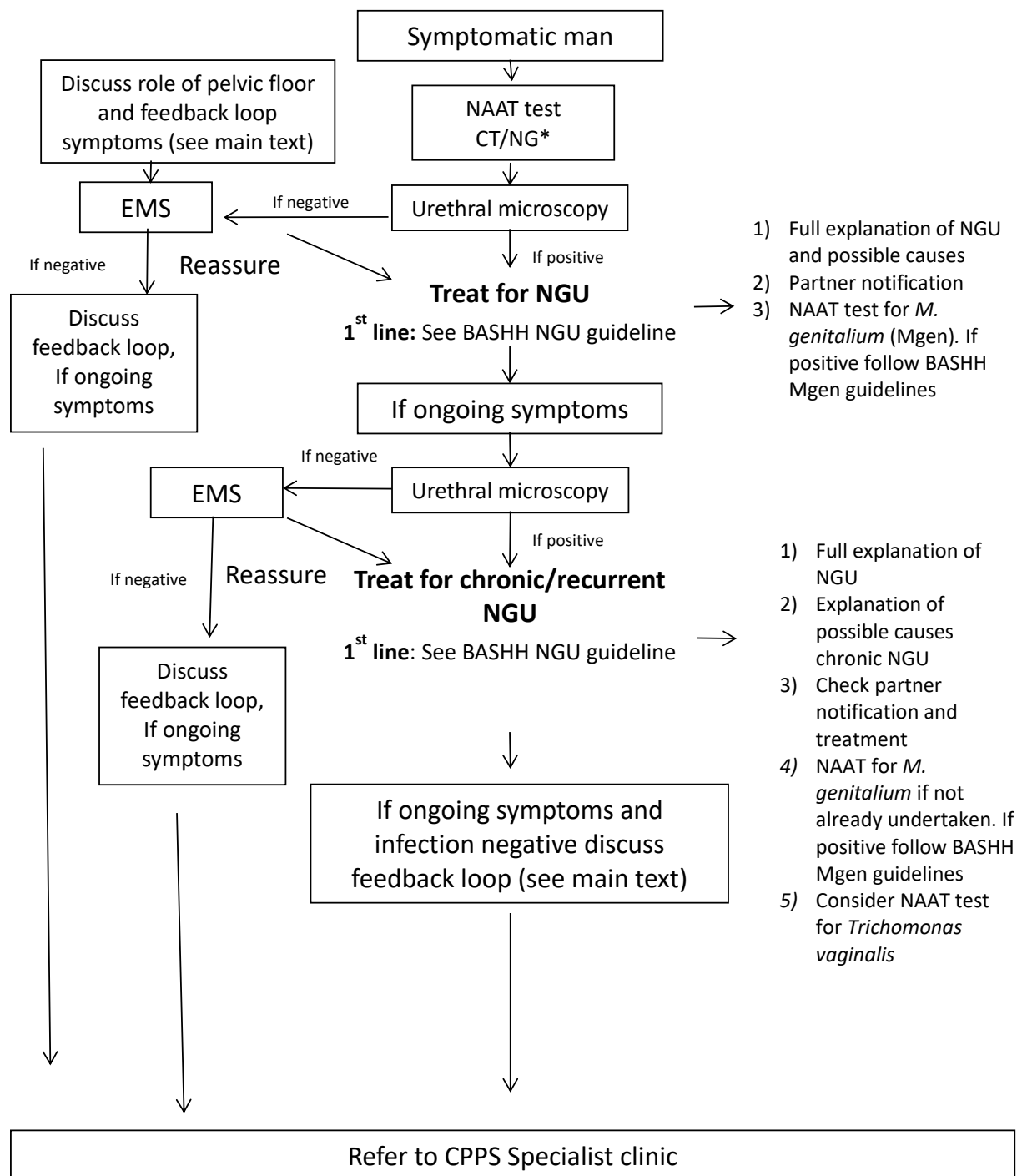


## **APPENDIX 1**

**Figure 1.** Management of Non-gonococcal urethritis (NGU) (adapted from eLH<sup>A10</sup>)



\*CT = *Chlamydia trachomatis*, NG = *Neisseria gonorrhoeae*

BASHH guidelines available at: <https://www.bashh.org/guidelines>

**Figure 2** The National Institutes of Health Chronic Prostatitis Symptoms Index, reproduced from Litwin MS et al.<sup>A11</sup>

