High-frequency percussive ventilation for intercontinental aeromedical evacuation.

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High-frequency percussive ventilation (HFPV) has been used for the management of patients with smoke inhalation injury for more than 20 years and is considered a standard of care at many burn centers. Because the ventilator is powered by air and oxygen rather than electricity, prehospital use has been limited by large-volume medical gas requirements. Since 2003, Operations Iraqi Freedom and Enduring Freedom have created a need for long-range aeromedical transfer of service members with severe burn and inhalation injuries. Unique to these conflicts is the availability of US Air Force C-17 cargo aircraft as the primary long-distance airframe. Because C-17 aircraft have a built-in medical oxygen supply, transcontinental patient transport using HFPV has become feasible. In this study, the authors report their initial experiences with the aeromedical transportation of 33 burn patients over a combined distance of 174,145 air miles using HFPV. HFPV is safe and efficacious for transcontinental flight when used by an experienced medical transport team.