MSAC Application 1741

Continuous nerve blockade using a catheter technique

Application for MBS eligible service or health technology

MSAC Application Number:
1741

Application title:
Continuous nerve blockade using a catheter technique

Submitting organisation:
AUSTRALIAN SOCIETY OF ANAESTHETISTS LIMITED

Submitting organisation ABN:
16095377370

Application description

Succinct description of the medical condition/s:
The medical conditions relevant to the proposed service is the management of acute postoperative pain following surgery including postoperative pain from procedures such as hip, knee and shoulder joint arthroplasty surgery, reconstructive upper and Lower limb surgery associated with moderate to severe post operative pain including shoulder rotator cuff repair or anterior cruciate ligament repair of the knee, ambulatory surgery including arthroscopic shoulder surgery, major breast or thoracic surgery including mastectomy and thoracotomy, trauma such as rib fractures and femoral fracture , as an alternative to epidural analgesia for open abdominal procedures.

Succinct description of the service or health technology:
Major peripheral nerve block, performed perioperatively, with the introduction of a catheter to allow continuous nerve blockade, to provide postoperative pain relief where pain duration exceeds the duration of a single injection. The technique is very similar to performing a major nerve block, however with the addition of the placement of a catheter in close proximity to the relevant nerves (often within the sheath).

Application contact details

Are you the applicant, or are you a consultant or lobbyist acting on behalf of the applicant?
Applicant

Are you applying on behalf of an organisation, or as an individual?
Organisation

Application details

Does the implementation of your service or health technology rely on a new listing on the Pharmaceutical Benefits Scheme (PBS) and/or the Prostheses List?
No

Is the application for a new service or health technology, or an amendment to an existing listed service or health technology?
New

Relevant MBS items

Please select any relevant MBS items:

MBS item number	Selected reason type
22041	Expansion or amendment to existing item

What is the type of service or health technology?
Therapeutic

Application PICO set:

Supporting documentation

Document type	Document file name
Application PICO set document	MSAC Application 1741 - PICO Set.docx
Reference list	*Refer to Application PICO set document*

Population

Describe the population in which the proposed health technology is intended to be used:
All patients from children to the elderly who require major limb or joint surgery, open abdominal or thoracic procedures, patients who have painful conditions following trauma, or other surgical procedures expected to result in significant post-operative pain, which is amenable to continuous regional nerve block, and in whom epidural analgesia would either be inappropriate, contraindicated or ineffective due to anatomical considerations.

Select the most applicable medical condition terminology (SNOMED CT):

-

Intervention

Name of the proposed health technology:
Continuous nerve block using catheter technique (regional analgesia)

Comparator

Nominate the appropriate comparator(s) for the proposed medical service (i.e. how is the proposed population currently managed in the absence of the proposed medical service being available in the Australian health care system). This includes identifying health care resources that are needed to be delivered at the same time as the comparator service:

Comparator name	Comparator type
MBS Item: 22041 Perioperative introduction of a plexus or nerve block proximal to the lower leg or forearm for post operative pain management. Single dose nerve blocks are administered in association with surgery (Item 22041), with the subsequent appropriate post-operative pain management (which may include intravenous opioid via patient-controlled analgesia (PCA pump), oral opioids, and other oral/IV/topical/sublingual/subcutaneous analgesia medication) as follow-up when block wears off. The patient usually remains in hospital until adequate oral analgesia has been achieved and the patient can be safely discharged from medical facility. Current comparator is expected to be substituted for the new catheter procedure for those patients that experience significant post-operative pain of a prolonged nature. It will also be substituted for trauma patients with prolonged pain, and will facilitate ongoing wound management on the ward and may reduce the requirement for wound dressing management in the operating theatre, It may also be used for pain management for patients (paediatric and adults) in Intensive Care Units (ICU) to help facilitate early extubation and earlier discharge from ICU.	MBS

Outcomes

Outcome description – please include information about whether a change in patient management, or prognosis, occurs as a result of the test information:

Outcome 1

Outcome type: Resources

Outcome name: Earlier hospital discharge/Reduced length of stay in hospital

Outcome description: For patients suffering from post-operative pain, the insertion of continuous nerve block catheter post-operatively will allow for a continuous infusion of pain medicine with a patient controlled component. That means that suitable patients may be discharged from the hospital the same day or day 1 post-operative as opposed day 2-5 post major joint arthroplasty. Therefore freeing up hospital beds/capacity. The patient can remove catheter on day 3-5 as directed and commence simple (non-opiate) analgesia as required.

Outcome 2

Outcome type: Health benefits

Outcome name: Reduced opiate use and addiction potential

Outcome description: Reduced opioid consumption

Outcome 3

Outcome type: Health benefits

Outcome name: Greater mobility following surgery

Outcome description: Improved mobility and recovery from major orthopaedic surgery and trauma

Outcome 4

Outcome type: Health benefits

Outcome name: Improved recovery from other surgeries/injuries (e.g. mastectomy or fractured ribs)

Outcome description: Improved recovery from other surgeries/injuries (e.g. mastectomy or fractured ribs)

Outcome 5

Outcome type: Health benefits

Outcome name: Improved health outcomes for patient as the result of the better pain management

Outcome description: For patients suffering from post-operative pain, the insertion of continuous nerve block catheter post-operatively will allow for a continuous infusion of pain medicine with a patient controlled component. That means that patient can be discharged from the hospital the same day. The patient can remove catheter on day 3-5 as directed and commence simple (non-opiate) analgesia as required.

