

Indoor Air Quality (IAQ) in Veterinary Clinics

Across Europe, veterinary clinics are increasingly aware that **Indoor Air Quality (IAQ)** directly affects the health of animals, staff, and clients alike. Everyday activities such as surgeries, disinfection, and cleaning release biological and chemical pollutants into the air.

As an expert in medical-grade air purification, NatéoSanté supports veterinary professionals in creating cleaner, healthier, and safer environments.

The Economic Value of Clean Air

Improved IAQ is an investment that can generate savings:

- A recent study in the United Kingdom (UK) suggests that reducing ambient **fine particulate matter (PM2.5)** levels to the **World Health Organization (WHO)** annual guideline of **5 µg/m³** could result in approximately **80,000 fewer vet visits each year** for air-quality-related issues.
- This entails an estimated annual savings in petcare utilisation costs of roughly **£15 million**.

Pollutant Exposure: Scientific Facts

Veterinary facilities are high-risk environments, accumulating a wide range of contaminants.

A. Particulates and Bioaerosols

- **PM2.5 Concentrations:** A 2023 study by the University of Bologna (Italy) found that **fine particulate matter (PM2.5)** concentrations in some veterinary treatment rooms exceeded **35 µg/m³**, more than double the WHO 24-hour guideline of 15 µg/m³.
- **Zoonotic Risk:** The **European Centre for Disease Prevention and Control (ECDC)** notes that zoonotic pathogens, such as *Chlamydomphila psittaci* and *Bordetella bronchiseptica*, can be transmitted via aerosols in poorly ventilated areas.
- **Airborne Microorganisms:** Research published in *Annals of Agricultural and Environmental Medicine* (2022) identified *Staphylococcus spp.*, *Bacillus spp.*, and *Aspergillus spp.* as the most common airborne microorganisms in small animal clinics.

B. Chemical Pollutants and Anaesthetic Gases

- **Volatile Organic Compounds (VOCs):** A Portuguese study (2021) measured formaldehyde concentrations up to **30 µg/m³** in preparation and cleaning areas, primarily linked to disinfectants and detergents.
- **Anaesthetic Gases (Isoflurane):**
 - The Royal Veterinary College (London, 2022) found Isoflurane levels reaching **4 ppm** in operating theatres lacking adequate ventilation.
 - This exceeds the occupational exposure limit recommended by the UK's **Health and Safety Executive (HSE)** and the US's **Occupational Safety and Health Administration (OSHA)** of **2 ppm** over 8 hours.

C. Client Perception

- **Odours:** A 2024 survey by the **Federation of Veterinarians of Europe (FVE)** revealed that **38%** of veterinarians consider **persistent odours** a problem for their clinic's image.

European Regulatory Trends and Best Practices

IAQ is now becoming a part of "hygiene best practices" across Europe.

Country	Key Regulation / Recommendation	Source Citation
United Kingdom (UK)	The HSE's 2024 guide requires gas scavenging systems, a minimum of 15 air changes per hour in surgical rooms, and regular leak testing. <i>This is considered a European benchmark practice.</i>	HSE 2024
Germany	The Federal Association of Practising Veterinarians (bpt) (<i>Bundesverband Praktizierender Tierärzte</i>) issued new guidelines in 2024 recommending HEPA filtration and air treatment in areas where anaesthetic gases are used.	bpt 2024
Switzerland	The Federal Food Safety and Veterinary Office (FSVO – Bundesamt für Lebensmittelsicherheit und Veterinärwesen, BLV) issued hygiene recommendations for veterinary practices, including regular ventilation and control of chemical exposures (2023). Indoor air monitoring aligns with the national Ordinance on Air Pollution Control (OAPC, updated 2023).	FSVO / OAPC 2023
Netherlands	The Dutch Veterinary Association (KNMvD) encourages clinics to adopt preventive IAQ measures, including HEPA filtration and odour control, as part of 'Gezonde Werkplek Dierenarts' (Healthy Veterinary Workplace, 2024). The RIVM (National Institute for Public Health and the Environment) defines reference limits for indoor VOCs and particulate matter.	KNMvD / RIVM 2024
Italy	The Ministry of Health (<i>Ministero della Salute</i>) (2023) advises measuring CO ₂ and ensuring adequate ventilation in waiting and surgical areas.	Ministero della Salute 2023

4. NatéoSanté, your Partner for Clean Air in Veterinary Environments

Air purification is no longer a luxury; it is a critical component of modern veterinary hygiene and workplace safety. NatéoSanté professional air purifiers equipped with **individually-certified HEPA H13** filters, **Very High Density Activated Carbon** filters, **germicidal UV-C** lamps and optional **Deep Clean exclusive feature** offer a complete solution.

Anaesthetic gas residues (Isoflurane, etc.)	Protect Staff Health: Ensures compliance with exposure guidelines and reduces chronic health risks for personnel.
Control bacteria and allergens (Pet dander, bioaerosols)	Boost Infection Control: Captures fine particles and bioaerosols, reducing airborne transmission risk.
Limit VOCs and odours (Disinfectants, animals)	Enhance Clinic Image & Client Comfort: Eliminates persistent odours, improving perceived hygiene and building client trust.
Improve staff well-being and efficiency	Staff Retention: Contributes to a safer and more pleasant workspace, which can reduce sick leave and boost staff morale/retention.

By combining medical-grade filtration and professional air quality expertise, NatéoSanté empowers veterinary professionals to create safer, cleaner, and more welcoming environments for both animals and people.