

SEPSIS



THE UK
SEPSIS
TRUST

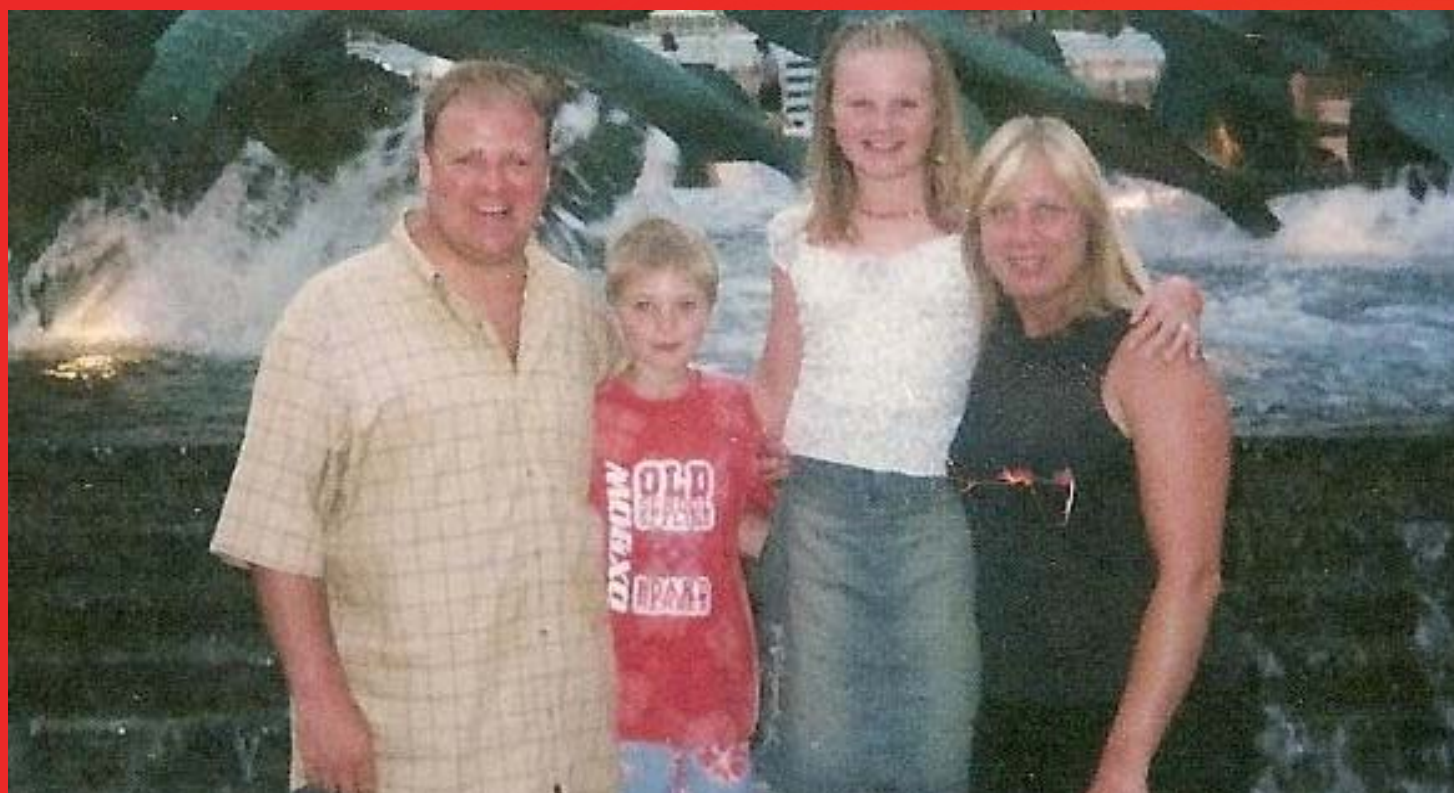
A UK PERSPECTIVE

SEPTEMBER 19



@SepsisUK

Dr Ron Daniels B.E.M.
CEO, UK Sepsis Trust
Exec Board, Global Sepsis Alliance
WHO Technical Expert Group



