

# Continuous, Real-Time Body Temperature Monitoring System

Early Fever Detection Leads to Better Patient Care



# Remote temperature monitoring that is accurate and effective in early fever detection

Non-invasive, wireless and fully integrated.



#### Accurate

Clinically tested and proven accuracy (in agreement with Pulmonary Artery Catheter).



### Non-invasive

TempTraq applies easily to patient with a gentle adhesive.



#### **Continuous**

Once activated, TempTraq continuously monitors axillary temperature for up to 72 hours per patch, and issues alerts when temperature rises.



### **Fully Integrated**

The TempTraq system can be integrated with existing EHR's and monitoring systems, providing a deeper data set than the existing Standard of Care.



#### Wireless

Data transmits via Bluetooth, allowing patient freedom of movement.



### Remote Monitoring

Patients can be remotely monitored via TempTraq Connect's secure, HIPAA compliant cloud service.

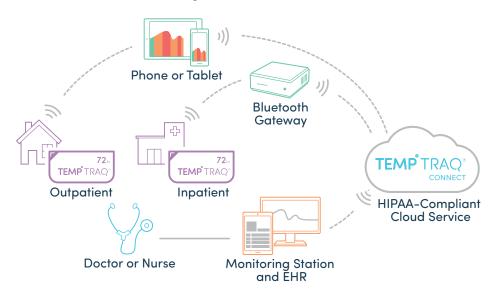
### **TempTraq Clinical Integration**

The TempTraq system can be seamlessly integrated into existing clinical workflow, increasing productivity by automatically capturing and entering temperature data into the EHR.

The TempTraq patch monitors a patient's temperature in real time and wirelessly uploads data to our HIPAA-compliant cloud server. Data from the secure server can be integrated

with Electronic Health Records, central clinical workstations, patient bedside monitors and mobile devices to provide clinicians with temperature data visualization and mapping of data to the desired patient record fields.

The system is scalable and can support a single hospital or a multi-hospital/physician group healthcare system.



Laring Traq(r) The Value of New Technology: There's an app for that" / Sandra L. Siedlecki PhD, RN, CNS and Sam Butler MS / Cleveland Clinic 2. "Feasibility of Continuous Monitoring of Body Temperature for Patients Undergoing Stem Cell Transplant or High-Dose Chemotherapy" / Ehsan Malek, MD and Nina Dambrosio, MSN, CNP / University Hospital – Seidman Cancer Center / February 2017 / 2 Continuous Temperature Monitoring in the Inpatient Setting Using TempTraq / Megan Sampson, MD(a), Victoria Hickey, RN(a), John Huber, MSc(b), Priscila Davila, MD(a), Jon Eager, BSEE(c), Stella Davies, MBBS, PhD(a), Christopher Dandoy, MD, MS(a) / (A)Division of Bone Marrow Transplant and Immune Deficiency, (b)Division of Information Services, Cincinnati Children's Hospital Medical Center, OH, USA, (c)Blue Spark Technologies, Westlake, OH, USA 4 Support Care Cancer. 2010 Jan; 18(1): 37–42. / Continuous non-invasive monitoring of the skin temperature of HSCT recipients / Maarten van Vliet, corresponding author J. Peter Donnelly, Carin M. J. Potting, and Nicole M. A. Bijlevens / 5 Time to antibiotics and outcomes in cancer patients with febrile neutropenia / Thomas Perron, Mohamed Email author / BMC Health Services Research 2014 14:162 / DOI: 10.1186/1472-6963-14-162 / 6 Kumar A, Crit. Care Med. 2006 Jun; 34(6):1589-96.

