

**Propellants used in medical metered dose inhalers and aerosol-based breath
activated devices in New Zealand August to October 2002 (most recent period for
which data is available)
(February 2003)**

	Inhalers containing CFCs	CFC-free inhalers
Unit volumes during time period (millions of doses)		
Salbutamol inhalers	4.9	67.4
Total inhaled short acting beta agonists and anticholinergic reliever inhalers	18.8	67.4
Total inhaled corticosteroid inhalers	18.0	23.8
Total inhaled long acting beta agonist inhalers	5.5	0.0
<i>Total unit volumes</i>	42.3	91.2
Proportion of market		
Salbutamol inhalers	7%	93%
Total inhaled short acting beta agonists and anticholinergic reliever inhalers	22%	78%
Total inhaled corticosteroid inhalers	43%	57%
Total inhaled long acting beta agonist inhalers	100%	0%
<i>Total</i>	32%	68%

RESPIRATORY SYSTEM AND ALLERGIES

Asthma Preventative Medicines

	Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
ASTHMA PREVENTATIVE MEDICINES				
Inhaled corticosteroids - metered dose inhalers				
Low dose				
BECLOMETHASONE DIPROPIONATE Aerosol inhaler, 50 µg per dose – available on a PSO from 1 November 2002 until 31 January 2003 <i>(Becotide Junior aerosol inhaler 50 µg per dose to be delisted 1 April 2003)</i>	8.54	200 dose OP	0.04	✓Beclazone 50 ✓Becotide Junior
FLUTICASONE Aerosol inhaler, 25 µg per dose	8.67	120 dose OP	0.07	✓Flixotide
Medium dose				
BECLOMETHASONE DIPROPIONATE Aerosol inhaler, 100 µg per dose – available on a PSO from 1 November 2002 until 31 January 2003 <i>(Becotide 100 aerosol inhaler 100 µg per dose to be delisted 1 April 2003)</i>	12.50	200 dose OP	0.06	✓Beclazone 100 ✓Becotide 100 ^{IMM} ✓Respocort 100 ^{IMM}
FLUTICASONE Aerosol inhaler, 50 µg per dose CFC-free	10.03	120 dose OP	0.08	✓Flixotide
High dose				
BECLOMETHASONE DIPROPIONATE Aerosol inhaler, 250 µg per dose – available on a PSO from 1 November 2002 until 31 January 2003 <i>(Becloforte aerosol inhaler 250 µg per dose to be delisted 1 April 2003)</i> <i>(Respocort 250 aerosol inhaler to be delisted 1 June 2003)</i>	22.67	200 dose OP	0.11	✓Beclazone 250 ✓Becloforte ✓Respocort 250
FLUTICASONE Aerosol inhaler, 125 µg per dose CFC-free	22.79	120 dose OP	0.19	✓Flixotide
Very high dose				
FLUTICASONE Aerosol inhaler, 250 µg per dose CFC-free	41.95	120 dose OP	0.35	✓Flixotide
Inhaled corticosteroids - metered dose inhalers with spacers				
Medium dose				
BECLOMETHASONE DIPROPIONATE Aerosol inhaler, 100 µg per dose	25.00	200 dose OP	0.13	✓Respocort 100-S <i>(Respocort 100-S aerosol inhaler to be delisted 1 May 2003)</i>
High dose				
BECLOMETHASONE DIPROPIONATE Aerosol inhaler, 250 µg per dose	45.33	200 dose OP	0.23	✓Respocort Forte-S <i>(Respocort Forte-S aerosol inhaler to be delisted 1 June 2003)</i>