Breast cancer

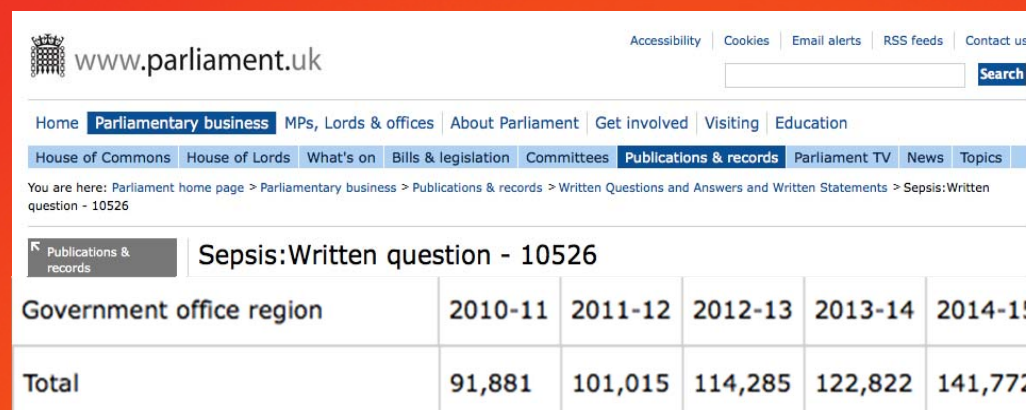
Bowel cancer

Annual UK sepsis deaths



HOSPITAL EPISODE STATISTICS (HES)

- ▶ ‘Head counts’
- ▶ Based on what is written in medical notes
- ▶ Likely to capture only c. 40% of episodes



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Publications & records | Sepsis:Written question - 10526

Government office region	2010-11	2011-12	2012-13	2013-14	2014-15
Total	91,881	101,015	114,285	122,822	141,772

(NCEPOD ‘Just say Sepsis’ 2015, Rhee et al AJRCCM 2017)

‘DEFINITE’ SEPSIS CODES

- A41.0** Sepsis due to *Staphylococcus aureus*
- A41.5** Sepsis- other gram-negative organisms
- A41.9** Sepsis, unspecified organism
- R65.2** Severe sepsis or septic shock
- P36.9** Bacterial sepsis of newborn
- O85** Puerperal sepsis

'DEFINITE' SEPSIS CODES

A41.0

A41.5

A41.9

R65.2

P36.9

O85



200,000
CASES

(HES data 2017)

SOURCES OF INFECTION

Source	% of cases (approx.)
Pneumonia	50%
Urinary tract	20%
Abdomen	15%
Skin, soft tissue, bone and joint	10%
Endocarditis	1%
Device-related infection	1%
Meningitis	1%
Others	2%

‘MIGHT BE’ SEPSIS CODES

- J18.0** Bronchopneumonia, unspecified organism
- J18.1** Lobar pneumonia, unspecified organism
- J18.9** Pneumonia, unspecified organism
- K65.0** Generalised peritonitis
- L03.9** Cellulitis, unspecified
- L03.1** Cellulitis of limb
- N39.0** Urinary tract infection

'MIGHT BE' SEPSIS CODES

J18.0

J18.1

J18.9

K65.0

L03.9

L03.1



1,700,000
CASES

(HES data 2017)

OUT OF HOURS (OOH)/ TELEPHONE TRIAGE	+
COMMUNITY SERVICES	+
GENERAL PRACTICE	+
PREHOSPITAL CARE/ AMBULANCE SERVICES	+
EMERGENCY MEDICINE AND ACUTE MEDICAL UNITS	+
ACUTE HOSPITAL INPATIENTS	+
LABORATORY SERVICES	+
DENTAL SERVICES	+

