Hospital Pharmaceuticals Review

PTAC, Hospital Pharmaceuticals Subcommittee, Analgesic Subcommittee, Mental Health Subcommittee & Neurological Subcommittee minutes for web publishing

Nervous System therapeutic group

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This document contains minutes relevant to the consultation document of 19 November 2012 relating to products in the Nervous System therapeutic group.

Note that this document is not a complete record of the relevant PTAC and Subcommittee meetings; only the relevant portions of the minutes relating PTAC and its Subcommittees advice on the review of Hospital Pharmaceuticals are included.

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Hospital Pharmaceuticals Subcommittee – 6 September 2011

1 Anaesthetics

1.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Anaesthetics heading.

1.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Glycopyrrolate bromide
  - Inj 0.2 mg per ml, 1 ml ampoule
- Etomidate
  - Inj 2 mg per ml, 10 ml ampoule
- Ketamine hydrochloride
  - Inj 10 mg per ml, 10 ml syringe
  - Inf 1 mg per ml, 100 ml bag
  - Inj 100 mg per ml, 2 ml vial
- Propofol
  - Inj 10 mg per ml, 20 ml vial/ampoule
  - Inj 10 mg per ml, 50 ml vial/ampoule
  - Inj 10 mg per ml, 50 ml syringe
  - Inj 10 mg per ml, 100 ml vial/ampoule
- Thiopental (thiopentone) sodium
  - Inj 500 mg ampoule
- Bupivacaine hydrochloride
  - Inj 0.5%, 4 ml ampoule
  - Inf 1.25 mg per ml, 100 ml bag
  - Inf 1.25 mg per ml, 200 ml bag
  - Inj 2.5 mg per ml, 20 ml ampoule
  - Inj 2.5 mg per ml, 100 ml bag
  - Inf 0.25%, 100 ml epidural
  - Inf 0.25%, 200 ml epidural
  - Inj 5 mg per ml, 10 ml amp
  - Inj 5 mg per ml, 20 ml amp
  - Inj 5 mg per ml, 10 ml theatre pack
  - Inj 5 mg per ml, 20 ml theatre pack
- Bupivacaine hydrochloride with adrenaline
  - Inj 2.5 mg per ml with adrenaline 1:400,000, 20 ml vial
  - Inj 5 mg per ml with adrenaline 1:200,000, 20 ml vial
- Bupivacaine hydrochloride with fentanyl
  - Inf 1.25 mg with fentanyl 2 µg per ml, 100 ml bag
  - Inf 1.25 mg with fentanyl 2 µg per ml, 200 ml bag
- Bupivacaine hydrochloride with glucose
  - Inj 0.5% with glucose 8%, 4 ml ampoule
- Cocaine hydrochloride
  - Paste 5%
  - Soln 4%, 2 ml oral syringe
- Ethyl chloride
  - Spray 100 ml

- Lignocaine hydrochloride
  - Inj 1%, 5 ml ampoule
  - Inj 1%, 20 ml ampoule
  - Inj 2%, 5 ml ampoule
  - Inj 2%, 20 ml ampoule
  - Gel 2%, 10 ml urethral syringes
  - Gel 2%
  - Oral (viscous) soln 2%
  - Spray 10%
  - Soln 4%
- Lignocaine hydrochloride with adrenaline
  - Inj 1% with adrenaline 1:100,000, 5 ml ampoule
  - Inj 1% with adrenaline 1:200,000, 20 ml vial
  - Inj 2% with adrenaline 1:200,000, 20 ml vial
  - Inj 2% with adrenaline 1:80,000, 1.7 ml cartridge
- Lignocaine hydrochloride with chlorhexidine
  - Gel 2% with chlorhexidine 0.05%, 10 ml urethral syringes
- Lignocaine hydrochloride with phenylephrine hydrochloride
  - Nasal spray 5% with phenylephrine hydrochloride 0.5%
- Lignocaine with prilocaine
  - Crm 2.5% with prilocaine 2.5%
  - Transdermal patch 25 µg with prilocaine 25 µg
- Prilocaine hydrochloride
  - Inj 0.5%, 50 ml vial
  - Inj 2%, 5 ml ampoule
- Ropivacaine hydrochloride
  - Inj 2 mg per ml, 10 ml ampoule
  - Inj 2 mg per ml, 20 ml ampoule
  - Inf 2 mg per ml, 100 ml bag
  - Inf 2 mg per ml, 200 ml bag
  - Inj 7.5 mg per ml, 10 ml ampoule
  - Inj 7.5 mg per ml, 20 ml ampoule
  - Inj 10 mg per ml, 10 ml ampoule
- Ropivacaine hydrochloride with fentanyl
  - Inf 2 mg with fentanyl 2 µg per ml, 100 ml bag
  - Inf 2 mg with fentanyl 2 µg per ml, 200 ml bag
- Tetracaine (amethocaine) hydrochloride
  - Gel 4%
- Atracurium besylate
  - Inj 10 mg per ml, 2.5 ml ampoule
  - Inj 10 mg per ml, 5 ml ampoule
- Mivacurium chloride
  - Inj 2 mg per ml, 5 ml ampoule
  - Inj 2 mg per ml, 10 ml ampoule
- Pancuronium bromide
  - Inj 2 mg per ml, 2 ml ampoule
- Rocuronium bromide
  - Inj 10 mg per ml, 5 ml vial
- Suxamethonium chloride
  - Inj 50 mg per ml, 2ml ampoule
- Vecuronium bromide

- Inj 4 mg ampoule
- Inj 10 mg vial

- Desflurane
  - Liq 240 ml
- Isoflurane
  - Liq 250 ml
- Sevoflurane
  - Liq 250 ml

1.3 The Subcommittee noted that not all DHBs had been asked about usage of ketamine inj 10 mg per mg, 10 ml syringe and ketamine inf 1 mg per ml, 100 ml bag and recommended that PHARMAC staff ask all DHBs about usage of these presentations, including what they are used for and how much is used.

1.4 The Subcommittee noted that lignocaine hydrochloride 2% injection with adrenaline 1:80,000, 2.2 ml cartridge was not widely used in DHB hospitals; however, the Subcommittee considered that this was an important treatment option and recommended that it be included in a national PML.

1.5 The Subcommittee noted that lignocaine hydrochloride 4% with adrenaline 0.1% and tetracaine hydrochloride 0.5% solution (5 ml syringe) was not widely used in DHB hospitals but considered that it was an important treatment option and recommended that it be included in a national PML.

1.6 The Subcommittee noted that ropivacaine hydrochloride 10 mg per ml, 20 ml ampoule was not widely used in DHB hospitals. Members were unsure as to whether this presentation was still available in the market. The Subcommittee recommended that this be included in a national PML if it is available as it is a useful treatment option and asked that PHARMAC staff investigate its availability.

1.7 The Subcommittee noted that several DHBs were in the process of shifting to glycopyrrolate bromide 0.5 mg with neostigmine 2.5 mg, 1 ml ampoule rather than using the individual components separately as, although this is an unregistered medicine, it is significantly less expensive than the individual components. The Subcommittee recommended that this be included in a national PML.

1.8 The Subcommittee considered that further advice was needed before making a recommendation in relation to sugammadex sodium. The Subcommittee noted that it has been declined for funding in some DHBs and that, in those that had approved it, its use was often subject to tight restrictions. The Subcommittee recommended that the view of anaesthetists be sought on the benefits of this agent, the need for it in a national PML, and how prescribing restrictions for it could be constructed.

1.9 The Subcommittee considered that further advice was required before making a recommendation in relation to methoxyflurane. Members noted that there is a potential for this agent to have widespread use in hospitals and by ambulance services, which could have a significant financial impact. The Subcommittee recommended that this be considered by the Analgesic Subcommittee.

1.10 The Subcommittee considered further advice was needed before making a recommendation in relation to articaine hydrochloride with adrenaline (inj 4% with adrenaline 1:100,000, 2.2 ml cartridge) and recommended that PHARMAC staff seek input from dentists and oral surgeons.

1.11 The Subcommittee considered further advice was needed before making a recommendation in relation to prilocaine hydrochloride with felypressin (inj 3% with felypressin 0.03 iu per ml, 1.8 ml and 2.2 ml cartridges) and recommended that PHARMAC staff seek input from dentists.

1.12 The Subcommittee noted that dental nurses are funded by DHBs, but that they do not appear to access pharmaceuticals through pharmacy departments. Members noted that a national PML would apply to dental nurses and recommended that PHARMAC staff determine how pharmaceuticals are provided for in this situation.

1.13 The Subcommittee recommended that PHARMAC staff seek input from dentists and oral surgeons in relation to all dental anaesthetic agents.

1.14 The Subcommittee noted that several DHB hospitals had reported using bupivacaine hydrochloride with fentanyl syringes (inj 1.25 mg with fentanyl 2 µg per ml), but that there was no consistency in which syringe volume (15 ml, 20 ml or 50 ml) was used. The Subcommittee considered that it would be appropriate to include at least one of these in a national PML, but requested the view of anaesthetists as to whether it would be sufficient to include only one volume of these syringes or whether there was a need for more than one to be included in a national PML.

1.15 The Subcommittee noted that one DHB had reported use of cocaine hydrochloride 4% eye drops. The Subcommittee considered that further advice was required before making a recommendation on this presentation and recommended that PHARMAC staff seek the view of ophthalmologists on the benefits of this and the need for it in a national PML.

