Diagnosis and treatment of overactive bladder (non-neurogenic) in adults: AUA/SUFU guideline.

TARGET POPULA	ΓΙΟΝ	Decidable
Eligibility Inclusion Criterion · non-neurogenic OAI Exclusion Criterion · individuals with sym	B aptoms related to neurologic conditions	(Y or N)
RECOMMENDATION	ONS	
Recommendation 1 - Diagnosis		
Conditional:	The clinician should engage in a diagnostic process to document symptoms and signs that characterize OAB and exclude other disorders that could be the cause of the patient's symptoms; the minimum requirements for this process are a careful history, physical exam and urinalysis.	
	IF {suspected} OAB Value: true THEN The clinician should engage in a diagnostic process to document symptoms and signs that characterize OAB and exclude other disorders that could be the cause of the patient's symptoms; the minimum requirements for this process are a careful history, physical exam and urinalysis.	Decidable Vocab Executable Vocab
Evidence Quality:		
Strength of Recommendation:	Clinical Principle	

Reason:			
Logic:	If {suspected} OAB is [true] Then The clinician should engage in a diagnostic process to document symptoms and signs that characterize OAB and exclude other disorders that could be the cause of the patient's symptoms; the minimum requirements for this process are a careful history, physical exam and urinalysis.		
Recommendation 2 - Diagnosis			
Conditional:	ional: In some patients, additional procedures and measures may be necessary to validate an OAB diagnosis, exclude other disorders and fully inform the treatment plan. At the clinician's discretion, a urine culture and/or post-void residual assessment may be performed and information from bladder diaries and/or symptom questionnaires may be obtained.		
	IF Decidable Voca		
	selected patients with OAB		
	THEN Executable Voca	ab	
	at the clinician's discretion, a urine culture may be performed		
	at the clinician's discretion, a post-void residual assessment		
	may be performed at the clinician's discretion, information from bladder diaries		
	may be obtained.		
	at the clinician's discretion, information from symptom questionnaires may be obtained.		
Evidence Quality:			
Strength of Recommendation:	Clinical Principle		
Reason:	In some patients, additional procedures and measures may be necessary to validate an OAB diagnosis, exclude other disorders and fully inform the treatment plan.		

Logic: If

selected patients with OAB

(at the clinician's discretion, a urine culture may be performed

at the clinician's discretion, a post-void residual assessment may be performed) **AND**

(at the clinician's discretion, information from bladder diaries may be obtained. OR

at the clinician's discretion, information from symptom questionnaires may be obtained.)

Recommendation

3 - Diagnosis

Conditional: Urodynamics, cystoscopy and diagnostic renal and bladder ultrasound should not be used in the initial workup of the uncomplicated patient.

IF

uncomplicated OAB patient

Value: true

THEN

do not use urodynamics in the initial diagnostic workup do not use cystoscopy in the initial diagnostic workup do not use diagnostic renal and bladder ultrasound in the initial diagnostic workup

Decidable	Vocab

Executable	Vocab

Evidence Quality:

Strength of **Recommendation:** Clinical Principle

Reason:

Urodynamics, cystoscopy and diagnostic renal and bladder ultrasound are not recommended in the initial diagnostic workup of the uncomplicated OAB patient. For complicated patients or refractory patients who have failed multiple OAB treatments, the choice of additional diagnostic tests depends on patient history and presentation and clinician judgment. In some cases, additional information may make clear that the patient has neurogenic OAB rather than non-neurogenic OAB and requires a different treatment plan. Patients with hematuria should be referred for a urologic work up. In the low-risk uncomplicated patient without microscopic hematuria, urine cytology is infrequently associated with atypia requiring further investigation, engendering costs and possibly resulting in

morbidity. Urine cytology is not recommended in the routine evaluation of patients with uncomplicated OAB without hematuria who respond to therapy.

