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## New survey shows low adherence to guidelines in sepsis care puts patients at risk

Marcy l'Étoile, France and London, UK – September 26<sup>th</sup>, 2021 – To mark Sepsis Awareness Month, bioMérieux, a world leader in *in vitro* diagnostics with a long-standing commitment to the fight against sepsis, and the UK Sepsis Trust, an internationally renowned charity, have released new survey data of health professionals to assess their knowledge and practice in the management of sepsis. This survey was commissioned among 368 doctors across six European countries.

### Key highlights include:

- While awareness of sepsis, and how serious it is, is high amongst surveyed doctors, adherence to guidelines for timely and appropriate sepsis treatment remains low, leaving patients at significant risk.
- More than half of surveyed doctors admit that some cases of Sepsis are missed in their hospitals.
- High patient caseload, staff shortages, insufficient training and lack of familiarity with the steps of the guidelines are identified as the main barriers to adhering to the stages outlined in the Sepsis Bundles.

Sepsis is a life-threatening condition in which the body's response to infection causes organ damage. Globally, sepsis is now recognized to claim more lives than cancer<sup>1,2</sup>. Every year in Europe, more than 3.4 million people develop sepsis and 700,000 of them do not survive<sup>3</sup>.

Early recognition and rapid diagnosis are essential for early patient management. Any delay in starting appropriate treatment is associated with increased mortality. A set of evidence-based clinical practices, known as Sepsis Bundles, have been defined internationally<sup>4</sup>. The routine implementation of these bundles by clinicians can greatly improve outcomes for patients with sepsis<sup>5</sup>.

**While most surveyed doctors know a great deal or are somewhat knowledgeable about Sepsis Bundles, some cases are missed and delays in diagnosis remain in the hospital they work.**

Surveyed health professionals are confronted with sepsis on a regular basis, reporting that **one in five of their hospitalized patients suffer with confirmed sepsis** in a typical week.

Despite the fact that nearly all (95%) respondents think that developing sepsis is serious, two thirds (66%) of the surveyed doctors agree that there is sometimes a delay in diagnosing sepsis and over half (56%) agree they do miss some cases of sepsis in the hospitals in which they work.

Dr Ron Daniels, world leading sepsis expert and Chief Executive of the UK Sepsis Trust, commented: *"This important research highlights that there remains huge variation between countries in properly implementing internationally supported standards of diagnosis and treatment of sepsis. The stark reality is that there is much more to be done to ensure timely and effective management of Sepsis. As healthcare*



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*systems continue to grapple with issues such as staff shortages and evolving patient needs, urgent action must be taken to ensure that there is consistent training on sepsis care to improve patient care and outcomes. Given the high mortality rate of sepsis across Europe, it is clear that governments, policymakers, commissioning bodies and professionals need to urgently address these barriers."*

**High patient caseload, staff shortages, insufficient training and lack of familiarity with the steps are identified as the main barriers to the adherence of the Sepsis Bundles.**

Almost all surveyed health professionals (96%) state they are followed in their hospital to at least some extent. However, when prompted, **only two in five (44%) carry out all steps included in the Hour-1 Sepsis Bundle** for diagnosis and treatment of suspected sepsis\*\*, meaning that over half (56%) of patients are not receiving standard of care, increasing their risk of morbidity and mortality.

The survey identified a number of reasons why there is a lack of adherence to the protocol. While the main barriers vary between countries, the main ones identified are **high patient caseload (59%), staff shortages (58%), insufficient training (34%) and lack of familiarity with the steps (32%)**.

While nearly all (**98%**) respondents agree **early detection of sepsis can lead to significantly better outcomes**, **one in four (27%) said that a lack of rapid diagnostic tests is one of the main barriers** to adhering to the stages outlined in the Sepsis Bundles.

*"Diagnostic tests are vital for anyone suspected of sepsis, providing critical information on its presence and severity, the type and extent of infection at the source, how best to manage the patient and also to monitor their progress" said Mark Miller, Executive Vice President and Chief Medical Officer at bioMérieux. "Tests like blood cultures, other appropriate cultures, lactate and procalcitonin can give essential information for guiding optimal patient care in suspected and proven sepsis."*

**More staff and training are identified as the top two areas to address existing knowledge gaps and improve patient outcomes.**

66% of doctors surveyed selected that training on what *Sepsis Bundles* are, or how to implement these in the hospitals within which they work, would improve adherence to these bundles.