Proposed MBS items

Please provide at least one proposed item with their descriptor and associated costs, for each Population / Intervention:

Proposed item	AAAAA
MBS item number (where used as a template for the proposed item)	
Category	THERAPEUTIC PROCEDURES
Group	RELATIVE VALUE GUIDE FOR ANAESTHESIA - MEDICARE BENEFITS ARE ONLY PAYABLE FOR ANAESTHESIA PERFORMED IN ASSOCIATION WITH AN ELIGIBLE SERVICE
Proposed item descriptor	Perioperative introduction of a continuous nerve block including an insertion of a catheter proximal to the lower leg or forearm for postoperative pain management.
Proposed MBS fee	$104.75
Indicate the overall cost per patient of providing the proposed health technology	$303.56
Please specify any anticipated out of pocket expenses	$0.00
Provide any further details and explain	The catheter kits are already in use and being funded by the hospitals. The proposal is highly unlikely to lead to any increased usage of the existing technology or equipment. No tests are necessary. No additional consultation is necessary – this is not a 'free-standing' procedure as proposed, it will always be in association with anaesthesia. No additional anaesthesia will be required – the patients are already being provided with appropriate anaesthesia. No additional follow-up appointments are required – existing routine post anaesthesia care covers all requirements We costed the additional Medicare funding by assuming a usage rate of around 5%, but it's likely to be based on 2% usage and 5% usage of the Australia wide usage of catheter techniques as a percentage of all blocks (excluding eye) that are currently funded by Medicare. The estimated additional annual Medicare costs can be calculated by multiplying the number of blocks in a 12 month period (using item 22041) by 75% of the Medicare RVG unit value by the number of additional units being proposed (3). The patient's out of pocket is therefore likely to be 0.

How is the technology / service funded at present? (For example: research funding; State-based funding; self-funded by patients; no funding or payments):
Not funded or self-funded by patients

Claims

In terms of health outcomes (comparative benefits and harms), is the proposed technology claimed to be superior, non-inferior or inferior to the comparator(s)?

Superior

Please state what the overall claim is, and provide a rationale:

- reduced length of stay in hospital
- better pain management, ongoing analgesia
- reduced opiate use and dependence potential
- improved mobility and recovery from major orthopaedic surgery and trauma
- improved recovery from other surgeries/injuries (eg mastectomy or fractured ribs)
- frees up the resources (hospital beds, nursing staff, PCA pumps, physio etc) that can be used for other patients

Estimated utilisation

Estimate the prevalence and/or incidence of the proposed population:
Estimated number of services provided for Nerve or Plexus Blocks for Postoperative Pain is 92,544 for the 2021-22 year.

According to surveyed cardiac anaesthetists, on average the catheters would be used between 2 % and 5% of the time. Therefore, the estimated number of additional services would be between 1,851 and 4,672.

Provide the percentage uptake of the proposed health technology by the proposed population:

Year 1 estimated uptake (%):
5.00

Year 2 estimated uptake (%):
6.00

Year 3 estimated uptake (%):
7.50

Year 4 estimated uptake (%):
10.00

Estimate the number of patients who will utilise the proposed technology for the first full year:
4672

Optionally, provide details:

The estimated utilisation could be between 2-5 % the first year therefore it's likely to be between 1851 and 4672 in the first year, then between 2776 (3%) and 5552 (6%) in the second year, then between 4164 (4.5%) and and 6940 (7.5%) in year 3, and between 4672 (5%) and 9254 (10%) in year 4. We believe it's likely to be on the lower end of uptake.

Will the technology be needed more than once per patient?
No, once only

Consultation

List all appropriate professional bodies / organisations representing the group(s) of health professionals who provide the health technology/service:

Australian Medical Association Limited
Australian Society of Anaesthetists Limited
Regional Anaesthesia Special Interest Group

List all appropriate professional bodies / organisations representing the group(s) of health professionals that may be impacted by the health technology/service:

Australian Society of Anaesthetists Limited
Regional Anaesthesia Special Interest Group

List the patient and consumer advocacy organisations or individuals relevant to the proposed health technology:

Number of organisations listed: 1

Consumers Health Forum of Australia Ltd

Regulatory information

Would the proposed health technology involve the use of a medical device, in-vitro diagnostic test, radioactive tracer or any other type of therapeutic good?

Yes

Has it been listed or registered or included in the Australian Register of Therapeutic Goods (ARTG) by the Therapeutic Goods Administration (TPG)?

Yes

Is the therapeutic good classified by the TGA as either a Class III or Active Implantable Medical Device (AIMD) against the TGA regulatory scheme for devices?

No

Please enter all relevant ARTG ID's:

ARTG ID	ARTG name
142526	Elastomeric infusion pump system
162583	Catheter, infusion

Is the intended purpose in this application the same as the intended purpose of the ARTG listing(s)?

Yes