1.16 The Subcommittee considered that further information was required before making a recommendation in relation to cocaine hydrochloride 15% solution, cocaine 15% with adrenaline 0.06% paste and cocaine 25% with adrenaline 0.06% paste. The Subcommittee recommended that PHARMAC staff seek the view of otolaryngologists on the benefits of these products and the need for them in a national PML.

1.17 The Subcommittee noted that lignocaine hydrochloride prefilled syringes (1%, 10 ml and 2%, 5 ml) were not widely used in DHB hospitals. The Subcommittee noted that lignocaine syringes have previously been used in cardiac arrest protocols but was unsure if such use was current. The Subcommittee recommended that the view of the Cardiovascular Subcommittee be sought on the need for these presentations.

1.18 The Subcommittee noted that ketamine hydrochloride inj 1 mg per ml, 10 ml syringe was is use in one DHB only and considered that it would not be needed in a national PML given the availability of other ketamine presentations.

1.19 The Subcommittee noted that there was little use of propofol 20 mg per ml injections in DHB hospitals. The Subcommittee considered that there was a safety risk associated with having this higher strength product available but no significant clinical benefit. The Subcommittee recommended that this not be included in a national PML.

1.20 The Subcommittee noted that only one DHB had reported using bupivacaine hydrochloride inj 2.5 mg per ml, 200 ml bag, and considered that this did not need to be included in a national PML. The Subcommittee also noted that bupivacaine hydrochloride inj 3.75 mg per ml, 20 ml amp had been discontinued and considered that this did not need to be included in a national PML.

1.21 The Subcommittee noted that the following presentations of bupivacaine hydrochloride with adrenaline were not in use in DHB hospitals, and considered that they did not need to be included in a national PML:

- Inj 2.5 mg per ml with adrenaline 1:400,000, 10 ml vial
- Inj 5 mg per ml with adrenaline 1:200,000, 2.2 ml cartridge
- Inj 5 mg per ml with adrenaline 1:200,000, 10 ml vial

1.22 The Subcommittee noted that the following presentations of bupivacaine hydrochloride with fentanyl were not widely used in DHB hospitals and considered that they did not need to be included in a national PML:

- Inf 0.625 mg with fentanyl 2 µg per ml, 100 ml bag
- Inf 0.625 mg with fentanyl 2 µg per ml, 200 ml bag

1.23 The Subcommittee noted that only one DHB had reported using lignocaine hydrochloride 5% patches and considered that these did not need to be included in a national PML. The Subcommittee also noted that lignocaine hydrochloride 0.5%, 5 ml injection had recently been discontinued and considered that this did not need to be included in a national PML.

1.24 The Subcommittee noted that the following presentations of lignocaine hydrochloride were not widely used in DHB hospitals, and considered that they did not need to be included in a national PML:

- Inj 2%, 2 ml ampoule
- Inj 2%, 2.2 ml cartridge
- Inj 2%, 50 ml ampoule
- Gel 2%, 15 ml urethral syringes
- Gel 2%, 30 ml urethral syringes
- Oint 5%

1.25 The Subcommittee recommended seeking the view of dentists on the exclusion of the 2.2 ml cartridge form of lignocaine 2% from a national PML.

1.26 The Subcommittee noted that only one DHB had reported using lignocaine 5% with cetrimide 0.15% lozenge and considered that this did not need to be included in a national PML.

1.27 The Subcommittee noted that mepivacaine hydrochloride 3% injections (1.8 ml and 2.2 ml cartridges) are not widely used in DHB hospitals and recommended that they not be included in a national PML. However, the Subcommittee noted that there has been some use of this agent in Auckland DHB's anaesthesia allergy clinic and recommended that the views of anaesthetists be sought on this issue.

1.28 The Subcommittee noted that procaine hydrochloride (inj 20 mg per ml, 2 ml ampoule) is not widely used in DHB hospitals and considered that it did not need to be included in a national PML.

1.29 The Subcommittee noted that procaine hydrochloride with adrenaline and atropine sulphate is not currently used in DHB hospitals and considered that it did not need to be included in a national PML.

1.30 The Subcommittee noted that rocuronium bromide (inj 10 mg per ml, 10 ml vial) is not widely used in DHB hospitals and considered that it did not need to be included in a national PML.

2 Antinausea and Vertigo Agents

2.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Antinausea and Vertigo Agents heading.

2.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Aprepitant
  - Cap 2 x 80 mg and 1 x 125 mg
- Betahistine
  - Tab 16 mg
- Cyclizine hydrochloride
  - Tab 50 mg
- Cyclizine lactate
  - Inj 50 mg per ml, 1 ml ampoule
- Domperidone
  - Tab 10 mg
- Droperidol
  - Inj 2.5 mg per ml, 1 ml ampoule
- Hyoscine butylbromide (scopolamine)
  - Patches, 1.5 mg
- Hyoscine hydrobromide
  - Inj 400 µg per ml, 1 ml ampoule
- Metoclopramide hydrochloride
  - Inj 5 mg per ml, 2 ml ampoule
  - Tab 10 mg
- Ondansetron
  - Inj 2 mg per ml, 2 ml ampoule
  - Inj 2 mg per ml, 4 ml ampoule
  - Tab 4mg
  - Tab 8 mg
  - Tab dispersible 4 mg
  - Tab dispersible 8 mg
- Prochlorperazine
  - Tab 3 mg buccal
  - Tab 5 mg
  - Inj 12.5 mg per ml, 1 ml ampoule
  - Suppos 25 mg
- Tropisetron
  - Cap 5 mg
  - Inj 1 mg per ml, 2 ml ampoule
  - Inj 1 mg per ml, 5 ml ampoule

2.3 The Subcommittee noted that metoclopramide oral liquid (5 mg per 5 ml) was not widely used in DHB hospitals but considered that it was an important treatment option, and recommended that it be included in a national PML.

2.4 The Subcommittee recommended that the listing of aprepitant in a national PML be subject to restrictions on its use that are in line with the Special Authority for it in the Pharmaceutical Schedule.

2.5 The Subcommittee recommended that the listing of hyoscine butylbromide in a national PML be subject to restrictions on its use that are in line with the Special Authority for it in the Pharmaceutical Schedule, with additional provision to enable its use in hypersalivation for clozapine patients and as a last-line agent for post-operative nausea and vomiting. The Subcommittee noted that PHARMAC staff were considering widening the Special Authority restrictions to include hypersalivation for clozapine patients.

2.6 The Subcommittee noted that domperidone oral liquid (1 mg per ml) and 10 mg suppositories are not widely used in DHB hospitals and considered that they did not need to be included in a national PML. Members noted that domperidone tablets can be compounded into an oral liquid formulation.

2.7 The Subcommittee noted that the 5 mg per ml, 2 ml ampoule form of droperidol is not in use in DHB hospitals and considered that this did not need to be included in a national PML.

2.8 The Subcommittee recommended that, as meclozine hydrochloride (12.5 mg tablet) is not widely used in DHB hospitals and, as it is not subsidised in the Pharmaceutical Schedule, it not be included in a national PML.

2.9 The Subcommittee noted that metoclopramide 10 mg suppositories are not widely used in DHB hospitals and recommended that they not be included in a national PML.

2.10 The Subcommittee noted that prochlorperazine 5 mg suppositories are not widely used in DHB hospitals and recommended that they not be included in a national PML.

2.11 The Subcommittee noted that promethazine theoclate is available in around half of all DHBs, but that it is not a highly used presentation. Members noted that this is not fully funded in the Pharmaceutical Schedule, but that several presentations of the hydrochloride salt were fully funded in the Pharmaceutical Schedule and had been recommended for inclusion in a national PML. The Subcommittee recommended that promethazine theoclate not be included in a national PML.

3 Analgesics

3.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Analgesics heading.

3.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Aspirin
  - Tab dispersible 300 mg
  - Tab EC 300 mg

- Capsaicin
  - Crm 0.075%
- Nefopam hydrochloride
  - Tab 30 mg
- Paracetamol
  - Tab 500 mg
  - Tab soluble 500 mg
  - Oral liq 120 mg per 5 ml
  - Oral liq 250 mg per 5 ml
  - Suppos 25 mg
  - Suppos 50 mg
  - Suppos 125 mg
  - Suppos 250 mg
  - Suppos 500 mg
  - Inf 10 mg per ml, 50 ml vial
  - Inf 10 mg per ml, 100 ml vial
- Alfentanil hydrochloride
  - Inj 0.5 mg per ml, 2 ml ampoule
- Codeine phosphate
  - Tab 15 mg
  - Tab 30 mg
  - Tab 60 mg
- Dihydrocodeine tartrate
  - Tab long-acting 60 mg
- Fentanyl
  - Inf 10 µg per ml, 100 ml bag
  - Inj 20 µg per ml, 50 ml syringe
  - Inj 50 µg per ml, 2 ml ampoule
  - Inj 50 µg per ml, 10 ml ampoule
  - Transdermal patch, 12.5 µg per hour
  - Transdermal patch, 25 µg per hour
  - Transdermal patch, 50 µg per hour
  - Transdermal patch, 75 µg per hour
  - Transdermal patch, 100 µg per hour
- Methadone hydrochloride
  - Tab 5 mg
  - Oral liq 2 mg per ml
  - Oral liq 5 mg per ml
  - Oral liq 10 mg per ml
  - Inj 10 mg per ml, 1ml vial
- Morphine hydrochloride
  - Oral liq 1 mg per ml
  - Oral liq 2 mg per ml
  - Oral liq 5 mg per ml
  - Oral liq 10 mg per ml
- Morphine sulphate
  - Tab immediate-release 10 mg
  - Tab immediate-release 20 mg
  - Tab long-acting 10 mg
  - Tab long-acting 30 mg
  - Tab long-acting 60 mg