### **Clinically Tested**

### **Proven Accuracy**

- Cleveland Clinic<sup>1</sup>
- University Hospital's Seidman Cancer Center<sup>2</sup>
- Cincinnati Children's Hospital<sup>3</sup>

#### Earlier fever detection

In a clinical study conducted by University Hospitals Seidman Cancer Center, TempTraq was shown to detect temperature rise earlier than the Standard of Care by a median of 140.1 minutes (range of 30–180 minutes) with bone marrow transplant patients.<sup>2</sup>



# Time TempTraq Detected Fever Earlier vs. 4 Hour Standard of Care



### **Clinical Benefits**

#### **Earlier Fever Detection**

Early detection of fever and prompt use of broad-spectrum antibiotics is crucial in neutropenic patients:

- 78% of patients who received an allogeneic HSCT had bacteraemia during the first episode of fever.<sup>4</sup>
- An hour delay in antibiotic administration resulted in an approximately eight hour increase in length of hospital stay among patients with febrile neutropenia.<sup>5</sup>

### Remote Patient Monitoring

Health systems seeking to improve patient care, reduce readmissions, optimize reimbursements and gain competitive advantage, are rapidly embracing new technologies that enable remote patient monitoring.

TempTraq provides a proven, reliable system to remotely monitor patients for temperature increases, a key symptom of infection. It also allows for self-monitoring through a smartphone app.

### **Target Patient Populations**

Hospitals using TempTraq typically start with patient populations where earlier detection of fever provides significant benefits over the current standard of care, such as:

- Patients with high risk of infection
- Oncology
- Bone marrow transplant
- CAR-T

- Immunotherapy with CRS
- Sepsis
- Post Operative
- Trauma
- ICU

"It is crucial to recognize neutropenic fever early and to commence broad spectrum empiric antibiotics promptly in order to avoid sepsis syndrome and possible death."

Time to antibiotics and outcomes in cancer patients with febrile neutropenia

Thomas Perron, BMC Health Services Research

"Remote Monitoring for patients means fewer office and emergency room visits, fewer and reduced duration of hospitalizations, reduced patient travel time and expense, and increased access (for the elderly, the physically challenged, the homebound, and especially for rural patients)."

Telehomecare and Remote Monitoring: An Outcomes Overview **M Stachura,** AdvaMed

"Each hour of delay in antimicrobial administration over the ensuing 6 hours was associated with an average decrease in survival of 7.6%."

Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock

A Kumar, et. al., St. Boniface Hospital, University of Manitoba<sup>6</sup>

# **TEMP** TRAQ®

### **Technical Specifications**

### Clearances

FDA Class II Medical Device CE TGA

### **Operating Life**

24 hours or 72 hours; Disposable/Single Use

### **Accuracy Rating**

Conforms with ASTM E1112-00 (2011) +/- 0.1°C or +/- 0.2°F over the temperature range of the device

### Wireless

Bluetooth Receiving Device, Low Energy, patch must be within 40 feet of Bluetooth device

#### Safe

For all ages and all skin types; does not contain materials made with natural latex rubber

### Temperature Display

Fahrenheit or Celsius

### Temperature Range

87.0 °F - 109.3 °F (30.6 °C - 42.9 °C)

#### **Alerts**

Audible and/or visual notifications of rising temperature via applications

### **Patent Number**

US 9,693,689 US 9,782,082

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### **About Blue Spark Technologies**

Blue Spark Technologies is the world's leading producer of solutions for wearable and flexible electronics. An innovator in the wearable medical device space, Blue Spark utilizes its proprietary, patented, printed battery technology to develop disruptive technologies in printed and flexible electronics.

Headquartered in Westlake, Ohio, Blue Spark Technologies was founded as the leader in developing thin, flexible, printed battery solutions. Blue Spark Technologies' latest innovation, TempTraq®, is the only Bluetooth®, wearable temperature monitor in the form of a soft, comfortable patch that continuously, safely and comfortably, monitors body temperature for up to 72 hours and sends alerts to Apple® or Android™ compatible mobile devices. The company's TempTraq Connect HIPAA-compliant service supported by Google Healthcare Cloud Platform allows caregivers to monitor body temperature from anywhere. It also allows direct integration with health care provider electronic health record (EHR) systems and central nursing stations, providing a secure method of storing patient health care data.

### For More Information

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