Logic: If

uncomplicated OAB patient is [true]

Then

do not use urodynamics in the initial diagnostic workup

AND

do not use cystoscopy in the initial diagnostic workup

AND

do not use diagnostic renal and bladder ultrasound in the initial diagnostic

workup

Recommendation

4 - Treatment

Conditional: OAB is not a disease; it is a symptom complex that generally

is not a life threatening condition. After assessment has been performed to exclude conditions requiring treatment and counseling, no treatment is an acceptable choice made by

some patients and caregivers.

IF
OAB

Value: true

assessment has been performed to exclude conditions requiring treatment and counseling

Value: true

THEN

no treatment is an acceptable choice made by some patients

and caregivers

Vessh
Vocab

Vocab

Decidable

Evidence Quality:

Strength of

Expert Opinion

Recommendation:

Reason: OAB is not a disease; it is a symptom complex that generally is not a life

threatening condition.

Logic: If

OAB is [true]

AND

assessment has been performed to exclude conditions requiring treatment and counseling is [true]

Then

no treatment is an acceptable choice made by some patients and caregivers

Recommendation

5 - Treatment

Conditional: Clinicians should provide education to patients regarding normal lower urinary tract function, what is known about OAB, the benefits vs. risks/burdens of the available treatment alternatives and the fact that acceptable symptom control may require trials of multiple therapeutic options before it is achieved.

> IF **OAB**

> > Value: true

THEN

Clinicians should provide education to patients regarding normal lower urinary tract function, what is known about OAB, the benefits vs. risks/burdens of the available treatment alternatives and the fact that acceptable symptom control may require trials of multiple therapeutic options before it is achieved.

Decidable	Vocab

Executable Vo

Evidence Quality:

Strength of **Recommendation:** Clinical Principle

Reason:

Explaining what is normal can help the patient understand how their condition diverges from normal and gives them a comparator (or goal) for judging their own progress in treatment. Education also empowers the patient to engage and participate in their treatment, which is essential when using interventions that rely on behavior change. Patients must understand that voiding is a behavior that can be managed and that successful OAB treatment requires a willing participant who is informed and engaged in the treatment process.

Logic: If

OAB is [true]

Then

Clinicians should provide education to patients regarding normal lower urinary

tract function, what is known about OAB, the benefits vs. risks/burdens of the available treatment alternatives and the fact that acceptable symptom control may require trials of multiple therapeutic options before it is achieved.

Recommendation

6 - First Line Treatments: Behavioral Therapies

Conditional: Clinicians should offer behavioral therapies (e.g., bladder

training, bladder control strategies, pelvic floor muscle training, fluid management) as first line therapy to all

patients with OAB.

IF OAB

Value: true

THEN

Standard

Clinicians should offer behavioral therapies (e.g., bladder training, bladder control strategies, pelvic floor muscle training, fluid management) as first line therapy Executable Vocab

Vocab

Decidable

Evidence Quality: Grade B; Benefits outweigh risks/burdens

Strength of

Recommendation:

Reason: Behavioral treatments are designated as first-line treatments because they are as

effective in reducing symptom levels as are anti-muscarinic medications, and they consist of many components that can be tailored to address the individual patient's needs and capacities. In addition, they are relatively non-invasive and, in contrast to medications, are associated with virtually no adverse events. They do require the active participation of the patient and/or of the patient's caregiver,

however, as well as time and effort from the clinician.

Logic: If

OAB is [true]

Then

Clinicians should offer behavioral therapies (e.g., bladder training, bladder control strategies, pelvic floor muscle training, fluid management) as first line

therapy

Recommendation

7 - First Line Treatments: Behavioral Therapies

Conditional: Behavioral therapies may be combined with anti-muscarinic

therapies.

IF OAB Decidable Vocab

Value: true

THEN

behavioral therapies may be combined with anti-muscarinic

therapies.

Executable Vocab

Evidence Quality: Grade C; Benefits outweigh risks/burdens

Strength of

Recommendation

Recommendation:

Reason: Behavioral and drug therapies are often used in combination in clinical practice to

optimize patient symptom control and QoL. A limited literature indicates that initiating behavioral and drug therapy simultaneously may improve outcomes, including frequency, voided volume, incontinence and symptom distress. In patients who are not adequately improved on behavioral or drug therapy alone, there also is evidence that continuing the initial therapy and adding the alternate therapy using a stepped approach can produce additional benefit. Evidence strength is Grade C because of the limited evidence base consisting of relatively

few trials, small sample sizes, and limited follow-up durations.