**NIH-Chronic Prostatitis Symptom Index (NIH-CPSI)**

**Pain or Discomfort**

1. In the last week, have you experienced any pain or discomfort in the following areas?

	Yes	No
a. Area between rectum and testicles (perineum)	<input type="checkbox"/> 1	<input type="checkbox"/> 0
b. Testicles	<input type="checkbox"/> 1	<input type="checkbox"/> 0
c. Tip of the penis (not related to urination)	<input type="checkbox"/> 1	<input type="checkbox"/> 0
d. Below your waist, in your pubic or bladder area	<input type="checkbox"/> 1	<input type="checkbox"/> 0

2. In the last week, have you experienced:

	Yes	No
a. Pain or burning during urination?	<input type="checkbox"/> 1	<input type="checkbox"/> 0
b. Pain or discomfort during or after sexual climax (ejaculation)?	<input type="checkbox"/> 1	<input type="checkbox"/> 0

3. How often have you had pain or discomfort in any of these areas over the last week?

0 Never  
 1 Rarely  
 2 Sometimes  
 3 Often  
 4 Usually  
 5 Always

4. Which number best describes your AVERAGE pain or discomfort on the days that you had it, over the last week?

0  1  2  3  4  5  6  7  8  9  10

NO PAIN PAIN AS BAD AS YOU CAN IMAGINE

**Urination**

5. How often have you had a sensation of not emptying your bladder completely after you finished urinating, over the last week?

0 Not at all  
 1 Less than 1 time in 5  
 2 Less than half the time  
 3 About half the time  
 4 More than half the time  
 5 Almost always

6. How often have you had to urinate again less than two hours after you finished urinating, over the last week?

0 Not at all  
 1 Less than 1 time in 5  
 2 Less than half the time  
 3 About half the time  
 4 More than half the time  
 5 Almost always

**Impact of Symptoms**

7. How much have your symptoms kept you from doing the kinds of things you would usually do, over the last week?

0 None  
 1 Only a little  
 2 Some  
 3 A lot

8. How much did you think about your symptoms, over the last week?

0 None  
 1 Only a little  
 2 Some  
 3 A lot

**Quality of Life**

9. If you were to spend the rest of your life with your symptoms just the way they have been during the last week, how would you feel about that?

0 Delighted  
 1 Pleased  
 2 Mostly satisfied  
 3 Mixed (about equally satisfied and dissatisfied)  
 4 Mostly dissatisfied  
 5 Unhappy  
 6 Terrible

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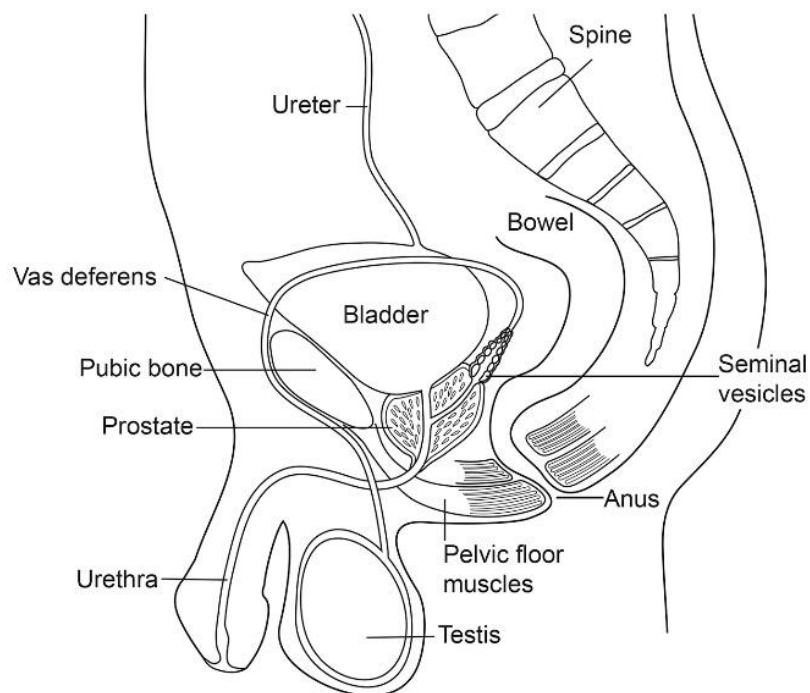
**Scoring the NIH-Chronic Prostatitis Symptom Index Domains**

