Inclusive UTI Care

Addressing Gender Diversity in Pharmacy Practice

Presented by:

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Speaker Disclosures

Presenter's Name: Brett Barrett

- I have the following relationships with commercial interests:
 - Speaker/Consulting Fees: OPA, CPhA, CSHP, EnsembleIQ
 - Current/past Employee of University of Waterloo, Grand River Hospital, MAPflow Inc.

Presenter's Name: Kyle Wilby

- I have the following relationships with commercial interests:
 - Funding (Grants/Honoraria): Shoppers Drug Mart, CIHR, SHHRC, Research Nova Scotia, AACP, Drug Evaluation Alliance of Nova Scotia, Dalhousie University
 - Speaker/Consulting Fees: PANS, CPhA, CSHP, Government of Qatar, Dal CPE, CaPhO
 - Current/past Employee of Dalhousie University, University of Otago, Qatar University

Both authors have received a speaker's fee from CPhA for this learning activity.



Positionality







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Learning Outcomes

By the end of this session, participants will be able to:

- 1. Define terms specific to gender diversity, including gender dysphoria, transgender, non-binary, gender fluid, gender non-conforming, and agender.
- 2. Describe at least three individual, interpersonal, or systemic factors that may negatively influence one's experience when receiving urinary tract infection (UTI) care.
- 3. Outline at least two communication strategies to improve inclusivity and affirmation of gender diverse individuals in pharmacy practice.
- 4. Identify patients who are appropriate for pharmacist management of UTI.
- 5. Develop a careplan for the management of a patient who qualifies for pharmacist management of UTI.



Setting the Scene

- Taylor (he/they) is a 32-year-old transgender man coming to your pharmacy for a UTI assessment. Taylor was assigned female at birth and has a vagina (but prefers to refer to it as 'front hole'). Taylor is not pregnant and has no known drug allergies.
- Taylor has had a UTI previously diagnosed and treated by their physician.
- Taylor's medication list includes testosterone injections (3 years) and ibuprofen PRN for headaches.
- Taylor has no other significant medical history, surgeries, or recent hospitalizations.
- Taylor's current symptoms are mild and not suggestive of pyelonephritis.
- Questions to consider:
 - How would you manage Taylor's possible UTI?
 - How could you provide inclusive and affirming care for Taylor?



Term	Definition ¹
Sex	Refers to a person's status as male, female, or intersex based on physical characteristics assigned at birth
Gender identity	Deeply felt, internal, intrinsic sense of own gender
Gender dysphoria	State of distress or discomfort due to a person's gender identity differing from that which is physically and/or socially attributed to their sex
Gender expression	How a person enacts or expresses their gender in everyday life
Cisgender	Gender identity corresponds to sex assigned at birth
Transgender	Umbrella term to describe gender identities/expressions not typically expected for sex assigned at birth
Non-binary	Umbrella term for anyone who does not identify with static, binary gender identities (genderqueer, gender diverse, genderfluid, agender, demigender)
Gender non-conforming	Expression of gender in a way that differs from societal norms
Agender	A person who has an internal sense of being neither male or female or some combination of both
Gender fluid	Change over time in a person's gender identity, expression or both



Gender Diverse People Experience Healthcare Differently²



Lens of Systemic Oppression³





Strategies to Reduce Oppression in Pharmacy Practice

- Individual Strategies
 - Education
 - Reflection ("you don't know what you don't know")
 - Experience

- Interpersonal Strategies
 - Communication, communication, communication!
 - Verbal, non-verbal, written
 - We will return to this at the end of the presentation



Strategies to Reduce Oppression in Pharmacy Practice²

Domain	Category	Example					
Systemic	Policies/Procedures	Prescribing protocols, non-discrimination policies, intake forms, counseling guides					
	Technology/Resources	Providing resources / community engagement for patients, advocating to tech companies for flexibility with names/gender identities					
	Education/Training	Investment in continuing professional development, relevant for ALL personnel (cashiers, cleaners, etc.)					
	Environment	Ensuring privacy available when desired / nice wait area, positive, bright, friendly					
	Representation/Symbols	Meaningful display of pride symbols / diversity of staff, pronoun pins					