Logic: If

OAB is [true]

Then

behavioral therapies may be combined with anti-muscarinic therapies.

Recommendation

8 - Second-Line Treatments: Anti-Muscarinics

Conditional: Clinicians should offer oral anti-muscarinics, including

darifenacin, fesoterodine, oxybutynin, solifenacin, tolterodine or trospium (listed in alphabetical order; no

hierarchy is implied) as second-line therapy.

IF Decidable Vocab

	OAB			
	Value: true THEN Clinicians should offer oral anti-muscarinics, including darifenacin, fesoterodine, oxybutynin, solifenacin, tolterodine or trospium (listed in alphabetical order; no hierarchy is implied) as second-line therapy.	Executable	Vocab	
Evidence Quality:	Grade B; Benefits outweigh risks/burdens			
Strength of Recommendation:	Standard			
Reason:	The choice of oral anti-muscarinics as second-line therapy refithese medications reduce symptoms but also can commonly his threatening side effects such as dry mouth, constipation, dry of vision, dyspepsia, UTI, urinary retention and impaired cognition life-threatening side effects such as arrhythmias have been repreview of the randomized trials that evaluated pharmacologic (including trials with placebo control groups as well as trials with treatment comparison groups) revealed no compelling evidence efficacy across medications. This finding is consistent with the several published systematic reviews. Evidence strength was most trials were of moderate quality and follow-up durations (i.e., 12 weeks).	ave non-life or itchy eyes, ive function. corted. An ex- therapies for with active ce for difference e conclusion Grade B bec	blurred Rarely, extensive r OAB ential as of	
Logic:	If OAB is [true] Then Clinicians should offer oral anti-muscarinics, including darife oxybutynin, solifenacin, tolterodine or trospium (listed in alph hierarchy is implied) as second-line therapy.			
Recommendation 9 - Second-Line Treatments: Anti-Muscarinics				
Conditional:	If an immediate release (IR) and an extended release (ER) formulation are available, then ER formulations should preferentially be prescribed over IR formulations because of lower rates of dry mouth.			
	IF OAB	Decidable	Vocab	

	Value: true	
	prescribing an anti-muscarinic	
	Value: true an extended release (ER) formulation is available	
	Value: true an immediate release (IR) formulation is available	
	Value: true THEN ER formulations should preferentially be prescribed over IR formulations because of lower rates of dry mouth.	Executable Vocab
Evidence Quality:	Grade B; Benefits outweigh risks/burdens	
Strength of Recommendation:	Standard	
Reason:	A meta-analysis of adverse events indicated that the ER form oxybutynin and tolterodine resulted in statistically significant reports of dry mouth than the IR formulations of both medical medication, there was no relationship with dose. There were trial arms to meta-analyze the IR vs. ER formulations; however was evident.	ly fewer patient tions. Within each insufficient trospium
Logic:	If OAB is [true] AND prescribing an anti-muscarinic is [true] AND an extended release (ER) formulation is available is [true] AND an immediate release (IR) formulation is available is [true] Then ER formulations should preferentially be prescribed over IR to because of lower rates of dry mouth.	formulations
Recommendation 10 - Second-Line Trea	atments: Anti-Muscarinics	
Conditional:	Transdermal (TDS) oxybutynin (patch or gel) may be offered.	
	IF	Decidable Vocab

