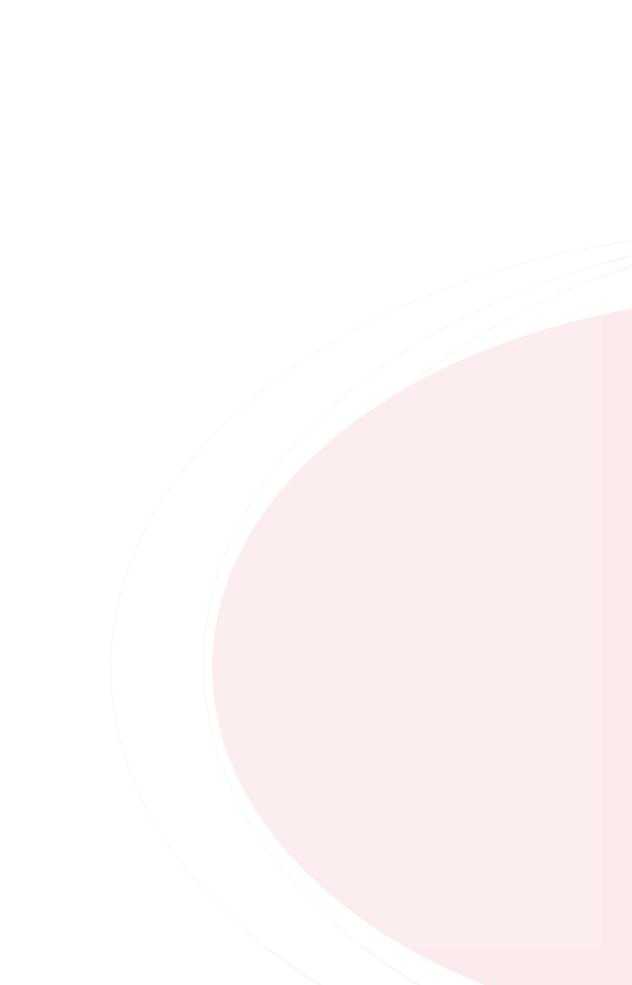
## MELBOURNE SEXUAL HEALTH CENTRE ANNUAL REPORT 2019





# CONTENT

05	Overview
09	Directors report
11	Services and consultations
19	Research
25	Publications
34	Staff

Melbourne Sexual Health Centre (MSHC) is a service within Alfred Health. The vision of the MSHC is to be a leader in the management and prevention of Sexually Transmitted Infections (STIs) and its mission is to maximize sexual health through innovation and excellence in public health, education, clinical care and research.



The MSHC has been in operation since 1918 as a specialised unit for the diagnosis and treatment of sexually transmissible infections (STIs). It is the only centre that provides full-time, free sexual health services to the people of Victoria. The Centre became part of Alfred Health in 2003. The services provided by MSHC include general clinics for the management of STIs and HIV and a variety of specialist clinics. The service provided is predominantly walk in led by nurse triage service that focuses on high risk individuals with some appointments.

#### Special services provided by MSHC include:

- Medical care and community welfare support for people living with HIV
- Dermatology clinic for specialist dermatological management of genital skin disorders and dermatological conditions in HIV positive and negative clients
- Counselling services with qualified counsellors that are available for individuals or couples with concerns about sexual health and STIs, including HIV
- STI testing through a website and/or telephone consultations for young people under 25 years, men who have sex with men (MSM) and Aboriginal or Torres Strait Islanders of any age living more than 100km from Melbourne augmented by self collected specimens and postal treatment
- Express testing service for MSM, Test and Go service (TAG)
- HIV Integrated Prevention clinic (HIP)
- Nursing service for Access Health (Salvation Army) in St Kilda that provides services for marginalised people in the community. Funding by the Drug and Alcohol section of the Department of Health has been provided for 5 hours of sexual health nursing services/week.
- On-site pharmacy provided by Alfred Health
- On-site laboratory service provided by the Public Health Laboratory Microbiology Diagnostic Unit (PHL-MDU), University of Melbourne which provides assistance to clinicians to make same day diagnoses and treatment

The team of health care providers at MSHC includes 26 doctors, 38 sexual health nurses and 3 counsellors. The clinicians play an instrumental role in screening and testing for STIs and HIV, STI and HIV prevention, education and counselling. The health care team is supported by 15 other staff members in administrative or clerical roles, IT support, pharmacists and medical scientists.

The pharmacy services at MSHC are co-ordinated by Alfred Health pharmacy services. The staff rotate at 6 monthly intervals and cover 4 campuses: The Alfred Hospital, Caulfield and Sandringham Hospitals, and MSHC.

As the population of Victoria grows, so too does the demand for the Centre's services. MSHC has continued to place importance on the provision of services that maximise access for members of the public in most need. This has been achieved through the continued provision of services that are free of charge, have greater flexibility through the use of walk-in triage and additional gains from clinical efficiency. Extra clinical services are provided for men who have sex with men (MSM), who currently constitute a major risk group for STIs in Victoria.

One of MSHC's key roles is to promote public health and education. It aims to provide material that is freely available to both the general public and health care providers, particularly general practitioners (GPs). MSHC provides support to GPs as well as the public through its web based service www.mshc.org. au and free-call telephone service whereby GPs can receive specialist clinical advice directly from a sexual health physician.

The frequently updated MSHC website <u>www.mshc.org.au</u> comprises of information divided into four major sections:

- Clinic information that includes available services recently implemented
- Sexual health for the general public
- Resources for health professionals
- Research and education

There are also interactive online services provided:

#### For the general public:

- ispysti.org/ (iSpy STI) is a symptom checker to help users understand their genital symptoms who may have a sexually transmitted infection
- <u>http://letthemknow.org.au/</u> (Let Them Know) for assisting individuals diagnosed with sexually transmitted infections about informing their partners about their possible risk of infection. The site has numerous tools including examples of conversations, emails, SMS and letters to communicate the information as well as fact sheets
- checkyourrisk.org.au/ (Check\_Your Risk) to check risk of exposure to an STI
- http://testme.org.au/ (TESTme) provides STI testing through telephone consultations for young people under 25 years, men who have sex with men (MSM) and Aboriginal or Torres Strait Islanders of any age living more than 100km from Melbourne augmented by self collected specimens and postal treatment
- mshc.org.au/syphilis/ (Syphilis) for assisting people who may have concerns about having contracted or have been diagnosed with syphilis. The site has detailed information about symptoms and treatment of syphilis, photographs and information on reducing risk and informing partners
- healthmap.org.au/ (Health Map) for HIV positive people to find out what tests are needed and also what issues should be on the agenda at the next visit to the doctor or clinic. Health Map asks questions about health and provides a personal report, based on expert advice. This report directs users to chosen websites for particular needs, and provides some facts and a "to do" list for medical care
- <u>https://wgodt.com.au/</u> ('What's Going On Down There?') information for women about vaginal health, symptoms and information for women who have been diagnosed with BV or thrush

#### For general practitioners:

- Online STI atlas <u>https://stiatlas.org/</u> is a free, open access online atlas showcasing MSHC's extensive library of clinical images aimed at improving diagnoses of STIs for health care providers internationally
- mshc.org.au/gpassist (GP Assist) provides a mechanism to improve partner notification by
  providing the mshc.org.au/GPassist web address on laboratory reports of positive results of
  common STIs. Accessible information about treatment of the more common STIs and simple
  tools such as partner letters and fact sheets for GPs to use in discussing partner notification are
  also available at this site

- <u>https://www.mshc.org.au/images/downloads/stiTool.pdf</u> This Tool has been prepared as an aid for GPs, providing simplified guidelines for STI screening and for dealing with common symptomatic presentations. The PDF file may be downloaded to allow offline access, both desktop and mobile, but please make sure you have the latest version. The Tool is an ongoing project and will be updated frequently.
- Treatment guidelines <u>www.mshc.org.au/health-professionals/treatment-guidelines</u>

Online training and education resources for health care professionals:

• Educational videos (see list Table 1) and audios for management of common sexual health issues such as treating genital warts and diagnosing PID, taking a Papanicolaou smear, symptoms of acute HIV, and examples of partner notification explanations to clients <a href="http://www.mshc.org.au/Education">www.mshc.org.au/Education</a>

#### Table 1 List of educational videos for health professionals

1. MSHC Orientation	A brief description about what happens at Melbourne Sexual Health Centre		
2. Chlamydia - introducing the test	How to introduce the recommended annual chlamydia test in a non sexual health consultation		
3. Chlamydia in general practice	Who, Where, When and Why An update on a previously recorded - chlamydia testing video		
4. Sexual health check up	Sexual health checkups for asymptomatic patients		
5. PID	Pelvic inflammatory disease - diagnosis and management		
6. Partner notification	Assisting patients to contact their partners		
7. Warts removal	Treating warts by cryocautery		
8. Warts treatment	Wart treatment		
9. Laboratory diagnosis of STIs	Laboratory diagnosis of sexually transmitted infections		
10. Sexual health examination	Sexual Health Examination and Normal Variants		
11. HSV	Genital herpes		
12. Cervical sampling	A clinicians guide for VCS pathology		

#### Table 2 List of educational audio presentations for health professionals

Topics
Adolescent Sexual Health
Genital Chlamydia
Management of Vulvar Pain
Pap Smear Terminology
Sex Worker Screening
Type-Specific Herpes Serology
MSM Screening

The Centre also fulfills an important role as a principal centre for the training of health professionals in Victoria through Dr Hennie Williams at Melbourne University. This year 22 nurses attended and successfully completed an assessed introductory course on sexual and reproductive health to become HIV and BBV test advisors and cervical screening practitioners.

The teaching and sexual health courses remain with The University of Melbourne.

MSHC places a premium on the provision of high quality services that are responsive to client needs. To this end, the Centre is active in quality assurance activities, which include an annual client satisfaction survey, where 97% of clients in 2018 expressed satisfaction with the service.

### **DIRECTOR'S REPORT 2019**

Welcome to our 2019 annual report. This year we provided more consultations (57,110) to the public we serve than we have ever provided thanks to our fabulous staff. We maintained our 97% client satisfaction rating but unfortunately we often had to refer clients to other services or ask them to return on another day. The building was so crowded at times leaving standing room only in the waiting area. This unprecedented demand for our services meant that for the first time, we have had to make changes not primarily driven by our desire to improve public health but driven by a service that couldn't provide an entirely walk-in service.

So in December this year we introduced a new system called "Time to test". This service aimed to reduce the number of clients in the building at any one time, occurring because of the very long time individuals had to wait to be seen. We did this by providing walk in access and priority for anyone who was urgent (e.g. someone with symptoms or who required post-exposure prophylaxis for HIV). For other high risk individuals without symptoms we provided an appointment for screening with a specific time in the next 24 hours. We provided the screening appointments through a new phone triage system that again reduced the actual number of individuals in the Centre at any one time. Ria Fortune worked with Jo Eccles , Chantal Maloney, Lisa Kennedy, Claire Randall, Anthony Snow and Rebecca Wigan in the planning and implementation of this new system. Implementation went very smoothly indeed and achieved it aims. Eric Chow will be leading the evaluation of this program to ensure something we implemented to 'manage' the impossible demand did not adversely affect our key role to maintain downward pressure on STI rates in Victoria. To further increase our efficiency and throughput, we stopped examining sex workers which significantly reduced the time required to provide clinical services to this group.

