delivered by every anesthesia system. This is what we have endeavored to accomplish with the vaporizer described in our article.

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Experience Using the F. & P. Humidifier for Pediatric Patients

To the Editor:—The description by Spence and Melville (ANESTHESIOLOGY 36:89–93, 1972) of the F. & P. humidifier prompts us to describe its use in pediatric intensive care. This humidifier has been used for all infants needing mechanical ventilation in the pediatric intensive care unit at The Prince of Wales Hospital, Sydney, in the last 12 months. Most patients so treated have been newborn infants with respiratory distress. The gas flow in these circumstances was lower than those described by Spence and Melville. The humidifier has been used with the Starling Ideal Pump, the Harvard Dog Respirator, and the Drager Spiromat with an infant head. It has been necessary to place a length of tubing between the end of the heated delivery hose and the point where the tubing enters the humidicrib, to allow temperature to fall to dewpoint. The temperature of the gas is continuously monitored using a thermocouple at the end of the heated delivery tube and another just before the tubing enters the humidicrib. It has been necessary to adjust the temperature of the heater plate and humidifier chamber so that the temperature at entry to the humidicrib when condensation is just visible at this point is about 36 C. The thermometer at the end of the delivery hose is checked to ensure that the temperature there is well above dewpoint.

Under these circumstances, once the apparatus is satisfactorily adjusted, the temperature of the gas delivered to the humidicrib has remained remarkably stable for days on end, in contrast to our experience using the more conventional heated humidifiers. Although the internal gas volume is much greater than that of the apparatus described by Epstein (ANESTHESIOLOGY 35:532–536, 1971), this has not prevented satisfactory ventilation with the ventilators we have used. The humidifier compartment and delivery tube in these patients was replaced only at weekly intervals. Attempts to culture organisms from the apparatus at the time of change have been unsuccessful.

The humidifier has also been used in a similar fashion to humidify the fresh gases supplied to the Jackson Rees modification of an Ayre's T-piece in the operating theater during anesthesia for neonates and infants.

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The Advantages of Giving *d*-Tubocurarine before Succinylcholine

To the Editor:—Three studies recently published in ANESTHESIOLOGY have attempted to evaluate the disadvantages of preceding succinylcholine (SCh) with a small dose of non-depolarizing muscle relaxant.[1-3] The differences between two of these studies were emphasized in an editorial by Wollman.[4] I believe, however, that the similarities in all

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