Challenge Yourself

- For the remaining presentation, try to think of how you could provide inclusive and affirming care for Taylor (or other gender diverse folks)
- Remember to consider:
 - Individual strategies
 - Interpersonal strategies
 - Systemic strategies



UTI as a Minor Ailment



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Minor/ Common Ailments

Expected to resolve with short-term or episodic treatment

Investigations not required for diagnosis or treatment Low risk of masking an underlying disease, disorder, or condition



PRESCRIBING AUTHORITY OF PHARMACISTS ACROSS CANADA

Implemented in iurisdiction

Pending legislation, regulation or policy for implementation Ρ



	BC	AB ¹	SK	MB	ON	QC	NB	NS	PEI	NL	ΥT	NWT	NU
Summary of Prescribing Authority													
Independently, for any schedule I drug	X	~	X	X	X	X	X	X	Х	X	X	X	X
Minor/common ailments	\checkmark	~	~	\checkmark	\checkmark	\checkmark	~	\checkmark	\checkmark	\checkmark	\checkmark	X	X
Reproductive & Genitourinary Conditions													
Uncomplicated acute cystitis (urinary tract infection)	~	~	~	4	~	4	4	× 4	~	 	~	X	X

⁴Previous diagnosis required



Urinary Tract Infection (UTI)

- Infection of urinary tract anywhere from urethra to kidneys
 - Cystitis: infection limited to bladder and urethra (i.e., lower UTI)
 - Pyelonephritis: infection involving kidney(s) and ureter(s) (i.e., upper UTI)





Pathophysiology

- Ascending (most common)
 - Urethra becomes colonized with uropathogens

 → ascend urethra to bladder +/- ascend
 ureter(s) to kidney(s)
 - Source of bacteria is intestinal microflora
 - In people with vaginas, preceded by colonization of vaginal introitus
- Protective features of genitourinary (GU) tract
 - Urethral length
 - Vaginal microflora
 - Distance from anus to urethra
 - Vigorous, high-volume urine flow





Risk Factors and Epidemiology



- Cis-female GU anatomy
 - Shorter urethra
- Alterations in vaginal microflora
 - Spermicide
 - Lower estrogen levels
- Vaginal intercourse
 - New partner
 - Frequency (i.e., ≥ 4/wk)
- Family or personal history of UTI
- Structural or functional abnormality
 - Vesicoureteral reflux
 - Impaired flow (e.g., prostatitis, instrumentation)



Uncomplicated Cystitis

- Robust evidence base to inform management
- High rates of self-diagnostic concordance
- Good likelihood of success, very low risk for complications
- Patients with uncomplicated cystitis have:
 - Typical signs and symptoms
 - Predictable pathogens and resistance patterns
 - No reason to suspect increased risk of treatment failure or complications from standard therapy

- Requirements*
 - No signs or symptoms consistent with pyelonephritis
 - Has a vagina
 - Not pregnant
 - Acquired in community
 - No poorly controlled diabetes
 - Age > 12 to 16 and < 65 to 75 yrs
 - No immunocompromise (disease or drug)
 - No structural or functional abnormalities of GU tract
 - Obstruction, instrumentation, impaired voiding, renal dysfunction
 - Genital surgery, including gender-affirming genital surgery



Complicated UTI

- Very heterogenous evidence base, less well studied
- Often greater risk for treatment failure and/ or complications
- Diagnosis much more challenging, atypical features common
- Patients with complicated UTI may require:
 - Additional investigations
 - Different antimicrobial therapy
 - Added therapeutic interventions
 - Closer clinical monitoring

- Includes any patient with*:
 - Signs or symptoms consistent with pyelonephritis
 - A penis
 - Pregnancy
 - Poorly controlled diabetes
 - Acquired in healthcare setting
 - Age < 12 to 16 or > 65 to 75 yrs
 - Immunocompromise (disease or drug)
 - Structural or functional abnormalities of GU tract
 - Obstruction, instrumentation, impaired voiding, renal dysfunction
 - Genital surgery, including gender-affirming genital surgery



