



**Joan Gillespie**, polio survivor, uses both mouthpiece and mask ventilation during the day and a customized full face mask at night. She had polio as an infant and used an iron lung until she was 8 years old. Joan was able to breathe independently until her middle years, but in 1979 she began using the iron lung to sleep in at night. Joan successfully converted to NIV in the late 1980s. Joan lives at home with her husband and is active in the community, volunteering at the local hospital.

## Victorian Respiratory Support Service

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The Victorian Respiratory Support Service (VRSS) is funded by the state of Victoria to provide respiratory assessment and review, and ventilators, related equipment and care to people in Victoria who need a ventilator to support their breathing. Referrals are made to the service by general practitioners and specialist physicians.

Currently, the VRSS has approximately 640 patients using ventilators. Most patients use noninvasive ventilation (NIV), via a mask or mouthpiece, but a few people need ventilation via a tracheostomy tube or electrical pacing of the diaphragm. We use predominantly bilevel pressure ventilators. Volume ventilators and equipment with back-up battery support are used as required.

Our team chooses the appropriate equipment and adjusts ventilator settings on at least two occasions initially and is available to provide ongoing support and adjustment of equipment at subsequent follow-up. Masks used by our patients include nasal and full face masks from a variety of manufacturers and a customised nasal mask (made by our occupational therapist for use only with volume ventilators). Unfortunately, VRSS does not have enough funds to loan out secretion clearance devices, except for suctioning units to those with tracheostomies.

Most patients who use NIV are managed by VRSS, but a few are managed using a share care model. In this model, VRSS supplies the ventilator and associated equipment, provides annual home visits for equipment maintenance, mask fitting and other equipment issues. Ongoing respiratory care is provided by the referring (public) hospital. Each group exchanges the outcome of visits in order for all

parties to have up-to-date records of the patient's care and status. Paediatric patients are managed by the Royal Children's Hospital (RCH) until the age of 18, at which time there is a staged transition from the RCH to the VRSS.

Sleep studies require a written referral from a respiratory physician. The VRSS conducts diagnostic studies before initiating NIV, but sometimes commences NIV symptomatically, and then conducts a sleep study to ensure adequate ventilation, as part of the follow-up. Treatment review studies will be done if the patient has any symptoms of inadequate ventilation, such as fragmented sleep, morning headaches or daytime sleepiness.

Most of our patients live in their own homes, but about 4 percent live in nursing homes and other community residential facilities. Diagnoses include obesity hypoventilation syndrome, motor neurone disease, spinal cord injury, muscular dystrophy and other neuromuscular diseases, post-polio syndrome, central hypoventilation syndrome, kyphoscoliosis, combined COPD/hypoventilation and bronchiectasis. We also have a small number of patients who use NIV as a bridge to lung transplant. ▲