We have said goodbye to a lot of very good people this year. Tim Read was elected to the lower house in the Victorian Government, Robin Tideman moved to Adelaide to live, Nick Medland moved to the UK with his partner and Vincent Cornelisse moved to Sydney. All obtained their PhD's during their time here and contributed immensely to our profile and will be greatly missed. Marti Kaiser left for a role in another organisation, and Jordan Wotton moved across to the Alfred site to undertake his graduate year in nursing. Many wonderful staff have stayed and we welcomed many other new and inspiring individuals to our team.

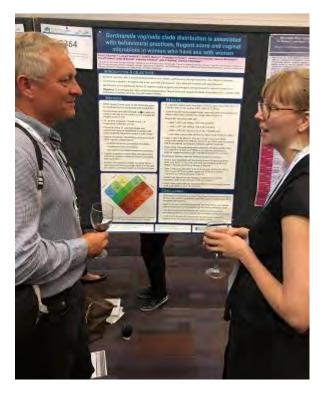
It has been an extraordinary year for research in so many ways. Three of us received three NHMRC investigator grants and one ARC grant that will provide the Centre with nearly two million dollars of research funding each year. Congratulations to Catriona Bradshaw, Jade Bilardi and Eric Chow. These grants were highly competitive and the chance of being successful in all four applications was well under 1 in 1,000 All that hard work, long hours and weekends of work has paid of brilliantly. Eric Chow was the top ranked applicant in Australia in the Emerging Leadership category.

We performed outstandingly at the 2019 ISSTDR conference in Vancouver. This meeting is held every two years and is the most prestigious STI meeting in the world. This year we had more abstracts and symposia than any other research group in the world including a plenary debate. Congratulations to Erica Plummer who won the best iPoster presentation. We are now collectively known as the 'Melbourne Group' together with our collaborators from The University of Melbourne. A long way from a solitary oral presentation at the ISSTDR meeting in Ottawa in 2003. We have come a very long way indeed.

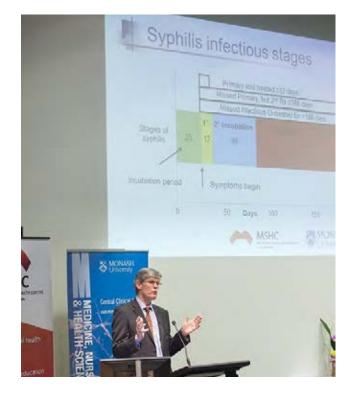
We also formed an important research collaboration called the 'China-Australia Joint Research Centre for Infectious Diseases' which is a collaboration between Monash University and Jiaotong University lead by

Lei Zhang. Jason Ong and Jane Hocking went to meet Lei Zhang in Xi'an and we signed an MOU with Monash and Jiaotong University. Our role will to provide methodology advice on research to address their rising rates of HIV and STIs.

Lastly I'd like to thank our outstanding team. The clinical load that our Centre and staff have faced this year has been quite extraordinary. But as always each and every one of them has done a truly outstanding job in providing the Victorian public with one of the best STI services in the world.



*Erica Plummer winner of the best iPoster presentation at the ISSDTR conference in Vanvcouver* 



Public lecture on Thursday 17<sup>th</sup> October 2019 when Professor Kit Fairley presented the 2019 Central Clinical School Public Lecture on "Whose Fault is It That Bob Got Syphilis"



It was an interesting night filled with a controversial presentation filled with facts and figures and also nice to meet new people and bump into old work colleagues, friends and family.

### SERVICES AND CONSULTATIONS

The numbers of consultations by type of service provided onsite are shown in Table 3. A further 326 outreach consultations were carried out offsite at various venues for men-who-have-sex-with-men (MSM) and Access Health services for marginalized people.

#### Table 3

Clinic Type	Total	Male	Female	Transgender
General Clinic	52,454	34,620	17,290	544
HIV Clinic	3,749	3,338	381	30
Counselling	907	661	243	3
Total	57,110	38,619	17,914	577
Individuals	29,257	18,530	10,464	263

#### Diagnoses

The numbers of the most frequently made diagnoses in consultations are shown in Table 4.

Gonococcal and chlamydial infections included are individuals with a newly diagnosed infection and may have more than one site of infection. Those returning with a new infection following successful treatment are included as a new diagnosis.

#### Table 4

Diagnoses	Total
Chlamydia trachomatis	3,644
Neisseria gonorrhoeae	2,352
Non gonococcal urethritis (NGU)	2,201
Herpes	1,274
Infectious syphilis	464
Bacterial vaginosis	1,332
Warts	1,402
HIV new cases	70
PID	310
Mycoplasma genitalium	551

Lymphogranuloma venereum	15
HIV PEP	1,279
PCI	38
Gonorrhoea in women	182
Trichomoniasis in women	44
Infectious syphilis in women	11

The numbers of consultations continue to rise with the number of individuals steadily increasing (Figure 1). In 2015, there were 42,466 consultations in total; 46,564 in 2016, 49,370 in 2017, 55,862 in 2018 and 57,110 in 2019. There was a marginal decrease in consultations in the General Clinic from 36,528 in 2012 to 35,072 in 2013 and in 2014 35,836. Since 2015, consultations in the General Clinic have risen from 37,859 to 52,454 in 2019 (Table 3). The number of returning clients remained at approximately the same level from 2013 (19,410 to 19,851 in 2015) after a significant reduction in returning clients in 2012 as a result of changes to sexworker health checks from monthly to 3 monthly in October 2012 and the change in policy of HIV negative results for all clients being provided by telephone consultations from the beginning of 2013. Since 2016, there has been a significant increase in returning clients (22,422 to 28,614 in 2018 and 27,853 in 2019). This may be the result of the introduction of the Test and Go (TAG) and HIV Integrated (HIP) services.

### 60,000 50,000 40,000 30,000 20,000 10,000 0 20,000 10,000 0 2006 2008 2010 2012 2018 2016 2018

#### Figure 1 Increasing numbers of clients each year

The numbers of positive chlamydia and gonorrhea tests have also increased (Figure 2 and 3) as well as the number of infectious syphilis cases (Figure 4).

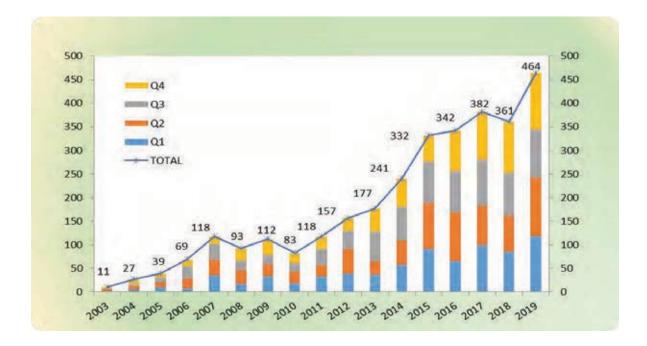
#### Figure 2 Number of positive chlamydia tests by year



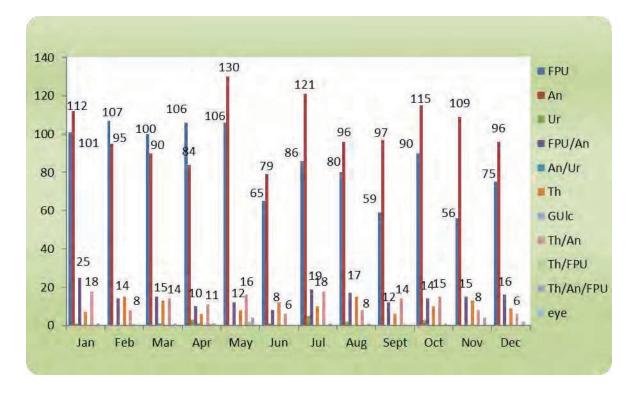
#### Figure 3 Number of positive gonorrhoea tests by year



13

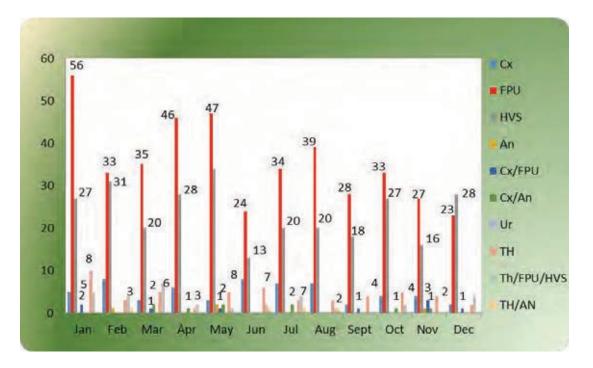


#### Figure 5 Sites of chlamydia infections among 2,736 males in 2019



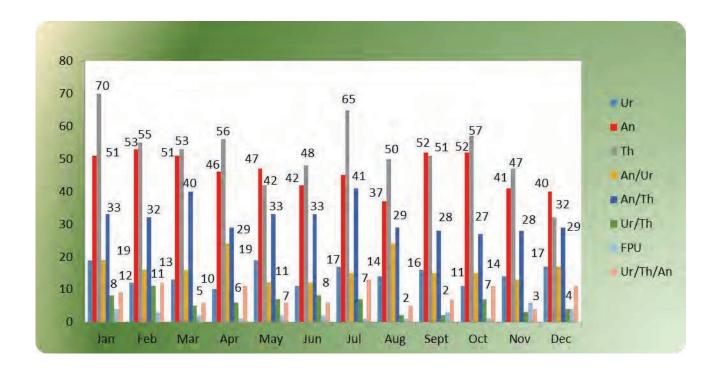
List of abbreviations: FPU – first pass urine; An – anal; Ur – urethral, Th – throat, GUlc – genital ulcer

#### Figure 6 Sites of chlamydia infections among 875 females in 2019



#### *List of abbreviations: Cx – cervical; HVS – high vaginal*

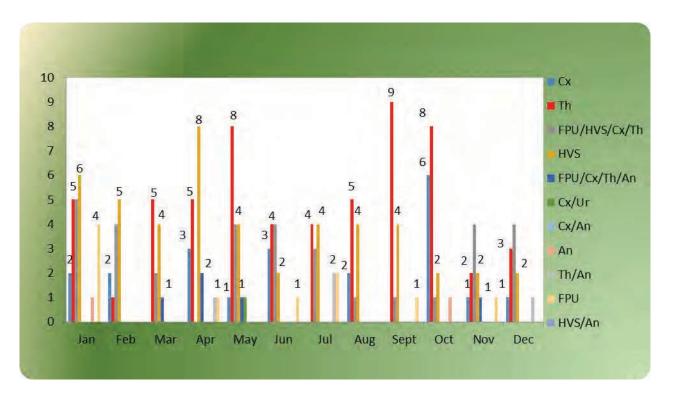
Chlamydia trachomatis remains the most common bacterial STI diagnosed at MSHC. The number of chlamydia infections by sex and site are shown in Figure 4 and 5). The majority of gonococcal infections occur in MSM.



