

Acupuncture

for adults with low back pain and neck pain

Technology Guidance from the MOH Medical Technology Advisory Committee

Guidance Recommendations

The Ministry of Health's Medical Technology Advisory Committee has recommended:

- ✓ Needled acupuncture (with or without electro stimulation) performed in public healthcare institutions (PHIs) for pain reduction or functional improvement in adults aged 18 years and above as clinically appropriate for:
 - Low back pain;
 - Neck pain, including pain radiating to the neck, or from neck to shoulders.
- ✓ It can be administered for up to 12 sessions within 3 months from treatment initiation following formal diagnosis and recommendation by a referring medical specialist in a PHI.
- ✓ Subsequent treatment up to 12 more sessions within the next 3 months is subject to the reviewing medical specialist's assessment of sustained pain reduction or functional improvement for the patient.
- ✓ It shall be performed by acupuncturists registered with the Traditional Chinese Medicine Practitioners Board (TCMPB) in accordance with minimum practice standards defined by the TCM Branch of MOH.

Subsidy status

Subsidy for needled acupuncture (with or without electro stimulation) for the abovementioned criteria is applicable only for treatments performed in public healthcare institutions.

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Factors considered to inform the recommendations for subsidy

Technology evaluation

- 1.1 The MOH Medical Technology Advisory Committee (“the Committee”) considered the evidence presented for the technology evaluation on acupuncture for adults with low back pain and other musculoskeletal disorders (e.g. neck pain). The Agency for Care Effectiveness conducted the evaluation in consultation with senior clinicians in pain management and rehabilitation, and acupuncturists.
- 1.2 The evidence was used to inform the Committee’s deliberations around five core decision-making criteria:
 - Clinical need of patients and nature of the condition;
 - Overall benefit of the technology to the patient and/or the system;
 - Cost-effectiveness (value for money), which covers the incremental benefit and cost of the technology compared with existing alternatives;
 - Estimated annual technology cost and the number of patients likely to benefit from the technology; and
 - Organisational feasibility, which covers the potential impact of adopting the technology, especially barriers for diffusion.
- 1.3 Considerations such as ethical or social issues related to adoption of the technology may also inform the Committee’s deliberations.

Clinical need

- 2.1 The Committee noted that musculoskeletal disorders accounted for about 13% of disability-adjusted life years in 2017, with low back pain and neck pain being the leading contributors in Singapore. Current treatment options include medications, physiotherapy, and surgery which may not satisfactorily or safely alleviate these conditions.
- 2.2 Among patients receiving acupuncture treatment at public healthcare institutions (PHIs) for musculoskeletal disorders in 2018, low back pain and neck pain comprised an estimated 62% of all cases.

Overall benefit of technology

- 3.1 The Committee noted that acupuncture referred to all needed variants involving skin penetration with or without moxibustion, electro-acupuncture, or manual acupuncture, whether as a primary treatment, or

as an adjunct to standard care. The main comparators were standard care and sham acupuncture, with no treatment as a secondary comparator. Standard care was any form of medications, physiotherapy, or surgery not including acupuncture. Sham acupuncture referred to the use of acupuncture controls that may or may not penetrate the skin and varied in needle depth and the position of needle placement.

- 3.2 The Committee noted that acupuncture is generally a safe procedure. Minor and transient side effects like pain and bleeding at needling sites, and bruising occurred in 1% to 15% of treatments. Serious infections and traumatic tissue damage were rare and could be attributed to unqualified acupuncturists.
- 3.3 The Committee noted that acupuncture was generally more effective in reducing pain in the short term (≤ 3 months) for low back pain compared with standard care, sham acupuncture, or no treatment. When administered as an adjunctive therapy to standard care, acupuncture improved additional pain relief, with potential benefits up to one year. Acupuncture was also found to be generally more effective in reducing functional disability within 1 week compared with sham acupuncture and when used as adjunctive therapy to standard care for treating low back pain. The evidence was inconsistent for acupuncture as a primary therapy in low back pain in effectively reducing pain when compared with non-steroidal anti-inflammatory drugs (NSAIDs) or transcutaneous electrical nerve stimulation (TENS).
- 3.4 The Committee noted that for other musculoskeletal conditions, acupuncture can be effective in reducing neck pain immediately after treatment and in the short term when compared with no treatment. There was no significant difference in pain, functionality and impairment for acupuncture in treating frozen shoulder (bursitis) when compared with alternative treatments.
- 3.5 The Committee noted that due to poor quality of evidence, small sample size, or unclear clinically relevant benefits, the effectiveness of acupuncture was unclear for chronic arthritis (rheumatoid arthritis), osteoarthritis, shoulder-arm syndrome (cervico-brachial syndrome), and epicondylitis (tennis elbow) when compared with alternative treatments.
- 3.6 The Committee acknowledged that the true effect size of acupuncture was difficult to estimate due to poor methodological quality, considerable heterogeneity among studies, poor reporting of acupuncture treatment details, small sample sizes for some sub-group analyses; and high placebo response observed in the sham acupuncture arm of comparative studies.

