

## 5.36 TESTOSTERONE

### 12.5 mg/1.25 g (1%) gel, 88g pump bottle x 2; Testogel®; Besins Healthcare Australia Pty Ltd

#### 1 Purpose of Application

- 1.1 The minor submission sought Authority Required listing of a new presentation of 1% testosterone gel, Testogel®, which is a pump bottle rather than the currently listed sachets.

#### 2 Requested listing

- 2.1 The submission sought the same restrictions as those that applied to the existing Testogel 1% sachet presentation. In summary, this is for the treatment of androgen deficiency in:
- 1) Males with established pituitary or testicular disorders
  - 2) Males aged 40 year or older where androgen deficiency is demonstrated through hormone levels
  - 3) Males aged under 18 years with micropenis, delayed puberty or constitutional delay of growth or puberty.
- 2.2 At its July 2014 meeting, the PBAC recommended amendments to the restrictions for testosterone products. The revised restrictions came into effect for all PBS-listed testosterone products on 1 April 2015, and are presented below.

Name, Restriction, Manner of administration and form	Max. Qty	No. of Rpts	Dispensed Price for Max. Qty	Proprietary Manufacturer	Name and
TESTOSTERONE Testosterone 1% (12.5 mg/1.25 g actuation) gel, 2 x 88 g pump bottle	1	5	\$ [REDACTED]	Testogel	Besins

#### Authority required

Restriction 1	
Category / Program	GENERAL – General Schedule (Code GE)
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Condition:	Androgen deficiency
Treatment criteria:	Must be treated by <del>or in consultation with</del> a specialist paediatric endocrinologist, specialist urologist, specialist endocrinologist or a registered member of the Australasian Chapter of Sexual Health Medicine; <i>or in consultation with one of these specialists</i> ; or have an appointment to be assessed by one of these specialists.
Restriction Level / Method:	<input type="checkbox"/> Restricted benefit <input checked="" type="checkbox"/> Authority Required - In Writing <input checked="" type="checkbox"/> Authority Required - Telephone <input checked="" type="checkbox"/> Authority Required – Emergency <input checked="" type="checkbox"/> Authority Required - Electronic <input type="checkbox"/> Streamlined

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Clinical criteria:	Patient must have an established pituitary or testicular disorder
Population criteria:	Patient must be male
Administrative Advice	The name of the specialist must be included in the authority application

Restriction 2	
Category / Program	GENERAL – General Schedule (Code GE)
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Condition:	Androgen deficiency
Treatment criteria:	Must be treated by <del>or in consultation with a specialist paediatric endocrinologist</del> , specialist urologist, specialist endocrinologist or a registered member of the Australasian Chapter of Sexual Health Medicine; <i>or in consultation with one of these specialists</i> ; or have an appointment to be assessed by one of these specialists.
Restriction Level / Method:	<input type="checkbox"/> Restricted benefit <input checked="" type="checkbox"/> Authority Required - In Writing <input checked="" type="checkbox"/> Authority Required - Telephone <input checked="" type="checkbox"/> Authority Required – Emergency <input checked="" type="checkbox"/> Authority Required - Electronic <input type="checkbox"/> Streamlined
Clinical criteria:	Patient must not have an established pituitary or testicular disorder AND The condition must not be due to age, obesity, cardiovascular diseases, infertility or drugs
Population criteria:	Patient must be male AND Patient must be aged 40 years or older
Prescriber Instructions	Androgen deficiency is defined as: i) testosterone level of less than 6 nmol per litre; OR ii) testosterone level between 6 and 15 nmol per litre with high luteinising hormone (LH) (greater than 1.5 times the upper limit of the eugonadal reference range for young men, or greater than 14 IU per litre, whichever is higher) Androgen deficiency must be confirmed by at least two morning blood samples taken on different mornings. The dates and levels of the qualifying testosterone and LH measurements must be, or must have been provided in the authority application when treatment with this drug is or was initiated
Administrative Advice	The name of the specialist must be included in the authority application

Restriction 3a	
Category / Program	GENERAL – General Schedule (Code GE)
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Condition:	Micropenis
Treatment criteria:	Must be treated by <del>or in consultation with a specialist paediatric endocrinologist</del> , specialist urologist, specialist endocrinologist or a registered member of the Australasian Chapter of Sexual Health Medicine; <i>or in consultation with one of these specialists</i> ; or have an appointment to be assessed by one of these specialists.

Restriction Level / Method:	<input type="checkbox"/> Restricted benefit <input checked="" type="checkbox"/> Authority Required - In Writing <input checked="" type="checkbox"/> Authority Required - Telephone <input checked="" type="checkbox"/> Authority Required – Emergency <input checked="" type="checkbox"/> Authority Required - Electronic <input type="checkbox"/> Streamlined
Population criteria:	Patient must be male AND Patient must be under 18 years of age
Administrative Advice	The name of the specialist must be included in the authority application

Restriction 3b	
Category / Program	GENERAL – General Schedule (Code GE)
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Condition:	Pubertal induction
Treatment criteria:	Must be treated by <del>or in consultation with</del> a specialist paediatric endocrinologist, specialist urologist, specialist endocrinologist or a registered member of the Australasian Chapter of Sexual Health Medicine; <i>or in consultation with one of these specialists</i> ; or have an appointment to be assessed by one of these specialists.
Restriction Level / Method:	<input type="checkbox"/> Restricted benefit <input checked="" type="checkbox"/> Authority Required - In Writing <input checked="" type="checkbox"/> Authority Required - Telephone <input checked="" type="checkbox"/> Authority Required – Emergency <input checked="" type="checkbox"/> Authority Required - Electronic <input type="checkbox"/> Streamlined
Population criteria:	Patient must be male AND Patient must be under 18 years of age
Administrative Advice	The name of the specialist must be included in the authority application