- Tab long-acting 100 mg
- Cap long-acting 10 mg
- Cap long-acting 30 mg
- Cap long-acting 60 mg
- Cap long-acting 100 mg
- Inj 500 µg per ml, 0.4 ml
- Inj 1 mg per ml, 10 ml syringe
- Inj 1 mg per ml, 50 ml syringe
- Inf 1 mg per ml, 100 ml bag
- Inj 5 mg per ml, 1 ml ampoule
- Inj 10 mg per ml, 1 ml ampoule
- Inj 15 mg per ml, 1 ml ampoule
- Inj 30 mg per ml, 1 ml ampoule

▪ Morphine tartrate
- Inj 80 mg per ml, 1.5 ml ampoule
- Inj 80 mg per ml, 5 ml ampoule

▪ Oxycodone hydrochloride
- Tab controlled-release 5 mg
- Tab controlled-release 10 mg
- Tab controlled-release 20 mg
- Tab controlled-release 40 mg
- Tab controlled-release 80 mg
- Cap 5 mg
- Cap 10 mg
- Cap 20 mg
- Oral liq 5 mg per 5 ml
- Inj 10 mg per ml, 1 ml ampoule
- Inj 10 mg per ml, 2 ml ampoule

▪ Paracetamol with codeine
- Tab paracetamol 500 mg with codeine phosphate 8 mg

▪ Pethidine hydrochloride
- Tab 50 mg
- Tab 100 mg
- Inj 5 mg per ml, 100 ml bag
- Inj 10 mg per ml, 50 ml syringe
- Inj 50 mg per ml, 1 ml ampoule
- Inj 50 mg per ml, 2 ml ampoule

▪ Remifentanil hydrochloride
- Inf 1 mg vial
- Inf 2 mg vial

▪ Tramadol hydrochloride
- Inf 10 mg per ml, 100 ml bag
- Cap 50 mg
- Oral drops 100 mg per ml
- Inj 50 mg per ml, 1 ml ampoule
- Inj 50 mg per ml, 2 ml ampoule

3.3 The Subcommittee noted that the following presentations of morphine sulphate were not widely used in DHB hospitals, but considered that they were important treatment options, and recommended that they be included in a national PML:

- Inj 1 mg per ml, 0.3 ml syringe
- Inj 2 mg per ml, 30 ml syringe
- Inf 10 mg per ml, 100 ml bag
- Inf 10 mg per ml, 100 mg cassette

3.4 The Subcommittee noted that the following presentations of oxycodone hydrochloride were not widely used in DHB hospitals, but considered that they were important treatment options and recommended that they be included in a national PML:

- Inj 50 mg per ml, 1 ml ampoule
- Inj 1 mg per ml, 100 ml bag

3.5 The Subcommittee recommended that the listing of capsaicin cream 0.075% in a national PML be subject to restrictions on its use that are in line with any restrictions for it in the Pharmaceutical Schedule.

3.6 The Subcommittee noted that the 25 mg and 50 mg paracetamol suppositories would be used for very young children in whom paracetamol may not be indicated. The Subcommittee requested that PHARMAC staff seek the view of the Paediatric Society on the need for these strengths in a national PML.

3.7 The Subcommittee considered that paracetamol injection should be subject to prescribing restrictions and recommended seeking the view of anaesthetists on this issue. Members noted that several DHBs have protocols or guidelines for IV paracetamol and considered that these may provide a good starting point.

3.8 The Subcommittee considered that, while it may not be possible to implement a prescribing restriction for oxycodone in hospitals, there should at least be a prescribing guideline for this agent.

3.9 The Subcommittee noted that some DHBs use morphine sulphate with bupivacaine hydrochloride and clonidine hydrochloride infusions. The Subcommittee considered that this should be available through a national PML, either as a listing in a PML or through compounding rules.

3.10 The Subcommittee recommended that, as paracetamol 500 mg capsules are not subsidised in the Pharmaceutical Schedule, and as they do not have a unique use in hospitals, they not be included in a national PML.

3.11 The Subcommittee noted that paracetamol 250 mg soluble tablets are not in use in DHB hospitals and considered that they did not need to be included in a national PML.

3.12 The Subcommittee recommended that, as paracetamol 500 mg with caffeine 65 mg is not subsidised in the Pharmaceutical Schedule and does not have a unique use in hospitals, it not be included in a national PML.

3.13 The Subcommittee recommended that, as paracetamol 500 mg with ibuprofen 150 mg is not subsidised in the Pharmaceutical Schedule and does not have a unique use in hospitals, it not be included in a national PML.

3.14 The Subcommittee recommended that, as buprenorphine patches are not subsidised in the Pharmaceutical Schedule, and as they do not have a unique use in hospitals, they not be included in a national PML. The Subcommittee noted that buprenorphine

injection (0.3 mg per ml, 1 ml ampoule) had recently been discontinued and considered that this did not need to be included in a national PML.

3.15 The Subcommittee noted that one DHB had reported using codeine phosphate 50 mg per ml, 1 ml injection but considered that there was not a need for this to be included in a national PML.

3.16 The Subcommittee noted that the following presentations of fentanyl were not widely used in DHB hospitals and considered that they did not need to be included in a national PML:

- Inf 20 µg per ml, 100 ml bag
- Inj 10 µg per ml, 10 ml syringe
- Inj 10 µg per ml, 50 ml syringe
- Inj 50 µg per ml, 50 ml syringe

3.17 The Subcommittee noted that one DHB had reported using ibuprofen with codeine phosphate but considered that there was not a need for this to be included in a national PML.

3.18 The Subcommittee noted that the following presentations of morphine sulphate were not widely used in DHB hospitals and considered that they did not need to be included in a national PML:

- Inj 1 mg per ml, 2 ml syringe
- Inj 1 mg per ml, 30 ml syringe

3.19 The Subcommittee noted that morphine sulphate 200 mg long-acting capsules had been discontinued and considered that they did not need to be included in a national PML.

3.20 The Subcommittee noted that one DHB had reported using paracetamol 500 mg with codeine 15 mg tablets but recommended that, as they are not subsidised in the Pharmaceutical Schedule and they do not have a unique use within hospitals, they not be included in a national PML.

3.21 The Subcommittee noted that the following presentations of pethidine hydrochloride were not widely used in DHB hospitals and considered that they did not need to be included in a national PML:

- Inj 5 mg per ml, 10 ml syringe
- Inj 10 mg per ml, 100 ml bag

3.22 The Subcommittee noted that pethidine hydrochloride 50 mg per ml, 1.5 ml ampoule has been discontinued and considered that this did not need to be included in a national PML.

3.23 The Subcommittee noted that one DHB had reported using a 5 mg vial of remifentanil hydrochloride but considered that there was not a need for this to be included in a national PML given the availability of the 1 mg and 2 mg vials.

3.24 The Subcommittee recommended that, as sustained-release tramadol tablets (50 mg, 100 mg, 150 mg and 200 mg) are not subsidised in the Pharmaceutical Schedule and as they do not have a unique use in hospitals, they not be included in a national PML.

3.25 Members noted that there appeared to be no evidence to suggest a clinical benefit of sustained-release tramadol tablets over the immediate-release capsules.

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4 Antidepressants

4.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Antidepressants heading.

4.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Amitriptyline
  - Tab 10 mg
  - Tab 25 mg
  - Tab 50 mg
- Clomipramine hydrochloride
  - Tab 10 mg
  - Tab 25 mg
- Dothiepin hydrochloride
  - Cap 25 mg
  - Tab 75 mg
- Doxepin hydrochloride
  - Cap 10 mg
  - Cap 25 mg
  - Cap 50 mg
- Imipramine hydrochloride
  - Tab 10 mg
  - Tab 25 mg
- Maprotiline hydrochloride
  - Tab 25 mg
  - Tab 75 mg
- Mianserin hydrochloride
  - Tab 30 mg
- Nortriptyline hydrochloride
  - Tab 10 mg
  - Tab 25 mg
- Phenelzine sulphate
  - Tab 15 mg
- Tranylcypromine sulphate
  - Tab 10 mg
- Moclobemide
  - Tab 150 mg
  - Tab 300 mg
- Mirtazapine
  - Tab 30 mg
  - Tab 45 mg
- Venlafaxine
  - Cap modified release 37.5 mg
  - Cap modified release 75 mg
  - Cap modified release 150 mg

    - Tab modified release 37.5 mg
    - Tab modified release 75 mg
    - Tab modified release 150 mg
- Citalopram hydrobromide
    - Tab 20 mg
- Escitalopram
    - Tab 10 mg
    - Tab 20 mg
- Fluoxetine hydrochloride
    - Cap 20 mg
    - Tab dispersible 20 mg, scored
- Paroxetine hydrochloride
    - Tab 20 mg
- Sertraline
    - Tab 50 mg
    - Tab 100 mg

4.3 The Subcommittee recommended that the listing of mianserin, mirtazapine and venlafaxine in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

4.4 The Subcommittee noted that trimipramine maleate, duloxetine and reboxetine mesylate are used in some DHBs, and that this usage is relatively low. The Subcommittee considered that as they were not funded in the Pharmaceutical Schedule, and as they do not have a unique use within hospitals, they should not be included in a national PML.