Cost effectiveness

- 4.1 The Committee noted that acupuncture as an adjunctive therapy to standard care was shown to be cost-effective in in South Korea, the United Kingdom, and Germany for treating low back pain of at least four weeks to six months in duration when compared with standard care alone. The reported ICERs ranged from about KRW3.4 million (\$\$3,900) to EUR10,500 (\$\$16,000) per quality-adjusted life year (QALY) gained.
- 4.2 The Committee acknowledged that the overall applicability of these estimates to the local context was unclear given concerns with heterogeneity in the acupuncture technique, and potential differences in local care settings. No economic evidence was identified for neck pain or other musculoskeletal disorders.

Estimated annual technology cost

- 5.1 Based on case volume trends in PHIs from 2014 to 2018, the Committee noted that the estimated annual cost to the Government for subsidising acupuncture in specialist outpatient clinics for low back pain and neck pain would range from \$1.3 million to \$1.8 million, and up to \$2.2 million if Pioneer Generation or Merdeka Generation subsidies were considered.

Organisational feasibility

- 6.1 The Committee noted that a positive subsidy recommendation would likely increase the utilisation of acupuncture as adjunctive therapy for the subsidised indications. There is an adequate local supply of qualified graduates who possess credentials recognised by the Traditional Chinese Medicine Practitioners Board (TCMPB) to meet the potential increase in demand.

Recommendation

- 7.1 Based on available evidence, the Committee recommended needed acupuncture (with or without electro stimulation) performed by acupuncturists registered with the TCMPB in PHIs — in accordance with minimum practice standards defined by the TCM Branch of MOH (Annex) — for pain reduction or functional improvement in adults aged 18 years and above as clinically appropriate for:
 - Low back pain;

- Neck pain, including pain radiating to the neck, or from neck to shoulders.
- 7.2 The Committee recommended the following criteria for acupuncture
- Needed acupuncture sessions (with or without electro stimulation) for low back pain or neck pain, including pain radiating to the neck, or from neck to shoulders, can be administered for up to 12 sessions within 3 months from treatment initiation following formal diagnosis and recommendation by a referring medical specialist in a PHI.
 - Subsequent treatment up to 12 more sessions within the next 3 months is subject to the reviewing medical specialist's assessment of sustained pain reduction or functional improvement for the patient.
- 7.3 The Committee advised that referrals for acupuncture should be initiated by attending medical specialists within the PHIs.
- 7.4 Treatment for low back pain or neck pain, including pain radiating to the neck, or from neck to shoulders, involves acupuncture at the trigger points as well as basic acupoints along the meridians or for the TCM syndromes presented (Annex). A TCM syndrome is the foundation of TCM practice and is a categorised pattern of symptoms and signs of a medical condition.

About the Agency

The Agency for Care Effectiveness (ACE) is the national health technology assessment agency in Singapore residing within the Ministry of Health. It conducts evaluations to inform the subsidy of health technologies, and produces guidance on the appropriate use of health technologies for public healthcare institutions in Singapore. This guidance is based on the evidence available to the Committee as at 4 November 2019. This guidance is not, and should not be regarded as a substitute for, professional/medical advice. Please seek the advice of a qualified healthcare professional on any medical condition. The responsibility for making decisions appropriate to the circumstances of the individual patient remains with the healthcare professional.

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