

Wellbeing in the ICU

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ICU Mental Health in the Ongoing Pandemic: How
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While Perioperative Care is Optimised, Patients Die Unmonitored in the Ward!

Patients and their families often fear surgical interventions due to possible complications during the procedure and falsely assume to have survived the most dangerous part when reaching post-anesthetic care units.¹ However, postoperative hypotension more often occurs in the wards, causing myocardial infarction and death,^{3,4} as it largely remains undetected.⁵ 47% of postsurgical hypotensive events are missed due to doing only blood pressure spot-checks.⁶

These alarming facts have a substantial impact on healthcare budgets: representing the third leading cause of death in the world⁴, postsurgical complications can increase costs by +172%,⁷ due to complication rates ranging up to 27%⁸ and mortality of up to 12%⁷ in post-surgical patients.

Only recently, experts have confirmed the high potential of reducing risks and costs of postoperative complications by extending continuous hemodynamic monitoring throughout the hospital stay. While already successfully implemented during surgery to guide Goal Directed Therapy^{9, 10, 11} also for low and medium-risk surgeries, to date, continuous hemodynamic monitoring is poorly implemented on surgical wards.

Hypotension remains undetected⁶ and patients' deterioration is often overlooked³, as blood pressure is usually measured only every 4 to 6 hours. Patients are supposed to get up from their beds and move around in due course after surgery, therefore wireless technologies such as

There is a high demand for a comfortable, small and mobile solution for affordable blood pressure and vital sign monitoring in the general ward to improve patient safety and outcome, as mortality after surgery is a thousand times higher than intraoperative death.¹ CNSystems has enhanced its non-invasive CNAP[®] technology for perioperative care with its new "CNAP[®]2GO" finger ring, suitable for ward monitoring, as outlined in a recent publication in NATURE Communications.²

wearable sensors are needed⁵, preferably providing wearing comfort at low costs, due to the large patient population.

Only recently, CNAP[®]2GO, a new innovative sensor concept for measuring blood pressure and other vital signs using a wearable finger ring, has been introduced in the NATURE Communications Journal. With its wireless setup and high wearing comfort, CNAP[®]2GO seems able to address all major demands on the wards. Clinical accuracy against invasive reference standards showed comparable results to its parent tech-

nology - CNAP[®] - for perioperative hemodynamic monitoring.²

With this ongoing development, CNSystems strives for a new tailor-made solution, covering the whole cycle of hemodynamic monitoring throughout the hospital stay of a surgical patient. All CNAP[®] solutions feature an easy and fast setup and well-founded clinical validation and are already established common practice. - THE FUTURE IS WEARABLE! ■

References

For full references, please email editorial@icu-management.org or visit <https://iii.hm/18od>



* sample picture of envisioned sensor