	OAB		
	Value: true history of dry mouth with oral agents		
	Value: true at risk of experiencing dry mouth with oral agents		
	Value: true THEN Transdermal oxybutynin (patch or gel) may be offered instead of oral anti-muscarinics	Executable	Vocab
Evidence Quality:	Grade C; Benefits outweigh risks/burdens		
Strength of Recommendation:	Recommendation		
Reason:	The Panel interpreted available data to indicate that transdern (patch and gel) is effective in reducing incontinence episodes dry mouth rates that appear to be less than the meta-analyzed oral oxybutynin ER and 68.0% for oral oxybutynin IR. Becaustudies evaluating TDS oxybutynin was relatively few with dinclusion criteria (i.e., known responders to anti-muscarinic retrials), the body of evidence strength was designated as Grade	, in particular, rates of 40.09 use the numbe different patient medications in	, with % for r of it
Logic:	If OAB is [true] AND (history of dry mouth with oral agents is [true] OR at risk of experiencing dry mouth with oral agents is [true]) Then Transdermal oxybutynin (patch or gel) may be offered instead muscarinics	d of oral anti-	
Recommendation 11 - Second-Line Trea	atments: Anti-Muscarinics		
Conditional:	If a patient experiences inadequate symptom control and/or unacceptable adverse drug events with one anti-muscarinic medication, then a dose modification or a different anti-muscarinic medication may be tried.		
	IF	Decidable	Vocab

	OAB		
	Value: true		
	taking an anti-muscarinic medication		
	Value: one		
	inadequate symptom control		
	Value: true unacceptable adverse drug events		
	Value: true		
	THEN modify dose of current anti-muscarinic medication	Executable Vocab	
	prescribe a different anti-muscarinic medication		
Evidence Quality:			
Strength of Recommendation:	Clinical Principle		
Reason:	In the Panel's experience, patients who experience inadequate and/or unacceptable adverse drug events with one anti-muscar may experience better symptom control and/or a more accept event profile with another anti-muscarinic. In addition, in sort modification (i.e., reducing dose or reducing dose and combin with behavioral techniques) may achieve a better balance better adverse drug events. A small literature composed of observat supports this experience, particularly when switching from an a newer medication. Patients who had prior unsatisfactory syntamical adverse events with tolterodine or oxybut efficacy and/or more acceptable adverse event profiles with find solifenacin or darifenacin. Based on the Panel's clinical expellimited literature, the Panel advises that clinicians should not muscarinic therapy if trial of one medication appears to fail of unacceptable adverse event profile. There is no literature that combination therapy of anti-muscarinics with each other or worm medication such as tricyclics to manage non-neurogenic OAE medication such as tricyclics to manage non-neurogenic OAE.	rug events with one anti-muscarinic medication m control and/or a more acceptable adverse drug -muscarinic. In addition, in some patients, dose see or reducing dose and combining medication ay achieve a better balance between efficacy and iterature composed of observational studies cularly when switching from an older medication to who had prior unsatisfactory symptom control vents with tolterodine or oxybutynin reported better le adverse event profiles with fesoterodine sed on the Panel's clinical experience and this vises that clinicians should not abandon anti-one medication appears to fail or produces an ofile. There is no literature that addresses suscarinics with each other or with other classes of	
Logic:	If OAB is [true] AND taking an anti-muscarinic medication is [one] AND (inadequate symptom control is [true] OR		

unacceptable adverse drug events is [true]) Then

modify dose of current anti-muscarinic medication

prescribe a different anti-muscarinic medication

Recommendation

12 - Second-Line Treatments: Anti-Muscarinics

Conditional: Clinicians should not use anti-muscarinics in patients with narrow angle glaucoma unless approved by the treating ophthalmologist and should use anti-muscarinics with extreme caution in patients with impaired gastric emptying or a history of urinary retention.

> IF OAB

> > Value: true

narrow angle glaucoma

Value: true

use of anti-muscarinics approved by treating ophthalmologist

Value: false

THEN

do not use anti-muscarinics

Executable	Vocab

Decidable

Vocab

Evidence Quality:

Strength of

Clinical Principle

Recommendation:

Reason:

Logic: If

OAB is [true]

AND

narrow angle glaucoma is [true]

AND

use of anti-muscarinics approved by treating ophthalmologist is [false]

Then

do not use anti-muscarinics

Conditional: Clinicians should not use anti-muscarinics in patients with

narrow angle glaucoma unless approved by the treating ophthalmologist and should use anti-muscarinics with extreme caution in patients with impaired gastric emptying

or a history of urinary retention.