RESPIRATORY SYSTEM AND ALLERGIES
Asthma Preventative Medicines

	Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
Inhaled corticosteroids - breath activated devices				
Medium dose				
BECLOMETHASONE DIPROPIONATE				
Aerosol inhaler, 100 µg per dose, breath activated	13.00 (17.00)	200 dose OP	0.07	Respocort 100 Autohaler
Powder for inhalation, 100 µg per dose, 8 doses per disk	7.80 (10.20)	15 disks	0.07	Becodisk Junior
<i>(Becodisk Junior powder for inhalation 100 µg per dose to be delisted 1 March 2003)</i>				
BUDESONIDE				
Powder for inhalation, 100 µg per dose	13.00	200 dose OP	0.07	✓Pulmicort Turbuhaler
FLUTICASONE				
Powder for inhalation, 50 µg per dose, breath activated	3.90 (8.67)	60 dose OP	0.07	Flixotide Accuhaler
High dose				
BECLOMETHASONE DIPROPIONATE				
Aerosol inhaler, 250 µg per dose, breath activated	28.13	200 dose OP	0.14	✓Respocort Forte Autohaler
Powder for inhalation, 200 µg per dose, 8 doses per disk	13.50 (18.90)	15 disks	0.11	Becodisk 200
<i>(Becodisk 200 powder for inhalation to be delisted 1 January 2003)</i>				
BUDESONIDE				
Powder for inhalation, 200 µg per dose	22.50	200 dose OP	0.11	✓Pulmicort Turbuhaler
FLUTICASONE				
Powder for inhalation, 100 µg per dose, 4 doses per disk	6.75 (13.87)	15 disks	0.11	Flixotide
Powder for inhalation, breath activated, 100 µg per dose,	6.75 (13.87)	60 dose OP	0.11	Flixotide Accuhaler
Very high dose				
BECLOMETHASONE DIPROPIONATE				
Powder for inhalation, 400 µg per dose, 8 doses per disk	23.13 (29.40)	15 disks	0.19	Becodisk Forte
<i>(Becodisk Forte powder for inhalation 400 µg per dose to be delisted 1 March 2003)</i>				
BUDESONIDE				
Powder for inhalation, 400 µg per dose	38.55	200 dose OP	0.19	✓Pulmicort Turbuhaler
FLUTICASONE				
Powder for inhalation, 250 µg per dose, 4 doses per disk	14.46 (24.51)	15 disks	0.24	Flixotide
Powder for inhalation, breath activated, 250 µg per dose	14.46 (24.51)	60 dose OP	0.24	Flixotide Accuhaler
Extremely high dose				
FLUTICASONE				
Powder for inhalation, 500 µg per dose, 4 doses per disk	28.92 (45.11)	15 disks	0.48	Flixotide

‡ safety cap reimbursed

▲ Three months supply may be dispensed at one time if endorsed "certified exemption" by the prescriber.

RESPIRATORY SYSTEM AND ALLERGIES

Asthma Preventative Medicines

Bronchodilators

Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
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Inhaled corticosteroids - nebuliser solution

BUDESONIDE

Note: The cost of nebuliser therapy greatly exceeds other inhaled forms. Steroid nebulising solution can cause cataract formation.

Nebuliser soln, 500 µg per ml, 2 ml - Special Authority 124.00 30 4.13 ✓Pulmicort
Special Authority - Hospital pharmacy [HP3]

a) Only for children under 2 years of age or children with major physical or intellectual disabilities who lack the necessary coordination to use aerosols with a spacer device.

b) Specialist must make application – paediatrician/respiratory physician.

Nedocromil

NEDOCROMIL

Aerosol inhaler, 2 mg per dose CFC-free 23.20 112 dose OP 0.21 ✓Tilade

Sodium cromoglycate

SODIUM CROMOGLYCAT

Aerosol inhaler, 5 mg per dose CFC-free 23.20 112 dose OP 0.21 ✓Vicrom
Powder for inhalation, 20 mg per dose 16.31 50 0.33 ✓Intal Spincaps
Nebuliser soln, 10 mg per ml, 2 ml 30.60 60 0.51 ✓Intal

BRONCHODILATORS

Inhaled beta-adrenoceptor agonists - metered dose inhalers

Low dose

SALBUTAMOL - Available on a PSO

Aerosol inhaler, 100 µg per dose CFC-free 3.72 200 dose OP 0.02
(6.00) Aiomir^{IMM}
Aerosol inhaler, 100 µg per dose CFC-free 6.00 200 dose OP 0.03 ✓Ventolin
Aerosol inhaler, 100 µg per dose 3.72 200 dose OP 0.02 ✓Asmol^{IMM}

TERBUTALINE SULPHATE

Aerosol inhaler, 250 µg per dose 7.44 400 dose OP 0.02 ✓Bricanyl Aerosol

High dose

SALBUTAMOL - Available on a PSO

Aerosol inhaler, 200 µg per dose 3.72 100 dose OP 0.04
(6.00) Ventolin Forte

(Ventolin Forte aerosol inhaler to be delisted 1 January 2003)

	Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
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Fenoterol

FENOTEROL HYDROBROMIDE - Special Authority

Aerosol inhaler, 100 µg per dose	6.00	200 dose OP	0.03	✓Berotec
Aerosol inhaler, 200 µg per dose	15.00	300 dose OP	0.05	
	(18.00)			Berotec

Special Authority - Retail pharmacy:

a) Approval for subsidy will be granted if:

- the patient has been on the product prior to 1 August 1990 (when it was removed from the Pharmaceutical Schedule)
- alternatives (salbutamol & terbutaline) have been tried
- the patient has asthma or chronic obstructive airways disease (COAD).

b) The dose must be provided on the application.

