current anesthetic practices could be contributing to this global long-term problem.

By far, most anthropogenic N$_2$O is released from the denitrification of agricultural fertilizers and the combustion of fossil fuels. It is estimated that these processes produce approximately $10 \times 10^{10}$ moles of N$_2$O each year.$^{1}$ While precise figures for the utilization of N$_2$O as an anesthetic are not available, it is instructive to develop a rough estimate. If half of the 2.1 x 10$^7$ surgical procedures performed yearly in the U. S. A. were each carried out with N$_2$O flowing at 2 l/min for a duration of 2 h, this would result in the venting of 1.3 x 10$^8$ moles of N$_2$O yearly. Considering that the number of anesthetics per capita worldwide is less than in the U. S. A. and the use of N$_2$O is limited primarily to industrialized countries, the worldwide use of N$_2$O may approximate five times that of the U. S. A. If so, total release of N$_2$O to the atmosphere could be in the range of 0.5 to 1.0 x 10$^8$ moles/year or less than 1% of the total global production of N$_2$O.

While this figure seems to minimize the contribution of anesthesia to atmospheric N$_2$O, we should not become complacent. Excessive atmospheric pollution could well disturb the delicate balance between N$_2$O production and N$_2$O absorption by natural geological and atmospheric "sinks."$^{1}$ Given the fact that N$_2$O has an extremely long transit time in the atmosphere of over 100 years,$^{1,2}$ future N$_2$O emissions could have real impact.

† Personal Communication, American Hospital Association, Chicago, IL.

Anesthesiology
68:817–818, 1988

A Simple Technique to Eliminate Needle Stick Injuries

To the Editor.—Needle stick injuries are an occupational hazard for anesthesiologists. Most needle stick injuries occur when the needle is being recapped.$^*$ Furthermore, the fluid in intravenous tubing should be considered contaminated because of possible previous backflow of blood.$^1$ Any needle used to administer medicines into intravenous tubing should also be considered contaminated. The Center for Disease Control has recommended that forceps should be used to recap needles,$^2$ but the naked, contaminated needle is still dangerous. We suggest the following technique to eliminate contaminated needles.

The anesthesiologist needs two designated areas in the operating room. A table in the operating room is usually designated the clean area. It is not to be touched by contaminated gloves, and is a distance away from the operative field or any contaminated substances. Needles are kept only on the clean area, and are for mixing

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(Accepted for publication January 10, 1988.)
Medicines are prepared in sterile fashion and capped with the plastic cap accompanying the syringe. Medicine prepackaged in syringes should have the needle broken off with a clamp and recapped. The nozzle of a syringe will fit a stopcock opening. The capped medicines are then moved to the work area. The work area should be considered contaminated. Usually, the work area is the anesthesia machine covered with clear plastic. The work area should only be touched with gloved hands.

A stopcock is placed between solution administration set (Travenol Continu-Flo™ model no. 2C0123) and extension set (Travenol model no. 2C0058). Another way to insert a stopcock into intravenous tubing is to attach it to an 18-gauge needle and insert the needle into an injection site of the tubing. The stopcock should be taped in place so that the tip of the needle is housed by the hard plastic of the injection site and cannot penetrate the tubing.

All medicines are then administered by uncappling the syringe and stopcock, injecting the medicine, and recapping the syringe and stopcock. If an infusion needs to be administered, then two or more stopcocks can be used in series. We have found this technique reduces anxiety about needle stick injuries during operations on infected patients. This simple, inexpensive technique eliminates the risk of contaminated needles.

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(Accepted for publication January 10, 1988.)

Anesthesiology
68:818, 1988

Facilitating Difficult Tracheal Intubation

To the Editor:—Difficult tracheal intubation cannot always be predicted, and may occur when least expected. This usually results in a situation in which the practitioner tries numerous “tricks” and “techniques” to accomplish the intubation before abandoning various blades and styles and resorting to more elaborate procedures. In addition, repeated laryngoscopy leads to fatigue. My approach has been to involve an assistant who can relieve me of some of the physical stress normally involved in this often frustrating experience.

The maneuver involves the placement of the laryngoscope blade in the optimum position and exposing the airway. An assistant (no training required) is then placed opposite the intubator and given the handle. With the guidance of the practitioner, the assistant is asked to retract on the handle. The practitioner is then able to use his left hand to manipulate the airway while advancing the endotracheal tube with his right hand. This allows optimum exposure of the airway while totally removing the physical strain of retracting with the laryngoscope.

This technique is also quite safe, as the handle of the scope is always retracted in a caudad direction, and prying or leveraging against the teeth is virtually impossible. The assistant must only be instructed to hold the handle in the position directed by the intubator.

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(Accepted for publication January 10, 1988.)