IF OAB

Value: true

impaired gastric emptying

Value: true

history of urinary retention

Value: true

THEN

use anti-muscarinics with extreme caution

Vocab

Decidable

Executable	Vocab

Evidence Quality:

Strength of

Clinical Principle

Recommendation:

Reason:

Logic: If

OAB is [true]

AND

(impaired gastric emptying is [true]

OR

history of urinary retention is [true])

Then

use anti-muscarinics with extreme caution

Recommendation

13 - Second-Line Treatments: Anti-Muscarinics

Conditional: Clinicians should manage constipation and dry mouth before

abandoning effective anti-muscarinic therapy. Management may include bowel management, fluid management, dose

modification or alternative anti-muscarinics.

	IF	Decidable	Vocab
	OAB		
	Value: true effective anti-muscarinic therapy		
	Value: true patient considering discontinuation		
	Value: true THEN manage constipation and dry mouth before abandoning effective anti-muscarinic therapy	Executable	Vocab
Evidence Quality:			
Strength of Recommendation:	Clinical Principle		
Reason:	One of the main limitations of anti-muscarinic therapy is that patients discontinue after a few weeks or months. Although the factors involved in this decision, side effects are commonly ediscontinuation. One way clinicians can help patients benefit muscarinic therapy is to proactively monitor for and manage effects.	nere may be so ited as the rea from anti-	several ason for
Logic:	If OAB is [true] AND effective anti-muscarinic therapy is [true] AND patient considering discontinuation is [true] Then manage constipation and dry mouth before abandoning effect therapy	ive anti-muso	carinic
Recommendation 14 - Second-Line Trea	atments: Anti-Muscarinics		
Conditional:	Clinicians must use caution in prescribing anti-muscarinics in patients who are using other medications with anti-cholinergic properties.		
	IF OAB	Decidable	Vocab

	Value: true
	use of medications with anti-cholinergic properties
	Value: true THEN Executable Vocab
	use caution in prescribing anti-muscarinics
Evidence Quality:	
Strength of Recommendation:	Expert Opinion
Reason:	The concurrent use of other medications with anti-cholinergic activity may potentiate the side effects of the anti-muscarinic class of OAB medications.
Logic:	If OAB is [true] AND use of medications with anti-cholinergic properties is [true] Then use caution in prescribing anti-muscarinics
Recommendation 15 - Second-Line Trea	atments: Anti-Muscarinics
Conditional:	Clinicians should use caution in prescribing anti-muscarinics in the frail OAB patient.
	IF OAB Value: true frail Value: true THEN Clinicians should use caution in prescribing anti-muscarinics Executable Vocab Vocab
Evidence Quality:	
Strength of Recommendation:	Clinical Principle
Reason:	In frail patients, defined as patients with mobility deficits (i.e., require support to walk, have slow gait speed, have difficulty rising from sitting to standing without

assistance), weight loss and weakness without medical cause and who may have cognitive deficits (PR 37, 98, 315), the use of OAB medications may have a lower therapeutic index and a higher adverse drug event profile. OAB medication studies generally are not conducted in the frail elderly, resulting in a lack of data in this group. In the Panel's experience, however, adverse drug events in addition to the typically reported events of dry mouth and constipation may occur, including impaired thermoregulation that can cause dangerous core temperature elevation.

Logic: If

OAB is [true]

AND

frail is [true]

Then

Clinicians should use caution in prescribing anti-muscarinics

Recommendation

16 - Second-Line Treatments: Anti-Muscarinics

Conditional: Patients who are refractory to behavioral and medical

therapy should be evaluated by an appropriate specialist if

they desire additional therapy.

IF

refractory OAB

Value: true

desire additional therapy

Value: true

THEN

patients should be evaluated by an appropriate specialist

Ŀ	Decidable	Vocab
L		
Γ		

Executable	Vocab

Evidence Quality:

Strength of

Expert Opinion

Recommendation:

Reason: Behavioral therapies present no risks to patients and anti-muscarinics present

risks that cease when the medication is stopped. The remaining treatment levels present increasing risks to patients that must be balanced with potential efficacy.

