

# How to improve sustainability in Anaesthesia and Intensive care: situational awareness in Slovak Republic

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## Questions of ESAIC

### 1 Do you have national guidelines on sustainability?

In Slovakia there are guidelines of Slovak Environmental Agency (<https://www.sazp.sk>), which cooperates with the European Environmental Agency (EEA), but guidelines are not specific for Anaesthesiology and Intensive Medicine. Even Slovak Society of Anaesthesiology and Intensive Medicine (SSAIM) has not yet issued such recommendations.

### 2 Does technology allow you to follow existing guidelines?

Based on the recommendations of DGAI, BDA and WFSA (see references 1, 2), the following practices in the field of AIM reduce the burden on the environment and contribute to its sustainability:

- Use mainly regional anaesthesia
- For general anaesthesia, use minimal flow anaesthesia, TIVA/TCI, do not use N<sub>2</sub>O, use desflurane only in indicated cases
- Recommendations for hospital waste disposal
- Use of reusable clothing and equipment
- Using streaming seminars and conferences to reduce mobility
- Organization of training and teaching on ecology in the field of AIM

In order to find out how departments of Anaesthesiology and Intensive Medicine in Slovakia contributes to the sustainability of the environment according to the above recommendations, we addressed all departments of anaesthesiology and intensive medicine (AIM) in Slovakia with a questionnaire. We received an answer from 50% of them (34 workplaces). The answers are shown in the table.

Table

Problem	% or qualified estimate
General anaesthesia (GA)	76% of all anaesthesia
Regional anaesthesia	24% of all anaesthesia
Anaesthesia machines with minimal flow	85% of all machines
Use of desflurane	9.3% of all GA
Use of N <sub>2</sub> O	23.3% all GA
TIVA/TCI	16.6% all GA
Recommendations for waste disposal (from the set of hospitals)	Yes 88%
Reusable clothing use	Yes 85%
Reusable devices use	Yes 82%
Streaming of seminars, conferences	Yes 59%
Training and education in environmental sustainability in AIM	Yes 24%

### 3 Are there any exemplary cases of sustainability in centres in your country?

According to our survey, the percentage of regional anaesthesia is increasing, the consumption of N<sub>2</sub>O is decreasing, the use of desflurane is low, the equipment for minimal flow anaesthesia and TIVA/TCI is improving, hospitals have rules for waste disposal, it remains increased use of disposable clothing and devices related to the effort to avoid the transmission of nosocomial infections, but also reusable clothing and devices are used, there is the low streaming of conferences and seminars and little training in environmental sustainability

### 4 What barriers have you encountered to sustainable practice?

Lack of financial funds, shortening of staff, lack of information.

#### Conclusion:

It would be appropriate to create recommendations specific to the field of Anaesthesiology and Intensive medicine binding for all workplaces and to create resources for this.

#### References:

- 1.Schuster M, Richter H, Pecher S, Koch S, Coburn M. Ecological Sustainability in Anaesthesiology and Intensive Care Medicine. A DGAI and BDA Position Paper with Specific Recommendations\*. *Anästh Intensivmed* 2020;61:329–338. DOI: 10.19224/ai2020.329
- 2.Lam S, Wong D. Moving Towards Green Anaesthesia—Strategies for Environmental Sustainability. *Tutorial WFSA* 495. Published 18 April 2023

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