4.5 The Subcommittee noted that there had been some use of venlafaxine immediate-release 75 mg tablets in one DHB to cover an out of stock situation. The Subcommittee considered that it was not necessary for these to be included in a national PML.

5 Antipsychotic Agents

5.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Antipsychotic Agents heading.

5.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Flupenthixol decanoate
    - Inj 20 mg per ml, 1 ml ampoule
    - Inj 20 mg per ml, 2 ml ampoule
    - Inj 100 mg per ml, 1 ml ampoule
- Fluphenazine decanoate
    - Inj 12.5 mg per 0.5 ml ampoule
    - Inj 25 mg per ml, 1 ml ampoule
    - Inj 100 mg per ml, 1 ml ampoule
- Haloperidol decanoate
    - Inj 50 mg per ml, 1 ml ampoule
    - Inj 100 mg per ml, 1 ml ampoule

- Olanzapine
  - Inj 210 mg vial
  - Inj 300 mg vial
  - Inj 405 mg vial
- Pipothiazine palmitate
  - Inj 50 mg per ml, 1 ml ampoule
  - Inj 50 mg per ml, 2 ml ampoule
- Risperidone
  - Inj 25 mg per 2 ml vial
  - Inj 37.5 mg per 2 ml vial
  - Inj 50 mg per 2 ml vial
- Zuclopenthixol decanoate
  - Inj 200 mg per ml, 1 ml ampoule
- Amisulpride
  - Oral liq 100 mg per ml
  - Tab 100 mg
  - Tab 200 mg
  - Tab 400 mg
- Aripiprazole
  - Tab 10 mg
  - Tab 15 mg
  - Tab 20 mg
  - Tab 30 mg
- Chlorpromazine hydrochloride
  - Tab 10 mg
  - Tab 25 mg
  - Tab 100 mg
  - Inj 25 mg per ml, 2 ml ampoule
- Clozapine
  - Tab 25 mg
  - Tab 50 mg
  - Tab 100 mg
  - Tab 200 mg
  - Suspension 50 mg per ml
- Haloperidol
  - Tab 500 µg
  - Tab 1.5 mg
  - Tab 5 mg
  - Oral liq 2 mg per ml
  - Inj 5 mg per ml, 1ml ampoule
- Levomepromazine (methotrimeprazine) maleate
  - Tab 25 mg
  - Tab 100 mg
  - Inj 25 mg per ml, 1 ml ampoule
- Lithium carbonate
  - Cap 250 mg
  - Tab 250 mg
  - Tab 400 mg
  - Tab long-acting 400 mg
- Olanzapine
  - Tab 2.5 mg

- Tab 5 mg
- Tab 10 mg
- Orodispersible tablet 5 mg
- Orodispersible tablet 10 mg
- Inj 10 mg vial

- Pericyazine
  - Tab 2.5 mg
  - Tab 10 mg
- Quetiapine
  - Tab 25 mg
  - Tab 100 mg
  - Tab 200 mg
  - Tab 300 mg
- Risperidone
  - Oral liq 1 mg per ml
  - Tab 0.5 mg
  - Tab 1 mg
  - Tab 2 mg
  - Tab 3 mg
  - Tab 4 mg
  - Orodispersible tablet 0.5 mg
  - Orodispersible tablet 1 mg
  - Orodispersible tablet 2 mg
- Trifluoperazine hydrochloride
  - Tab 1 mg
  - Tab 2 mg
  - Tab 5 mg
- Ziprasidone
  - Cap 20 mg
  - Cap 40 mg
  - Cap 60 mg
  - Cap 80 mg
- Zuclopenthixol acetate
  - Inj 50 mg per ml, 1 ml ampoule
  - Inj 50 mg per ml, 2 ml ampoule
- Zuclopenthixol hydrochloride
  - Tab 10 mg

5.3 The Subcommittee recommended that the listing of olanzapine depot injection in a national PML be subject to restrictions on its use that are in line with the Special Authority restrictions for it in the Pharmaceutical Schedule.

5.4 The Subcommittee recommended that the listing of risperidone depot injection in a national PML be subject to restrictions on its use that are in line with the Special Authority restrictions for it in the Pharmaceutical Schedule.

5.5 The Subcommittee recommended that the listing of risperidone orodispersible tablet in a national PML be subject to restrictions on its use that are in line with the Special Authority restrictions for it in the Pharmaceutical Schedule.

5.6 The Subcommittee recommended that the listing of aripiprazole in a national PML be subject to restrictions on its use that are in line with the Special Authority restrictions for it in the Pharmaceutical Schedule.

5.7 The Subcommittee recommended that the listing of ziprasidone in a national PML be subject to restrictions on its use that are in line with the endorsement restrictions for it in the Pharmaceutical Schedule.

5.8 The Subcommittee noted that one DHB had reported using chlorpromazine hydrochloride oral liquid. The Subcommittee deferred making a recommendation on this issue pending further information about the particular product that was being used, and whether a proprietary oral liquid was required, or if a compounded product would be acceptable.

5.9 The Subcommittee noted that there was some use of zuclopenthixol decanoate 500 mg depot injection in DHB hospitals, and considered that there may be a benefit from having this higher strength presentation available; however, the Subcommittee recommended that this product only be included in a national PML if it obtained regulatory consent from Medsafe.

5.10 The Subcommittee considered that further advice was required before making a recommendation in relation to the listing of ziprasidone injection (20 mg and 100 mg) in a national PML. The Subcommittee requested that the view of the Mental Health Subcommittee be sought on this issue.

5.11 The Subcommittee noted that paliperidone was a newer antipsychotic agent that was not widely used in DHB hospitals. Members noted that PTAC had previously reviewed the tablet and depot injection forms of this agent and had recommended that each presentation only be funded if it was cost-neutral versus the same presentation of risperidone. The Subcommittee recommended that these presentations of paliperidone not be included in a national PML unless they also became funded in the Pharmaceutical Schedule.

5.12 The Subcommittee noted that trifluoperazine hydrochloride oral liquid had been discontinued and considered that it did not need to be included in a national PML.

5.13 The Subcommittee noted that although pimozide is used in some DHBs, it has been discontinued and usage of this unregistered product is relatively low. The Subcommittee considered that as it is not registered, is not funded in the Pharmaceutical Schedule, and does not have a unique use within hospitals, it should not be included in a national PML.

5.14 The Subcommittee noted that zuclopenthixol hydrochloride 25 mg tablets are used in a small number of DHBs. The Subcommittee considered that there was not a need for this presentation to be included in a national PML given the availability of the 10 mg presentation.

6 Anxiolytics

6.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Anxiolytics heading.

6.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and

recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Alprazolam
  - Tab 250 µg
  - Tab 500 µg
  - Tab 1 mg
- Buspirone hydrochloride
  - Tab 5 mg
  - Tab 10 mg
- Diazepam
  - Tab 2 mg
  - Tab 5 mg
- Lorazepam
  - Tab 1 mg
  - Tab 2.5 mg
  - Inj 2 mg vial
  - Inj 4 mg per ml, 1 ml ampoule
- Oxazepam
  - Tab 10 mg
  - Tab 15 mg

6.3 The Subcommittee was uncertain of the availability of lorazepam 4 mg injection, and recommended that PHARMAC staff investigate this further. The Subcommittee considered that if this was no longer available in New Zealand, it would not need to be included in a national PML given the inclusion of the 2 mg injection.

6.4 The Subcommittee recommended that the listing of buspirone in a national PML be subject to restrictions on its use that are in line with the Special Authority restrictions for it in the Pharmaceutical Schedule.

6.5 The Subcommittee considered that there would be value in having access to an oral liquid formulation of diazepam, however the Subcommittee noted that this could be achieved through compounding from tablets or a proprietary preparation. The Subcommittee deferred making a recommendation on this and recommended that PHARMAC seek the input of pharmacists with expertise in compounding.

6.6 The Subcommittee noted that there was no use of chlordiazepoxide hydrochloride (tab 10 mg) in DHB hospitals, and that it was not subsidised in the Pharmaceutical Schedule. The Subcommittee recommended that it not be included in a national PML.

6.7 The Subcommittee noted that diazepam 10 mg tablets have been discontinued and considered that these did not need to be included in a national PML.

7 Sedatives and Hypnotics

7.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Sedatives and Hypnotics heading.

7.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Chloral hydrate
  - Oral liq 100 mg per ml
  - Oral liq 200 mg per ml
- Dexmedetomidine hydrochloride
  - Inf 100 µg per ml, 2 ml vial
- Midazolam
  - Oral liq 2 mg per ml
  - Inj 1 mg per ml, 5 ml ampoule
  - Inj 5 mg per ml, 3 ml ampoule
- Nitrazepam
  - Tab 5 mg
- Temazepam
  - Tab 10 mg
- Triazolam
  - Tab 125 µg
  - Tab 250 µg
- Zopiclone
  - Tab 7.5 mg

7.3 The Subcommittee noted that dexmedetomidine hydrochloride is only used within anaesthesia and, therefore, should be listed under the Anaesthetics heading rather than Sedatives and Hypnotics. The Subcommittee recommended seeking information from intensivists and anaesthetists on whether any indication- or prescriber-specific restrictions should be placed on the listing of dexmedetomidine hydrochloride.