Signs and Symptoms of UTI

Cystitis

- Urinary urgency
- Increased frequency of urination
- Pain or burning with urination (dysuria; internal)
- Mild hematuria
- Suprapubic pain or tenderness

Pyelonephritis

- Fever, chills
- Nausea, vomiting
- Low back pain, flank pain, or costovertebral angle (CVA) tenderness
- +/- symptoms of cystitis

Signs and symptoms can be highly variable in patients with complicated UTI



Assessment and Management of Uncomplicated Cystitis





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Patient presents with classic symptoms of cystitis



Acute dysuria
 Urinary urgency
 Urinary frequency

Mild hematuria

 Suprapubic pain or tenderness









- × Pregnancy
- × Has a penis
- × Age < 12 to 16 or > 65
 - to 74 yrs
- × Poorly controlled diabetes
- Immunocompromised (disease or drug)
- Infection acquired in healthcare setting

- Structural or functional abnormalities of GU
 - × Stones
 - Indwelling or intermittent catheterization
 - × Neurogenic bladder
 - × Vesicoureteral reflux
 - × Renal failure
 - × Genital surgery





- Previous diagnosis of cystitis
 - Required in MB, QC, NB, NS
 - Increases accuracy of self-diagnosis
- Recurrent UTI
 - 2 or more distinct episodes in past 6 mos or 3 or more in past 12 mos
 - Some provinces will allow prescribing for current episode



Goals of Therapy

Cure Infection⁴

- Spontaneous resolution possible (25 to 60% by day 7)
- Low risk for progression to pyelonephritis with placebo
- Antimicrobial therapy associated with faster symptom resolution compared with placebo or NSAID
- UK NICE Guidelines recommend 48 hr wait-andsee approach⁵

Prevent Recurrence

- Non-pharmacological strategies
 - Cranberry?
 - Avoid spermicide
 - Increase water intake, if < 1.5 L at baseline⁶
 - Behavioural strategies (limited-to-no evidence)
- Patients with ≥ 2 episodes in 6 mos or ≥ 3 in 12 mos may benefit from referral
 - Rule out unrecognized complicating features
 - Vaginal estrogen if postmenopausal
 - Antimicrobial prophylaxis

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Antimicrobial Options*

Nitrofurantoin	TMP-SMX**	Trimethoprim	Fosfomycin	Beta-lactams	Fluoroquinolones
x 5 days	x 3 days	x 3 days	x 1 dose	x 5 to 7 days	x 3 days
 100 mg po BID (macrocrystals/ monohydrate; i.e.MacroBID[®]) 50 mg po QID (macrocrystals or macrocrystals/ microcrystals) 	 160 mg/ 800 mg (e.g., Septra DS®) po BID 	 100 mg po BID 200 mg po daily 	 3 g po mixed in ½ cup water 	 Cefadroxil 500 mg po BID Cephalexin 250 to 500 mg po QID Amoxicillin- clavulanic acid 500 to 875 mg po BID Others 	 Ciprofloxacin 250 mg po BID 500 mg po daily (ER formulation) Norfloxacin 400 mg po BID Levofloxacin 250 mg po daily



Option	Efficacy	Safety/ Adherence
Nitrofurantoin	Equivalent to TMP-SMX for symptom resolution Risk for <i>E. coli</i> resistance consistently low	Decreased collateral damage Longer duration of therapy Contraindicated in lactating people feeding an infant who is < 1 mos or premature
TMP-SMX	Preferred option if local resistance < 20%, but rates often higher Resistance risk increased if used in past 3 to 6 mos	Contraindicated in true allergy to sulfonamide-containing antimicrobials Contraindicated in lactating people feeding an infant who is jaundiced, ill, or premature
Trimethoprim	Susceptibility inferred from TMP-SMX Alternative in setting of sulfa allergy	Contraindicated in true allergy to TMP-SMX
Fosfomycin	Risk for resistance generally low Meta-analysis found no difference in clinical resolution for all comparators ⁷	Shortest duration of therapy More expensive than alternatives May wish to reserve for multidrug resistant infections Not indicated in < 18 yrs
Fluoroquinolones	Equivalent to TMP-SMX for symptom resolution No resistance cut-off known, but high in many areas Resistance risk increased if used in past 3 to 6 mos	Significant collateral damage (both within patient and community) Many serious adverse effects possible
Beta-lactams	Some evidence suggests inferior to alternatives No resistance cut-off known, but higher than nitrofurantoin and fosfomycin in many areas	Longest duration of therapy Amox-clav has significant collateral damage