(Berotec aerosol inhaler, 200 µg per dose to be delisted 1 February 2003)

(Berotec aerosol inhaler, 100 µg per dose to be delisted 1 April 2003)

Inhaled beta-adrenoceptor agonists - breath activated devices

Medium dose

SALBUTAMOL - Available on a PSO

Aerosol inhaler, 100 µg per dose, breath activated	21.22	400 dose OP	0.05	✓Respolin Autohaler
Powder for inhalation, 50 µg per dose, breath activated	10.61	200 dose OP	0.05	✓Salbutamol Turbuhaler

(Salbutamol Turbuhaler powder for inhalation to be delisted 1 January 2003)

High dose

TERBUTALINE SULPHATE

Powder for inhalation, 250 µg per dose, breath activated	13.54	200 dose OP	0.07	✓Bricanyl Turbuhaler
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Inhaled beta-adrenoceptor agonists - long acting

Metered dose inhalers

SALMETEROL - Special Authority (See page 150)

Aerosol inhaler, 25 µg per dose	33.75	120 dose OP	0.28	✓Serevent
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Breath activated devices

EFORMOTEROL FUMARATE

Powder for inhalation, 6 µg per dose, breath activated - Subsidy by endorsement	21.50	60 dose OP	0.36	✓ Oxis Turbuhaler
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Subsidy is available for patients with poorly controlled asthma where:

- a) at least three months of 750 µg or more daily of inhaled beclomethasone or budesonide (or 400 µg of fluticasone) for adults has been used; or
- b) at least three months of 400 µg or more daily of inhaled beclomethasone or budesonide (or 200 µg of fluticasone) for children 12 years or older has been used;

The prescription must be endorsed accordingly. We recommend that the words used to indicate eligibility are "poor control with ICS" or "certified condition".

‡ safety cap reimbursed

▲ Three months supply may be dispensed at one time if endorsed "certified exemption" by the prescriber.

RESPIRATORY SYSTEM AND ALLERGIES

Bronchodilators

	Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
BUDESONIDE WITH EFORMOTEROL - Special Authority				
Powder for inhalation 100 µg with eformoterol fumarate 6 µg	74.10	120 dose OP	0.62	✓Symbicort Turbuhaler 100/6
Powder for inhalation 200 µg with eformoterol fumarate 6 µg	90.80	120 dose OP	0.76	✓Symbicort Turbuhaler 200/6
EFORMOTEROL FUMARATE - Special Authority				
Powder for inhalation, 12 µg per dose, and monodose device	35.80	60 doses	0.60	✓Foradil
Powder for inhalation, 12 µg per dose, breath activated	35.80	60 dose OP	0.60	✓Oxis Turbuhaler
SALMETEROL - Special Authority				
Powder for inhalation, 50 µg per dose, 4 doses per disk	35.80	15 disks	0.60	✓Serevent
Powder for inhalation, 50 µg per dose, breath activated	35.80	60 dose OP	0.60	✓Serevent Accuhaler

(Serevent powder for inhalation, 50 µg per dose, 4 doses per disk to be delisted 1 June 2003)

Special Authority - Retail pharmacy for eformoterol fumarate (12 µg per dose), eformoterol fumarate with budesonide and salmeterol .

- Special Authority criteria either under point I (in its entirety), or point II (in its entirety), or point III (in its entirety) must apply before patients have access to subsidy.
- Special Authority approvals (CHEM numbers) are interchangeable among all presentations of inhaled long-acting beta agonists and eformoterol fumarate with budesonide.
- Applications for Special Authority to be made by general practitioners or an appropriate specialist.
- Approvals valid for two years.
- Patients are to be reviewed at least at six months to assess compliance and effectiveness of therapy.
- Applications to be made on a PHARMAC approved form.
- The re-application criteria under each point below (I, II or III) are:
 - compliance (prescriber determined) with medication; and
 - improved asthma symptom control.
- Children who turn 12, and are stabilised on an inhaled LABA, are not required to try Oxis Turbuhaler 6 µg in order to have continued access to their original inhaled LABA.
- Serevent MDI, Serevent Diskhaler, Serevent Accuhaler, Foradil, Oxis Turbuhaler 12 µg, Symbicort Turbuhaler

Subsidy is available for:

 - children with poorly controlled asthma under the age of 12 who required at least three months of 400 µg or more daily inhaled beclomethasone or budesonide (or 200 µg or more of fluticasone); or
 - adults with poorly controlled asthma who required at least three months of 1500 µg or more daily of inhaled beclomethasone or budesonide (or 750 µg or more of fluticasone).
- Serevent MDI, Serevent Diskhaler, Serevent Accuhaler

