Mycoplasma genitalium (MGen): Test-positivity in syndromic presentations and compliance with treatment guidelines at Sydney Sexual Health Centre

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Background

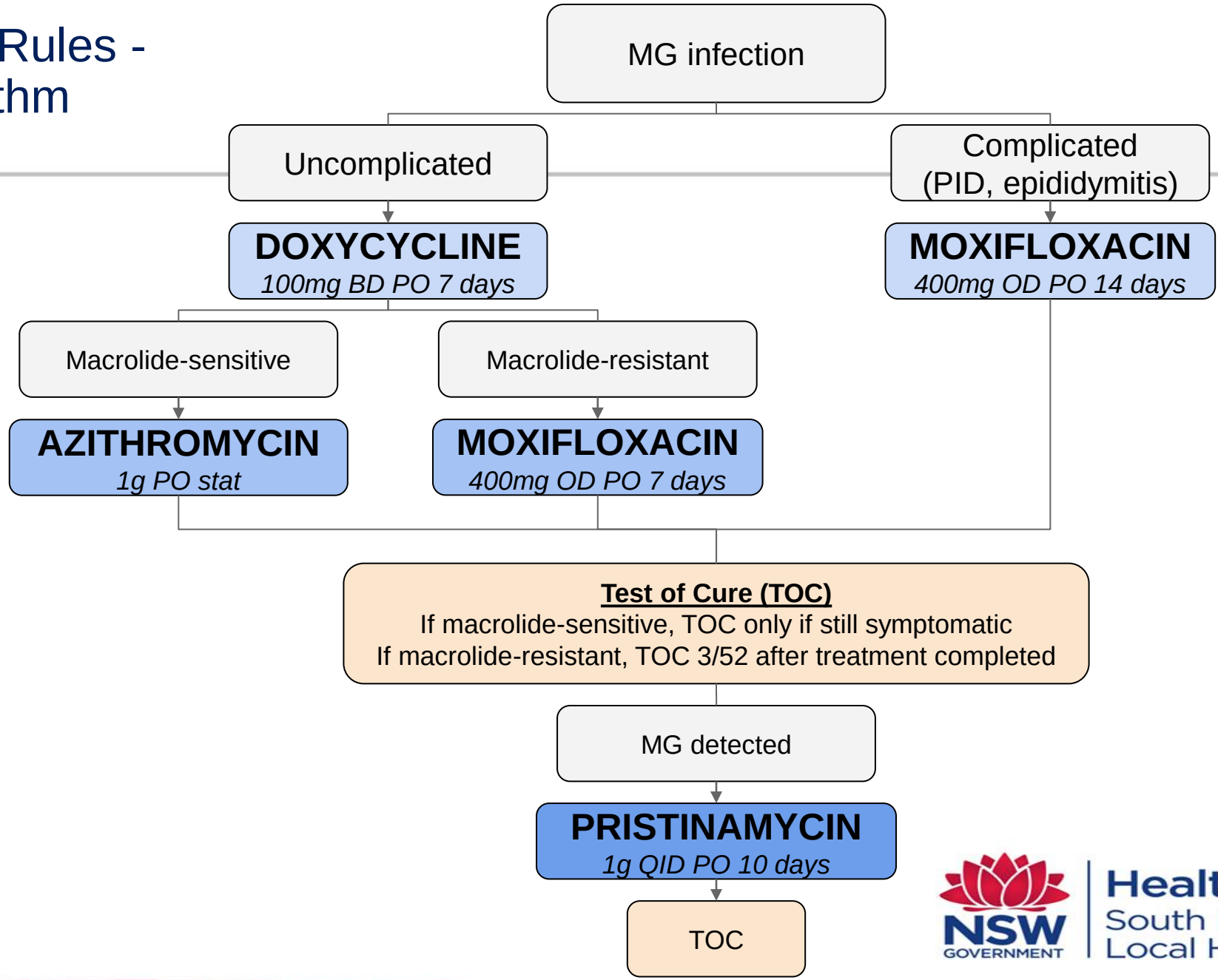
- MGen infections are strongly associated with NGU, cervicitis, PID , while an association with epididymitis and proctitis are less well-defined
- High rates of macrolide-resistance mutations necessitate resistance-guided therapy
- Test of cure approach – no consensus internationally

Objectives

1. **Does MGen testing occur in patients presenting with STI syndromes (urethritis, proctitis, PID, cervicitis, epididymo-orchitis)?**
   - What proportion of these syndromes were MGen-positive?

2. **Are MGen infections being managed according to the SSHC management guidelines?**
   - Are the appropriate antibiotics being prescribed?
   - Are appropriate tests of cure being performed?

