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BIOGRAPHY

Quentin Hayes has worked in Healthcare in the UK for over 25 years in both the private sector and the NHS. He is a graduate in Economics from Durham University and holds professional qualifications including membership of the Chartered Institute of Marketing.

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HEART RATE MONITORING IN NEW BORN BABIES: CHALLENGES AND OPPORTUNITIES

Aim: The aim of this paper is to present a new approach to monitoring heart rate in new born babies that has the potential to significantly change clinical outcomes for babies needing resuscitation and enhanced support at birth. The technology in addition has the potential to serve as a research platform for future research in this area of critical care.

Introduction: 10% of new born babies need enhanced support in the transition from the womb to the outside world and heart rate (HR) assessment in these first few 'Golden minutes' of life is critical to the guidance of resuscitation efforts. There is a lack of reliable and timely HR information from existing modes of HR assessment to support optimal new born transition, particularly in premature and poorly-perfused babies.

HR Monitoring Alternatives: A number of new technologies have been or are being, developed to overcome the limitations of current HR assessment techniques. These include forehead-mounted reflectance photoplethysmography (PPG), Bluetooth ECG, the use of camera/video, Doppler ultrasound and Bluetooth digital stethoscope. SurePulse vs utilises PPG and wirelessly delivers accurate and reliable HR information, visible in real-time, to the whole clinical team in the delivery room, supporting optimal care of the new born baby.

Conclusion: New technologies provide new possibilities in vital signs monitoring at birth and should enhance the evidence-based evaluation of changing practice in the delivery room. Opportunities include optimisation of ventilation, delayed cord clamping, umbilical cord milking and mother-and-baby bonding (skin-to-skin care).