Title:	**Hyperbaric oxygen therapy (HBOT) - November 2000**
Agency:	Medicare Services Advisory Committee (MSAC) Commonwealth Department of Health and Ageing GPO Box 9848 Canberra ACT 2601 Australia **http://www.msac.gov.au**
Reference:	**MSAC applications 1018-1020. Assessment report ISSN 1443-7120.**

Aim

To assess the safety and effectiveness of HBOT and whether public funding should be supported.

Conclusions and results

Safety HBOT carries some risk of myopia, barotrauma, claustrophobia and oxygen toxicity, but most effects are self-limiting and life-threatening events are rare**.**

Effectiveness		
Thermal burns		Little evidence of benefit and lack of well conducted studies.
Diabetic wounds		More minor amputation risk, less major amputation risk with chronic ulceronecrotic lesions, better wound healing, reduced hospital stay.
Non-diabetic wounds		One study shows reduction in wound size, .
Necrotising soft tissue infections:	general	Some indication that HBOT improved patient survival.
	necrotising fasciitis	Inadequate information available.
	Fournier's gangrene	One study shows benefit.
Osteomyelitis		One negative study of an atypical HBOT regime.
Osteoradionecrosis:	prevention	One representative study indicates HBOT is superior to penicillin.
	treatment	One positive study.
Skin graft survival		Possible benefit, but difficult to interpret.
Multiple sclerosis		Little supporting evidence.
Cardio -vasc. disease :	acute myocardial infarction	No supporting evidence, possible benefit if used with thrombolytic therapy.
	cerebrovascular disease	Evidence conflicting.
	peripheral obstructive art. disease	No supporting evidence.
Soft tissue injuries:	acute ankle sprains	No supporting evidence.
	crush injuries	Some supporting evidence that HBOT reduces surgical intervention.
Cluster headaches		Little supporting evidence
Migraine headaches		Some evidence of pain relief.
Facial paralysis		Some evidence of benefit.
Sudden deafness or acoustic trauma		Conflicting evidence.
Cancer:	head and neck	Conflicting evidence.
	cervix	Little supporting evidence.
	bladder	Conflicting evidence.
	lymphomas	Some supporting evidence.
	lung	Little supporting evidence.
	neurobastoma	Some positive evidence.
Carbon monoxide poisoning		A Cochrane Review found no reduction in neurologic sequelae.

Cost-effectiveness HBOT is cost-effective for diabetic wounds and nectrotising soft-tissue infections, but may cost $28,480 per case of osteoradionecrosis avoided.

Recommendations

Public funding for HBOT in monoplace or multiplace chambers be supported for decompression illness, gas gangrene, air or gas embolism for which no alternative treatment exists, diabetic wounds (including gangrene and foot ulcers), necrotising soft tissue infections (including necrotising fasciitis), Fournier's gangrene and prevention and treatment of osteoradionecrosis.

Method

MSAC conducted a systematic review of the biomedical literature from 1966 to 1999 using biomedical electronic databases, the Internet and international health technology agency websites. Reference lists of publications and textbooks were consulted. Cost effectiveness is based on expert advice on HBOT costs and effectiveness evaluation in this report.