#### Figure 7 Sites of gonococcal infections among 2,137 males in 2019

List of abbreviations: FPU – first pass urine; An – anal; Ur – urethral, Th – throat

#### Figure 8 Sites of gonococcal infections among 182 females in 2019



*List of abbreviations: Cx – cervical; HVS – high vaginal* 

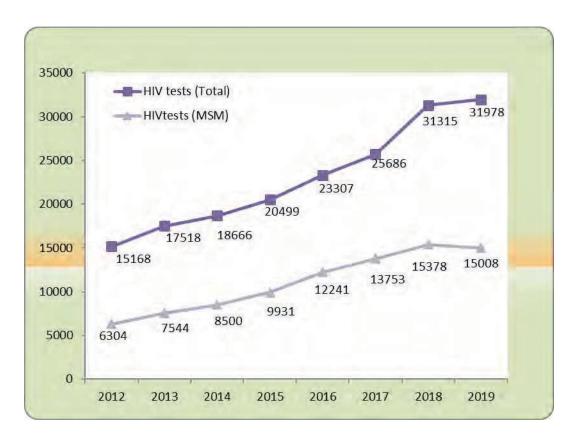
#### Table 5Number of HIV and Syphilis tests provided by year

Year	HIV tests (Total)	HIV tests (in MSM)	Syphilis (Total )	Syphilis (in MSM)
2012	15168	6304	18129	8176
2013	17518	7544	20580	9489
2014	18666	8500	21881	10674
2015	20499	9931	23630	12199
2016	23307	12241	26443	14549
2017	25686	13753	29161	16332
2018	31315	15378	35245	18024
2019	31978	15008	36350	18043

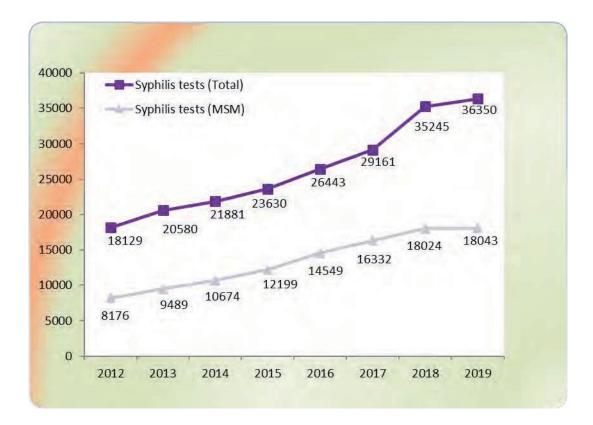
MSM= men who have sex with men

The numbers of HIV and syphilis tests over time has doubled since 2012 to 2019 (Table 5; Figures 9 and 10)

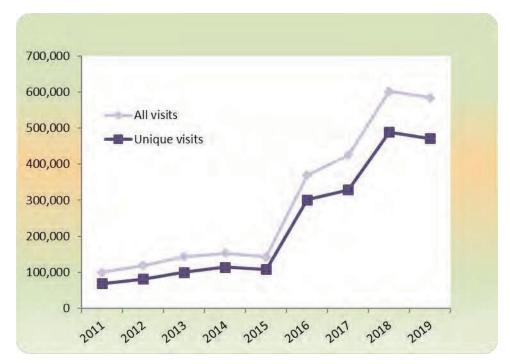
#### Figure 9 Numbers of HIV tests taken over time



#### Figure 10 Numbers of Syphilis tests taken over time



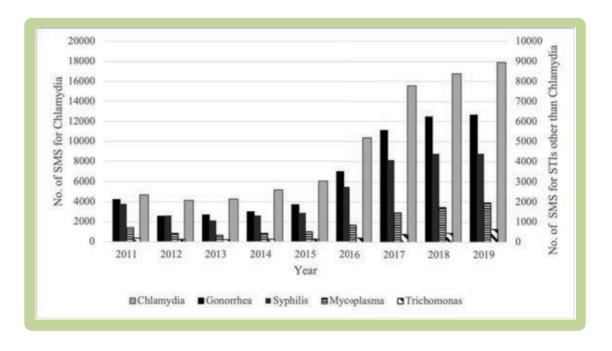
#### Figure 11 Estimated usage of MSHC website from 2011 - 2019



Note Google Analytics changed their search algorithm in June 2019 resulting in an ~25% reduction in users compared to the same time last year

Use of the MSHC website has steadily increased over time. In 2011 there were 100,125 visits in total and 68,991 unique visits. In 2015 a new website was launched and subsequently visits increased substantially

### Figure 12 Number of text messages sent from Let Them Know for chlamydia, gonorrhoea, syphilis, Mycoplasma genitalium and trichomonas, 2011 to 2019.



### RESEARCH

The Centre has continued to maintain strong research and education activities through the Central Clinical School, Monash University and The Sexual Health Unit of the School of Population Health, University of Melbourne

#### Postgraduate Research

#### Completed:

The changing course of the HIV epidemic: implications form the rapid scale-up of antiretroviral therapy and the emerge of synthetic drug use in China. **Shu Su**, PhD, Monash University

#### In progress:

Sexually transmitted infections (STIs) in HIV-infected patients in the Australian HIV Observational Database (AHOD), Brian Mulhall, PhD, The University of New South Wales

*Epidemic syphilis in Victoria 2015: Strategies to improve prevention, early detection and treatment,* **Janet Towns**, PhD, Monash University

RTS: Rectal Treatment Study - comparing single dose 1g azithromycin to 500mg doxycycline twice daily for 7 days as treatment for rectal chlamydia in men who have sex with men (MSM). Andrew Lau, PhD, The University of Melbourne

*Mycoplasma genitalium to genital symptoms in women and MSM*. **Rosie Latimer**, PhD, Monash University

Using metagenomic techniques to investigate the influence of hormonal contraception on the vaginal microbiota and to determine the cause of non-gonococcal urethritis. Larissa Ratten, PhD, Monash University

Understanding the pathogenesis of bacterial vaginosis. Erica Plummer, PhD, Monash University

Novel approaches to treatment and testing of sexually transmitted infections. Chloe Durukan, PhD, Monash University

Applications of artificial intelligence on disease prevention in public health. Eric Xu, PhD, Monash University

Understanding the transmission of sexually transmitted infections and evaluation of control approach. **Ei Aung**, PhD, Monash University

#### Completed research projects as part of MPH

Eligible sub-Saharan African communities and the human papillomavirus (HPV) vaccine: an exploration of attitudes, knowledge, motivators and barriers to HPV vaccination in Victoria: a research protocol. Neihad Abdulwadud, The University of Melbourne

#### **Completed Bachelor of Medical Science (Hons)**

*HIV, STIs and sexual behaviours in male sex workers* **Evelyn Turek**, Monash University

#### **Medical Student Projects**

*Preferences for HIV/STI services among priority populations: a systematic review.* Joscelyn Gan, The University of Melbourne

Lifetime cost of managing HIV: a global systematic review. An Huynh, Monash University

Usability of HIV self-testing kits among Australian gay, bisexual and other men who have sex with men. Dana Lee, Monash University

Healthcare access among Medicare-eligible and Medicare-ineligible patients at MSHC, Monash University. Anysha Walia, Monash University

#### **Prizes and awards**

- Catriona Bradshaw in collaboration with Metrodora Therapeutics and The Royal Women's Hospital were awarded a Victorian Medical Research Acceleration Fund Grant (Tier 2) to evaluate pharmaceutical-grade bovine lactoferrin in women with bacterial vaginosis.
- Vincent Cornelisse received the 2019 Victorian Premier's Award for Health and Medical Research in the public health category 1/04/2019 in recognition of his research involvement at MSHC and in PrEPX.
- Catriona Bradshaw is part of one of 10 grants awarded to Burnet, MSHC, Swinburne, Deakin and FP NSW as part of the Medical Research Future Fund (MRFF) Frontiers initiative, for the EVE-M project. The EVE-M — Enhancing the Vaginal Environment and Microbiome—Initiative is headed by Professor Gilda Tachedjian of the Burnet Institute. The EVE-M initiative will develop and commercialise a series of pioneering technologies to improve women's sexual and reproductive health
- Associate Professor Eric Chow has received the 2019 UNSW Young Alumni Award. The Young Alumni Award acknowledges the most accomplished UNSW Sydney Alumni under 35 years across 13 categories spanning science and technology to arts and services to the community.



- National Health and Medical Research Council (NHMRC) Investigator grants were received by: Kit Fairley for optimising the control and management of sexually transmitted infections through research and innovation. Catriona Bradshaw for innovative approaches to improving treatment and control of *Mycoplasma genitalium* and bacterial vaginosis. Eric Chow for a multidisciplinary approach to understanding the transmission dynamics and control of sexually transmitted infections
- 2019 NHMRC Peter Doherty Investigator Grant Award (Emerging Leadership) was received by Eric Chow
- Anthony Snow and David Lee (Nurse Practitioners) were nominated for an Alfred Excellence Award in the Education Category
- Suzanne Amisano was nominated for an Alfred Excellence Award
- Rosie Latimer and Erica Chow received prizes for their excellent presentations and research at the Central Clinical School, Monash University translational research symposium
- Jade Bilardi was successful in the very highly competitive Australian Research Council 'Decra' grants (stands for Discovery Early Career Research Award)
- Erica Plummer Plummer's iposter presentation on the association between subtypes of Gardnerella vaginalis and bacterial vaginosis and sexual behaviour won first prize in the young investigator category in Vancouver at the 2019 STI World Congress

### **Publication highlights**

- Study:Combined oral contraceptive pill-exposure alone does not reduce the risk of bacterial<br/>vaginosis recurrence in a pilot randomised controlled trial
- **Researchers:** Vodstrcil LA, Plummer E, Fairley CK, Tachedjian G, Law MG, Hocking JS, Worthington K, Grant M, Okoko N, Bradshaw CS

Publication: Scientific Reports 2019; 9(1):3555. doi:10.1038/s41598-019-39879-8

- Summary: A study looked at whether using a hormonal contraceptive pill could lower the risk of getting bacterial vaginosis (BV). Ninety-five women with symptoms of BV were prescribed antibiotics together with an oral contraceptive pill or a non-hormonal contraceptive. The women were followed up every month for six-months or until their BV returned. The hormonal contraceptive pill did not improve a cure of BV but found returning BV was found more often in women with an ongoing untreated regular sexual partner and had a previous history of BV.
- Study:Incidence, clearance, and persistence of anal human papillomavirus in men who have<br/>sex with men living with human immunodeficiency virus: implications for human<br/>papillomavirus vaccination
- Researchers:Ong JJ, Walker S, Grulich A, Hoy J, Read TRH, Bradshaw CS, Chen MY, Garland SM,<br/>Cornall A, Hillman R, Templeton DJ, Hocking J, Eu B, Tee BK, Chow EPF, Fairley CK
- Summary: Men who have sex with men living with human immunodeficiency virus have a high risk of getting anal cancer. Anal swabs at their first visit and at their 2 year follow up visit were tested for anal HPV and if found the HPV was typed. Of 255 men, 74% had at least 1 HPV type at their first visit, and 55% had at least 1 high risk to cancer HPV type. Of the men who had any type of anal HPV, most had multiple HPV types at their first visit. After 2 years of follow-up, 58% had at least 1 high-risk HPV type and 28% had 2 high risk HPV types. If vaccination was received at the first visit, we assume that HPV-negative men would receive vaccine protection, and this could prevent high risk type HPV infection.

