

Outpatient work-up for LUTS, an assignment for Specially Trained Nurses (STN)?

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OBJECTIVES

In daily clinical practice, one consequence of the increasing number of patients presenting with elevated PSA levels that need urological evaluation, is that patients who have benign LUTS will have to wait much longer from time of referral to specialist evaluation of their problems. The aim of this study was to evaluate if outpatient LUTS work-up could be done by STN and if this would optimize the management for this particular group of patients with regards especially to cost/effectiveness, time between referral and evaluation without jeopardizing safety.



METHODS

After 2 months of training (theory and practical management) on LUTS and how to do LUTS work-up (History, Timed micturation, IPSS, Micturation charts, Flow, PVR, TRUS-volume, DRE) 2 RNs were assigned to perform the outpatient work-up on patients with benign LUTS.
 All referrals for LUTS were evaluated by a board certified Urologist. If there were no indications of malignancy in the referral, the work-up was done by the STN. Prior to the work-up, lab test (Hb, creatinine, PSA, U-stix and culture), timed micturation, IPSS, and micturation charts had to be completed (Fig 1.)
 At the time of visit; history, Flow, PVR, TRUS and DRE was done.
 After the visit all above data were registered on a specially designed chart, together with calculated total 24 hour urine volume, min/max & medium voided volumes, frequency and % of volume at day and night time.
 The completed charts were evaluated by a certified specialist in urology, who based on the results gave 3 options:
 1) No further treatment or evaluation needed
 2) Recommendation for treatment
 3) Further exam or evaluation needed
 Finally cost and effectiveness was calculated and compared with standard LUTS management at the outpatient facility

Figures and Tables

RESULTS

Fig 1. FLOW chart

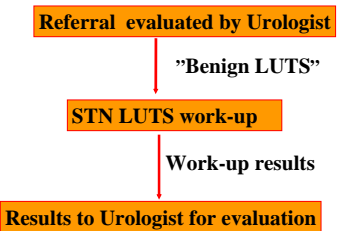


Table II

Diagnosis	n	Recommendations	n
BOU/BPH	56	No treatment needed	29
OAB	20	Medical LUTS treatment	39
Mixed(BOU/OAB)	15	TURP	15
"Prostatitis NUD"	9	TUMT	4
BOU/ Bladderneck obstruction	6	Urotherapy	2
Hypotonic bladder	3	Permanent catheter	1
Normal	3	Clean intermittent cath	1
Incontinence NUD	3	Further work-up needed	44
Uretral Stricture	2	<i>Type of work-up</i>	
UTI	2	Cystoscopy (20)	
Polydipsia	2	TRUS w Biopsy(5)	
Elevated PSA	7	Complete Urodynamic exam (5)	
Macroscopic haematuria	1	Other (7)	

Table I

Patients waiting for LUTS Evaluation	N
2008-04-01	104
2009-04-01	49
Number of weeks waiting for a visit	N
2008-04-01	40
2009-04-01	4

Between apr -08 and mar -09 a total of 135 men, age 39-88y (mean 67) were seen by the STNs.
 At the initiation of the study there were 104 patients waiting for a LUTS evaluation and the time from referral to visit was 44 weeks with 7 doctors working at the clinic.
 At the end of the study 40 patients were waiting and the time from referral to visit was 4 weeks, with 5 doctors working (Table I).
 Twenty-nine patients needed no further evaluation or treatment, 41 were recommended pharmacological LUTS treatment, 15 TURP, 4 TUMT, 1 Foley, 2 Clean intermittent self cath and 44 needed further examination. The most common additional exam was cystoscopy n=30 (Table II) .
 Only 2 patients were offended because they did not meet a doctor at the work-up visit
 No malignant diseases were diagnosed.
 The average net cost for LUTS work-up with doctors doing the procedures was estimated to 48 EUROS, with the RNS doing the work up the average net cost was estimated to 25 EUROS

CONCLUSIONS

Outpatient LUTS work-up with specially trained nurses is a feasible option and will significantly improve the management in this particular group of patients, with regards to cost per work-up and time between referral and evaluation