Restriction 3c	
Category / Program	GENERAL – General Schedule (Code GE)
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Condition:	Constitutional delay of growth or puberty
Treatment criteria:	Must be treated by <del>or in consultation with</del> a specialist paediatric endocrinologist, specialist urologist, specialist endocrinologist or a registered member of the Australasian Chapter of Sexual Health Medicine; <i>or in consultation with one of these specialists</i> ; or have an appointment to be assessed by one of these specialists.
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### **3 Background**

- 3.1 Testosterone 1% gel is TGA registered for use as testosterone replacement therapy for male hypogonadism when testosterone deficiency has been confirmed by clinical features and biochemical tests.
- 3.2 Testosterone 1% gel 5g x 30 sachets are currently PBS listed. The testosterone 1% gel 88g pump pack had not previously been considered by the PBAC.

### **4 Clinical place for the proposed therapy**

- 4.1 Symptoms associated with low testosterone include decreased sexual desire with or without erectile dysfunction, fatigue, loss of muscle mass, mood depression and regression of secondary sexual characteristics.
- 4.2 Androgen deficiency is treated with androgen replacement therapy most often in the form of testosterone therapy. Restoring testosterone levels to within the normal range can result in improvements over time in muscle mass, mood, sexual desire, libido and sexual function.
- 4.3 The recommended dose is 50mg testosterone (5g gel) applied once daily. Dose adjustment should be made in increments of 25mg, and the maximum recommended dose is 100mg per day.
- 4.4 The submission provided PBS 10% sample data for testosterone replacement therapies to show that there is little preference for initiation of one testosterone formulation over another (current formulations include long acting intramuscular injections, shorter acting intramuscular injections, transdermal solutions, patches and gel). The submission stated that it did not anticipate that the listing of the Testogel 1% pump pack would drive an increased switch of patients from testosterone replacement therapies with alternative modes of delivery.
- 4.5 The submission stated that listing of the Testogel 1% pump pack would provide increased dosing flexibility with a reduction in wastage and increased safety.
  - The submission's claim of reduced wastage arose because dose adjustments are made in increments of 2.5g gel, which represents half the 5g sachet, and the unused portion of the sachet must be thrown away. The pump pack delivers 12.5mg testosterone in each 1.25g pump actuation, so no wastage occurs when patients are titrated in 25mg increments.
  - The submission's claim of increased safety arose because the disposal of used sachets in household waste may represent a risk for contamination of other members of the household.

## **5 Consideration of evidence**

### **Sponsor hearing**

5.1 There was no hearing for this item as it was a minor submission.

### **Consumer comments**

5.2 The PBAC noted that no consumer comments were received for this item.

### **Clinical claim**

5.3 The submission claimed that substitution of the testosterone 1% gel pump pack for the current testosterone 1% sachets will provide dosing flexibility, decreased wastage and increased safety through a reduction in contaminated waste.

### **Estimated PBS usage & financial implications**

5.4 The minor submission estimated there that the financial impact of listing would be minimal because the testosterone 1% gel pump pack will substitute for testosterone 1% gel sachets, and both items have the same price.

5.5 The minor submission estimated that 13% of the currently-listed 5g sachets have half their contents wasted (i.e. when 25mg or 75mg testosterone doses are used). The 13% was based on dose distributions in three published studies. The submission proposed a minor saving (less than \$10 million over 5 years of listing) should this level of reduced wastage be achieved. However, the listing would be cost neutral to the PBS if no adjustment is made for wastage.

5.6 The growth rate for this market is uncertain. Analysis of the market for testosterone showed an overall increase in use but with large variation between different years in the growth of individual products (between 4% and 16% annual growth between 2009-10 and 2013-14).

5.7 The submission requested the same maximum quantity (1) and number of repeats (5) for the 2 x 88g pump bottles (176 mg) as for the 30 x 5g sachets (150mg). This would result in a difference in the total amount (and number of standard 50mg daily doses) provided with 1,056mg (211 doses) with the pump bottles and 900mg (180 doses) with the sachets. At a 50mg daily dose, the pump bottles would provide 35 days of treatment, while the sachets would provide 30 days.

*For more detail on PBAC's view, see section 6 "PBAC outcome"*

## **6 PBAC Outcome**

6.1 The PBAC recommended listing testosterone 1% gel pump bottles on a cost-minimisation basis to testosterone 1% gel sachets. The equi-effective doses are testosterone 1% gel 5g pump bottles and testosterone 1% gel 5g gel sachet.

6.2 The PBAC considered that the submission's estimated saving to the PBS/RPBS of less than \$10 million over 5 years, which was based on reduced wastage, would not be realised in clinical practice.

- 6.3 The PBAC recommended listing of testosterone gel 1% pump bottles under the same conditions as the existing testosterone 1% gel sachets, but with four repeats rather than five to account for the increased number of doses provided at the maximum quantity. Four repeats would provide around six months of treatment at the standard dose.
- 6.4 The PBAC advised that testosterone gel is not suitable for prescribing by nurse practitioners.
- 6.5 The PBAC recommended that the Safety Net 20 Day Rule should apply.

**Outcome:**

Recommended

**7 Recommended listing**

**7.1 Add new item**

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Condition:	Androgen deficiency
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## 8 Context for Decision

The PBAC helps decide whether and, if so, how medicines should be subsidised in Australia. It considers submissions in this context. A PBAC decision not to recommend listing or not to recommend changing a listing does not represent a final PBAC view about the merits of the medicine. A company can resubmit to the PBAC or seek independent review of the PBAC decision.

**9 Sponsor's Comment**

The sponsor welcomes this decision by the PBAC to provide access to an alternative testosterone formulation that provides improved patient outcomes.