Study:Association of HIV preexposure prophylaxis with incidence of sexually transmitted<br/>infections among individuals at high risk of HIV infection

Researchers: Traeger MW, Cornelisse VJ, Asselin J, Price B, Roth NJ, Willcox J, Tee BK, Fairley CK, Chang CC, Armishaw J, Vujovic O, Penn M, Cundil P, Forgan-Smith G. Gall J, Pickett C, Lal L, Mak A, Spelman TD, Nguyen L, Murphy DA, Ryan KE, El-Hayek C, West M, Ruth M, Batrouney C, Lockwood JT, Hoy JF, Hellard ME, Stoové MA, Wright EJ

Publication: JAMA 2019; 321(14): 1380-1390. doi:10.1001/jama.2019.2947

Summary:A study of mostly gay and bisexual men who received daily HIV pre-exposure prophylaxis<br/>(PrEP) to reduce being infected with HIV found that a small group of 25% were more<br/>likely to have STIs. The results found that there was an increase in STIs in some after<br/>taking PrEP compared to before taking PrEP. These findings highlight the importance<br/>of frequent STI testing among gay and bisexual men using PrEP.

Study:Co-circulation of multidrug-resistant Shigella among men who have sex with men,<br/>AustraliaResearchers:Ingle DJ, Easton M, Seemann T, Kwong JC, Stephens N, Carter GP, Da Silva AG,<br/>Adamopoulos J, Baines SL, Holt KE, Chow EPF, Fairley CK, Chen MY, Kirk M, Howden

Publication: Clinical Infectious Diseases 2019 doi:10.1093/cid/ciz005

BP, Williamson DA

Summary: In urban Australia, infection with Shigella bacteria is usually found in returning travelers from regions where Shigella are often found or in men who have sex with men (MSM). We describe data on sexual exposure and travel and the spread of multidrug-resistant Shigella. All positive laboratory tested Shigella in Victoria, Australia were included from 1 January 2016 through 31 March 2018. The study found that multidrug -resistant Shigella bacteria acquired in Victoria or by international travel are also found across many continents and are often found in MSM. The data highlights the ongoing public health threat posed by multidrug-resistant Shigella bacteria, both in Australia and globally.

Study:Kissing may be an important and neglected risk factor for oropharyngeal gonorrhoea:<br/>a cross-section study in men who have sex with men

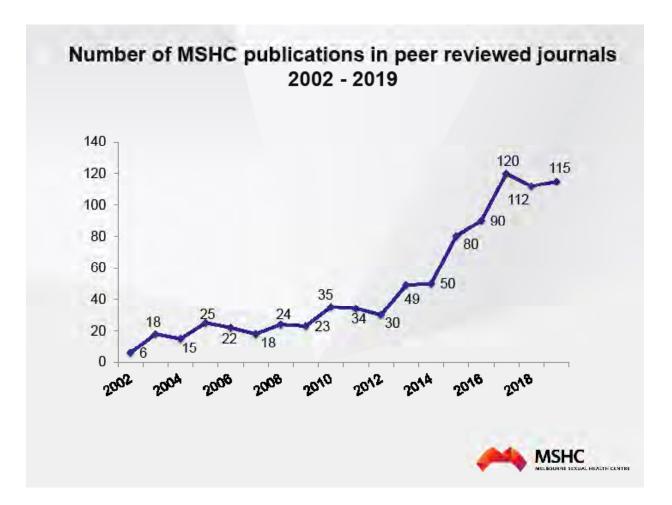
**Researchers:** Chow EPF, Cornelisse VJ, Williamson DA, Priest D, Hocking JS, Bradshaw CS, Read TRH, Chen MY, Howden BP, Fairley CK

Publication: Sexually Transmitted Infections 2019; 0:1–6. doi:10.1136/sextrans-2018-053896

Summary: Men who have sex with men (MSM) attending a public sexual health centre in Melbourne, Australia, between March 2016 and February 2017 were invited to participate in a brief survey that linked data on their number of male partners in the last 3 months to if they only kissed their partner(s)(ie, no sex including no oral and/or anal sex), or if they only had sex (ie, any sex without kissing), and if they kissed during sex (ie, kissing with any sex). A total of 3677 men completed the survey and 6% had oropharyngeal gonorrhoea. Kissing-only and kissing-with-sex was shown to contribute to the spread of oropharyngeal gonorrhoea, but sex-only did not. The link was higher in MSM with 4 partners or more. These data suggest that kissing may contribute to the spread of oropharyngeal gonorrhoea in MSM, irrespective of whether sex also occurs.

#### Figure 13 Number of publications over time

The number of publications in peer reviewed journals steadily increased from 6 in 2002 to 30 in 2012, and then significant increases were achieved from 49 in 2013 to 120 in 2017, and 115 in 2019.



### PUBLICATIONS

- Goddard SL, Templeton DJ, Petoumenos K, Jin F, Hillman RJ, Law C, Roberts JM, Fairley CK, Garland SM, Grulich AE, Poynten IM, on behalf of the Study for the Prevention of Anal Cancer (SPANC). Association of anal symptoms with anal high grade squamous intraepithelial lesions (HSIL) among men who have sex with men: Baseline data from the study of the prevention of anal cancer (SPANC) Research Team. *Cancer Epidemiology 2019; 58 :12-16 doi: 10.1016/j.canep.2018.10.009*
- 2. Cleere EF, Fairley CK, McGrath L, Bradshaw C, Chen MY, Chow EPF. Sex with a transgender or gender diverse person among patients attending a sexual health centre in Melbourne, Australia. *Sexually Transmitted Infections 2019; 95(1): 46-52 doi:10.1136/sextrans-2018-053653*
- 3. Su S, Fairley CK, Mao, Medland NA, Jing J, Cheng F, Zhang L. Estimates of the national trend of drugs use during 2000-2030 in China: a population-based mathematical model. *Addictive Behaviors* 2019; 93: 65-71 doi: 10.1016/j.addbeh.2019.01.022
- Read TRH, Fairley CK, Murray GL, Jensen JS, Danielewski J, Worthington K, Doyle M, Mokany E, Tan L, Chow EPF, Garland SM, Bradshaw CS. Outcomes of resistance-guided sequential treatment of Mycoplasma genitalium infections: a prospective evaluation. *Clinical Infectious Diseases.* 2019; 68(4):554-560 doi.org/10.1093/cid/ciy477
- Gilbert M, Thomson K, Salway T, Haag D, Grennan T, Fairley CK, Buchner C, Kraider M, Kendall P, Shoveller J, Ogilvie G. Differences in experiences of barriers to STI testing between clients of the internet-based diagnostic testing service GetCheckedOnline.com and an STI clinic in Vancouver, Canada. Sexually Transmitted Infections 2019; 95(2): 151-156 doi: 10.1136/sextrans-2017-053325
- Vodstrcil LA, Plummer E, Fairley CK, Tachedjian G, Law MG, Hocking JS, Worthington K, Grant M, Okoko N, Bradshaw CS. Combined oral contraceptive pill-exposure alone does not reduce the risk of bacterial vaginosis recurrence in a pilot randomised controlled trial. *Scientific Reports 2019; 9(1):3555 doi:10.1038/s41598-19-39879-8*
- 7. Ong JJ, Walker S, Grulich A, Hoy J, Read TRH, Bradshaw CS, Chen MY, Garland SM, Cornall A, Hillman R, Templeton DJ, Hocking J, Eu B, Tee BK, Chow EPF, Fairley CK. Incidence, clearance, and persistence of anal Human Papillomavirus in men who have sex with men living with Human Immunodeficiency Virus: Implications for human papillomavirus vaccination. *Sexually Transmitted Diseases 2019; 46(4):229-233 doi: 10.1097/OLQ.000000000000958*
- McManus H, Callander D, Donovan B, Russell D, O'Connor CC, Davies SC, Lewis DA, Hellard ME, Chen MY, Petoumenos K, Varma R, Cogle A, Boyd MA, Grulich AE, Pollard JD, Medland N, Fairley CK, Guy RJ. Early initiation of antiretroviral therapy for people newly diagnosed with HIV infection in Australia: trends and predictors, 2004–2015. *Medical Journal of Australia 2019; 210(6): 269-275 doi:* 10.5694/mja2.50006
- 9. Cornelisse VJ, Wright EJ, Fairley CK, McGuinness SL. Sexual safety and HIV prevention in travel medicine: practical considerations and new approaches. *Travel Medicine and Infectious Disease* 2019; 28: 68-73 doi: 10.1016/j.tmaid.2018.12.006
- Traeger MW, Cornelisse VJ, Asselin J, Price B, Roth NJ, Willcox J, Tee BK, Fairley CK, Chang CC, Armishaw J, Vujovic O, Penn M, Cundil P, Forgan-Smith G. Gall J, Pickett C, Lal L, Mak A, Spelman TD, Nguyen L, Murphy DA, Ryan KE, El-Hayek C, West M, Ruth M, Batrouney C, Lockwood JT, Hoy JF, Hellard ME, Stoové MA, Wright EJ. Association of HIV preexposure prophylaxis with incidence of sexually transmitted infections among individuals at high risk of HIV infection. *JAMA 2019; 321(14):* 1380-1390 doi:10.1001/jama.2019.2947
- McGrath L, Fairley CK, Cleere EF, Bradshaw CS, Chen MY, Chow EPF. Human papillomavirus vaccine uptake among young gay and bisexual men who have sex with men with a time-limited targeted vaccination programme through sexual health clinics in Melbourne in 2017. Sexually Transmitted Infections 2019; 95(3):181-186 doi:10.1136/sextrans-2018-053619

