billinghurst, Ms Ann Whitfield.
3. Ms Tamara Lebedevs was a proxy for Ms Michelle Porter, Mr Geoff Ham was proxy for Ms Zoy Goff
4. Ms Tamara Lebedevs was a proxy for Ms Michelle Porter, Mr Geoff Ham was proxy for Ms Zoy Goff
5. Ms Tamara Lebedevs was a proxy for Ms Michelle Porter

Appendix 5: WADEP members and attendance 2016/2017

Member	21/07/16	25/08/16	13/10/16	01/12/16	02/02/17	23/03/17	27/04/17	08/06/17
Mr Richard Wojnar-Horton (Chair)	×	c×	-	-	-	-	-	-
Mr Peter Smart *(Chair)*	✓	✓	✓	g✓	✓	✓	✓	✓
Dr Jason Armstrong	×	×	×	✓	×	×	×	×
Mr Roy Finnigan	-	-	-	-	-	j✓	✓	✓
Ms Helena Halton	✓	×	×	h×	-	-	-	-
Mr Scott Jones	-	-	-	-	-	j✓	×	✓
Dr Audrey Koay	a	✓	×	×	×	✓	×	×
Mr Cale Padgett	-	-	-	-	-	j✓	✓	n✓
Dr Gavin Coppinger	b×	-	-	-	-	-	-	-
Dr Ian Li	×	✓	✓	×	×	✓	✓	×
Dr Alison MacLean	✓	✓	×	✓	×	×	I×	-
Dr Andrew McLean-Tooke	✓	✓	×	✓	×	✓	×	✓
Mr Mitch Messer	×	✓	✓	✓	✓	✓	✓	×
Dr David Ransom	✓	✓	✓	×	✓	×	✓	✓
Ms Elizabeth Rohwedder	✓	✓	✓	✓	×	✓	×	×
Prof Chris Etherton-Beer	-	-	e,f✓	✓	✓	×	×	✓
Prof Johan Rosman	×	×	×	×	×	×	×	o×
Ms Ann Berwick	-	-	-	-	-	j✓	✓	✓
Mr Ben Ware	-	-	-	-	-	-	-	p✓
Rotational PMH Representative	-	d-	×	×	i✓	k✓	m✓	×
Ms Rebecca Godfrey *(Executive Officer)*	✓	✓	✓	✓	✓	✓	✓	n-
In attendance	-	-	1	2	3	4	5	6

a. Dr Audrey Koay was acting Chair
b. Dr Gavin Coppinger resigned from WADEP
c. Mr Richard Wojnar–Horton resigned as chair and from WADEP
d. Rotational PMH representative position created
e. Position created for WATAG Chair
f. Prof Chris Etherton-Beer was acting Chair
g. Mr Peter Smart was elected in as Chair
h. Ms Helena Halton Resigned from WADEP
i. Mr Jasper Jensen was the PMH Representative

j. First meeting for Mr Cale Padgett, Ms Ann Berwick, Mr Scott Jones and Mr Roy Finnigan
k. Mr Jonathan Nugent was the PMH Representative
l. Dr Alison MacLean resigned from WADEP
m. Mr Jonathan Nugent was the PMH Representative
n. Ms Rebecca Godfrey went on maternity leave, Mr Cale Padgett's membership was put on hold as he covered during Rebecca Godfrey's leave as the secretariat
o. Professor Johan Rosman resigned from WADEP
p. First meeting for Mr Ben Ware who will replace Cale Padgett while he acts as the secretariat

1. Mr Cale Padgett, Mr Dominic Goodwin, Ms Lesley Gregory
2. Mr Zach Nizich, Mr Dominic Goodwin, Ms Lesley Gregory
3. Mr Cale Padgett and Mr Dominic Goodwin were co-opted in. Ms Lesley Gregory also in attendance
4. Mr Dominic Goodwin, Ms Lesley Gregory
5. Mr Dominic Goodwin, Ms Lesley Gregory
6. Mr Dominic Goodwin, Ms Lesley Gregory