SEPSIS SCREENING TOOL ACUTE ASSESSMENT

AGE 12+**PATIENT DETAILS:****DATE:****TIME:****NAME:****DESIGNATION:****SIGNATURE:**

01 START THIS CHART IF THE PATIENT LOOKS UNWELL OR **NEWS-2** HAS TRIGGERED

RISK FACTORS FOR SEPSIS INCLUDE:

- | | |
|--|---|
| <input type="checkbox"/> Age > 75 | <input type="checkbox"/> Recent trauma / surgery / invasive procedure |
| <input type="checkbox"/> Impaired immunity (e.g. diabetes, steroids, chemotherapy) | <input type="checkbox"/> Indwelling lines / IVDU / broken skin |

02 **COULD THIS BE DUE TO AN INFECTION?**

LIKELY SOURCE:

- | | | | |
|--------------------------------------|-----------------------------------|---|--|
| <input type="checkbox"/> Respiratory | <input type="checkbox"/> Urine | <input type="checkbox"/> Skin / joint / wound | <input type="checkbox"/> Indwelling device |
| <input type="checkbox"/> Brain | <input type="checkbox"/> Surgical | <input type="checkbox"/> Other | |

YES**NO****SEPSIS UNLIKELY, CONSIDER OTHER DIAGNOSIS**

03 ANY RED FLAG PRESENT?

- Objective evidence of new altered mental state
- Systolic BP \leq 90 (or drop of >40 from normal)
- Heart rate \geq 130 per minute
- Respiratory rate \geq 25 per minute
- Needs O₂ to keep SpO₂ \geq 92%
- Non-blanching rash / mottled / ashen / cyanotic
- Lactate \geq 2 mmol/l
- Recent chemotherapy
- Not passed urine in 18 hours (<0.5 ml/kg/hr if catheterised)

YES

YES

RED FLAG SEPSIS

START

SEPSIS SIX

THE SEPSIS SIX

1. Give O₂ to keep SATS above 94%
2. Take blood cultures
3. Give IV antibiotics
4. Give a fluid challenge
5. Measure lactate
6. Measure urine output

JUST ASK
"COULD IT BE SEPSIS?"
IT'S A SIMPLE QUESTION, BUT IT COULD SAVE A LIFE.

#POLITICS

JEREMY HUNT ADMITS NHS IS
'TOTALLY INADEQUATE' AT SPOTTING SEPSIS

Summary: To meet the AMR and Sepsis CQUINs

NHS
Improvement

- Design systems to force better prescribing eg day 3 review for de-escalation AND IV to oral switch
- Review guidelines containing piperacillin-tazobactam and meropenem. Ensure they are followed through audit & feedback
- Quality improvement, not annual audit of AMS
- Merge sepsis and AMR CQUIN – start smart then focus
- Protected (restricted) antibiotic systems need to work
- Monitor & benchmark antibiotic usage
- Regular but varied communication on progress
- Local education & training at ward level
- Strong and effective multidisciplinary leadership (champions) at all levels

