Fundación
Tecnología y Salud

WEBINAR CONCLUSIONS

SURGICAL SMOKE: A REAL RISK

SURGICAL SMOKE

The use of electrosurgical instruments in operations generates a mixture of gases, vapours and aerosols – known as **surgical smoke**– containing toxic particles, carcinogens, tumour cells, viruses and bacteria that pose a potential risk to patients and healthcare staff.

GENERATE MORE SCIENTIFIC EVIDENCE

There are few **articles providing scientific evidence** on this topic and, therefore, little awareness of the problem. Only 27% of operating theatre staff are aware of toxic or potentially harmful components of surgical smoke, while around one million health professionals across the globe are exposed to its effects each day. In fact, exposure to surgical smoke for one day in an operating theatre is comparable to exposure to 27 cigarettes, and staff who have been working in an operating theatre for over 15 years are 70% more likely to develop chronic obstructive pulmonary disease (COPD).

WORKING TOWARDS SPECIFIC LEGISLATION

No **specific legislation** on surgical smoke currently exists in Spain, despite it being a risk. A legal framework that protects patients and operating theatre staff is needed. The general regulatory framework provides partial legal coverage. The H+S protocols that hospitals and health services have in place are very important.

THE SAFETY OF HEALTH PROFESSIONALS AND PATIENTS

The commitment to ensuring the **health and safety of professionals and patients** should be genuine, ongoing and a top priority for all parties, in all settings and at all levels of management. However, to achieve this, more studies on exposure are needed – particularly long-term research – that establish a relationship between the appearance of disorders in operating theatre staff and exposure to surgical smoke and, of course, the relevant authorities need to be involved to develop legislation and establish obligatory measures.

PREVENTIVE MEASURES

The **preventive measures** include general ventilation systems, smoke evacuation systems with extraction located as close as possible to the emission source – equipped with the appropriate filters, such as HEPA and ULPA filters – and the use of gowns, gloves, eye protection and masks (minimum FFP2). Additionally, a holistic approach should be taken to these measures, about which consensus should be reached by all the parties involved.

TRAINING, KNOWLEDGE AND AWARENESS

To guarantee compliance with these and other preventive measures, the **training, knowledge and awareness** of health professionals – including veterinarians, health and safety specialists, representatives and officials, for example – need to be enhanced through seminars, conferences and forums, such as this one. Education is the catalyst for action.