7.4 The Subcommittee considered that, as lormetazepam 1 mg tablets are not fully subsidised in the Pharmaceutical Schedule, and as they do not have a unique use within hospitals, they should only be available within a hospital for continuation of care, not for initiation.

7.5 The Subcommittee noted that midazolam 7.5 mg tablets had recently been discontinued and considered that these did not need to be included in a national PML.

7.6 The Subcommittee considered that there may be benefit from the availability of a midazolam oral liquid in the community, and considered that PHARMAC should seek advice from the Mental Health Subcommittee of PTAC regarding a potential listing in the Pharmaceutical Schedule for community use, should a registered product become available.

7.7 The Subcommittee noted that amylobarbitone sodium injection is not in use in DHB hospitals, and considered that it did not need to be included in a national PML.

7.8 The Subcommittee noted that flunitrazepam 2 mg injection is rarely used within DHB hospitals, and recommended that it not be included in a national PML.

7.9 The Subcommittee noted that melatonin was in use in several DHB hospitals, although the form and strength varied between DHBs. The Subcommittee noted that most forms of melatonin were not registered as medicines by Medsafe and members were not aware of good evidence of benefit from melatonin. The Subcommittee recommended that melatonin not be included in a national PML. The Subcommittee noted that one form of melatonin had recently been registered by Medsafe, and considered that this would need to undergo a formal evaluation by PHARMAC.

8 Stimulants / ADHD Treatments

8.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Stimulants / ADHD Treatments heading.

8.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Atomoxetine
  - Cap 10 mg
  - Cap 18 mg
  - Cap 25 mg
  - Cap 40 mg
  - Cap 60 mg
  - Cap 80 mg
  - Cap 100 mg
- Caffeine
  - Tab 100 mg
- Dexamphetamine sulphate
  - Tab 5 mg
- Methylphenidate hydrochloride
  - Tab immediate-release 5 mg
  - Tab immediate-release 10 mg
  - Tab immediate-release 20 mg
  - Tab sustained-release 20 mg
  - Tab extended-release 18 mg
  - Tab extended-release 27 mg
  - Tab extended-release 36 mg
  - Tab extended-release 54 mg
  - Cap modified-release 10 mg
  - Cap modified-release 20 mg
  - Cap modified-release 30 mg
  - Cap modified-release 40 mg
- Modafinil
  - Tab 100 mg

8.3 The Subcommittee recommended that the listings of atomoxetine, dexamphetamine, methylphenidate and modafinil in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

9 Treatments for Dementia

9.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Treatments for Dementia heading.

9.2 The Subcommittee noted donepezil (5 mg and 10 mg tablets) is commonly used in DHB hospitals and is fully subsidised in the Pharmaceutical Schedule and recommended that it be included in a national preferred medicines list (PML) without need for further prioritisation.

9.3 The Subcommittee noted that there is some use of other dementia treatments (galantamine, rivastigmine and memantine hydrochloride) in DHB hospitals but recommended that, as these are not subsidised in the Pharmaceutical Schedule, they not be included in a national PML.

10 Treatments for Substance Dependence

10.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Treatments for Substance Dependence heading.

10.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Buprenorphine with naloxone
  - Tab 2 mg with naloxone 0.5 mg
  - Tab 8 mg with naloxone 2 mg
- Bupropion hydrochloride
  - Tab modified-release 150 mg
- Disulfiram
  - Tab 200 mg
- Naltrexone hydrochloride
  - Tab 50 mg
- Nicotine
  - Gum 2 mg
  - Gum 4 mg
  - Lozenge 1 mg
  - Lozenge 2 mg
  - Patch 7 mg / 24 hours
  - Patch 14 mg / 24 hours
  - Patch 21 mg / 24 hours
  - Inhaler 10 mg per dose
  - Sublingual tablet 2 mg
- Varenicline
  - Tab 0.5 mg (11) and tab 1 mg (14)
  - Tab 1 mg

10.3 The Subcommittee recommended that the prescribing of buprenorphine with naloxone be restricted to use for detoxification in an inpatient setting only. The Subcommittee noted that patients would be required to shift to methadone for maintenance treatment under this scenario, as is currently the case, which it considered to be acceptable.

10.4 The Subcommittee recommended that the listing of naltrexone hydrochloride and varenicline in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

10.5 The Subcommittee noted that acamprosate calcium (333 mg tablet) is not in use in DHB hospitals and is not subsidised in the Pharmaceutical Schedule. The Subcommittee considered that this did not need to be included in a national PML.

10.6 The Subcommittee noted that other strengths of nicotine patch (5 mg, 10 mg and 15 mg per 16 hours) were not widely used in DHB hospitals, and that they were not subsidised in the Pharmaceutical Schedule. The Subcommittee considered that these did not need to be included in a national PML.

10.7 The Subcommittee noted that one DHB had reported using nicotine nasal spray, but this was not subsidised in the Pharmaceutical Schedule. The Subcommittee considered that this should not be included in a national PML.

11 Agents for Parkinsonism and Related Disorders

11.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Agents for Parkinsonism and Related Disorders heading.

11.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Botulinum toxin type A
  - Inj 100 u vial
  - Inj 500 u vial
- Tetrabenazine
  - Tab 25 mg
- Benztropine mesylate
  - Inj 1 mg per ml, 2 ml ampoule
  - Tab 2 mg
- Orphenadrine hydrochloride
  - Tab 50 mg
- Procyclidine hydrochloride
  - Tab 5 mg
- Amantadine hydrochloride
  - Cap 100 mg
- Apomorphine hydrochloride
  - Inj 10 mg per ml, 1 ml ampoule
  - Inj 10 mg per ml, 2 ml ampoule
- Bromocriptine
  - Tab 2.5 mg
  - Cap 5 mg
- Entacapone
  - Tab 200 mg
- Levodopa with benserazide
  - Cap 50 mg with benserazide 12.5 mg
  - Tab dispersible 50 mg with benserazide 12.5 mg
  - Cap 100 mg with benserazide 25 mg
  - Cap long-acting 100 mg with benserazide 25 mg
  - Cap 200 mg with benserazide 50 mg
- Levodopa with carbidopa
  - Tab 100 mg with carbidopa 25 mg
  - Tab 250 mg with carbidopa 25 mg
  - Tab long-acting 200 mg with carbidopa 50 mg

- Lisuride hydrogen maleate
  - Tab 200 µg
- Pergolide
  - Tab 0.25 mg
  - Tab 1 mg
- Ropinirole hydrochloride
  - Tab 0.25 mg
  - Tab 1 mg
  - Tab 2 mg
  - Tab 5 mg
- Selegiline hydrochloride
  - Tab 5 mg
- Tolcapone
  - Tab 100 mg

11.3 The Subcommittee recommended that the prescribing of apomorphine be subject to recommendation by neurologists.

11.4 The Subcommittee noted that PHARMAC was intending to list pramipexole in the Pharmaceutical Schedule, but this had been delayed by supply problems. The Subcommittee recommended that pramipexole only be included in a national PML once it becomes subsidised in the Pharmaceutical Schedule.

11.5 The Subcommiittee noted that piracetam is not in use in DHB hospitals and is not subsidised in the Pharmaceutical Schedule. The Subcommittee recommended that this not be included in a national PML.

11.6 The Subcommiittee noted that droxidopa is not in use in DHB hospitals and is not subsidised in the Pharmaceutical Schedule. The Subcommittee recommended that this not be included in a national PML.

11.7 The Subcommittee noted that there is some use of bromocriptine 10 mg tablets in DHB hospitals. The Subcommittee noted that it is not subsidised in the Pharmaceutical Schedule, and considered that there was no need for it given the availability of other presentations. The Subcommittee recommended that this not be included in a national PML.

11.8 The Subcommittee noted that pergolide 0.05 mg tablets are used in some DHBs, and that this usage is relatively low. The Subcommittee considered that as these are not funded in the Pharmaceutical Schedule, and as they do not have a unique use within hospitals, they should not be included in a national PML.

11.9 The Subcommittee noted that starter packs (42 x tab 0.25 mg, 42 x tab 0.5 mg and 21 x tab 1 mg) and follow-on packs (42 x tab 0.5 mg, 21 x tab 1 mg and 63 x tab 2 mg) of ropinirole hydrochloride had previously been delisted from the Pharmaceutical Schedule, and considered that these did not need to be included in a national PML.

12 Antiepilepsy Drugs

12.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Antiepilepsy Drugs heading.