Logic: If

refractory OAB is [true]

AND

desire additional therapy is [true]

Then

patients should be evaluated by an appropriate specialist

Recommendation

17 - FDA-Approved Neuromodulation Therapies

Conditional: Clinicians may offer sacral neuromodulation (SNS) as thirdline treatment in a carefully selected patient population characterized by severe refractory OAB symptoms or patients who are not candidates for second-line therapy and are willing to undergo a surgical procedure.

IF	Decidable	Vocab
severe refractory OAB symptoms		
Value: true		
candidate for second-line therapy		
Value: false		
willing to undergo a surgical procedure		
Value: true		
THEN	Executable	Vocab
Clinicians may offer sacral neuromodulation (SNS) as third-		
line treatment		

Evidence Quality: Grade C; Benefits outweigh risks/burdens

Strength of

Reason:

Recommendation

Recommendation:

The Panel interpreted available data to indicate that in carefully selected patients,

SNS is an appropriate therapy that can have durable treatment effects but in the context of frequent and moderately severe adverse events, including the need for

additional surgeries.

Logic: If

(severe refractory OAB symptoms is [true]

candidate for second-line therapy is [false])

AND

willing to undergo a surgical procedure is [true]

Clinicians may offer sacral neuromodulation (SNS) as third-line treatment

Recommendation

18 - FDA-Approved Neuromodulation Therapies

Conditional: Clinicians may offer peripheral tibial nerve stimulation (PTNS) as third-line treatment in a carefully selected patient

population.

IF	Decidable	Vocab
moderately severe baseline incontinence		
Value: true		
moderately severe baseline frequency		
Value: true	L	
willingness to comply with the PTNS protocol		
Value: true		
resources to make frequent office visits in order to obtain		
treatment		
Value: true		
THEN	Executable	Vocab
Clinicians may offer peripheral tibial nerve stimulation		

Evidence Quality: Grade C; Balance between benefits and risks/burdens uncertain

(PTNS) as third-line treatment

Strength of **Recommendation:**

Reason:

Option

The Panel interpreted available data to indicate that PTNS can benefit a carefully selected group of patients characterized by moderately severe baseline

incontinence and frequency and willingness to comply with the PTNS protocol. Patients must also have the resources to make frequent office visits in order to obtain treatment because treatment effects dissipate once treatment ceases. As a group, the PTNS studies constitute Grade C evidence because of the predominant observational designs, varying patient inclusion criteria and short follow-up

durations for most studies.

Logic:

moderately severe baseline incontinence is [true]

moderately severe baseline frequency is [true]

AND

willingness to comply with the PTNS protocol is [true]

AND

resources to make frequent office visits in order to obtain treatment is [true]

Then

Clinicians may offer peripheral tibial nerve stimulation (PTNS) as third-line treatment

Recommendation

Recommendation:

19 - Non-FDA-Approved: Intradetrusor injection of onabotulinumtoxinA

Conditional: Clinicians may offer intradetrusor onabotulinumtoxinA as third-line treatment in the carefully-selected and thoroughlycounseled patient who has been refractory to first- and second-line OAB treatments. The patient must be able and willing to return for frequent post-void residual evaluation and able and willing to perform self-catheterization if necessary.

	IF	Decidable	Vocab
	refractory to first-line OAB treatments		
	Value: true refractory to second-line OAB treatments		
	Value: true thoroughly counseled		
	Value: true able and willing to to return for frequent post-void residual evaluation		
	Value: true able and willing to perform self-catheterization if necessary.		
	Value: true		
	THEN	Executable	Vocab
	Clinicians may offer intradetrusor onabotulinumtoxinA as third-line treatment		
Evidence Quality:	Grade C; Balance between benefits and risks/burdens uncerta	in	
Strength of	Option		

Reason:

The Panel designated intradetrusor onabotulinumtoxinA treatment as an option because although most studies reported improvements in measured parameters, rates of adverse events that could compromise quality of life or lead to serious illness were extremely high in some trials, making the balance between benefits and risks/burdens unclear. In addition, at the time of this writing, intradetrusor onabotulinumtoxinA is not FDA-approved for treatment of non-neurogenic OAB.