Subsidy is available for patients with poorly controlled asthma aged 12 years and over, under the following criteria:

 - at least three months of 750 µg or more daily of inhaled beclomethasone or budesonide (or 400 µg of fluticasone) for adults, or 400 µg or more daily inhaled beclomethasone or budesonide (or 200 µg of fluticasone) for children 12 years or older has been used; and
 - patients either:
 - are hypersensitive to eformoterol; or
 - have developed a product related adverse event that resolved on cessation and recurred on re-challenge with Oxis Turbuhaler 6 µg; or
 - after a six week trial of Oxis Turbuhaler 6 µg (with doses of 12–24 µg daily) failed to show evidence of improved asthma control.

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	Subsidy (Manufacturer's Price)	Cost per dose	Brand or Generic Manufacturer
	\$	Per	\$

III. Serevent MDI and spacer (with or without mask)

Subsidy is available in rare circumstances for patients with poorly controlled asthma aged 12 years and over, under the following criteria:

- have documented serious mental or physical* disability who are incapable of being taught to use the appropriate breath activated device; and
- at least three months of 750 µg or more daily of inhaled beclomethasone or budesonide (or 400 µg of fluticasone) for adults, or 400 µg or more daily inhaled beclomethasone or budesonide (or 200 µg of fluticasone) for children 12 years or older has been used;

ii) Applications must be made on a PHARMAC approved form, which contains a free text box for "Turbuhaler failures" where the nature of the documented serious mental or physical disability is to be recorded.

*Hand grips for the Turbuhaler are available free of charge from AstraZeneca for patients with problems with manual dexterity.

Inhaled beta-adrenoceptor agonists - nebuliser solutions

Low dose

SALBUTAMOL - Available on a PSO

Nebuliser soln, 1 mg per ml, 2.5 ml	4.83	20	0.24 (per 2.5 ml)	✓ Ventolin Nebules
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High dose

SALBUTAMOL - Available on a PSO

Nebuliser soln, 2 mg per ml, 2.5 ml	5.10	20	0.26 (per 2.5 ml)	✓ Ventolin Nebules
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Very high dose

TERBUTALINE SULPHATE

Nebuliser soln, 10 mg per ml	16.02	50 ml OP	0.32 (per ml)	✓ Bricanyl
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Inhaled anticholinergic agents - metered dose inhalers

Low dose

IPRATROPIUM BROMIDE

Aerosol inhaler, 20 µg per dose	13.50	200 dose OP	0.07	✓ Atrovent
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High dose

IPRATROPIUM BROMIDE

Aerosol inhaler, 40 µg per dose	14.95	200 dose OP	0.07	✓ Atrovent Forte
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‡ safety cap reimbursed

▲ Three months supply may be dispensed at one time if endorsed "certified exemption" by the prescriber.

RESPIRATORY SYSTEM AND ALLERGIES

Bronchodilators

	Subsidy (Manufacturer's Price) \$	Per	Cost per dose \$	Brand or Generic Manufacturer
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Inhaled anticholinergic agents - nebuliser solutions

Low dose

IPRATROPIUM BROMIDE - Available on a PSO

Nebuliser soln, 250 µg per 1 ml, 1 ml	5.90	20	0.30	✓Ipra 250
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High dose

IPRATROPIUM BROMIDE - Available on a PSO

Nebuliser soln, 500 µg per 2 ml, 2 ml	7.55	20	0.38	✓Ipra 500
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Inhaled beta-adrenoceptor agonist and anticholinergic agents - metered dose inhalers

FENOTEROL HYDROBROMIDE WITH IPRATROPIUM BROMIDE - Special Authority

Aerosol inhaler, 100 µg with ipratropium bromide, 40 µg per dose	13.50 (18.00)	200 dose OP	0.07	Duovent Inhaler
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Special Authority - Retail pharmacy:

a) Approval for subsidy will be granted if:

- the patient has been on the product prior to 1 August 1990 (when it was removed from the Pharmaceutical Schedule)
- alternatives (salbutamol & terbutaline) have been tried
- the patient has asthma or chronic obstructive airways disease (COAD).

b) The dose must be provided on the application.

(Duovent Inhaler to be delisted 1 February 2003)

SALBUTAMOL WITH IPRATROPIUM BROMIDE

Aerosol inhaler, 100 µg with ipratropium bromide, 20 µg per dose	12.19	200 dose OP	0.06	✓Combivent
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