12.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and

recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Clonazepam
  - Inj 1 mg per ml, 1 ml ampoule
- Diazepam
  - Rectal tubes 5 mg
  - Rectal tubes 10 mg
  - Inj 5 mg per ml, 2 ml ampoule
  - Inj (emulsion) 5 mg per ml, 2 ml ampoule
- Paraldehyde
  - Inj 5 mg ampoule
- Phenytoin sodium
  - Inj 50 mg per ml, 2 ml ampoule
  - Inj 50 mg per ml, 5 ml ampoule
- Carbamazepine
  - Oral liq 100 mg per 5 ml
  - Tab 200 mg
  - Tab 400 mg
  - Tab long-acting 200 mg
  - Tab long-acting 400 mg
- Clobazam
  - Tab 10 mg
- Clonazepam
  - Oral drops 2.5 mg per ml
  - Tab 500 µg
  - Tab 2 mg
- Ethosuximide
  - Cap 250 mg
  - Oral liq 250 mg per 5 ml
- Gabapentin
  - Cap 100 mg
  - Cap 300 mg
  - Cap 400 mg
  - Tab 600 mg
- Lacosamide
  - Inj 10 mg per ml, 20 ml
  - Tab 100 mg
  - Tab 150 mg
  - Tab 200 mg
  - Tab 50 mg
- Lamotrigine
  - Tab dispersible 2 mg
  - Tab dispersible 5 mg
  - Tab dispersible 25 mg
  - Tab dispersible 50 mg
  - Tab dispersible 100 mg
- Levetiracetam
  - Tab 250 mg
  - Tab 500 mg
  - Tab 750 mg

    - Inj 100 mg per ml, 5 ml
- Phenobarbitone
    - Tab 15 mg
    - Tab 30 mg
    - Inj 200 mg per ml, 1 ml ampoule
- Phenytoin
    - Tab 50 mg
- Phenytoin sodium
    - Cap 30 mg
    - Cap 100 mg
    - Oral liq 30 mg per 5 ml
- Primidone
    - Tab 250 mg
- Sodium valproate
    - Inj 100 mg per ml, 4 ml vial
    - Oral liq 200 mg per 5 ml
    - Tab 100 mg
    - Tab 200 mg EC
    - Tab 500 mg EC
- Topiramate
    - Tab 25 mg
    - Tab 50 mg
    - Tab 100 mg
    - Tab 200 mg
    - Sprinkle cap 15 mg
    - Sprinkle cap 25 mg
- Vigabatrin
    - Tab 500 mg

12.3 The Subcommittee was uncertain of the availability of the emulsion form of diazepam injection, and recommended that PHARMAC investigate this further. The Subcommittee considered that if this was no longer available in New Zealand, it would not need to be included in a national PML given the inclusion of the non-emulsion form.

12.4 The Subcommittee recommended that the listing of gabapentin, lacosamine and vigabatrin in a national PML be subject to restrictions on their use that are in line with the Special Authority restrictions for them in the Pharmaceutical Schedule.

12.5 The Subcommittee noted that stiripentol (cap 250 mg and powder 250 mg per sachet) was not widely used in DHB hospitals, but recommended that this be included in a national PML. The Subcommittee recommended that the listing of stiripentol in a national PML be subject to prescribing restrictions that limit its use to severe myoclonic epilepsy of infancy. The Subcommittee noted that there would be benefit from having this subsidised in the community, and considered that PHARMAC should consider listing this in the Pharmaceutical Schedule for this indication.

12.6 The Subcommittee considered that there would be benefit from having an oral liquid preparation of levetiracetam, and recommended that PHARMAC seek the advice of pharmacists with expertise in extemporaneous compounding on whether this could be achieved by extemporaneous compounding, or whether a proprietary oral liquid preparation would be required.

12.7 The Subcommittee noted that there is some use of felbamate oral liquid in DHB hospitals, but recommended that, as this is not subsidised in the Pharmaceutical Schedule, and as it does not have a unique use within hospitals, that it not be included in a national PML.

12.8 The Subcommittee noted that lamotrigine 200 mg tablets had been discontinued, and were no longer subsidised in the Pharmaceutical Schedule. The Subcommittee considered that these did not need to be included in a national PML.

12.9 The Subcommittee noted that there is some use of levetiracetam 1 g tablets in DHB hospitals. The Subcommittee considered that, as these are not subsidised in the Pharmaceutical Schedule, and given the availability of alternative presentations, these did not need to be included in a national PML.

12.10 The Subcommittee recommended that, as oxcarbazepine is not subsidised in the Pharmaceutical Schedule, and as it does not have a unique use within hospitals, that it not be included in a national PML.

12.11 The Subcommittee noted that phenobarbitone 40 mg per ml, 0.5 ml injection had been used once by one DHB hospital. The Subcommittee considered that this did not need to be included in a national PML.

12.12 The Subcommittee recommended that, as pregabalin is not subsidised in the Pharmaceutical Schedule, and as it does not have a unique use within hospitals, that it not be included in a national PML.

12.13 The Subcommittee recommended that, as retigabine is not subsidised in the Pharmaceutical Schedule, and as it does not have a unique use within hospitals, that it not be included in a national PML.

12.14 The Subcommittee noted that topiramate 50 mg sprinkle capsules had been used in one DHB hospital, and considered that these did not need to be included in a national PML.

13 Antimigraine Preparations

13.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Antimigraine Preparations heading.

13.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Dihydroergotamine mesylate
  - Inj 1 mg per ml, 1 ml ampoule
- Ergotamine tartrate with caffeine
  - Tab 1 mg with caffeine 100 mg
- Metoclopramide hydrochloride with paracetamol
  - Tab 5 mg with paracetamol 500 mg
- Rizatriptan benzoate
  - Wafer 10 mg
- Sumatriptan
  - Tab 50 mg

- Tab 100 mg
- Inj 12 mg per ml, 0.5 ml cartridge

- Clonidine hydrochloride
  - Tab 25 µg
- Pizotifen
  - Tab 500 µg

13.3 The Subcommittee noted that methysergide maleate (1 mg tablet) had previously been discontinued in New Zealand, and considered that this did not need to be included in a national PML.

14 Multiple Sclerosis Treatments

14.1 The Subcommittee reviewed the information from DHB hospitals and PHARMAC in relation to products under the Multiple Sclerosis Treatments heading.

14.2 The Subcommittee noted that the following pharmaceuticals are commonly used in DHB hospitals and/or are fully subsidised in the Pharmaceutical Schedule and recommended that they be included in a national preferred medicines list (PML) without need for further prioritisation:

- Glatiramer acetate
  - Inj 20 mg syringe
- Interferon beta-1-alpha
  - Inj 6 million iu per vial
- Interferon beta-1-alpha
  - Inj 6 million iu syringe
- Interferon beta-1-beta
  - Inj 8 milion iu per 1 ml vial

14.3 The Subcommittee recommended that the listing of multiple sclerosis treatments in a national PML be subject to restrictions on their use that are in line with the restrictions for them in the Pharmaceutical Schedule.

14.4 The Subcommittee noted that there had been a small amount of use of natalizumab in DHB hospitals. The Subcommittee recommended that it not be included in a national PML.

Analgesic Subcommittee – 24 April 2012

15 Sugammadex (Bridion) for reversal of neuromuscular blockade

Application

15.1 The Subcommittee reviewed an application from Merck Sharpe & Dohme to list sugammadex on the national Preferred Medicines List for patients undergoing general anaesthesia with either rocuronium or vecuronium.

Recommendation

15.2 The Subcommittee recommended that sugammadex (Bridion) be funded with a high priority for:

- patients who require reversal of profound neuromuscular blockade following a rapid sequence induction that has been undertaken using rocuronium (ie suxamethonium contraindicated or undesirable);
- patients with an unexpectedly difficult airway that can be ventilated but not intubated and in whom the anaesthetist plans a rapid reversal of anaesthesia and neuromuscular blockade;
- unexpected short surgical duration;
- patients in whom neostigmine or the neostigmine/ anticholinergic combination is contraindicated, such as those with ischaemic heart disease, morbid obesity or COPD; and
- patients with a partial residual block after conventional reversal.

15.3 The Subcommittee recommended that the prescribing of sugammadex be subject to recommendation by an anaesthetist.

15.4 The Decision Criteria particularly relevant to this recommendation are: *(i) the health needs of all eligible people within New Zealand; (iii) the availability and suitability of existing medicines, therapeutic medical devices and related products and related things; (iv) the clinical benefits and risks of pharmaceuticals and (v) The cost-effectiveness of meeting health needs by funding pharmaceuticals rather than using other publicly funded health and disability support services.*

Discussion

15.5 The Subcommittee noted that sugammadex is a selective relaxant binding agent used to reverse neuromuscular block induced by rocuronium or vecuronium. The Subcommittee noted that sugammadex can reverse a light, moderate or deep neuromuscular block thus eliminating the need for acetylcholinesterase inhibitors such as neostigmine and cholinergic antagonists such as glycopyrrolate or atropine.

15.6 The Subcommittee considered that there are several scenarios where sugammadex would have benefits over other treatments. The Subcommittee considered that sugammadex would be beneficial when the anaesthetist plans to reverse profound neuromuscular block following rapid sequence induction with rocuronium.

15.7 The Subcommittee considered that sugammadex would be used if maintaining airway patency is difficult when the patient can be ventilated but not intubated.

15.8 The Subcommittee considered that sugammadex could be used following short surgical procedures or where surgery is unexpectedly ceased soon after induction and a profound block is in place. The Subcommittee considered that providing a faster reversal of neuromuscular block could reduce risks for some patients and improve theatre efficiencies.

15.9 The Subcommittee considered that there is a high incidence of patients experiencing residual post-operative neuromuscular block activity and that this can increase risks, particularly for patients with poor respiratory function or ischaemic heart disease at risk of hypoxia. The Subcommittee noted that morbidly obese patients often have these risks. The Subcommittee considered that there are some instances where neuromuscular block persists despite conventional therapy and where sugammadex could be used.

15.10 The Subcommittee considered sugammadex may be a useful treatment option for patients if neostigmine or neostigmine/ anticholinergic combination therapy is contraindicated.