- 12. Salway T, Thomson K, Taylor D, Haag D, Elliot E, Wong T, Fairley CK, Grennan T, Shoveller J, Ogilvie G, Gilbert M. Post-test comparison of HIV test knowledge and changes in sexual risk behaviour between clients accessing HIV testing online versus in-clinic. *Sexually Transmitted Infections 2019;* 95(2):102-107 doi:10.1136/sextrans2018-053652
- 13. Bavinton BR, Prestage G, Jin J, Phanuphak N, Grinsztejn B, Fairley CK, Baker D, Hoy, J, Templeton D, Tee BK, Kelleher A, Grulich AE. Strategies used by gay male HIV serodiscordant couples to reduce the risk of HIV transmission from anal intercourse in three countries. *Journal of the International AIDS Society.* 2019; 22(4): e25277 doi:10.1002/jia2.25277
- Gunaratnam P, Schierhout G, Brands J, Maher L, Bailie R, Ward J, Guy R, Rumbold A, Ryder N, Fairley CK, Donovan B, Moore L, Kaldor J, Bell S. Qualitative perspectives on the sustainability of sexual health continuous quality improvement in clinics serving remote Aboriginal communities in Australia. *BMJ Open 2019; 9(5): e026679 doi:10.1136/bmjopen-2018-026679*
- 15. Latimer RL, Read TRH, Vodstrcil LA, Goller JL, Ong JJ, Fairley CK, Hocking JS, Bradshaw CS. Clinical features and therapeutic response in women meeting criteria for presumptive treatment for pelvic inflammatory disease associated with Mycoplasma genitalium. *Sexually Transmitted Diseases* 2019; 46(2):73-79 doi:10.1097/OLQ.00000000000924
- 16. Durukan DC, Fairley CK, Bradshaw CS, Read TRH, Druce J, Caly L, Catton M, Chow EPF. Increasing proportion of herpes simplex virus type 1 among women and men diagnosed with first episode anogenital herpes: a retrospective observational study over 14 years in Melbourne, Australia. *Sexually Transmitted Infections 2019; 95(4):307-313 doi: 10.1136/sextrans-2018-053830*
- 17. Chow EPF, Grulich AE, Fairley CK. Epidemiology and prevention of sexually transmitted infections in men who have sex with men at risk of HIV. *Lancet HIV 2019; 6(6): e396–405 doi: 10.1016/S2352-3018(19)30043-8*
- 18. Goller JL, Fairley CK, De Livera AM, Chen MY, Bradshaw CS, Chow EPF, Guy R, Hocking JS. Trends in diagnosis of pelvic inflammatory disease in an Australian sexual health clinic, 2012-2016: before and after the clinical audit feedback. *Sexual Health 2019; 16(3): 247-253 doi: 10.1071/SH18119*
- 19. Wilkinson AL, Scott N, Tidhar T, Luong P, El-Hayek C, Wilson DP, Fairley CK, Zhang L, Leslie D, Roth N, Tee BK, Hellard M, Stoové M. Estimating the syphilis epidemic among gay, bisexual and other men who have sex with men in Australia following changes in HIV care and prevention. *Sexual Health* 2019; 16(3): 254-262 doi: 10.1071/SH18215
- 20. Cornelisse VJ, Chow EPF, Bradshaw CS, Williamson DA, Fairley CK. Oropharyngeal gonorrhea in the absence of urogenital gonorrhea in a sexual network of males and females, Australia, 2018. *Emerging Infectious Diseases 2019; 25(7)1373-1376 doi:10.3201/eid2507.181561*
- 21. Medland NA, Chibo D, Chow EPF, Guy RJ, Fairley CK. Is differential access to prevention distorting HIV epidemiology in Australia? *The Lancet HIV 2019; 6(8): e492 doi:10.1016/S2352-3018(19)30225-5*
- Ford BK, Kong M, Ward JS, Hocking JS, Fairley CK, Donovan B, Lorch R, Spark S, Law M, Kaldor J, Guy R. Incomplete recording of Indigenous identification status under-estimates the prevalence of Indigenous population attending Australian general practices: a cross sectional study. *BMC Health Services Research 2019; 19(567) doi:10.1186/s12913-019-4393-6*
- 23. Chow EPF, Fairley CK. The role of saliva in gonorrhoea and chlamydia transmission to extragenital sites among men who have sex with men: new insights into transmission. *Journal of the International AIDS Society 2019; 22(S6): e2535 doi:10.1002/jia2.25354*
- 24. Williamson DA, Chow EPF, Gorrie C, Seemann T, Ingle DJ, Higgins N, Easton M, Taiaroa G, Grad YH, Kwong JC, Fairley CK, Chen MY, Howden BP. Bridging of Neisseria gonorrhoeae lineages across sexual networks in the HIV pre-exposure prophylaxis (PrEP) era. *Nature Communications 2019;* 10(1):3988 doi:10.1038/s41467-019-12053-4
- Williamson DA, Chow EPF, Lee D, Maddaford K, Sait M, Easton M, Ingle D, Wigan R, De Petra V, Howden BP, Fairley CK, Chen MY. Risk factors for asymptomatic enteric pathogen detection among men who have sex with men. *Open Forum Infectious Diseases. 2019; 6(9): ofz326 doi.10.1093/ofid/ofz326*



- 26. Chow EPF, Fairley CK. Use of doxycycline prophylaxis among gay and bisexual men in Melbourne. *The Lancet HIV 2019; 6(9): PE568-569. doi:10.1016/S23523018(19)30186-9*
- 27. Chow EPF, Maddaford K, Trumpour S, Fairley CK. Translating mouthwash use for gonorrhoea prevention into a public health campaign: identifying current knowledge and research gaps. *Sexual Health 2019; 16(5):433-441 doi:10.1071/SH18237*
- 28. Lau A, Kong FYS, Huston W, Chow EPF, Fairley CK, Hocking JS. Factors associated with anorectal Chlamydia trachomatis or Neisseria gonorrhoeae test positivity in women a systematic review and meta-analysis. *Sexually Transmitted Infections* 2019;95(5):361-367 doi: 10.1136/sextrans-2018-053950
- 29. Read TRH, Murray GL, Danielewski J, Fairley CK, Doyle M, Worthington K, Su J, Mokany E, Tan LT, Lee D, Vodstrcil LA, Chow EPF, Garland SM, Chen MY, Bradshaw CS. Symptoms, sites and significance Mycoplasma genitalium in men who have sex with men. *Emerging Infectious Diseases* 2019; 25(4): 719-727 doi:10.3201/eid2504.181258
- 30. Cornelisse VJ, Williamson DA, Zhang L, Chen MY, Bradshaw CS, Hocking J, Hoy J, Howden BP, Chow EPF, Fairley CK. Evidence for a new paradigm of gonorrhoea transmission: Cross-sectional analysis of Neisseria gonorrhoeae infections by anatomic site in both partners in 60 male couples. *Sexually Transmitted Infections. 2019; 95(6): 437-442 doi: 10.1136/sextrans-2018-053803*
- 31. Chow EPF, Williamson DA, Fortune R, Bradshaw CS, Chen MY, Fehler G, De Petra V, Howden BJ, Fairley CK. Prevalence of genital and oropharyngeal chlamydia and gonorrhoea among female sex workers in Melbourne, Australia, 2015-2017: Need for oropharyngeal testing. *Sexually Transmitted Infections 2019; 95(6): 398-401 doi:10.1136/sextrans-2018-053957*
- 32. Chen MY, McNulty A, Avery A, Whiley D, Tabrizi SN, Hardy D, Das AF, Nenninger A, Fairley CK, Hocking JS, Bradshaw CS, Donovan B, Howden BP, Oldach D. Solithromycin versus ceftriaxone plus azithromycin for the treatment of uncomplicated genital gonorrhoea (SOLITAIRE-U): a randomised phase 3 non-inferiority trial. The Lancet Infectious Diseases 2019; 19(8):833-842 doi: 10.1016/S1473-3099(19)30116-1
- 33. Drolet M, Bénard E, Pérez N, Boily MC, Ali A, Baldo V, Brotherton JML. Callander D, Checchi M, Chow EPF, Cocchio S, Dalianis T, Deeks S, Dehlendorff C, Donovan D, Fairley CK, Flagg EW, Gargano JW, Grün N, Hansen BT, Harrison C, Herweijer E, Imburgia T, Johnson A, Kahn JA, Kavanagh K, Kjaer SK, Kliewer EV, Liu B, Markowitz L, Mesher D, Niccolai L, Nygård M, Ogilvie G, Oliphant G, Pollock KG, Smith M, Söderlund-Strand A, Sonnenberg P, Sparen P, Wheller C, Woestenberg P, Yu BN, Brisson M. Population-level impact and herd effects following the introduction of Human Papillomavirus vaccination programs: updated systematic review and meta-analysis. *The Lancet 2019; 394(10197)497-509 doi:10.1016/S0140-6736(19)30298-3*
- 34. Callander D, Guy R, Fairley CK, McManus H, Prestage G, Chow EPF, Chen M, O'Connor C, Grulich AE, Bourne C, Hellard M, Stoové M, Donovan B. Gonorrhoea gone wild: rising incidence of gonorrhoea and associated risk factors among gay and bisexual men attending Australian sexual health clinics. *Sexual Health 2019; 16(5): 457-463. doi:10.1071/SH18097*
- 35. Chow EPF, Danielewski DA, Murray GL, Fehler G, Chen MY, Bradshaw CS, Garland SM, Fairley CK. Anal human papillomavirus infections in young unvaccinated men who have sex with men attending a sexual health clinic for HPV vaccination in Melbourne, *Australia. Vaccine 2019; 37(43): 6271-6275. doi: 10.1016/j.vaccine.2019.08.066*
- 36. Williamson DA, Fairley CK, Howden BP, Chen MY, Stevens K, De Petra V, Denham I, Chow EPF. Trends and risk factors for antimicrobial-resistant Neisseria gonorrhoeae, Melbourne Australia, 2007-2018. *Antimicrobial Agents and Chemotherapy 2019; 63(10): e01221-19. doi:10.1128/AAC.01221-19*
- 37. Ward J, Guy RJ, Rumbold AR, McGregor S, Wand H, McManus H, Dyda A, Garton L, Hengel B, Silver BJ, Taylor-Thomson D, Knox J, Donovan B, Maher L, Fairley CK, Skov, S, Ryder N, Moore E, Mein J, Reeve C, Chee DH, Boffa J, Kaldor JM. Strategies to improve control of sexually transmissible infections in remote Australian Aboriginal communities: a stepped-wedge, cluster-randomised trial. *The Lancet Global Health 2019; 7(11). e1553-e1563*