Summary: To meet the AMR and Sepsis COJINs

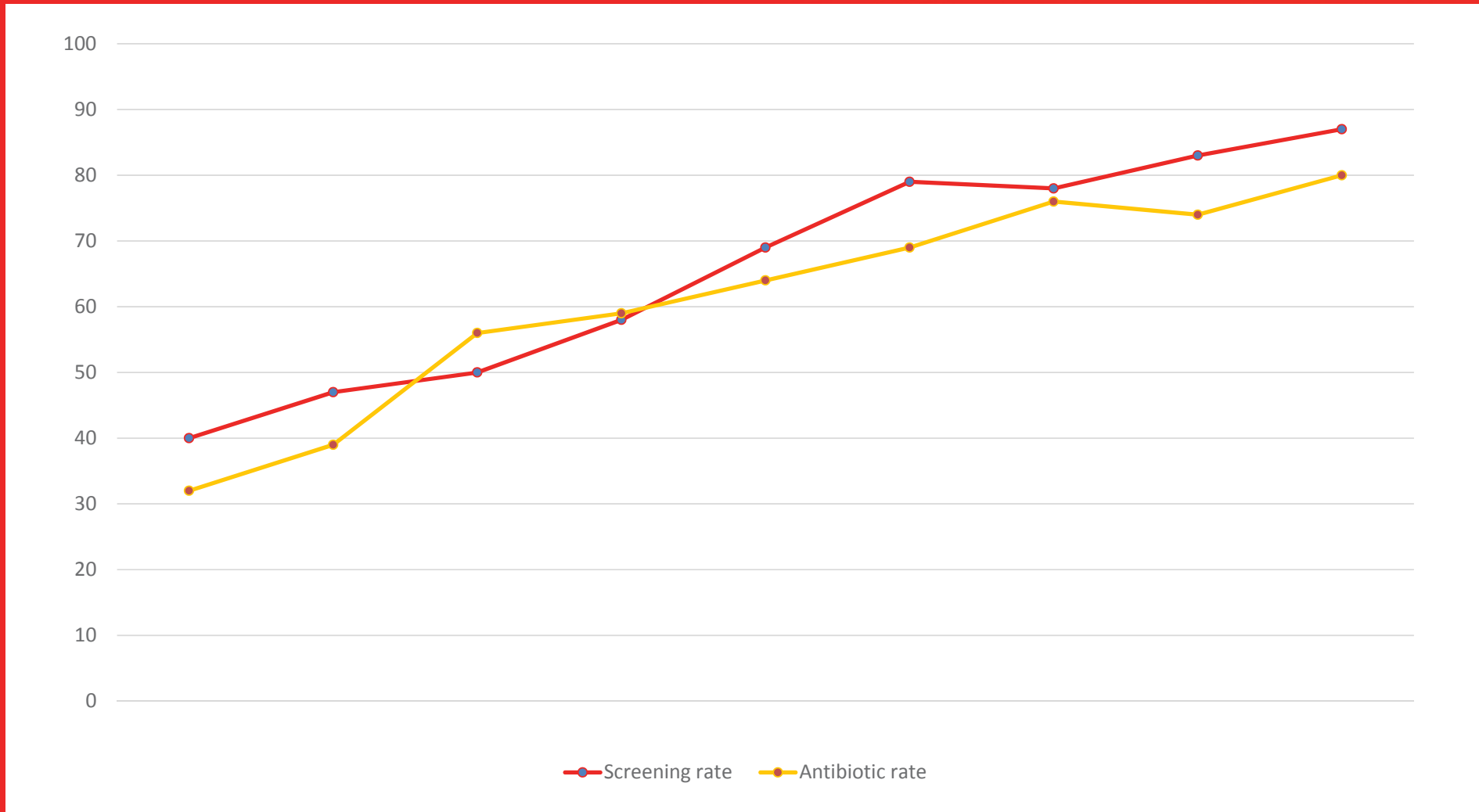


Results of antibiotic consumption to Mar-17

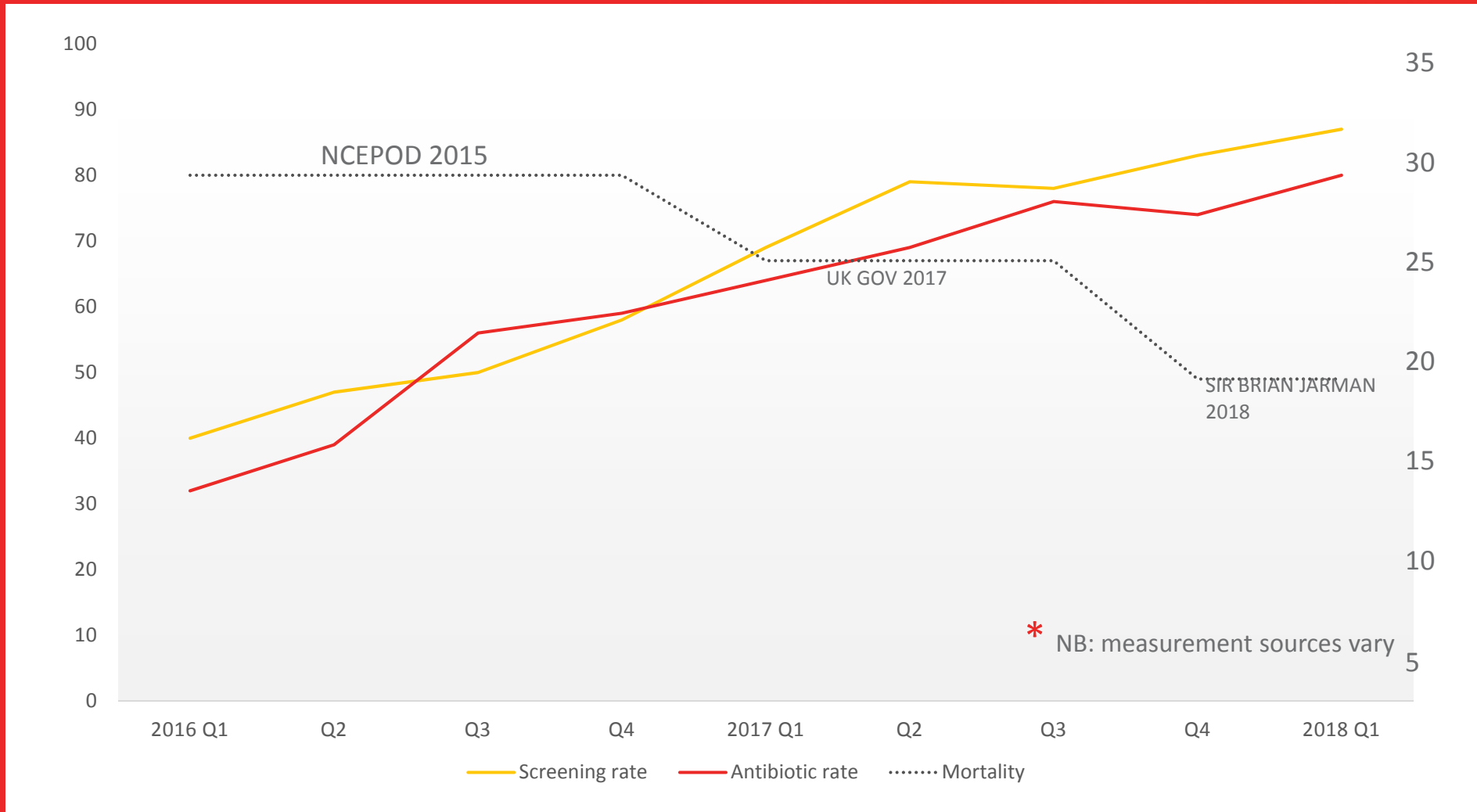
Drug (DDD/1000 adm inc daycase) Rx-Info	ED 2015-6	ED 2016-7	Acute Trust 2015-6	Acute Trusts 2016-7
Total IV AB	110.7	134 (+21%)	907.6	925 (+1.7%)
Carbapenem	7.2	7.5 (+4.2%)	85.1	77.8 (-8.6%)
Piperacillin-tazobactam	13.4	14.4 (+7.5%)	112.8	102.6 (-9.0%)

- Strong and effective multidisciplinary leadership (champions) at all levels

NHS ENGLAND COQUIN DATA



OVERLAID WITH EST^D MORTALITY*







Amia Art



NHS

SEPSIS

IS A RARE BUT SERIOUS COMPLICATION OF AN INFECTION

If your child has any of these symptoms you should take immediate action:

- Looks mottled, bluish or pale
- Is very lethargic or difficult to wake
- Feels abnormally cold to touch
- Is breathing very fast
- Has a rash that does not fade when you press it
- Has a fit or convulsion

Acting quickly could save your child's life, so if your child has any of these symptoms don't be afraid to go to A&E immediately or call 999.