15.11 The Subcommittee noted the inconsistent access for sugammadex across DHBs, and noted the high cost of the pharmaceutical in comparison to other available agents. The Subcommittee noted that the dose and therefore cost, depends on the level of neuromuscular block.

16 Methoxyflurane (Penthrox) for patient-controlled analgesia

Application

16.1 The Subcommittee reviewed a funding application from Medical Developments International (MDI) to list methoxyflurane (Penthrox) on the national Preferred Medicines List (PML) for patient-controlled analgesia.

Recommendation

16.2 The Subcommittee recommended that methoxyflurane be listed on the national PML with a high priority for patients undergoing painful procedures with an expected duration of less than 1 hour.

16.3 The Subcommittee recommended that methoxyflurane be funded in the Community with a medium priority for the same patient group.

16.4 The Decision Criteria particularly relevant to this recommendation are: *(i) the health needs of all eligible people within New Zealand; (iii) the availability and suitability of existing* medicines*, therapeutic medical devices and related products and related things; (iv) the clinical benefits and risks of pharmaceuticals; (v) The cost-effectiveness of meeting health needs by funding pharmaceuticals rather than using other publicly funded health and disability support services;*

Discussion

16.5 The Subcommittee considered that methoxyflurane is currently used in New Zealand at a low dose in the acute pain setting for analgesia primarily in ambulance services,

however use has been increasing in emergency departments and hospitals as an analgesic for procedural sedation, notably at Waikato DHB.

16.6 The Subcommittee noted that the most contemporary evidence is in the form of case reports and observational studies.

16.7 The Subcommittee considered that methoxyflurane has a similar efficacy to ketamine but with a quicker onset and offset of action, and is a more effective analgesic compared with Entonox (nitrous oxide and oxygen). The Subcommittee considered that methoxyflurane is more appropriate for procedural analgesia than a PCA opioid or oral opioid treatment.

16.8 The Subcommittee considered that methoxyflurane provides effective analgesia for painful procedures, providing an alternative to general anaesthesia with the associated risks and costs, improving patient care by avoiding protracted starvation times pre-surgery and delays in accessing surgical facilities. The Subcommittee considered that the use of methoxyflurane could reduce the duration of procedures which has benefits for both patients and healthcare staff.

16.9 The Subcommittee considered that the risks associated with methoxyflurane are primarily dose related and can result in renal failure, hepatitis or malignant hyperthermia. Members noted that for safety reasons, its use is limited to a maximum dose of 6 ml per day and 15 ml per week, and that it should not be given on consecutive days.

16.10 The Subcommittee noted that methoxyflurane is self-administered and patient controlled and can be given in a procedural room under supervision. The Subcommittee considered that this provides benefits when compared with using the resources of an anaesthetist and theatre time.

16.11 The Subcommittee considered that currently in most hospitals, ketamine or strong opioid are administered by a doctor or anaesthetist and this is usually the rate limiting step to availability of treatment, resulting in delays in patient care and potentially unnecessary patient suffering.

16.12 The Subcommittee noted that methoxyflurane is currently used at Waikato DHB for a number of indications, and that clinicians' experience from this is that methoxyflurane provides equivalent analgesia to other options, but is preferred by patients, and has reduced the time required to change dressings in burns patients.

16.13 The Subcommittee considered that the patient population who could benefit most from methoxyflurane therapy would be patients requiring painful, short duration procedures (less than one hour) where conventional methods of analgesia have failed or are anticipated to be insufficient. The Subcommittee considered patients should be appropriately screened and monitored and that staff should be appropriately trained.

16.14 The Subcommittee considered that there may be a niche use in the community for patients undergoing an intra-uterine device insertion or surgical procedure such as vasectomy, and that there may be a greater scope for use in rural areas in the acute pain setting.

17 Hospital Pharmaceuticals

17.1 The Subcommittee reviewed a series of recommendations by the Hospital Pharmaceuticals Subcommittee in regards to which pharmaceuticals should be

included on a national preferred medicines list (PML). The Subcommittee noted that PHARMAC had invited feedback from relevant colleges and professional societies, and noted the responses that were received.

Anaesthetic Agents

17.2 The Subcommittee noted feedback suggesting that the 5 mg per ml, 10 ml ampoule form of bupivacaine could be excluded, but recommended that this be retained in a national PML.

17.3 The Subcommittee noted feedback suggesting that the higher concentration form of bupivacaine with adrenaline (5 mg per ml bupivacaine with 1:200,000 adrenaline, 20 ml vial) could be excluded from a national PML, but recommended that both presentations be included.

17.4 Members noted feedback suggesting that the 1% strength of ropivacaine should be excluded for safety reasons. The Subcommittee noted that this presentation is used in arm blocks and should be included in a national PML.

17.5 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had requested advice on which bupivacaine with fentanyl syringes should be included in a national PML. Members noted feedback suggesting that this be limited to one or both of the 20 ml or 50 ml syringes, and considered that it may be sufficient to have just a 50 ml syringe.

17.6 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had deferred making a recommendation in relation to lignocaine prefilled syringes. The Subcommittee considered that these had no advantage over ampoules, and recommended that they not be included in a national PML.

17.7 The Subcommittee noted feedback suggesting that the 1 mg per ml strength of ketamine is not necessary in DHB hospitals, but disagreed with this view and recommended that it be included in a national PML.

17.8 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended against including lignocaine 5% patch in a national PML. The Subcommittee considered that this would be useful in the management of neuropathic pain, but considered that this would be a community-led funding decision.

Analgesics

17.9 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee requested advice on the lower strength paracetamol suppositories. Members noted that paracetamol suppositories are used in paediatrics, but that this practice is declining due to inconsistencies in absorption. The Subcommittee considered that these should remain available in DHB hospitals.

17.10 The Subcommittee noted that there was a place for tramadol SR, but considered that this should be a community-led funding decision.

17.11 The Subcommittee considered that the development of a hospital prescribing guideline for oxycodone would likely be of benefit.

Other Agents

17.12 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had deferred making a recommendation in relation to orphenadrine, and had requested the advice of anaesthetists on the need for it. The Subcommittee considered that there was not a need for orphenadrine to be included in a national PML.

17.13 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended against including oral COX-2 inhibitors in a national PML. Members noted that there would be clinical benefit for some patients from using a COX-2 inhibitor, but noted that this would be a community-led funding decision.

Mental Health Subcommittee – 8 June 2012

18 Hospital Pharmaceuticals Review

18.1 The Subcommittee reviewed a series of recommendations by the Hospital Pharmaceuticals Subcommittee in regards to which pharmaceuticals should be included on a national preferred medicines list (PML).

18.2 The Subcommittee noted that fluoxetine dispersible tablets are the only antidepressant available in New Zealand for patients with swallowing difficulties. Members considered that an alternative oral liquid preparation would be useful for patients with nasogastric tubes inserted, but that this would not need to be subsidised in the community. The Subcommittee noted that as fluoxetine is an SSRI, it would be particularly useful if this alternative product was a tricyclic antidepressant.

18.3 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had deferred making a recommendation in relation to the inclusion of proprietary oral liquid forms of chlorpromazine and diazepam in a national PML. The Subcommittee noted that these are currently extemporaneously compounded into liquid forms, and considered that there was not a need for proprietary oral liquid preparations of these agents.

18.4 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had deferred making a recommendation in relation to the inclusion of ziprasidone injection in a national PML. The Subcommittee noted that this is a short-acting injection form, and would therefore be a useful alternative to short-acting olanzapine injection. Members considered that this would be a low volume product, and that it would not be needed in the community.

18.5 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended against including the higher dose form (500 mg) of zuclopenthixol injection in a national PML as it is not currently registered. The Subcommittee considered that there is not a need for such a dose, and that it should not be included in a national PML even if the product was to obtain Medsafe registration.

18.6 The Subcommittee noted that pimozide had been discontinued in New Zealand, and considered that there was an unmet need for this product, particularly in the treatment of Tourette's syndrome. The Subcommittee recommended that PHARMAC investigate sourcing an alternative brand of pimozide for use in DHB hospitals and in the community, with a high priority. Members noted, however, that an alternative product may not be available.

18.7 The Subcommittee noted that the Special Authority criteria for buspirone limit its use to an anxiolytic. Members noted that buspirone is sometimes used in the treatment of patients with head injuries. The Subcommittee recommended that PHARMAC seek further advice from neuropsychiatrists on this matter.

18.8 The Subcommittee noted that midazolam tablets had been discontinued in New Zealand. The Subcommittee considered that it would be useful to have a tablet form of midazolam funded, and that if this was the case, there would not be a need for an oral liquid form of midazolam to be subsidised in the community.

Neurological Subcommittee – 24 July 2012

19 Hospital Pharmaceuticals Review

19.1 The Subcommittee reviewed a series of recommendations by the Hospital Pharmaceuticals Subcommittee in regards to which pharmaceuticals relevant to endocrinology should be included on a national Preferred Medicines List (PML). The Subcommittee noted that PHARMAC had invited feedback from relevant colleges and professional societies and noted that responses were received.

19.2 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that apomorphine be subject to recommendation by neurologists. The Subcommittee noted that this could be extended to geriatricians, and to physicians with experience in treating movement disorders.

19.3 The Subcommittee considered that there was not a need for a modified-release form of pyridostigmine to be available in DHB hospitals.

19.4 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had recommended that stiripentol be included in a national PML for the treatment of severe myoclonic epilepsy of infancy. Members noted that SMEI, or Dravet's syndrome as it is more commonly referred, is a rare condition, and as such the target population in New Zealand would be small. The Subcommittee recommended that this also be subsidised in the community.