SSHC Business Rules - Treatment Algorithm



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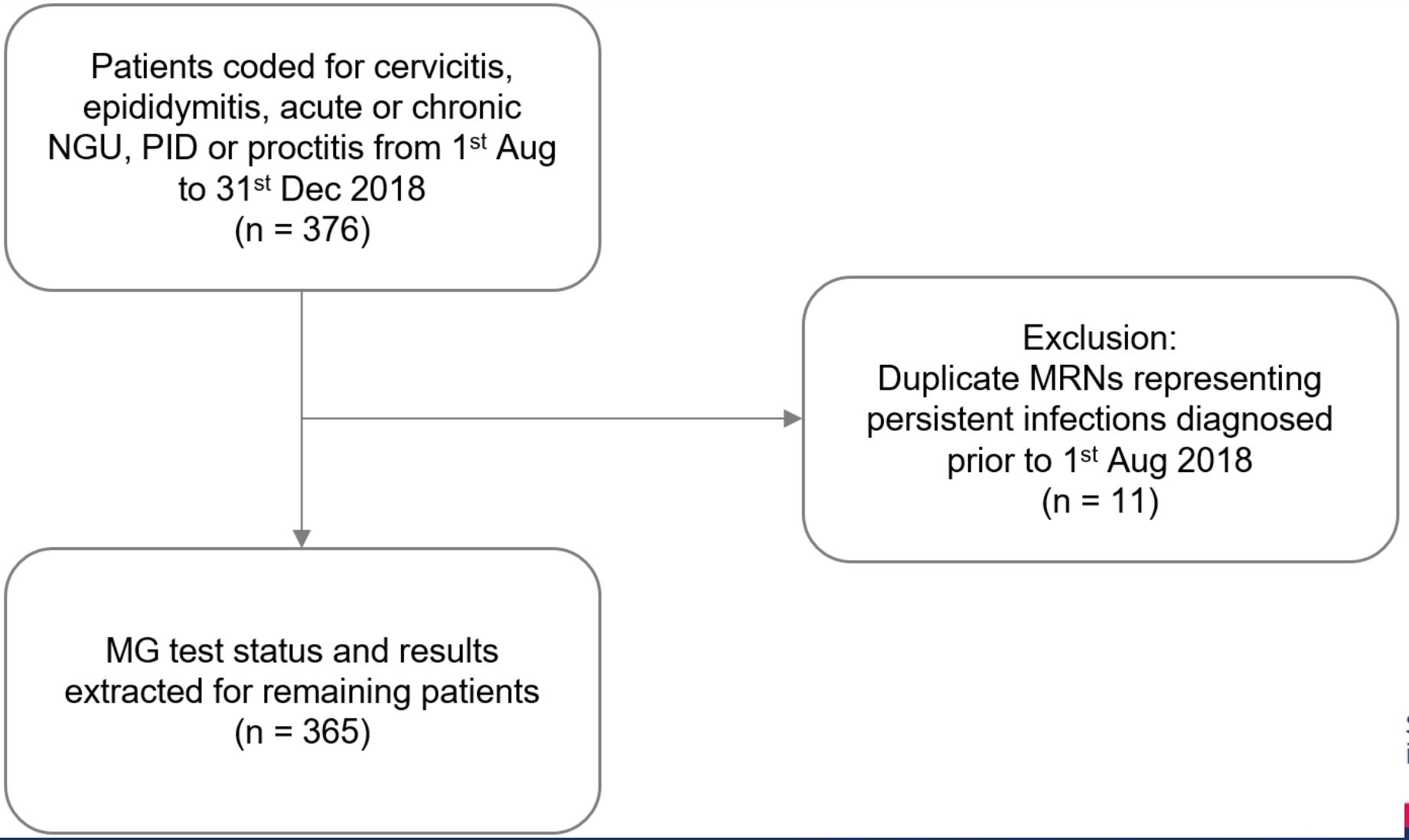
Compliance with MGen testing recommendations and test-positivity of syndromic presentations