- 38. Harney BL, Agius PA, El-Hayek C, Fairley CK, Chow EPF, Roth N, Tee BK, Leslie D, Tachedjian G, Hellard M, Stoove M. Risk of subsequent HIV infection following exposure to sexually transmissible infections among men who have sex with men. *Open Forum Infectious Diseases 2019; 6(10): ofz376.* doi: 10.1093/ofid/ofz376
- 39. Chow EPF, Cornelisse VJ, Williamson DA, Priest D, Hocking JS, Bradshaw CS, Read TRH, Chen MY, Howden BP, Fairley CK. Kissing may be an important and neglected risk factor for oropharyngeal gonorrhoea: a cross-section study in men who have sex with men. *Sexually Transmitted Infections* 2019; 95(7): 516-521 doi:10.1136/sextrans2018053896
- 40. Gilbert M, Salway T, Haag D, Eliot E, Fairley CK, Krajden M, Grennan T, Shoveller J, Ogilvie G. A cohort study comparing rate of repeat testing for sexually transmitted and blood-borne infections between clients of an internet-based testing program and of sexually transmitted infection clinics in Vancouver, Canada. *Sexually Transmitted Infections 2019; 95(7): 540-546. doi:10.1136/sextrans-2019-054071*
- Chow EPF, Tabrizi SN, Fairley CK, Wigan R, Machalek DA, Regan DG, Hocking JS, Garland SM, Cornall AM, Atchison S, Bradshaw CS, McNulty A, Owen L, Marshall L, Russell DB, Kaldor JM, Chen MY. Prevalence of human papillomavirus in teenage heterosexual males following the implementation of female and male school-based vaccination in Australia: 2014-2017. *Vaccine 2019; 37(46): 6907-6914. doi: 10.1016/j.vaccine.2019.09.052*
- 42. Chow EPF, Chen MY, Williamson DA, Bradshaw CS, Vodstrcil LA, Trumpour S, Howden BP, Fairley CK. Oropharyngeal and genital gonorrhea infections among women and heterosexual men reporting sexual contact with partners with gonorrhoea: Implications for oropharyngeal testing of heterosexual gonorrhoea contacts. *Sexually Transmitted Diseases 2019; 46(11): 743-747. doi:10.1097/OLQ.000000000001068*
- 43. Aung ET, Chow EPF, Fairley CK, Hocking JS, Bradshaw CS, Williamson DA, Chen MY. International travel as risk factor for Chlamydia trachomatis infections among young heterosexuals attending a sexual health clinic in Melbourne, Australia, 2007 to 2017. *Euro Surveillance 2019;24(44): pii=1900219. doi:10.2807/15607917.ES.2019.24.44.1900219*
- 44. Bilardi JE, Hulme-Chambers A, Chen MY, Fairley CK, Huffam SS, Tomnay JE. The role of stigma in the acceptance and disclosure of HIV among recently diagnosed men who have sex with men in Australia: A qualitative study. *PLOS ONE 2019;14(11): e0224616 doi: 10.1371/journal.pone.0224616*
- 45. Callender C, Cook T, Read P, Hellard ME, Fairley CK, Kaldor JM, Vlahakis E, Pollack A, Bourne C, Russell DB, Guy RJ, Donovan B. HIV and other Sexually transmissible infections among transgender men and women attending of Australian sexual health clinics. *Medical Journal of Australia 2019; 211(9): 406-411 doi:10.5694/mja2.50322*
- 46. Plummer EL\*, Vodstrcil LA\*, Fairley CK, Tabrizi SN, Garland SM, Law MG, Hocking JS, Fethers KA, Bulach DM, Murray GL, Bradshaw CS. Sexual practices have a significant impact on the vaginal microbiota of women who have sex with women. *Scientific Reports (2019) 9:19749 (\*joint first authors) doi: 10.1038/s41598-019-55929-7*
- 47. Chow EPF, Ong JJ, Vodstrcil LA, Fairley CK. Drug use and the influence on kissing among gay and bisexual men who have sex with men in Melbourne, Australia. *International Journal of STD & AIDS 2020; 31(1): 16-21 doi:10.1177/0956462419878338*
- 48. Templeton DJ, Williamson C, Jin F, Hillman RJ, Roberts JM, Law C, Fairley CK, Garland SM, Grulich AE, Poynten IM. Prevalence and associations of larger burden of intra-anal high grade squamous intraepithelial lesions (HSIL) at baseline in an Australian cohort of gay and bisexual men: the study of the prevention of anal cancer (SPANC) *Cancer Epidemiology 2020; 64; 101661 doi: 10.1016/j. canep.2019.101661*
- Phillips TR, Fairley CK, Maddaford K, Danielewski J, Hocking JS, Lee D, Williamson DA, Murray G, Kong F, De Petra V, Bradshaw CS, Chen MY, Wigan R, Snow A, Howden BP, Garland SM, Chow EPF. Bacterial load of Chlamydia trachomatis in the posterior oropharynx tonsillar fossae and saliva among gay and bisexual men with untreated oropharyngeal chlamydia. Journal of Clinical Microbiology. 2020; 58(1) e0137519 doi:10.1128/JCM.01375-19



- 50. Chow EPF, Phillips TR, Bradshaw CS, Chen MY, Fairley CK. Sexual mixing patterns by HIV status and PrEP use among men who have sex with men partnerships in Melbourne, 2011-2018. Journal of Acquired Immune Deficiency Syndromes 2020; 83(2): 99-102. doi: 10.1097/QAI.00000000002231
- 51. Kong FYS, Hocking JS, Fairley CK. Is there a future for the ongoing use of azithromycin for the treatment of Neisseria gonorrhoeae? *Clinical Microbiology and Infection 2020; 26(2): 137-139 doi.10.1016/j.cmi.2019.10.015*
- 52. Chow EPF, Aung ET, Chen MY, Bradshaw CS, Fairley CK. Human papillomavirus vaccination and sexual practices among men who have sex with men in Melbourne, Australia: a cross-sectional study. *International Journal of STD & AIDS 2020; 31(4): 312–317 doi:10.1177/0956462419897514*
- 53. Zappulla A, Fairley CK, Donovan B, Guy R, Bradshaw CS, Chen MY, Phillips TR, Maddaford K, Chow EPF. Sexual practices of female sex workers in Melbourne, Australia: an anonymous cross-sectional questionnaire study in 2017–18. *Sexual Health 2020; 17(1): 53-60 doi: 10.1071/SH19037*
- 54. Murray GL, Bodiyabadu K, Danielewski J, Garland SM, Machalek DA, Fairley CK, Jensen JS, Williamson DA, Tan LY, Mokany E, Durukan D, Bradshaw CS. Moxifloxacin and Sitafloxacin treatment failure in Mycoplasma genitalium Infection: association with parC mutation G248T (S83I) and concurrent gyrA mutations. *Journal of Infectious Diseases 2019; 221(6): 1017-1024 doi:10.1093/infdis/jiz550*
- 55. Burrell S, Vodstrcil LA, Fairley CK, Kilner A, Bradshaw CS, Chen MY, Chow EPF. Hepatitis A vaccine uptake among gay and bisexual men who have sex with men form a time-limited vaccination programme in Melbourne in 2018. *Sexually Transmitted Infections 2020; 96(2): 110-114 doi:10.1136/ sextrans-2019-054132.*
- 56. Ingle DJ, Easton M, Seemann T, Kwong JC, Stephens N, Carter GP, Da Silva AG, Adamopoulos J, Baines SL, Holt KE, Chow EPF, Fairley CK, Chen MY, Kirk M, Howden BP, Williamson DA. Cocirculation of multidrug-resistant Shigella among men who have sex with men, Australia. *Clinical Infectious Diseases 2019 69(9): 1535–1544 doi:10.1093/cid/ciz005*
- 57. Ryan KE, Wilkinson AL, Chow EPF, Read TRH, Chen MY, Locke P, Leitinger D, Bradshaw CS, Pedrana A, Hellard M, Fairley CK, Stoové M. A comparative, retrospective analysis of HIV testing among gay, bisexual and other men who have sex with men in Melbourne, Australia. Australian and New Zealand *Journal of Public Health 2019 43(5): 419 423 doi 10.1111/1753-6405.12903*
- 58. Latimer RL, Vodstrcil LA, De Petra V, Fairley CK, Read TRH, Williamson D, Chow EPF, Bradshaw CS. Extragenital Mycoplasma genitalium infections amongst men who have sex with men. *Sexually Transmitted Infections*. 2019 96(1): 10-18 doi: 10.1136/sextrans-2019-054058
- 59. Blackshaw LCD, Chow EPF, Varma R, Templeton DJ, Basu A, Turner D, Medland NA, Rix S, Fairley CK, Chen MY. The Characteristics of recently arrived Asian born men who have sex with men diagnosed with HIV through sexual health services in Sydney and Melbourne, 2014-2017. *Australian and New Zealand Journal of Public Health 2019 43(5): 424-428 doi:10.1111/1753-6405.12926*
- 60. Klassen K, Millard T, Stout J, McDonald K, Dobson S, Osborne R, Battersby M, Fairley CK, Kidd M, McMahon J, Elliott J. Recruiting people with HIV to an online self-management support randomised controlled trial: barriers and facilitators. *Sexual Health 2019 16(4): 340-347 doi:10.1071/SH18130*
- 61. Goddard SL, Poynten IM, Petoumenos K, Jin F, Hillman RJ, Law C, Roberts JM, Fairley CK, Garland SM, Grulich AE, Templeton DJ. Prevalence, incidence and predictors of anal Chlamydia trachomatis, anal Neisseria gonorrhoeae and syphilis among older gay and bisexual men in the longitudinal Study for the Prevention of Anal Cancer (SPANC). *Sexually Transmitted Infections 2019 95(7): 477-483 doi:10.1136/sextrans-2019-054011*
- 62. Fairley CK, Cornelisse VJ, Hocking JS, Chow EPF. Models of gonorrhoea transmission from the mouth and saliva. *The Lancet Infectious Diseases 2019 19(10) PE360-E366 doi:10.1016/ S14733099(19)30304-4*
- 63. Phillips TR, Fairley CK, Chen MY, Bradshaw CS, Chow EPF. Risk factors for urethral gonorrhoea infection among heterosexual males in Melbourne Australia: 2007-2017. *Sexual Health 2019 16(5): 508-513 doi:10.1071/SH19027*

