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IN REPLY: We disagree with Wodak and colleagues in a number of respects.

■ If the results of a hydromorphone trial were as good as Wodak et al claim a heroin trial would be, then a heroin trial would be unnecessary.

■ We accept, as did the Dutch and Swiss, that politicians have the authority to make decisions about what medical research is permitted. The heroin trials in Switzerland and the Netherlands were approved by parliament and supported by referenda in cantons and cities in Switzerland.

■ The Australian survey data cited by Wodak and colleagues indicate that a heroin trial would not have been approved if a referendum had been held in 2001. Nor do we think it would be supported by a free vote in Federal Parliament, as it was not supported by a similar vote at the NSW Drug Summit in 1999.

■ Wodak et al present no evidence to support their claim that the delivery of a treatment that costs between A\$25 000 and A\$45 000 per patient per year in the Netherlands¹ to less than 5% of the heroin-dependent population would have a detectable impact at the population level.

A hydromorphone trial would provide a way of evaluating the role of injectable opioids in the treatment of heroin dependence. It would not prevent Wodak and colleagues from convincing the community that injectable heroin is the drug of choice to treat refractory heroin dependence.

1. Medical co-prescription of heroin: two randomized controlled trials. Utrecht, Netherlands: Central Committee on the Treatment of Heroin Addicts, 2002. □

Assessing children's fitness for scuba diving

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TO THE EDITOR: The South Pacific Underwater Medicine Society (SPUMS) recommends that, before starting scuba-diving activities, all candidates undertake a medical assessment by a doctor trained in diving medicine. SPUMS recommends a minimum age of 14 years for all entry-level scuba activities, as does Australian Standard 4005.1.¹ This recommendation is based

on the belief that younger children do not have the emotional maturity and confidence to safely manage underwater emergencies. Such emergencies, which may include running out of air, being separated from your buddy, being caught in a strong current, and equipment malfunction, can all result in panic.^{2,3} A diver who panics will typically make a rapid ascent to the surface, risking life-threatening pulmonary barotrauma and decompression illness.²

Commercial scuba diving instructor agencies are introducing a number of introductory activities for children as young as eight years.

SPUMS urges caution in assessing young children as fit to dive. Medical practitioners making these assessments should clearly understand the nature of the activity to be undertaken, the equipment to be used and the nature of the environment in which the training is to occur. They should also understand the nature of the certification to be awarded. The presence of at least one legal guardian during this assessment is desirable to ensure that the risks are fully understood and to ensure the desire for the child to undertake the activity is not that of the parents alone.

An individual may meet the criteria laid down in a standard or understand and accept the risks of an aquatic sport. However, it is not clear that a young child is mature enough to make this informed choice.⁴ Clearly, some 14-year-olds also lack sufficient maturity, and an experienced diving physician will advise them to delay their open-water certification course until greater maturity is demonstrated. Alternatively, some children younger than 14 years may be completely safe in undertaking a highly structured, one-on-one, supervised scuba experience in a swimming pool. However, it should be understood that trialling scuba equipment in a swimming pool has resulted in significant morbidity.

SPUMS continues to recommend a minimum age of 14 years for all entry-level scuba activities involving open-water dives, and recommends caution in assessing younger children for all other scuba experiences.

1. Training and certification of recreational divers — minimum entry-level SCUBA diving (AS 4005.1-1992). Sydney: Standards Australia, 1992.
2. Walker D. Provisional report on Australian diving-related deaths in 1998. *SPUMS J* 2001; 31: 122-131.
3. Cresp R, Grove C, Lalor E, et al. Health status of recreational scuba divers in Western Australia. *SPUMS J* 2000; 30: 226-231.
4. Edmonds C, Lowry C, Pennefather J, Walker R. Age and diving. In: *Diving and subaquatic medicine* 4th ed. London: Arnold Publications, 2002. (In press.) □

Death in Antarctica

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TO THE EDITOR: Lamberth stated in his case report that Antarctic tourist ships should be equipped to provide life support, as well as better screening and education of Antarctic tourists.¹

I recently travelled to both the Arctic and Antarctic as a medical officer on small ships, caring for seven passengers injured in a helicopter crash in the remote Russian Arctic and a 12-year-old with diabetic ketoacidosis in the Drake Passage, as well as numerous people with minor ailments. To compare these ships with large tropical cruise liners is unrealistic.

Ships' medical supplies are selected with an appreciation of the casemix. A study of 16 Antarctic trips in 1997 and 1998 found that most problems were respiratory tract complaints, acute soft tissue injuries and complaints, sea sickness and dermatological problems.²

Few major incidents have been reported, and equipment for advanced life support is tailored to this. Paralyzing agents and ventilators are not supplied. A single doctor with no nursing staff cannot safely care for a ventilated patient for 72 hours, as suggested by Lamberth, and the additional staff needed for this would be a huge additional expense for a very rare occurrence. While some ingenuity and adaptability may be required, the equipment supplied is adequate for the vast majority of events.