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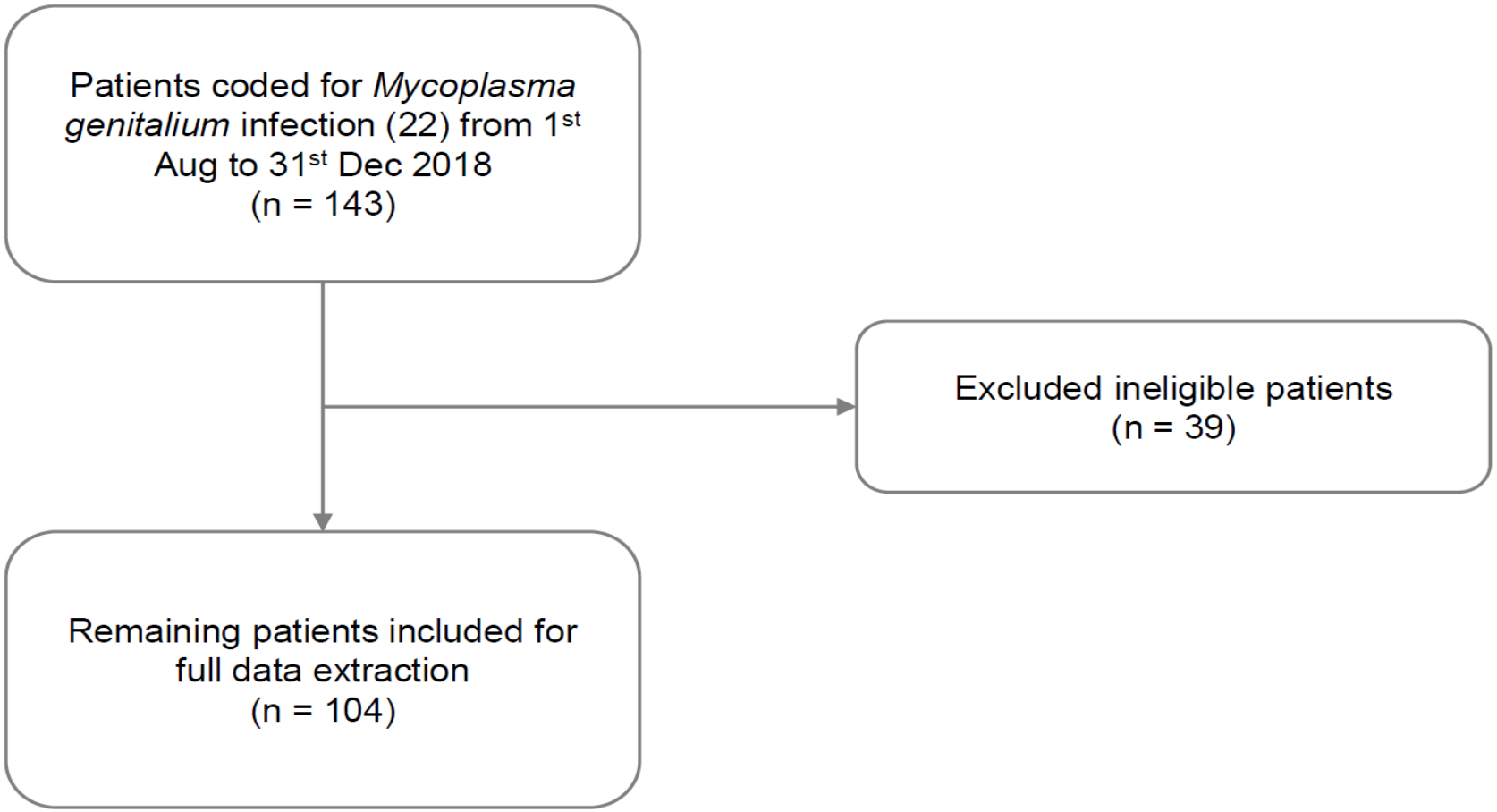
MGen test-positivity and macrolide-resistance in syndromic presentations at SSHC

	NGU (n = 215)	Cervicitis (n = 23)	PID (n= 45)	Proctitis (n = 56)	Epididymitis (n = 33)	All syndromes (n= 372)
Total tested	199 (92%)	21 (91%)	43 (96%)	55* (98%*)	31 (94%)	349* (94%*)
MG positive	42 (20%)	3 (13%)	5 (11%)	6 (11%)	2 (6%)	58 (16%)
Macrolide-resistant MG	35 (83%)	3 (100%)	3 (60%)	5 (83%)	1 (50%)	47 (81%)

*includes 1 invalid result

Compliance with management guidelines for MG infections



Compliance with antimicrobial treatment guidelines

Doxycycline + (Azithromycin OR Moxifloxacin)

Pristinamycin

		First-line treatment (n = 104)	Second-line treatment (n = 10)
Macrolide-sensitive	Compliant with guidelines	16/27	N/A
	% compliance	59%	N/A
Macrolide-resistant	Compliant with guidelines	65/77	6/10
	% compliance	84%	60%

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Impact of STI co infections* and adherence to guidelines

		No co-existing STI (n = 72)	Co-existing STI present (n = 32)
Macrolide-sensitive	Compliant with guidelines *Doxycycline + Azithromycin*	13/20	3/7
	% compliance	65%	43%
Macrolide-resistant	Compliant with guidelines *Doxycycline + Moxifloxacin*	44/52	21/25
	% compliance	85%	84%

*Co-existing STIs include gonorrhoea, chlamydia, HSV,HIV

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Compliance with tests of cure recommendations

- Macrolide –sensitive : 23/28 (82%) had TOC scheduled

- Macrolide – resistant :
  - 74/80 (88%) TOC scheduled after 1st line antibiotics
  - 12/14 (86%) TOC scheduled after 2nd line antibiotics

TOC outcomes for macrolide-resistant MGen infections

	First line treatment (n = 80)	Second-line treatment (n = 14)
MG not detected	36	2
MG detected	13	1
Attempted contact or scheduled TOC	25	9
TOC not attempted or scheduled	6	2

conclusion

- MGen high rates of testing in presentations of NGU, cervicitis, PID, proctitis and epididymitis, with up to 20% test-positivity and high rates of macrolide resistance
- Additional MGen tests outside of specific STI syndrome requires monitoring
- TOC – high % of unknown results in macrolide resistant cases

conclusion

- Mgen guidelines and complexity of implementation
  - Differences in adherence to protocols based on resistance results
- Value of QA process within context of change in clinical service delivery