- 64. Chow EPF, Fairley CK. The role of saliva in gonorrhoea and chlamydia transmission to extragenital sites among men who have sex with men: new insights into transmission. *Journal of the International AIDS Society. 2019 Suppl 6: e25354 doi: 10.1002/jia 2.25354*
- 65. Nwaozuru U, Iwelunmor J, <u>Ong JJ</u>, Salah S, Obiezu-Umeh C, Ezechi O, Tucker JD. Preferences for HIV testing services among young people in Nigeria. *BMC Health Services Research 2019; 19(1)*
- Dan W, Ong JJ, Tang WM, Tiarney R, Walker J, Iwelunmor J, Tucker JD. Crowdsourcing methods to enhance HIV and sexual health services: a scoping review and qualitative synthesis. *JAIDS 82: S271-*278
- 67. Ritchwood TD, He J, Smith MK, Tang WM, Ong JJ, Oduro A, Ntlapo N, Tucker JD. "Getting to Zero" among men who have sex with men in China: a review of the HIV care continuum. *Current HIV/AIDS Reports 2019 December; 16(6):431-438*
- Ong JJ, Baggaley R, Wi T, Tucker JD, Fu HY, Smith K, Rafael S, Anglade V, Falconer J, Ofori-Asenso R, Terris-Prestholt F, Hodges-Mameletzis I, Mayaud P. Global epidemiology of sexually transmitted infections in HIV pre-exposure prophylaxis users: A systematic review and meta-analysis. *JAMA Network Open*. 2019;2(12): e1917134
- 69. Tang WM, Lu WT, Lu HD, Cao B, Dan W, Ong JJ, Fu HY, Zhang Y, Yang B, Ma W, Wei CY, Tucker JD. What happens after HIV self-testing? Results from a longitudinal cohort study of Chinese men who have sex with men. *BMC Infectious Diseases* 2019 19:807
- Huang W, Wu D, Pan SW, Li K, Ong JJ, Fu HY, Liu CC, Mao J, Tucker JD, Tang WM. Driving force of condomless sex after online Intervention among Chinese Men who have sex with men. *BMC Public Health* 2019 19:978
- 71. Turner K, Zienkiewicz A, Rees NVV, Christensen H, Hill D, Homer M, Hughes G, Horner P, Looker, Ong JJ. Agent-based modelling study of antimicrobial resistant *Neisseria gonorrhoea* transmission. *Sexually transmitted infections* 2019 95(suppl 1): A285
- 72. Tang WM, Wang YH, Ong JJ, Wu D, Smith KM, Fu HY, Huang WT, Wei CY, Tucker JD. Early sexual debut and non-consensual sex among Chinese men who have sex with men: a multi-city cross sectional study. *Sexually transmitted infections* 2019 95(suppl 1): A241
- 73. Ong JJ, Li CC, Wang C, Cheng WB, Tang WM, Juan N, Fu HY, Smith KM, Marks M, Yang B, Tucker JD. Using lottery incentives to attract sexually risky Chinese men who have sex with men to prevent syphilis. *Sexually transmitted infections* 2019 95(suppl 1): A320
- 74. Ong JJ, Wi T, Hughes G, Williamson D, Mayaud P, Chow E. Gonorrhoea: tackling the global epidemic in the era of rising antimicrobial resistance. *Sexual Health* 2019 16:397–400
- 75. Tang WM, Ritchwood TD, Wu D, Ong JJ, Wei CY, Iwelunmor J, Tucker JD. Crowdsourcing to promote HIV and sexual health services: A scoping review *Current HIV/AIDS Report* 2019 Aug;16(4):270-278
- 76. Durvasula M, Pan S, Ong JJ, Tang WM, Cao B, Liu CC, Terris-Prestholt F, Tucker JD. Enhancing public health messages: Discrete choice experiment evidence to design HIV messages in China. *Medical Decision Making* 2019 Jul;39(5):568-582
- 77. Ong JJ, Neke N, Wambura M, Kuringe E, Grund JM, Plotkin M, d'Elbee M, Torres-Rueda S, Mahler H, Weiss H, Terris-Prestholt F. Use of lotteries for the promotion of voluntary medical male circumcision service: a discrete choice experiment among adult men in Tanzania. *Medical Decision Making* 2019 May;39(4):474-485.
- 78. Wang Q, Ma XM, Zhang XS, Ong JJ, Jun J, Zhang L, Wang LH. Human papillomavirus infection and associated factors for cervical intraepithelial neoplasia in women living with HIV in China: a cross-sectional study. *Sexually Transmitted Infections* 2019 Mar; 95(2):140-144
- 79. Wu Dan, Li K, Tang WM, Ong JJ, Huang WT, Fu HY, Lee A, Wei CY, Tucker JD. Low chlamydia and gonorrhoea testing rates among men who have sex with men in Guangdong and Shandong Provinces, China. *Sexually Transmitted Diseases* 2019 Apr; 46(4):260-265



- 80. Pan SW, Durvasula M, Ong JJ, Liu CC, Tang WM, Fu HY, Wei CY, Wang C, Terris-Prestholt F, Tucker JD. No place like home? Disentangling preferences for HIV testing locations and services among men who have sex with men in China. *AIDS and Behavior* 2019 Apr;23(4):847-859
- 81. Dan W, Tang WM, Lu HD, Zhang TP, Cao B, Ong JJ, Lee A, Liu CC, Huang WT, Fu R, Li K, Pan S, Zhang Y, Fu HY, Wei CY, Tucker JD. Leading by example: online sexual health influencers among men who have sex with men have higher HIV and syphilis testing rates in China. *J Med Internet Research* 2019 Jan 21;21(1): e10171
- 82. Hillman R, Berry-Lawhorn M, Ong JJ, Cuming T, Nathan M, Goldstone S, Richel O, Barroso L, Darragh T, Law C, Stier E, Palefsky J, Jay N. International Anal Neoplasia Society Guidelines for the practice of Digital Ano-Rectal Examination. *Journal of Lower Genital Tract Disease* 2019 23(2):138-146
- Sibanda E, dElbée M, Maringwa G, Ruhode N, Tumushime M, Madanhire C, Ong JJ, Indravudh P, Watadzaushe C, Johnson C, Hatzold K, Taegtmeyer M, Hargreaves J, Corbett EL, Cowan F, Terris-Prestholt F. Applying user preferences to optimize achievement of the first 90 through self-testing: results from discrete choice experiments in Zimbabwe. *Journal of the International AIDS Society* 2019 Mar;22(1): e25245
- 84. Mangenah C, Mwenge L, Sande L, Ahmed N, d'Elbee M, Chiwawa P, Chigwenah T, Kanema S, Mutsesa MN, Nalubamba M, Chilongosi R, Indravudh P, Sibanda EL, Neuman M, Ncube G, Ong JJ, Mugurungi O, Hatzold K, Johnson CC, Ayles H, Corbett EL, Cowan FM, Maheswaran H, Terris-Prestholt F. Economic cost analysis of door-to-door community-based distribution of HIV self-test kits in Malawi, Zambia and Zimbabwe. *Journal of the International AIDS Society* 2019 Mar; 22(1): e25255
- 85. Cao B, Saffer A, Yang C, Chen H, Peng K, Pan SW, Ong JJ, Durvasula M, Liu CC, Fu HY, Tang WM, Tucker JD. MSM behaviour disclosure networks and HIV testing: an egocentric network analysis among MSM in China. *AIDS and Behaviour 2019 May; 23(5):1368-1374*
- 86. Cao B, Saha P, Leuba S, Lu H, Tang W, Wu D, Ong JJ, Liu CC, Fu Rong, Wei CY, Tucker JD. Recalling, sharing and participating in a social media intervention promoting HIV testing: A longitudinal analysis of HIV testing among MSM in China. *AIDS and Behaviour 2019 May; 23(5):1240-1249*
- 87. Ong JJ, Magooa MP, Chikandiwa A, Kelly H, Didelot MN, Muller EE, Maseko V, Segondy M, Delany-Moretlwe S, Kularatne R, Mayaud P. Prevalence and antimicrobial resistance of Mycoplasma genitalium infection among women living with HIV in South Africa: a prospective cohort study. *Clinical Infectious Diseases 2019 Jan 29. doi: 10.1093/cid/ciz045*
- Terris-Prestholt F, Neke N, Grund J, Plotkin M, Kuringe E, Osaki H, Ong JJ, Mshana, Mahler H, Weiss H, Wambura M. Using Discrete Choice Experiments to Inform the Design of Complex Interventions. Trials 2019; 20(157)
- 89. Sweeney EL, Trembizki E, Bletchly C, Bradshaw CS, Menon A, Francis F, Langton-Lockton J, Nimmo GR and Whiley DM Levels of Mycoplasma genitalium antimicrobial resistance differ by both region and gender in the state of Queensland, Australia: implications for treatment guidelines. *J Clin Micro 2019; 57 (3): e01555-18.*
- McKinnon LR, Achilles SL, Bradshaw CS, Burgener A, Crucitti T, Fredricks DN, Jaspan HB, Kaul R, Kaushic C, Klatt N, Kwon DS, Marrazzo JM, Masson L, McClelland RS, Ravel J, van de Wijgert JHHM, Vodstrcil LA, Tachedjian G. The Evolving Facets of Bacterial Vaginosis: Implications for HIV Transmission. *AIDS Res Hum Retroviruses 2019 Mar; 35(3):219-228.*
- 91. Giles ML, MacPhail A, Bell C, Bradshaw CS, Furner V, Gunathilake M, John M, Krishnaswamy S, Martin SJ, Ooi C, Owen L, Russell D, Street A, Post J. The barriers to linkage and retention in care for women living with HIV in an high income setting where they comprise a minority group. *AIDS Care* 2019 Feb 12:1-7
- 92. Giles ML, MacPhail A, Bell C, Bradshaw CS, Furner V, Gunathilake M, John M, Krishnaswamy S, Martin SJ, Ooi C, Owen L, Russell D, Street A, Post JJ. A national study of the clinical management of HIV-positive women in Australia: what are the successes and where are the gaps? Sex Health 2019 Jun 6

- 93. Fernández-Huerta M, Bodiyabadu K, Esperalba J, Bradshaw CS, Serra-Pladevall J, Garland SM, Fernández-Naval C, Jensen JS, Pumarola T, Ebeyan S, Lundgren M, Tan LY, Espasa M, Murray GL. Multicenter clinical evaluation of a novel multiplex real-time PCR (qPCR) assay for detection of fluoroquinolone resistance in Mycoplasma genitalium. *J Clin Microbiol 2019 Oct 23; 57(11): e00886-19*
- 94. Murray GL, Danielewski J, Bodiyabadu K, Machalek DA, Bradshaw CS, Costa AM, Birnie J, Garland SM. Analysis of infection loads in Mycoplasma genitalium clinical specimens by use of a commercial diagnostic test. *J Clin Microbiol 2019 Aug 26;57(9) pii: e00344-19*
- 95. Murray GL, Su JP, Birnie J, Danielewski J, Machalek DA, Bradshaw CS, Read TRH, Costa AM, Garland SM. The impact of sample storage on molecular-based detection of Mycoplasma genitalium. *J Appl Microbiol 2019 Oct;127(4):1219-1223*
- 96. Grillová L, Oppelt J, Mikalová L, Nováková M, Giacani L, Niesnerová A, Noda A, Mechaly A, Pospíšilová P, Čejková D, Grange P, Dupin N, Strnadel R, Chen M, Denham I, Arora N, Picardeau M, Weston C, Forsyth RA, Šmajs, D. Directly sequenced genomes of contemporary strains of syphilis reveal recombination-driven diversity in genes encoding predicted surface-exposed antigens. *Frontiers in Microbiology 2019; 10: 1691*
- 97. Bellhouse, CE., Watson S, Temple-Smith M, Bilardi JE. The loss was traumatic... some healthcare providers added to that": Women's experiences of miscarriage. *Women & Birth 2019; 32(2):137-146*
- 98. Miller E, Temple-Smith M, Bilardi J. 'There was just no one there to acknowledge that it happened to me as well'. A qualitative study of male partners' experience of miscarriage. *PLOS One, 14(5):* e0217395. doi.org/10.1371/journal.pone.0217395
- 99. Nyguen V, Temple-Smith M, Bilardi J. Men's lived experiences of perinatal loss: A review of the literature. *Australian and New Zealand Journal of Obstetrics and Gynaecololgy 2019; 59: 757–76*
- 100. Bilardi JE, Hulme-Chambers A, Chen MY, Fariley CK, Huffman S, Tomnay JE. (2019). The acceptance and disclosure of HIV among recently diagnosed men who have sex with men in Australia: A qualitative study. *PLOS One, 14(11): e0224616. doi.org/10.1371/journal.pone.0224616*
- Nguyen Julie, Williams Henrietta, McNamee Kathleen, Shaffeu Nabreesa, Vaisey Alaina, Hocking Jane (2019) Condom use among young women in Australia using long-acting reversible contraceptives or other hormonal contraceptives. Sexual Health 16, 574-579