In 2021 bioMérieux and the UK Sepsis Trust published the [results of a separate survey showing the need to accelerate awareness and education of the general population](#) about Sepsis. The current second survey is an evolution of the campaign to enhance awareness among health workers and institutions, to improve patient care with crucial and timely diagnostics, and to promote better adherence to international Sepsis care guidelines.

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## REFERENCES

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- <sup>2</sup> World Health Organisation. *Cancer.* Available at: [https://www.who.int/health-topics/cancer#tab=tab\\_1](https://www.who.int/health-topics/cancer#tab=tab_1). Last accessed: July 2022.
- <sup>3</sup> European Sepsis Alliance. *What is Sepsis? – Definition of Sepsis.* Available at: <https://www.europeansepsisalliance.org/Sepsis#:~:text=Impact%20in%20Europe,%2C%20mental%2C%20and%20cognitive%20problems>. Last accessed: July 2022.
- <sup>4</sup> Evans L, et al. *Surviving sepsis campaign: international guidelines for management of sepsis and septic shock 2021. Intensive Care Med.* 2021 Nov;47(11):1181-1247.
- <sup>5</sup> Milano PK, Desai SA, Eiting EA, Hofmann EF, Lam CN, Menchine M. *Sepsis Bundle Adherence Is Associated with Improved Survival in Severe Sepsis or Septic Shock. West J Emerg Med.* 2018 Sep;19(5):774-781. doi: 10.5811/westjem.2018.7.37651. Epub 2018 Aug 13. PMID: 30202487; PMCID: PMC6123087.

## NOTES

- \* *Hour-1 Sepsis Bundle includes a set of interventions which are recommended to begin immediately in all patients with suspected Sepsis or septic shock.*
- \*\* *Correctly selected actions include: measure lactate level and re-measure if the initial level is elevated; obtain blood cultures before administering antibiotics; administer broad-spectrum antibiotics; administer iv fluid: rapid administration of 30ml/kg crystalloid for hypotension or lactate  $\geq$  4mmol/l; apply vasopressors if hypotensive during or after fluid resuscitation to maintain a mean arterial pressure  $\geq$  65 mmhg.*

## ABOUT THE SURVEY – TECHNICAL NOTE

On behalf of BioMérieux and the UK Sepsis Trust, Ipsos conducted an online survey among 368 health professionals across 6 countries (UK n=100, France n=100, Spain n=100, Sweden n=50, Denmark n=16, Norway n=2) between 20th June and 18th July 2022. For analysis purposes, Nordic countries were grouped as one market (n=68). Health professionals were Emergency Department Physicians, General Surgeons, Internal Medicine Physicians, Critical Care Physicians or Pulmonologists and chose to take part in the survey. All physicians had been qualified for 3-30 years and spend the majority of their clinical time in a hospital, spent at least 50% of their professional time in direct patient care. The overall total results are based on country averages across the four regions and each was weighted equally across the UK, France, Spain and the Nordic countries included.

## ABOUT UK SEPSIS TRUST

The UK Sepsis Trust was founded in 2012 by world-leading sepsis expert, NHS consultant Dr Ron Daniels BEM. Our goal is to end preventable deaths from sepsis and improve outcomes for sepsis survivors. We believe that earlier diagnosis and treatment across the UK and beyond could save thousands of lives. Our critical expertise is based on the charity's grassroots origins: our doctors and nurses have front line experience of sepsis and their passion is born of a uniquely comprehensive understanding of what needs to be done. The urgent need to improve sepsis care in the UK drives us forward as we continue to work in hospitals, while advancing the sepsis agenda.

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## ABOUT BIOMÉRIEUX

### *Pioneering Diagnostics*

A world leader in the field of *in vitro* diagnostics for over 55 years, bioMérieux is present in 45 countries and serves more than 160 countries with the support of a large network of distributors. In 2020, revenues reached €3.4 billion, with over 90% of international sales (outside of France).

bioMérieux provides diagnostic solutions (systems, reagents, software and services) which determine the source of disease and contamination to improve patient health and ensure consumer safety. Its products are mainly used for diagnosing infectious diseases. They are also used for detecting microorganisms in agri-food, pharmaceutical and cosmetic products.



bioMérieux is listed on the Euronext Paris stock market.

Symbol: BIM – ISIN Code: FR0013280286

Reuters: BIOX.PA/Bloomberg: BIM.FP

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