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CLINICAL CONTEXT

Knowledge and Compassion **Focused on You**



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Practice Guidelines for UTI Diagnosis and Treatment Among People with NLUTD

- NIDRR (1992)
- IDSA (2009)
- Pediatrics (2013)
- European Association of Urology, with other European and Asian urologic societies (2017)

**The Prevention and Management of Urinary Tract Infections
Among People With Spinal Cord Injuries**

National Institute on Disability and Rehabilitation Research Consensus Statement
January 27-29, 1992

IDSA GUIDELINES

**EAU Guidelines on
Urological
Infections**

Diagnosis, Prevention, and Treatment of Catheter-Associated Urinary Tract Infection in Adults:
2009 International Clinical Practice Guidelines
from the Infectious Diseases Society of America

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Clinical Context: Practice Guidelines

- *Each* notes their lack of high quality evidence support
- Each calls for research addressing the challenge of UTI diagnosis
 - Lack of available evidence most noteworthy in PVA Consortium Guideline
- Recent heightened interest in the *prevention* of catheter-associated UTI
- Patient perspective is not represented



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UTI Definition by Guideline: Gaps and Inconsistencies

Authority	NIDRR Consensus Statement (1992)	IDSA/EAU Guidelines (2017) Infectious Diseases Society of America (2009)	Pediatrics Proposed Definition of UTI in SB (2013)
Definition of Infection	Symptoms + Inflammatory Response + Bacterial Load	Symptoms + Bacterial Load	Symptoms + Inflammatory Response + Bacterial Load
Symptoms	One or more of the following symptoms required:	One or more of the following symptoms required:	Two or more of the following symptoms required:
		Fever	Fever
	Increased spasticity	Increased spasticity	
	Autonomic dysreflexia	Autonomic dysreflexia	
		Rigors	
	Discomfort or pain during urination	Dysuria	Pain with catheterization/urination
	Onset of urinary incontinence		New or worse incontinence
		Urgent/frequent urination	
	Malodorous and cloudy urine	Acute hematuria	Malodorous/cloudy urine
	Leukocytes in urine		
	Malaise	Malaise	
	Sense of unease	Sense of unease	
	Lethargy	Lethargy	
		Altered mental status	
	Discomfort/pain over kidney	Flank pain/CVA tenderness	New back pain
	Discomfort/pain over bladder	Pelvic discomfort	
		Suprapubic pain/tenderness	Abdominal pain
Inflammatory Response	Pyuria (>10 WBC/HPF)		Pyuria (>10 WBC/HPF)
Bacterial Load	Bacterial load (100 CFU/mL if IC; 10,000 CFU/mL if condom catheter; any detectable if indwelling urethral or suprapubic catheter)	Bacterial load (>=1000 CFU/mL)	Bacterial load (>100,000 CFU/mL of a single organism)



Guidelines Don't Agree with Evidence

- Ronco et al (2011): no associations between clinical symptoms and WBC and CFU thresholds in sample of males with SCI-IC.
- Tractenberg et al. (2017) Most prevalent symptoms in national sample are darker, cloudy, or fouler smelling urine and blood in urine (endorsement 70-84%)
 - *At least 80%* of this national sample (n=581) of persons with NB managing their bladder with IC attributed each of these sx to a UTI at least some of the time.



Problems Arising from Guidelines:

1. Different Guidelines identify different people as having “UTI”
2. All Guidelines assume no differences due to catheter or type of patient, or long/short term catheter use
3. Guidelines are not based on clinical or basic science evidence
4. Guidelines do not include patient perspective/experience
5. Guidelines focus all attention on “UTI” - so treatment for “not UTI but still problematic symptoms” not possible



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As a Result:

TREATMENT OF UTI IS LARGELY SUBJECTIVE WITHIN AND ACROSS PATIENTS



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Take Home Point

**UTI IS A POOR OUTCOME MEASURE FOR
PEOPLE WITH NEUROGENIC BLADDER-
FOR RESEARCH, SELF-MANAGEMENT,
AND POSSIBLY GUIDELINES**



Take Home Points

DO NOT PERFORM SURVEILLANCE

UA/C&S

**CANNOT RELY ON URINE WBC AS
MANY/MOST PEOPLE HAVE BLADDER
INFLAMMATION AT BASELINE**

**DIAGNOSIS OF UTI MUST BE
ASSOCIATED WITH SYMPTOMS**

**CLOUDY/FOUL SMELLING URINE, IN
ISOLATION, DOES NOT CONSTITUTE UTI**