

## **COST-EFFECTIVENESS AND FINANCIAL IMPACT OF ONABOTULINUMTOXINA TREATMENT FOR URINARY INCONTINENCE DUE TO NEUROGENIC DETRUSOR OVERACTIVITY IN SPINAL CORD INJURY PATIENTS WITHIN THE FRENCH HEALTHCARE SYSTEM**

### Hypothesis / aims of study

The objective of this research was to estimate the costs and outcomes of onabotulinumtoxinA compared to standard of care for urinary incontinence (UI) due to Neurogenic Detrusor Overactivity (NDO) in patients with spinal cord injury (SCI) using the French payer perspective.

### Study design, materials and methods

A Markov model was used to evaluate two different treatment strategies in SCI patients with UI due to NDO who failed oral antimuscarinics. In the “standard-of-care arm”, based on input from clinical experts, patients were assumed to have no further pharmacologic treatment with only a subgroup of patients undergoing augmentation cystoplasty (AC). In the “onabotulinumtoxinA arm”, all patients were assumed to have 300 Allergan units of onabotulinumtoxinA. OnabotulinumtoxinA non-responders were assumed to have no further pharmacologic treatment, but a subgroup of them received AC. Model inputs included an intervention specific proportion of patients achieving at least a 50 percent reduction in incontinence episodes (treatment success), a 7.5 month onabotulinumtoxinA retreatment time interval for successes, treatment specific adverse event rates, and health utility scores and costs associated with treatment success and failure. Base case results were produced using a 10-year time horizon with costs and outcomes discounted at three percent per annum. Model outputs included health care resource utilization, quality-adjusted survival (QALYs), payer costs, and incremental cost-effectiveness ratio (ICER). One-way sensitivity analyses were performed on time interval for onabotulinumtoxinA retreatment, treatment rates, utility estimates, and treatment success rates.

### Results

The onabotulinumtoxinA treatment strategy as compared to standard of care resulted in a ten year incremental cost of €11,048, 0.43 QALYs gained, and a cost-effectiveness ratio of €25,580/QALY. The estimated additional cost per onabotulinumtoxinA treated patient-year to the French payer was €1,105. The financial impact of adding onabotulinumtoxinA treatment for the urinary incontinent NDO with SCI population for the French payer was €0.14 per French person-year. The incremental cost-effectiveness results were most sensitive to the health utility score improvement for treatment success, the onabotulinumtoxinA retreatment time interval, and the proportion of patients receiving surgery.

### Interpretation of results

There is preliminary evidence demonstrating efficacy of onabotulinumtoxinA in this population.

### Concluding message

At less than € 30,000/QALY, onabotulinumtoxinA may also be considered good value for money from the French payer perspective. Due to the relatively small population of eligible patients, this treatment approach would be expected to result in a small impact on the overall healthcare budget.

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<b>What were the subjects in the study?</b>	<b>NONE</b>