Logic:

If

refractory to first-line OAB treatments is [true]

AND

refractory to second-line OAB treatments is [true]

AND

thoroughly counseled is [true]

AND

able and willing to to return for frequent post-void residual evaluation is [true]

AND

able and willing to perform self-catheterization if necessary. is [true]

Then

Clinicians may offer intradetrusor onabotulinumtoxinA as third-line treatment

Recommendation

20 - Additional Treatments

Conditional: Indwelling catheters (including transurethral, suprapubic, etc.) are not recommended as a management strategy for OAB because of the adverse risk/benefit balance except as a last resort in selected patients.

IF	Decidable	Vocab
urinary incontinence has resulted in the development and		
progression of decubiti		
Value: true		
urinary incontinence is the predominant disability affecting		
activities of daily living and therefore may result in		
institutionalization		
Value: true		
medical management of burdensome OAB is not feasible,		
effective nor recommended		
Value: true		
THEN	Executable	Vocab
As a last resort, an indwelling catheter may be considered.		<u>. </u>

Evidence Quality:	
Strength of Recommendation:	Expert Opinion
Reason:	In situations where the medical management of burdensome OAB, as outlined above, is not feasible, effective nor recommended, as in the patient with severe cognitive deficits or mobility issues, then other management options may need to be considered. Management with diapering and absorbent garments is always preferred to indwelling catheterization because of the high risk of indwelling catheter-associated UTIs, urethral erosion/destruction and urolithiasis. Intermittent catheterization may be an option when concomitant incomplete bladder emptying is present leading to overflow incontinence; however, this approach generally requires either patient willingness and ability or significant caregiver support.
Logic:	If urinary incontinence has resulted in the development and progression of decubiti is [true] OR urinary incontinence is the predominant disability affecting activities of daily living and therefore may result in institutionalization is [true] OR medical management of burdensome OAB is not feasible, effective nor recommended is [true] Then As a last resort, an indwelling catheter may be considered.
Recommendation 21 - Additional Treatr	ments
Conditional:	In rare cases, augmentation cystoplasty or urinary diversion for severe, refractory, complicated OAB patients may be considered.
	IF severe OAB Value: true refractory OAB Value: true complicated OAB Value: true

	THEN	Executable	Vocab
	In rare cases, augmentation cystoplasty or urinary diversion may be considered.		
Evidence Quality:			
Strength of Recommendation:			
Reason:	In general, surgery is not recommended for OAB patients excrare cases. The vast majority of case series that document the augmentation cystoplasty and diversion focus on neurogenic known regarding the impact of these procedures on non-neurand, particularly, on their quality of life. There are substantial procedures, however, including the likely need for long-term catheterization and the risk of malignancy. 199 In the Panel's a surgical approach to OAB treatment is appropriate only in the patient.	effects of patients. Little ogenic OAB I risks to these intermittent judgment, the	le is patients e self- erefore,
Logic:	If severe OAB is [true] OR refractory OAB is [true] OR complicated OAB is [true] Then In rare cases, augmentation cystoplasty or urinary diversion refractory.	nay be consid	lered.
Recommendation 22 - Follow-Up			
Conditional:	The clinician should offer follow up with the patient to assess compliance, efficacy, side effects and possible alternative treatments.		
	IF OAB	Decidable	Vocab
	Value: true THEN The clinician should offer follow up with the patient to assess compliance, efficacy, side effects and possible	Executable	Vocab

alternative treatments.

Evidence Quality:

Strength of **Expert Opinion**

Recommendation:

Reason:

Logic: If

OAB is [true]

Then

The clinician should offer follow up with the patient to assess compliance, efficacy, side effects and possible alternative treatments.