



Dräger SmartPilot View

Anaesthesia Decision Support

The software estimates and visualises complex interactions of anaesthetic drugs based on pharmacodynamic modelling for both the current and predicted course of anaesthesia. SmartPilot View supports informed decision-making that facilitates more precision and individualisation in anaesthetic drugs titration.

Highlights

Optimise individualised drug dosing

SmartPilot View calculates and predicts the combined effects of used analgesic and hypnotic drugs based on population models. This can facilitate the implementation of a differentiated, individualised and well-balanced dosing regimen for:

- Haemodynamic stability¹²³⁴⁶
- Controlled patient condition during both induction² and maintenance⁴
- Prevention of over-dosage¹²³⁴⁵ that can contribute to reduction of postoperative delirium
- Well-managed recovery (faster awakening)²³⁴⁵⁶

Support decision-making

SmartPilot View supports the decision-making⁵ by turning complex pharmacokinetic and pharmacodynamic calculations into an easy-to-interpret visualisation of:

- Current anaesthesia level and hypnotic-analgesic balance
- 20 minute prediction of the anaesthesia level
- Built-in pre-prediction ("What if..." function) for IV pump rates and anaesthesia device settings that shows what effect a rate change or bolus would have
- Numeric value of anaesthesia level (Noxious Stimulus Response Index - NSRI)

Provide comprehensive visualisation

SmartPilot View provides instant access to the status of anaesthesia and the administered drugs throughout the entire surgical procedure to support the intuitive and rapid assessment of the patient's status with:

- Isobole lines on 2D diagram representing areas of probability how patient will react to a defined pain stimulus, and indicating the level of anaesthesia (e.g. TOL 90, TOL 50, TOSS 50, MAC 50)
- History function on the 2D diagram to track the anaesthesia level from the beginning of the case
- Effect-site concentrations displayed as numeric values and trends
- Calculated effect-site concentrations of administered hypnotics, opioids, and muscle relaxants for past (40 minutes), present, and preview (20 minutes) periods
- Optional: Selected vital parameters, including heart rate, blood pressure and CO₂, and BIS

Optimise OR and PACU utilisation

SmartPilot View may help to optimise OR and PACU utilisation times with:

- Bar graph indicator to estimate patient wake-up time
- Individualised drug dosing to reduce risk of overdosing¹²⁵ that may help to mitigate prolonged PACU stays

Reduce drug consumption

Based on clinical evidence, SmartPilot View can help to minimise the total amount of consumed drugs²³⁵ to:

- Reduce the environmental impact
- Save costs

Support on-site education and training

The SmartPilot View Trainer (non-medical device) is intended to support training and teaching. It can be used outside of the clinical workplace as well as for educational purposes to:

- Enable case simulations

Sustainability

Our technology protects people and the environment. Protecting the environment is therefore not just our duty, but also an opportunity for us to gain a competitive advantage through environmentally friendly products and by conserving resources. For this reason, we make sure that our day-to-day activities, in all areas of the company, protect the environment rather than damage it. We are committed to the United Nations' climate action goals. We handle resources responsibly and work systematically to reduce our carbon footprint. What is more, Dräger products and services help our customers all over the world live up to their responsibility to protect people and environment.

Learn more: https://www.draeger.com/en_sa/About-Draeger/Sustainability

References

- ¹ Leblanc, D., Conté, M., Masson, G., Richard, F., Jeanneteau, A., Bouhours, G., Chrétien, J. M., Rony, L., Rineau, E., & Lasocki, S. (2017). SmartPilot View-guided anaesthesia improves postoperative outcomes in hip fracture surgery: a randomized blinded controlled study. *British journal of anaesthesia*, 119(5), 1022–1029. <https://doi.org/10.1093/bja/aex317>
- ² İnan, G., Emmez, G., Pampal, K., & Özköse Şatırlar, Z. (2021). Evaluating the role of SmartPilot View assisted target-controlled infusion anesthesia during intracranial mass surgery: A comparative retrospective study with bispectral index-guided standard anesthesia. *Journal of Surgery and Medicine*, 5(9), 884–888. <https://doi.org/10.28982/josam.987346>
- ³ İnan, G., & Şatırlar Özköse, Z. (2021). Target Controlled Infusion via SmartPilot View for Neuromonitoring in Neurosurgical Patients: A Novel Technology. *Clin Surg*, 6, 3165.

<https://www.clinicsinsurgery.com/open-access/target-controlled-infusion-via-smartpilot-view-for-neuromonitoring-in-neurosurgical-7196.pdf>

⁴ Kuizenga, M. H., Vereecke, H. E. M., Absalom, A. R., Bucher, C. H., Hannivoort, L. N., van den Berg, J. P., Schmalz, L., Struys, M. M. R. F., & Luginbühl, M. (2022). Utility of the SmartPilot View advisory screen to improve anaesthetic drug titration and postoperative outcomes in clinical practice: a two-centre prospective observational trial. *British journal of anaesthesia*, 128(6), 959–970.

<https://doi.org/10.1016/j.bja.2022.02.033>

⁵ İnan, G., Emmez, G., Pampal, H. K., & Özköse Şatırlar, Z. (2021). The Effect of SmartPilot View, A New Decision Support System on Recovery and Anesthetic Consumption in Spinal Surgery: A Retrospective Study. *Jarss*, 29(4), 226-232.

<https://doi.org/10.5222/jarss.2021.66588>

⁶ Morimoto, Y., Shiramoto, H., & Yoshimura, M. (2021). The usefulness of SmartPilot View for fast recovery from desflurane general anesthesia. *Journal of anesthesia*, 35(2), 239–245.

<https://doi.org/10.1007/s00540-021-02905-z>

Not all products, features, or services are for sale in all countries. Trademarks mentioned herein are the property of its respective owner. Trademarks may be owned by Drägerwerk AG & Co. KGaA (Dräger) or its affiliates in certain countries and not necessarily in the country in which this material is released. Visit www.draeger.com/trademarks for the current status of Dräger's trademarks.

Draeger Arabia Co.Ltd.

P.O.Box 365642
Riyadh 11393 Kingdom of Saudi Arabia
Tel: 0118288200

Corporate Headquarters

Drägerwerk AG & Co. KGaA

Moislinger Allee 53-55
23558 Lübeck
Germany