Find out more information visit
www.nhschoices.co.uk/xxxxx
or www.sepsistrust.org

THE UK SEPSIS TRUST

Facing The Future

We see change as an opportunity not as a problem

My mum works here and she's here to help you.

Primary Health

Our values guide

The Friends and Family Test How did we do?

Equality 2015 to 2017

Let's talk



Matt Hancock ✓

@MattHancock

Following



Sepsis kills over 52,000 every year - each death a preventable tragedy. So we're introducing new guidance to use [#data](#) to identify & treat sepsis faster - and save more lives



NHS hospitals could face fines for breaches of new sepsis rules

NHS England staff told to look out for signs of sepsis in patients attending A&E

[theguardian.com](https://www.theguardian.com)

INITIATING A NATIONAL REGISTRY



JAMA | **Original Investigation** | CARING FOR THE CRITICALLY ILL PATIENT

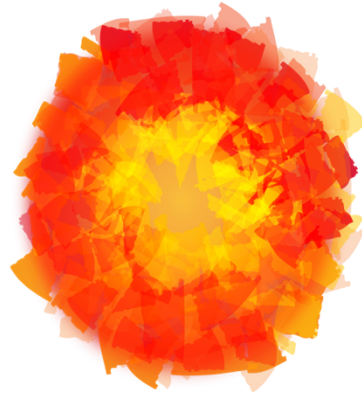
Derivation, Validation, and Potential Treatment Implications of Novel Clinical Phenotypes for Sepsis

CONCLUSIONS AND RELEVANCE In this retrospective analysis of data sets from patients with sepsis, 4 clinical phenotypes were identified that correlated with host-response patterns and clinical outcomes, and simulations suggested these phenotypes may help in understanding heterogeneity of treatment effects. Further research is needed to determine the utility of these phenotypes in clinical care and for informing trial design and interpretation.