Safety and preventive medicine are very much part of the ship's doctor's role. Most doctors give a brief lecture as part of the initial briefing of passengers. Seasickness, appropriate medication and safety on the ship are usually part of this.

The passengers are predominantly elderly and, in my experience, many are fulfilling a long-held ambition to travel to the polar regions. Reputable companies require a fitness-to-travel assessment from passengers' general practitioners before the trip is confirmed. This assessment is tailored to potential problems in remote regions.

I believe that excluding people from the wonders of polar travel on the basis of age or previous coronary artery disease would be a terrible shame, while accepting that there will always be a risk in travelling to remote locations. Having shared in the 90th birthday celebration of a woman with chronic obstructive pulmonary disease in the Arctic, I hope that I will still be able to enjoy such experiences at that age.

1. Lamberth P. Death In Antarctica. *Med J Aust* 2001; 175: 583-584.
2. Curry C, Johnston M. Emergency doctors by sea to Antarctica: small ship medicine in Polar Regions. *Emerg Med (Fremantle)* 2001; 13: 233-236. □

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TO THE EDITOR: Lamberth raised some worthwhile issues about small-ship adventure tourism to Antarctica in his recent case report describing the death of an 82-year-old tourist.¹ This occurred in 1999, the season I started as medical director for the leading polar adventure tour company that chartered the vessel involved. I have some comments and an update.

The former Soviet oceanographic research vessel was converted in the 1990s to carry 78 passengers. She had a two-bed infirmary and a procedure room with Russian and German medical supplies for passengers and crew, and carried a German- and English-speaking Russian doctor experienced with passenger ship medicine. The tour operator provided additional medical supplies and an emergency physician. Ventilatory support could have been provided, although not to the standard of a contemporary Australian intensive care unit. Polar adventure operations are very different from "tropical" cruise lines, which generally operate their own ships from home ports and cater for up to 3000 passengers with very different expectations.²

Operators require that prospective passengers submit a medical information form and a declaration from their personal physician that they are fit for the journey. The 82-year-old who died was a retired physician who did not declare the extent of his limitations, and who acted as his own medical advisor. His is the only death I am aware of after seven years' involvement in the industry.

The medical declaration form has been modified and now addresses the risk factors identified by Lamberth. Prospective clients with questionable health are referred to the medical director. However, operators cannot verify declarations of good health, and physicians have been known to collude with passengers to avoid risk of rejection.

Furthermore, "ageism" is as unacceptable as sexism and racism. I was present on the first passenger-circumnavigation of Antarctica in the company

of several octogenarians and a 90-year-old, and on the first circumnavigation of the Arctic Ocean, with other octogenarians and a 92-year-old. Short trips to the Antarctic Peninsula are very different from scientific expeditions; Lamberth's suggestion that advising doctors should consider scientific expedition criteria is inappropriate.

The International Association of Antarctic Tour Operators (<www.iaato.org>) is a voluntary association of competing adventure eco-tour operators whose purpose is to self-regulate the industry and to develop good standards. Standards for provision of medical supplies and capabilities are under development by this association.

1. Lamberth P. Death In Antarctica. *Med J Aust* 2001; 175: 583-584.
2. Curry C, Johnston M. Emergency doctors by sea to Antarctica: small ship medicine in polar regions. *Emerg Med (Fremantle)* 2001; 13: 233-236. □

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IN REPLY: I welcome Curry and Merfield's interest and comments. The patient described in my case report¹ was not, as Curry states, "a retired physician". Nor did he provide his own health assessment, but had his assessment form filled out by another physician. Unfortunately, this form, along with those of 60 other passengers, was not made available to any doctor before embarkation.

Curry confirms that many older passengers are travelling to Antarctica.² Merfield's experiences attest to the potential for serious (including multiple casualty) incidents in this remote location. I agree that ageism *per se* is unacceptable.

Rather, the issue is the provision of adequate facilities to deal with potential problems or, alternatively, warning as to the hazards. Advertising for Antarctic cruises emphasises the medical facilities provided. The public may not realise that a doctor with minimal equipment cannot deliver the same care available in a First World hospital.

Curry's assertion that ventilation could have been provided illustrates this. Ventilation is more than placement of an endotracheal tube. It is ludicrous to suggest that, without oxygen, paralysing drugs, positive end-expiratory pressure or means to suction the copious thick secretions, hand-bagging for 36 hours while crossing the heavy seas of the

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