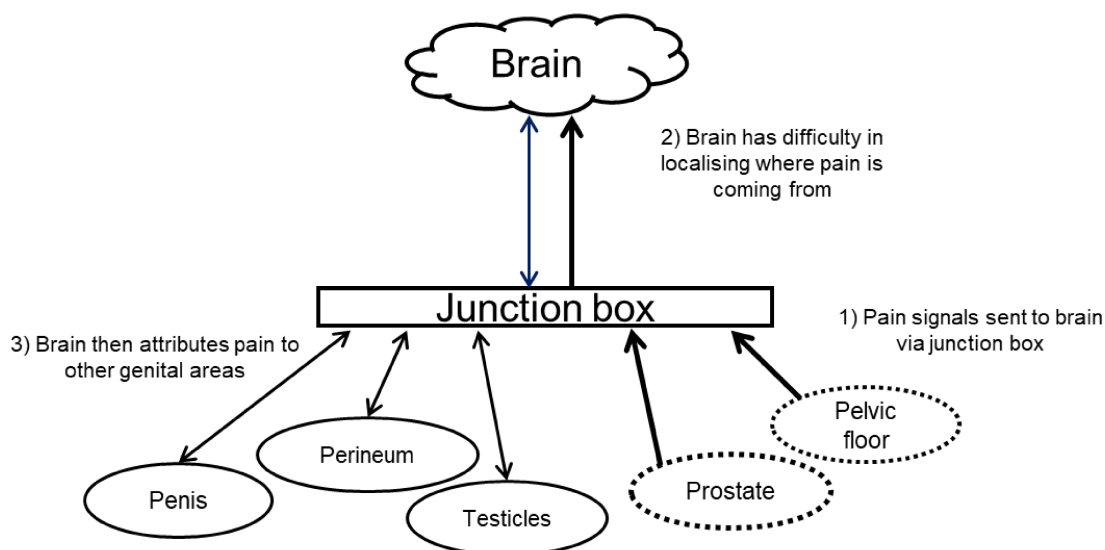
*Pain:*  
Total of items 1a, 1b, 1c, 1d, 2a, 2b, 3, and 4 = \_\_\_\_\_

*Urinary Symptoms:*  
Total of items 5 and 6 = \_\_\_\_\_

*Quality of Life Impact:*  
Total of items 7, 8, and 9 = \_\_\_\_\_

**Figure 3** Diagram of the male genital tract.<sup>1</sup> This can be used to discuss with patients the pelvic floor anatomy and how it is linked to the urinary tract with the urethra passing through it (external urethral sphincter). Thus part of the pelvic floor muscle group helps control how we urinate and if there is increased pelvic floor muscle tone this can cause urinary symptoms and even pain on ejaculation as it may narrow the urethra. (use in conjunction with figure 4 [Appendix 1], and figure 2 [Appendix 2])





**Figure 4** The pelvis, the hypogastric nerve plexus (junction box) and referred pelvic pain. Diagram used with patients for explaining how in our brain's sensory map, which was formed at birth, both the pelvic floor (constantly in action similar to the heart and diaphragm) and prostate (very small at birth) are poorly represented. As a result when pain is experienced in these parts of the body it can be attributed to other parts of the pelvis innervated through the same "junction box" (hypogastric plexus). This is similar to what happens when patients with angina and/or having a heart attack may experience pain in their left arm or jaw. The diagram has been adapted from Schneider et al.<sup>1,4</sup>