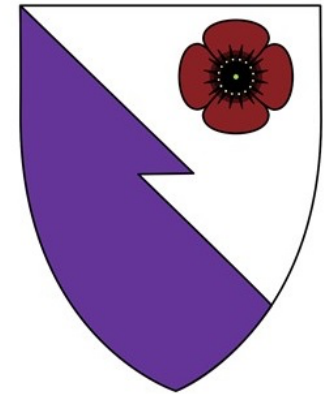
INITIATING A NATIONAL REGISTRY



Ministry
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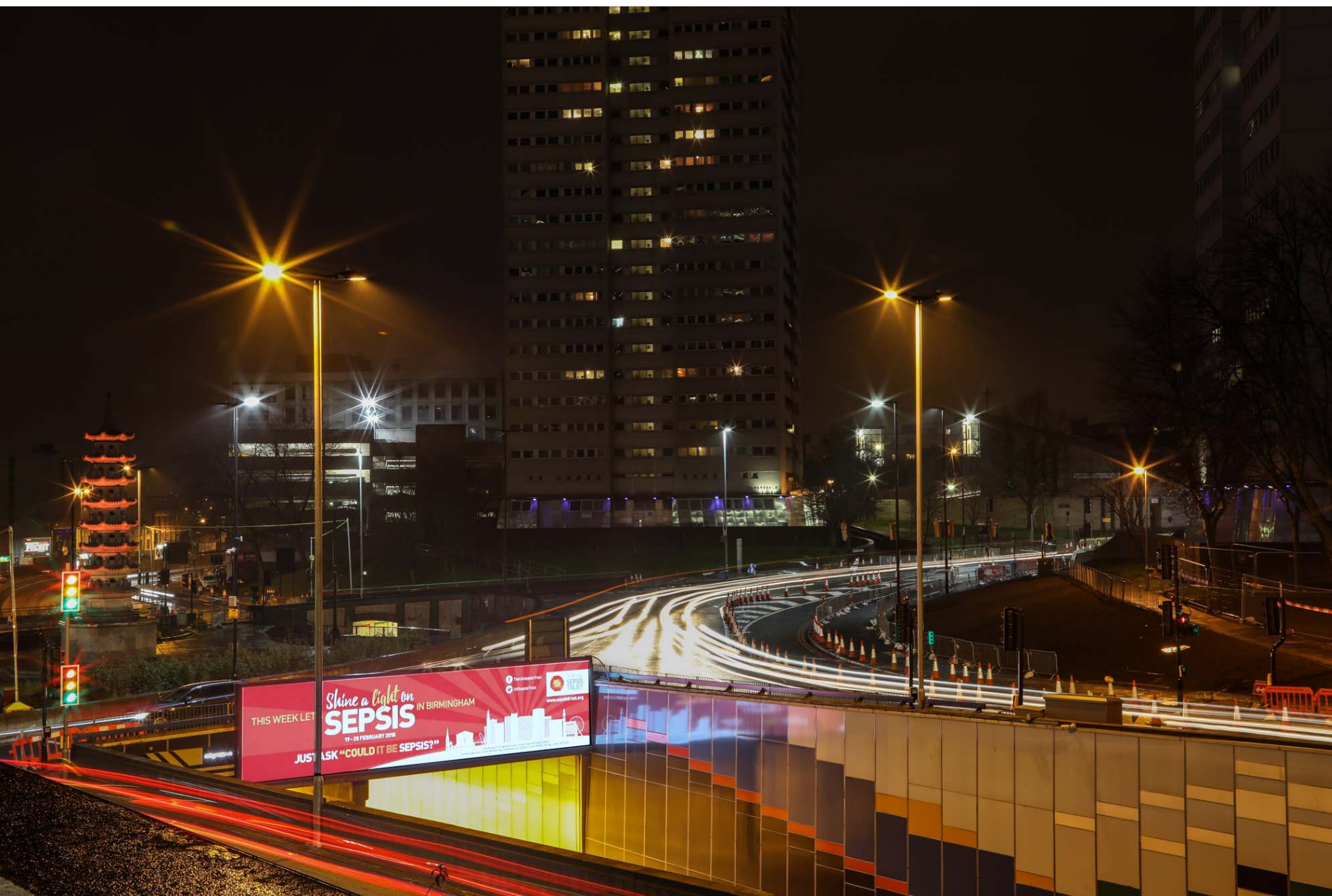