### Ahead of Print

- 1. Maddaford K, Fairley CK, Trumpour S, Chung M, Chow EPF. The sites in the oropharynx reached y different methods of using mouthwash: clinical implication for oropharyngeal gonorrhoea prevention. *Sexually Transmitted Infections 2019 doi:10.1136/sextrans-2019-054158 (October 2019)*
- 2. Cornelisse VJ, Chow EPF, Latimer RL, Towns J, Chen MY, Bradshaw CS, Fairley CK. Getting to the bottom of it: Sexual positioning and stage of syphilis at diagnosis, and implications for syphilis screening. *Clinical Infectious Diseases 2019 doi:10.1093/cid/ciz802 (October 2019)*
- 3. Wong WCW, Lau STH, Choi EPH, Tucker J, Fairley CK, Saunders J. A Systematic Literature Review of Reviews on the Effectiveness of Chlamydia Screening. *Epidemiologic Reviews doi.10.1093/epirev/* mxz007 (September 2019)
- 4. Plummer EL, Vodstrcil LA, Murray GL, Fairley CK, Danielewski JA, Garland SM, Chow EPF, Bulatch DM, Fethers KA, Hocking JS, Bradshaw CS. *Gardnerella vaginalis* clade distribution is associated with behavioural practices and Nugent Score in women who have sex with women. *Journal of Infectious Diseases doi.10.1093/infdis/jiz474 (September 2019)*
- 5. Durukan D, Read TRH, Murray G, Doyle M, Chow EPF, Vodstrcil LA, Fairley CK, Aguirre I, Mokany E, Tan LY, Chen MY, Bradshaw CS. Resistance-guided antimicrobial therapy using doxycycline-moxifloxacin and doxycycline-2.5g azithromycin for the treatment of Mycoplasma genitalium infection: efficacyand tolerability. *Clinical Infectious Diseases doi:10.1093/cid/ciz1031 (October 2019)*
- Comninos NB, Garton LM, Guy RJ, Callander D, Fairley CK, Grulich AE, Donovan B, Goddard SL, Rutherford A, Templeton DJ. Significant increases in pharyngeal Neisseria Gonorrhoeae, positivity in men who sex with men, 2011-2015: An observational study. *Sexually Transmitted Infections 2019 pii:* sextrans-2019054107 doi: 10.1136/sextrans-2019-054107 (October 2019)
- 7. Platt L, French C, McGowan C, Sabin K, Gower E, Trickey A, McDonald B, Ong J, Stone J, Easterbrook P, Vickerman P. Prevalence and burden of HBV co-infection among people living with HIV: a global systematic review and meta-analysis *Journal of Viral Hepatitis Oct 11. doi: 10.1111/jvh.13217*
- 8. Quaife M, MacGregor L, Ong JJ, Gafos M, Torres-Rueda S, Grant H, Terris-Prestholt F, Vickerman P. Risk compensation and STI incidence in PrEP programmes: Latest evidence and research gaps. *The Lancet HIV doi.org/10.1016/S2352-3018(19)30333-9*
- 9. Zienkiewicz A, Rees NVV, Homer, Ong JJ, Christensen H, Hill D, Looker K, Horner P, Hughes G, Turner K. Agent-based modelling study of antimicrobial resistant Neisseria gonorrhoea transmission in men who have sex with men: towards individualized diagnosis and treatment. *Sexual Health Sept. doi: 10.1071/SH18235*
- Ong JJ, Magooa MP, Chikandiwa A, Kelly H, Didelot MN, Muller EE, Maseko V, Segondy M, Delany-Moretlwe S, Kularatne R, Mayaud P. Clinical characteristics of Mycoplasma genitalium and the usefulness of syndromic management among women living with HIV. Sexually Transmitted Diseases 2019 Jul 25. doi: 10.1097/OLQ.00000000001054
- 11. Wang C, Cheng WB, Li CC, Tang WM, Ong JJ, Smith MK, Fu HY, Marks M, Nie J, Zheng HP, Tucker JD, Yang B. Syphilis self-testing: a nationwide pragmatic study among men who have sex with men in China. *Clinical Infectious Diseases 2019 Jul 1. pii: ciz603. doi: 10.1093/cid/ciz603*
- 12. Smith MK, Wei CY, Liu CC, Pan SW, Ong JJ, Tucker JD. Gender Identity and Sexual Orientation in Chinese Men who have sex with men: A latent class analysis. *Archives of Sexual Behavior 2019 Sep 30. doi: 10.1007/s10508-019-01481-4*
- 13. Bien C, Zhao PP, Cao B, Tang WM, Ong JJ, Baral S, Bauermeister JA, Yang LG, Luo ZZ, Tucker JD. Providing competent, comprehensive, and inclusive sexual health services for MSM in low- and middle-income countries: a scoping review. *Sexual Health 2019 Jun 19doi: 10.1071/SH18191*
- Ong JJ, Magooa MP, Chikandiwa A, Kelly H, Didelot MN, Muller EE, Maseko V, Segondy M, Delany-Moretlwe S, Kularatne R, Mayaud P. Prevalence and antimicrobial resistance of Mycoplasma genitalium infection among women living with HIV in South Africa: a prospective cohort study. *Clinical Infectious Diseases 2019 Jan 29. doi: 10.1093/cid/ciz045*

### **STAFF**

The continuing successes enjoyed by MSHC hinge on the ongoing enthusiasm and dedication shown by its multidisciplinary team. The professionalism and commitment of all staff of MSHC is reflected in the Annual Client Surveys which have recorded overall satisfaction rates of approximately 97-99% since 2005 (see Annual Client Survey).

#### **Staff Members**

#### **Administration and Computer Services**

Afrizal Suzanne Amisano Safron Brady Andrew Elstone Fleur Glenn David Johnston Karen Kon David Nguyen Sharon Noronho Rashidur Rahman Cecily Sheppard Maggie Vandeleur Wendy Zeng

#### **Other Support**

Mark Chung Glenda Fehler James Unger Lyn Zhang ICT Analyst Operations Manager Patient Services Officer IT Lead Technology Specialist Patient Services Officer Patient Services Officer Patient Services Officer Patient Services Officer

Multimedia Content Co-ordinator Clinical Project Manager Personal Assistant to Director Resource and Billing Officer

#### **Clinical Services - Medical**

Ei Aung Doctor **Karen Berzins** Doctor Melanie Bissessor Doctor Catriona Bradshaw Doctor Andrew Buchanan Doctor Marcus Chen Doctor, Medical Unit Manager Kathy Cook Doctor Mark Darling Dermatologist Ian Denham Doctor **Christopher Fairley** Professor/Director Kath Fethers Doctor Helen Henzell Doctor Sarah Huffam Doctor Kirsty McNab Doctor Alex Marceglia Doctor Nick Medland Doctor



Anna Morton Jason Ong Stephen Rowles Tina Schmidt Richard Teague Janet Towns Robin Tideman Hennie Williams Josephine Yeatman Doctor Doctor Doctor Doctor Doctor Doctor Doctor Doctor Doctor, Senior Lecturer Dermatologist

#### **Clinical Services - Nursing and Counsellors**

Surbhi Bird **Caroline Cittarelli** Penne Braybrook Suzanne Brown Lauren Brvar **Beth Costelloe** Freya Dench Sheranne Dobinson Michelle Doyle Jo Eccles **Ria Fortune Candice Fuller Tessa** Grause Shauna Hall Nina Hancox Peter Hayes Jayne Howard Kerri Howley Marti Kaiser Jason Kenna Lisa Kennedy Abby Knoester Annie Lang David Lee Genevieve Lilley **Chantal Maloney** Luke Mitchell Colette Mc Guiness Lesley O'Donell Monica Owlad lan O'Meara Kate Potappel **Claire Randall** Anne Reid Suzanne Rose **Carly Schreiber** Inkyung Kate Seong Anthony Snow Mee Tan Haiping Tang Mark Thompson

Sexual Health Clinic Support Nurse Sexual Health Clinic Support Nurse Sexual Health Nurse Nursing Services Manager Sexual Health Nurse Sexual Health Nurse Sexual Health Nurse Counsellor Counsellor Sexual Health Nurse Practitioner Sexual Health Nurse Practitioner Sexual Health Nurse Sexual Health Nurse Sexual Health Nurse

Helen Kent Kate Maddeford Colette Mc Guiness Erica Plummer **Tiffany Phillips** Julie Silvers Sabrina Trumpour Lenka Vodstrcil Rebecca Wigan Lei Zang

#### Laboratory

Vesna de Petra **Catherine Flower** Kate Paoli Kathy Petit Marleen Tschaepe Maree Soumilas Phoebe Webster

**Pharmacy** Ivette Aguirre

**Eric Chow** Michelle Doyle Marti Kaiser

Sexual Health Nurse Sexual Health Nurse/Clinical Nurse Co-ordinator Sexual Health Nurse Sexual Health Nurse Sexual Health Nurse

Clinical HIV Co-ordinator Doctor Doctor Doctor Doctor **Patient Services Officer** 

Counsellor

Postdoctoral Research Fellow Postdoctoral Research Fellow **Research Nurse Research Nurse Research Nurse Research Nurse Research Nurse** PhD scholar, Masters in Bioinformatics **Research Administration Research Nurse Research Administrative Assistant** Postdoctoral Research Fellow **Research Nurse** PhD, Master of Applied Mathematics

Section Leader Laboratory Scientist Laboratory Scientist Laboratory Scientist Laboratory Section Support Laboratory Scientist Laboratory Scientist

Senior Clinical Pharmacist

Rebecca Wigan Jordan Wotten Karen Worthington **HIV Clinic** 

Susan Peterson Stephen Kent **Richard Moore** Joe Sasadeusz Ivan Stratov

Jocelyn Verry

Eloise Vicary Patricia Wakefield

**Evaluation Unit** 

Jade Bilardi

Jeanette Venkataya