19.5 The Subcommittee noted that the Hospital Pharmaceuticals Subcommittee had deferred making a recommendation in relation to a proprietary form of levetiracetam liquid. The Subcommittee noted that it is currently compounded from the tablets, and members noted that there do not appear to be any problems with the current situation.

19.6 The Subcommittee noted that feedback had highlighted some additional items that had not previously been considered by the Hospital Pharmaceuticals Subcommittee. The Subcommittee noted that zolmitriptan was not subsidised in the community, and considered that this should be a community-led funding decision.

19.7 The Subcommittee noted that pyridoxal 5 phosphate, trihexyphenidyl and 3,4 diaminopyidine were likely to be used in neurological practice, but considered that it would be appropriate for these to be accessed under an exceptions scheme.

Hospital Pharmaceuticals Subcommittee – 25 September 2012

20 Review of Nervous System Recommendations

20.1 The Subcommittee reviewed its previous recommendations in relation to products in the Nervous System group, feedback from other organisations, and recommendations from the Analgesic Subcommittee, Neurological Subcommittee and Mental Health Subcommittee.

Anaesthetic Agents

20.2 The Subcommittee noted that it had previously deferred making a recommendation in relation to articaine hydrochloride with adrenaline. Members noted that this is used in the management of anaesthetic allergies, and recommended that it be included.

20.3 The Subcommittee noted that it had previously deferred making a recommendation in relation to bupivacaine hydrochloride with fentanyl syringes, pending further advice on the particular presentations that should be included in a national PML. The Subcommittee recommended that all three currently used presentations (15 ml, 20 ml and 50 ml) be included.

20.4 The Subcommittee noted that it had previously deferred making a recommendation in relation to lignocaine syringes. The Subcommittee noted that these are not required in anaesthesia or cardiology, and recommended that they be excluded from a national PML.

20.5 The Subcommittee noted the recommendation from the Analgesic Subcommittee in relation to methoxyflurane. Members noted there are a number of safety issues with this agent, such as renal failure and staff exposure to exhaled methoxyflurane, particularly in areas with poor ventilation. Members considered that this issue may require further consideration by PTAC.

20.6 The Subcommittee noted the recommendation from the Analgesic Subcommittee in relation to sugammadex. The Subcommittee considered that the access restrictions that had been proposed were very broad, given its current use in DHB hospitals, and that the criteria would position the agent as one for routine use, rather than as an emergency option. The Subcommittee considered that while sugammadex should be included in a national PML, the overall expenditure on sugammadex under the proposed access criteria would be large, and recommended that PTAC give consideration to refining these criteria further.

Antinausea and Vertigo Agents

20.7 The Subcommittee noted that it had previously recommended that hyoscine patches be included in a national PML, and subject to criteria that restricted its use to the current community Special Authority criteria, plus for hypersalivation and for last-line use in post-operative nausea and vomiting. Members noted that the Mental Health Subcommittee had recently recommended that the Special Authority criteria be widened to include clozapine-induced hypersalivation, and considered that it would be useful for this to be extended to all hypersalivation.

20.8 The Subcommittee noted that it had previously recommended that promethazine theoclate not be included in a national PML, as it is not fully subsidised in the community, and other salts of promethazine had already been recommended for

inclusion. The Subcommittee recommended that this be included, but limited to continuation use only.

Agents for Parkinsonism and Related Disorders

20.9 Members noted that it had previously recommended that apomorphine be subject to recommendation by neurologists, and that the Neurological Subcommittee had noted that this could be widened to include geriatricians and other physicians with expertise in treating movement disorders. The Subcommittee considered that requiring recommendation by neurologists may present difficulties for smaller hospitals, but a wider restriction may be difficult to define. The Subcommittee recommended that no such restriction should apply to apomorphine.

Antiepilepsy Drugs

20.10 The Subcommittee noted that there is a role for the use of gabapentin in the peri-operative setting, and recommended that the access criteria accommodate such use.

20.11 The Subcommittee noted that it had previously deferred making a recommendation on the inclusion of levetiracetam liquid in a national PML. The Subcommittee considered that this should be a community-led funding decision.

Antipsychotic Agents

20.12 The Subcommittee recommended that ziprasidone tablets be subject to the endorsement criteria that apply in the community.

20.13 The Subcommittee recommended that ziprasidone injection be included in a national PML, with prescribing restrictions similar to those that apply to the tablet form.

20.14 The Subcommittee noted that it had previously deferred making a recommendation in relation to chlorpromazine oral liquid. The Subcommittee recommended that this be included in a national PML.

Sedatives and Hypnotics

20.15 The Subcommittee recommended that triazolam be limited to use for continuation only.

Stimulants / ADHD Treatments

20.16 The Subcommittee noted that methylphenidate has a role in hospitals for use in inpatient treatment of head injury and stroke, and recommended that the access criteria accommodate such use.

Treatments for Substance Dependence

20.17 Members noted that naltrexone is used in hospitals for treatment of opioid-induced constipation. The Subcommittee recommended that prescribing restrictions not apply to naltrexone in a national PML.

20.18 The Subcommittee recommended that the prescribing of varenicline in DHB hospitals be subject to restrictions in line with the Special Authority criteria in the community.

Pharmacology and Therapeutics Advisory Committee – 8 & 9 November 2012

21 Nervous System

21.1 The Committee considered a list of pharmaceuticals under consideration for use in DHB hospitals under the Nervous System heading, including advice from the Hospital Pharmaceuticals Subcommittee, the Analgesic Subcommittee, the Mental Health Subcommittee and the Neurological Subcommittee. Except where indicated, the Committee agreed with the recommendations by the subcommittees.

21.2 The Committee noted that the Analgesic Subcommittee had recommended that methoxyflurane be listed in a national PML for patients undergoing painful procedures with an expected duration of less than 1 hour. The Committee considered that the published evidence in support of methoxyflurane as an analgesic agent compared to alternatives currently available in the hospital setting was poor.

21.3 The Committee considered that there was a potential for methoxyflurane to be a useful analgesic agent in reducing the need for proceduresin theatres, particularly for situations such as painful dressings changes for burns patients. However the Committee considered that the benefits of this over currently utilised sedative and analgesic agents was unclear. The Committee deferred making a recommendation on methoxyflurane pending review of further evidence of its benefit, and safety, in this setting.

21.4 The Committee noted feedback from anaesthetists suggesting that methoxyflurane be available for restricted indications. The Committee suggested that PHARMAC staff seek further information from anaesthetists on the potential use of methoxyflurane and associated safety issues. Members noted that methoxyflurane has been used significantly in one DHB, and considered that it would be useful for the Committee to be able to review an audit of this use.

21.5 The Committee noted that the Analgesic Subcommittee had recommended that sugammadex be listed in a national PML for:

21.5.1 patients who require reversal of profound neuromuscular blockade following a rapid sequence induction that has been undertaken using rocuronium (i.e. suxamethonium contraindicated or undesirable);

21.5.2 patients with an unexpectedly difficult airway that can be ventilated but not intubated and in whom the anaesthetist plans a rapid reversal of anaesthesia and neuromuscular blockade;

21.5.3 unexpected short surgical duration;

21.5.4 patients in whom neostigmine or the neostigmine/ anticholinergic combination is contraindicated, such as those with ischaemic heart disease, morbid obesity or COPD; and

21.5.5 patients with a partial residual block after conventional reversal.

21.6 The Committee considered that the clinical benefits from sugammadex are unclear, but that the benefit in terms of theatre time could be significant, depending on the extent to which sugammadex is used.

21.7 The Committee agreed with the recommendation to list sugammadex in a national PML, and gave a medium priority to this recommendation for all indications listed above.

21.8 Members noted that there may be a potential to use sugammadex in other situations, such as patients with myasthenia gravis or muscular dystrophy.

21.9 The Committee noted that the Neurological Subcommittee had recommended that stiripentol be listed in a national PML and subsidised in the community for Dravet syndrome. Members noted that several patients had been approved under NPPA (and Exceptional Circumstances previously) for this use.

21.10 The Committee noted that stiripentol is not registered in New Zealand, but that it is licenced in the European Union for use in conjunction with clobazam and sodium valproate. Members noted that paediatric neurologists had indicated that it would be used for the treatment of Dravet syndrome, often after failure to respond to other agents.

21.11 The Committee recommended that stiripentol be listed for the treatment of Dravet syndrome where diagnosis has been confirmed by a paediatric neurologist. Members considered that clobazam and sodium valproate should have been trialled first, as well as two of the following: topiramate, levetiracetam and ketogenic diet. The Committee considered that initial applications should be for six months, with a lifetime approval for patients who receive benefit from initial treatment.

21.12 The Committee noted that the Analgesic Subcommittee had recommended prescribing restrictions for IV paracetamol which included the requirement for recommendation by a consultant. The Committee considered that the proposed restriction was sufficiently specific that made a consultant restriction redundant, and recommended that this be removed from the prescribing restriction.

21.13 The Committee noted that metoclopramide oral liquid, tramadol oral drops and paracetamol soluble tablets had been proposed for inclusion in a national PML. Members noted that these would also be useful formulations to have available in the community.

21.14 The Committee noted that sucrose oral liquid is used in paediatrics as an analgesic agent, and recommended that this be included in a national PML.