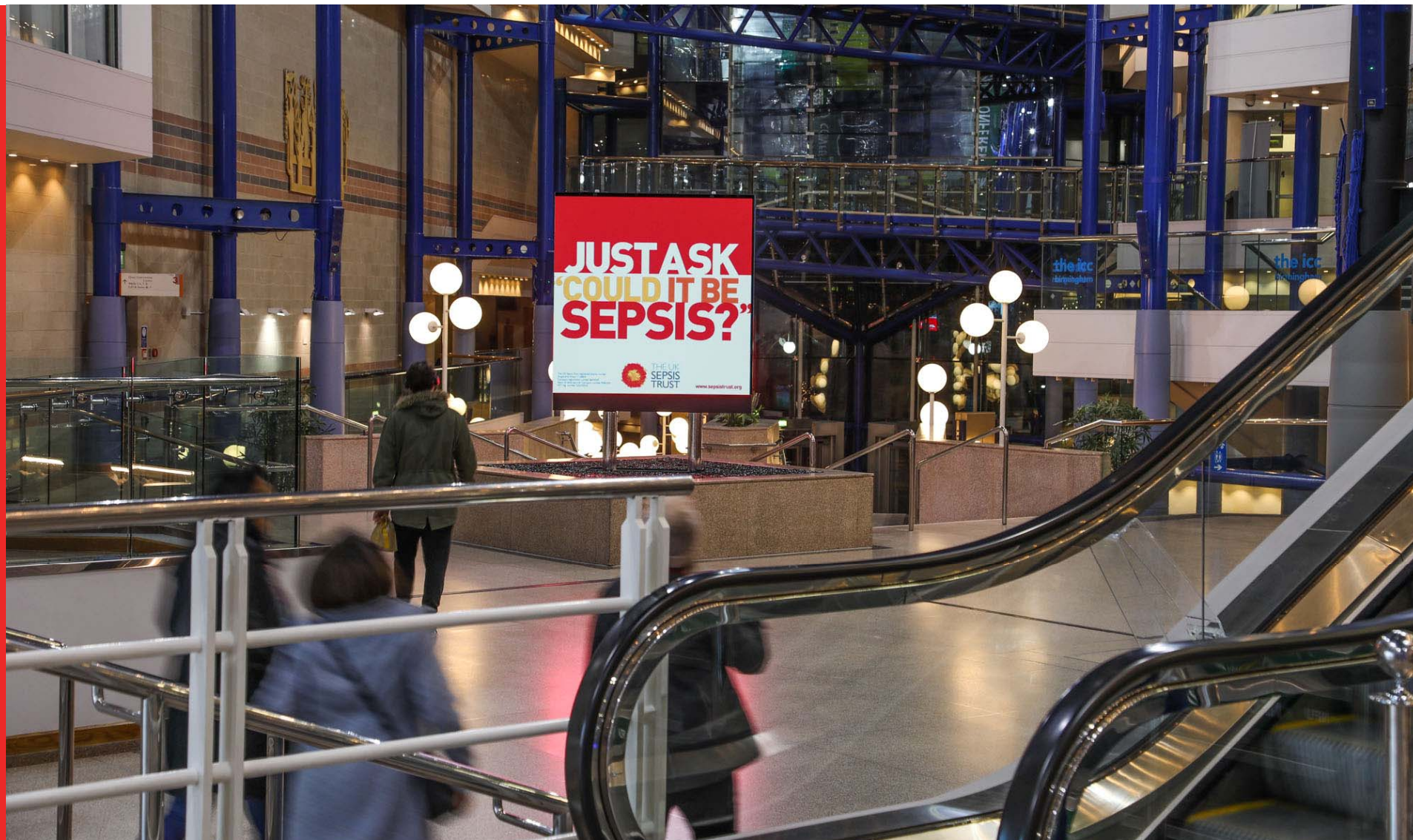
The Royal College of
Emergency Medicine

















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ODDS ARE YOU KNOW SOMEONE WHO'LL GET SEPSIS











Kevin Webster's son to have life-threatening battle with sepsis after grazing knee in Coronation Street health scare

Kevin Webster's son Jack becomes ill while in the care of his half-sister Sophie, who takes him to a doctor but is told it's a virus



2014
SHARES



2
COMMENTS

By **Nicola Methven**

21:44, 4 JUN 2018 | UPDATED 10:14, 5 JUN 2018

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SCHOOLS AGAINST SEPSIS



WHAT ARE THE SYMPTOMS?

JUST ASK
“**COULD IT BE SEPSIS?**”

SYMPTOMS IN CHILDREN

A child may have sepsis if he or she:

- Is breathing very fast
- Has a ‘fit’ or convulsion
- Looks mottled, bluish, or pale
- Has a rash that does not fade when you press it
- Is very lethargic or difficult to wake
- Feels abnormally cold to touch

SYMPTOMS IN ADULTS

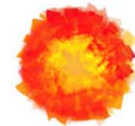
An adult may have sepsis if they show any of these signs:

- Slurred speech or confusion
- Extreme shivering or muscle pain
- Passing no urine (in a day)
- Severe breathlessness
- It feels like you’re going to die
- Skin mottled or discoloured

JUST ASK
“**COULD IT BE SEPSIS?**”

Call 111 or **contact your GP** if you’re worried about an infection.
Call 999 or **visit A&E** if someone has one of the sepsis symptoms.

The Iceland Foods Charitable Foundation registered charity number 281943. Second Avenue, Deeside Industrial Park, Deeside, Flintshire, CH5 2NW
The UK Sepsis Trust registered charity number (England & Wales) 1158843. Company registration number 8644039. Sepsis Enterprises Ltd.
Company number 9583335. VAT reg. number 225570222



SEPSIS



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**TOGETHER WE CAN
SAVE 14,000 LIVES**