## ADDITIONAL REFERENCES

- A1. Krieger JN, Lee SW, Jeon J, et al. Epidemiology of prostatitis. *International journal of antimicrobial agents* 2008;31 Suppl 1(Suppl 1):S85-90. doi: 10.1016/j.ijantimicag.2007.08.028
- A2. Horner P, Blee K, O'Mahony C, et al. NGU 2015. Updated on: 03 December 2018. <https://www.bashh.org/guidelines>.
- A3. Anderson RU, Sawyer T, Wise D, et al. Painful myofascial trigger points and pain sites in men with chronic prostatitis/chronic pelvic pain syndrome. *The Journal of urology* 2009;182(6):2753-58. doi: 10.1016/j.juro.2009.08.033
- A4. Doiron RC, Tripp DA, Tolls V, et al. The evolving clinical picture of chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS): A look at 1310 patients over 16 years. *Can Urol Assoc J* 2018;12(6):196-202. doi: 10.5489/cuaj.4876
- A5. Shoskes DA, Nickel JC, Kattan MW. Phenotypically Directed Multimodal Therapy for Chronic Prostatitis/Chronic Pelvic Pain Syndrome: A Prospective Study Using UPOINT. *Urology* 2010;75(6):1249-53.
- A6. Shoskes DA, Berger R, Elmi A, et al. Muscle tenderness in men with chronic prostatitis/chronic pelvic pain syndrome: the chronic prostatitis cohort study. *J Urol* 2008;179(2):556-60. doi: 10.1016/j.juro.2007.09.088
- A7. Anothaisintawee T, Attia J, Nickel JC, et al. Management of Chronic Prostatitis/ Chronic Pelvic Pain Syndrome. *JAMA: The Journal of the American Medical Association* 2011;305(1):78-86.
- A8. Crofts M, Ramsden S, Horner P. Chronic pelvic pain in men. *Medicine* 2022;50(5):280-84. doi: <https://doi.org/10.1016/j.mpmed.2022.02.007>
- A9. Soni S, Horner P, Rayment M, et al. British Association for Sexual Health and HIV national guideline for the management of infection with Mycoplasma genitalium (2018). *Int J STD AIDS* 2019;30(10):938-50. doi: 10.1177/0956462419825948
- A10. Horner P, LeVoir H. Sexual Health and HIV: 03\_05 Acute and Chronic Non-gonococcal Urethritis: Specialist Management. 2018. <https://www.e-lfh.org.uk/>.
- A11. Litwin MS, McNaughton-Collins M, FOWLER JR, et al. The National Institutes of Health Chronic Prostatitis Symptom Index: Development and validation of a new outcome measure. *The Journal of Urology* 1999;162(2):369-75.
- A12. Horner PJ, Blee K, Falk L, et al. 2016 European guideline on the management of non-gonococcal urethritis. *Int J STD AIDS* 2016;27:928-37. doi: 10.1177/0956462416648585
- A13. Giubilei G, Mondaini N, Minervini A, et al. Physical activity of men with chronic prostatitis/chronic pelvic pain syndrome not satisfied with conventional treatments--could it represent a valid option? The physical activity and male pelvic pain trial: a double-blind, randomized study. *Journal of Urology* 2007;177(1):159-65.
- A14. Boecker H, Sprenger T, Spilker ME, et al. The runner's high: opioidergic mechanisms in the human brain. *Cereb Cortex* 2008;18(11):2523-31. doi: 10.1093/cercor/bhn013
- A15. Horner PJ, Flanagan H, Horne AW. Is There a Hidden Burden of Disease as a Result of Epigenetic Epithelial-to-Mesenchymal Transition Following Chlamydia trachomatis Genital Tract Infection? *J Infect Dis* 2021;224(Supplement\_2):S128-S36. doi: 10.1093/infdis/jiab088
- A16. Frølund M, Wikström A, Lidbrink P, et al. The bacterial microbiota in first-void urine from men with and without idiopathic urethritis. *PloS one* 2018;13(7):e0201380. doi: 10.1371/journal.pone.0201380
- A17. Horner PJ, Cain D, McClure M, et al. Association of antibodies to *Chlamydia trachomatis* heat-shock protein 60 kD with chronic nongonococcal urethritis. *Clinical Infectious Diseases* 1997;24(4):653-60.
- A18. Hooton TM, Wong ES, Barnes RC, et al. Erythromycin for persistent or recurrent nongonococcal urethritis. A randomized, placebo-controlled trial. *Annals of Internal Medicine* 1990;113(1):21-26.
- A19. Kricker JA, Page CP, Gardarsson FR, et al. Nonantimicrobial Actions of Macrolides: Overview and Perspectives for Future Development. *Pharmacol Rev* 2021;73(4):233-62. doi: 10.1124/pharmrev.121.000300
- A20. O'Neill J. Tackling Drug-Resistant Infections Globally: final report and recommendations. 2016. <https://amr-review.org/>.