

Title	Device for temperature monitoring SpotOn™
Agency	Comité d'Évaluation et de Diffusion des Innovations Technologiques (CEDIT) Assistance Publique – Hôpitaux de Paris (AP-HP) Direction de l'organisation médicale et des relations avec les universités 3, Avenue Victoria 75184 PARIS Cedex 04 France info.cedit@sap.aphp.fr , http://cedit.aphp.fr/
Reference	Evaluations de technologies de santé Avis CEDIT – Dispositif SpotOn™

Aim

The CEDIT assessed the value of SpotOn™ device for temperature monitoring, in order to inform the decision making process of its possible adoption and use at the Paris University Hospital (AP-HP). The temperature monitoring is essential for various clinical situations, especially when they occur in anesthesia and intensive care departments. Direct measurement of core temperature uses invasive techniques. Most of the time, the core temperature is evaluated from peripheral measures and thus depends on the thermometers' metrological performance and mostly on the anatomical location of the measurement.

Conclusions and results

Technical aspects: the originality of SpotOn™ is its skin sensor which comprises on the external side an electrical heating circuit, compensating for the cutaneous loss of heat and thereby creating a "zero-heat-flux" which makes the skin temperature theoretically close to the core temperature.

Clinical aspects: no study has evaluated the clinical impact of SpotOn™. Four studies, of which only one has been published, compared the temperatures recorded by SpotOn™ with those recorded by other methods, in a surgical environment. Differences between methods were minor (approximately 0.3°C) but with wide confidence intervals. The CEDIT currently considers SpotOn™ as a method of continuous measurement of temperature, which is comparable to the existing devices used in the AP-HP hospitals. Nevertheless this device might respond to a specific need in some care units and could deserve a prospective study.

Economic aspects: the prices (excluding VAT) provided by the company are 360 € for the monitor and 309 € for a set of 25 single-use sensors (12.36 € per sensor). No economic evaluation comparing SpotOn™ to its alternatives is currently available. Given the small difference in terms of relative efficiency (temperature measurement), a cost superior to other methods could be an indication for an unfavorable cost-effectiveness ratio. The CEDIT encourages a comparative economic analysis.

Organizational aspects: the health care units have at their disposal simple methods of measuring the temperature. As a necessarily supplementary method in the health care units where it could be used, SpotOn™ adds some organizational

complexity, which would be acceptable if the benefit provided to patients was real. These aspects could be discussed to the research project the CEDIT encourages.

Recommendations

Given the available data, the CEDIT does not currently recommend purchasing the SpotOn™ device for the continuous measurement of the temperature at the AP-HP.

Methods

A literature review regarding magnetic growth rods for the scoliosis treatment in children was undertaken. Further CEDIT sought input from expert practitioners in the field.

Further research/reviews required

However, considering the possible existence of a still inadequately covered need for continuous measurement of temperature in specific clinical situations and patient care units, the CEDIT considers that a study investigating the potential contribution of SpotOn™ in terms of clinical, economic and organizational impact might be useful. If so, it should be organized with the contribution of the manufacturer.

Written by

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