Microbiology and Resistance Considerations

- Escherichia coli (80 to 90%)
 - Also Staphylococcus saprophyticus, Klebsiella pneumoniae, Proteus mirabilis
- Consider community and patient risk for resistance
 - · Local antibiograms, where available
 - Consider source of data (i.e., LTC vs. hospital vs. community; urinary vs. all isolates)
 - Recent urinary culture results (if known)
 - Recent antimicrobial use (i.e., TMP-SMX, fluoroquinolone in past 3 months)

British Columbia: Antimicrobial Resistance Dashboard, LifeLabs Alberta: Alberta Precision Laboratories Saskatchewan: Firstline app, Saskatchewan Health Authority Manitoba: Health Providers Ontario: Lifel abs Québec: Antibiogouvernance (PrAG) Newfoundland and Labrador: Spectrum app New Brunswick: Firstline app Nova Scotia: Nova Scotia Health Prince Edward Island: Health PEI



Antimicrobial Susceptibility Report January 1, 2023 to December 31, 2023 Waterloo Wellington Out Patient (Excluding Hospitals)

Urinary Tract Pathogens (in Order of Frequency) - % Susceptible

Organism	Number of Isolates	Amox clavulanic	Ampicillin	Cefazolin (1)	Ceftriaxone	Ciprofloxacin	liosfomycin	Gentamicin	Meropenem	Nitrofurantoin	Trimethoprim- Sulfamethoxazole	
E. coli ^	11261	85	64	88	92	76	99	94	100	99	81	
Klebsiella pneumoniae *	1790	94		94	96	89		98	100	60	93	
Proteus mirabilis +	594	98 n:591	87	93	98	91		97	99		88	



Patient Education and Follow-Up





Pulling it Together – Back to Taylor

- Taylor (he/they) is a 32-year-old transgender man coming to your pharmacy for a UTI assessment. Taylor was assigned female at birth and has a vagina (but prefers to refer to it as 'front hole'). Taylor is not pregnant and has no known drug allergies.
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Pulling it Together

Domain	Strategies
Individual Strategies	Continuing education (formal, informal), facilitating discussions, attending community events, binge watching relevant TV shows!
Interpersonal Strategies	Effective use of pronouns (and documentation within systems), practicing a gender-neutral approach, use of gender-neutral infographics, explaining reasoning when making decisions, acknowledge knowledge gaps
Systemic Strategies	Use of intake forms, privacy, ensuring protocols are inclusive, training for all staff, other?



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Local Antibiogram Links

- British Columbia: Antimicrobial Resistance Dashboard (http://www.bccdc.ca/healthprofessionals/data-reports/antimicrobial-resistance-utilization/antimicrobial-resistance-dashboard), LifeLabs (https://www.lifelabs.com/healthcare-providers/reports/antibiograms/)
- Alberta: Alberta Precision Laboratories (https://www.albertaprecisionlabs.ca/hp/Page13779.aspx)
- Saskatchewan: Firstline app, Saskatchewan Health Authority (https://library.saskhealthauthority.ca/home/mobile/antibiograms)
- **Manitoba: Health Providers** (https://healthproviders.sharedhealthmb.ca/services/diagnostic-services/reference-material/clinical-microbiology/#122-122-top)
- **Ontario: LifeLabs** (https://www.lifelabs.com/healthcare-providers/reports/antibiograms/)
- Québec: Antibiogouvernance (PrAG) (https://www.ciusssmcq.ca/a-propos-denous/documentation/documentation-partenaires/antibiogouvernance-prag/)
- Newfoundland and Labrador: Spectrum app
- New Brunswick: Firstline app
- Nova Scotia: Nova Scotia Health (https://library.nshealth.ca/AMS/Antibiograms)
- Prince Edward Island: Health PEI (https://src.healthpei.ca/microbiology)



Thank you

