The AHSN Network

NHS Improvement

Defining and measuring suspicion of sepsis: an analysis of patient outcomes

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Introduction

- The lack of suitable outcome measures for sepsis has hampered evaluation of regional, national and international campaigns, guidelines and improvement programmes (Rhee 2014, N Engl J Med, 370: 18).
- Most sepsis programmes focus on early detection and treatment of patients with suspicion of sepsis. Clinicians do not wait to diagnose sepsis but act promptly on suspicion.
- To evaluate sepsis programmes we must therefore define a "suspicion of sepsis" (SoS) group and monitor the outcomes of these patients.

Method

- Data source: Hospital Episode Statistics (HES) data for all acute trusts in the Oxford AHSN region for 2012-2016.
- A "suspicion of sepsis" (SoS) coding set was created consisting of all bacterial infective diagnoses.
- The HES dataset was analysed to identify all adult patients admitted to hospital with a diagnosis listed in the SoS coding set.

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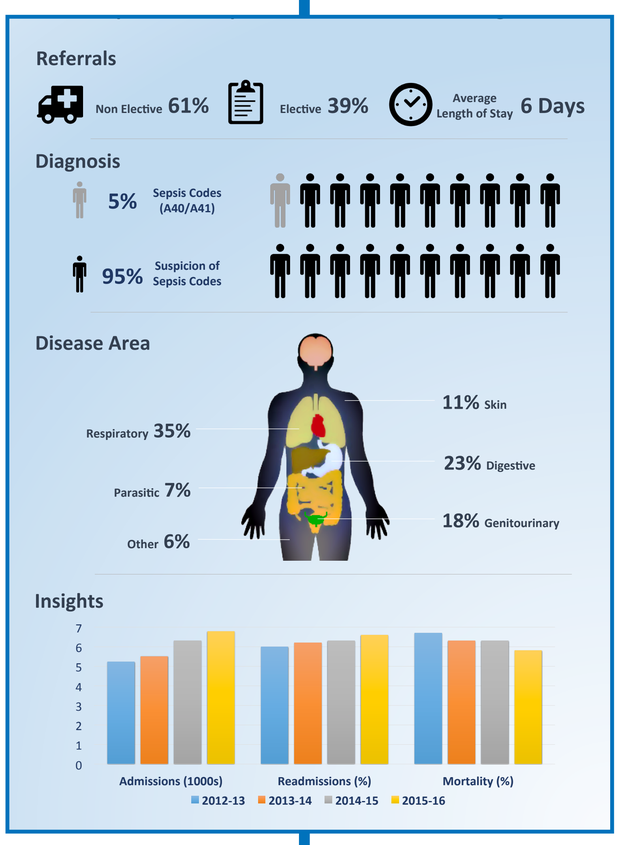
Results

- The number of admissions for SoS is increasing rapidly year on year.
- A shortlist of ten diagnoses can account for 85% of SoS deaths (mostly chest infections).

Most common SoS diagnoses	Diagnoses associated with the most deaths
1. N39.0 - Urinary tract infection	1. J18.1 - Lobar pneumonia
2. J18.1 - Lobar pneumonia	2. J18.9 - Pneumonia, unspecified
3. J22.X - Unspecified acute lower respiratory infection	3. N39.0 - Urinary tract infection
4. J18.9 - Pneumonia, unspecified	4. A41.9 - Sepsis, unspecified
5. L03.1 - Cellulitis of other parts of limb	5. J69.0 - Pneumonitis due to food and vomit



Conclusions

Our methodology for identifying suspicion of sepsis (SoS) uses routine administrative data, providing a means of assessing the SoS burden and comparing patient outcomes over time and across organisations. Examining the outcomes of patients with suspicion of sepsis provides a basis for the evaluation of sepsis guidelines and improvement programmes.

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