

THE INVISIBLE RISK

TO HEALTH CARE PROVIDERS

Waste Anesthetic Gas (WAG) is the small amount of anesthetic gases that leak into the surrounding room during medical procedures. In the PACU, WAG may be exhaled by patients recovering from anesthesia. This gas is not typically harmful to the patient, but the health effects could be cumulative for nurses working in the patient's breathing zone.^{1,2}

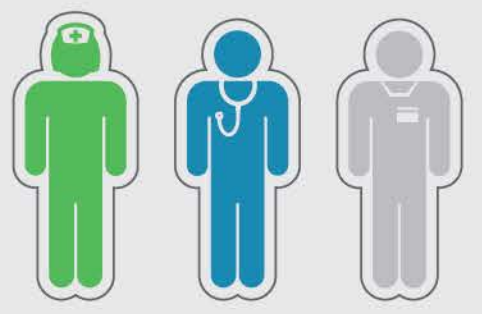


WAG is considered an **"invisible risk"** because it cannot be detected by sight or odor* and because post-anesthetic care units (PACUs) are not required to scavenge WAG at its source – the patient.

THE NUMBER OF HEALTH CARE PROVIDERS IN THE U.S. POTENTIALLY EXPOSED TO WAG²

MORE THAN
250,000

WHO IS AT RISK

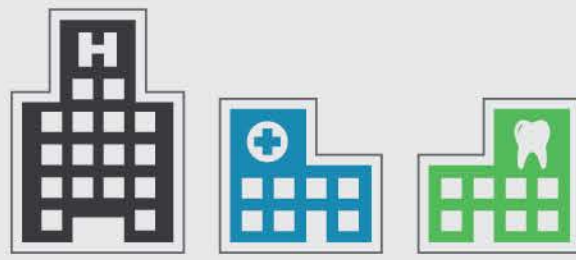


PACU NURSES
NURSE MGRS
NURSING AIDES
HYGIENISTS

ANESTHESIOLOGISTS
SURGEONS
DENTISTS

SUPPORT STAFF
TECHNICIANS

WHERE



HOSPITALS
OPERATING ROOMS
RECOVERY ROOMS
PACUs

SURGERY CENTERS

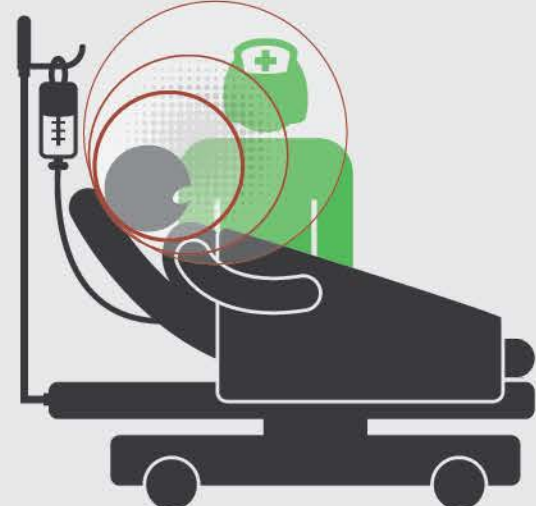
DENTAL OFFICES

WHAT ARE THE POTENTIAL HEALTH EFFECTS FROM WAG EXPOSURE?^{2,4}

- NAUSEA
- FATIGUE
- HEADACHES
- DIFFICULTIES WITH JUDGMENT AND COORDINATION
- LIVER AND KIDNEY DISEASE
- CANCER
- REPRODUCTIVE ISSUES IN EXPOSED WOMEN AND PARTNERS OF EXPOSED MEN, INCLUDING:
 - MISCARRIAGES
 - STERILITY
 - BIRTH DEFECTS IN OFFSPRING

HOW EXPOSURE HAPPENS IN THE PACU³

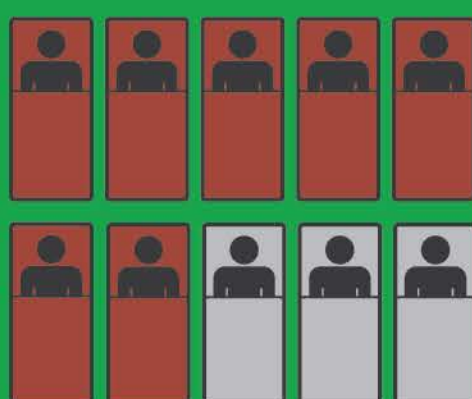
PACU nurses work directly within their patients' breathing zones.



Patients continue to exhale WAG up to **40 minutes** after leaving the operating room.

7 IN 10

the approximate number of patients serviced by PACU nurses who **exhale WAG** above NIOSH recommended exposure levels³



WHY EXPOSURE HAPPENS

1 Nurses and PACU staff may be unaware that WAG exists in their daily work zone.

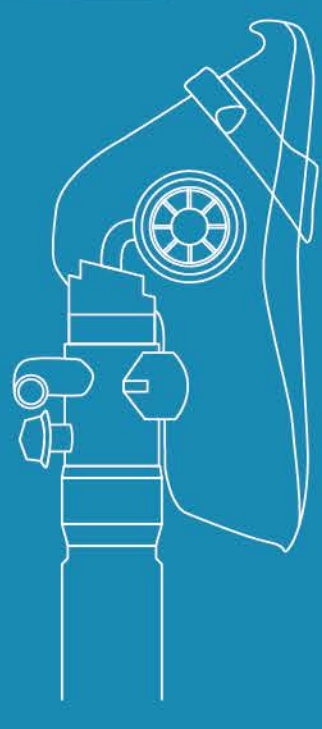
2 Most PACU scavenging systems do not account for the patient breathing zone, where the highest concentrations of WAG linger.

3 Current safety standards and guidelines do not require source control of WAG.

SOLUTION

SOURCE CONTROLLED SCAVENGING

An effective method for decreasing PACU clinician exposure to WAG is the use of a source control scavenging system, such as the ISO-Gard[®] Mask with ClearAir[™] Technology from Teleflex.³



2.9X

Average exposure of nurses to WAG can be up to 2.9 times greater when wearing a nasal cannula or face tent compared to the ISO-Gard Mask with ClearAir Technology

+ O₂

Delivers oxygen to patients while capturing exhaled WAG

LOWER HEALTH RISKS

Lowering/controlling WAG in the PACU reduces adverse health effect possibilities for nurses and staff

LEARN MORE AT THEINVISIBLERISK.ORG

* Anesthetic gases cannot be detected by the naked eye or by their odor until concentrations are very high

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REFERENCES:

1. Occupational Safety & Health Administration, U.S. Department of Labor. (Revised 18 May 2000). Anesthetic Gases: Guidelines for Workplace Exposures. Retrieved from: <http://www.osha.gov/dts/osta/anestheticgases/>.
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3. McGlothlin JD, Moenning JE, Cole, SS. *Evaluation and Control of Waste Anesthetic Gases in the Postanesthesia Care Unit*. Journal of PeriAnesthesia Nursing, published online 14 April 2014. Available at: www.jopan.org.
4. *Waste Anesthetic Gases—Occupational Hazards in Hospitals*. Centers for Disease Control and Prevention. NIOSH Publication 2007-151 <http://www.cdc.gov/niosh/docs/2007-151> Accessed February 13, 2013