## Additional file 3. Prevalence of combined keywords.

The prevalence of combined keywords [1] in the entire population of septic patients presenting to the emergency department of Södersjukhuset during 2013 and prevalence based on mode of arrival.

|       |  | Prevalence    |                           |              |                           |                  |                           |          |
|-------|--|---------------|---------------------------|--------------|---------------------------|------------------|---------------------------|----------|
|       |  |               |                           |              |                           |                  |                           |          |
|       |  | Entire sample |                           | EMS patients |                           | non-EMS patients |                           |          |
|       |  | (N=479)       |                           | (n=357)      |                           | (n=122)          |                           |          |
| Order | Combined keyword [1]   | Number        | Percent (%) and<br>95% CI | Number       | Percent (%) and<br>95% CI | Number           | Percent (%) and<br>95% CI | P-value* |
| 1     | Abnormal, or suspected abnormal temperature In turn including primary keywords shivering OR hypothermia OR the following combined keywords:  | 319           | 66.6 (62.3-70.7)          | 232          | 65.0 (60.0-69.8)          | 87               | 71.3 (62.7-78.6)          | 0.201    |
|       | -Confirmed or suspected fever Fever defined as statement fever or statement temperature >38" OR suspected fever defined as statement feeling hot/warm, increasing temperature or similar expressions | 296           | 61.8 (57.4-66.0)          | 214          | 59.9 (54.8-64.9)          | 82               | 67.2 (58.5-74.9)          | 0.154    |
|       | -Confirmed abnormal temperature (confirmed fever or hypothermia) Statement fever or statement temperature >38° OR statement hypothermia or temperature <36°  | 286           | 60.0 (55.3-64.0)          | 212          | 59.4 (54.2-64.4)          | 74               | 60.7 (51.8-68.9)          | 0.805    |
| 2     | Pain Abdominal/extremity/back/ undefined/urinary tract/joint/chest/general/ headache/throat/wound/painful muscle cramp/positive Pasternatsy's sign (costovertebral angle tenderness)                 | 230           | 48.0 (43.6-52.5)          | 143          | 40.1 (35.1-45.2)          | 87               | 71.3 (62.7-78.6)          | <0.001   |
| 3     | Abnormal breathing Tachypnea, low oxygen saturation, airway secretions, breathing difficulties, cough, or obstructive breathing  | 210           | 43.8 (39.5-48.3)          | 185          | 51.8 (46.7-57.0)          | 25               | 20.5 (14.3-28.5)          | <0.001   |
| 4     | Risk factors for sepsis Known ongoing or recent infection, current antibiotic treatment, recent invasive procedures, substance abuse, compromised immune system), chronically compromised breathing  | 172           | 36.0 (31.7-40.3)          | 110          | 30.8 (26.3-35.8)          | 62               | 50.8 (42.1-59.5)          | <0.001   |

| 5  | Abnormal circulation Weak pulse or difficulties to palpate the pulse, peripheral coldness, cardiac arrest, tachycardia, low blood pressure, prolonged capillary refill time or non-measurable circulatory variables  | 163 | 34.0 (29.9-38.4) | 137 | 38.4 (33.5-43-5) | 26 | 21.3 (15.0-29.4) | 0.001  |
|----|--|-----|------------------|-----|------------------|----|------------------|--------|
| 6  | Gastrointestinal symptoms Vomiting, diarrhoea, reduced amount of stool, gastrointestinal bleeding, obstipation, pale faeces  | 137 | 28.6 (24.7-32.8) | 104 | 29.1 (24.7-34.1) | 33 | 27.0 (20.0-35.5) | 0.660  |
| 7  | Acute altered mental status Abnormal behaviour or level of consciousness (excluding previously known dementia or mental retardation without statement worse) OR abnormal verbal response defined as no/decreased verbal response   | 127 | 26.5 (22.8-30.6) | 111 | 31.1 (26.5-36.1) | 16 | 13.1 (8.2-20.2)  | <0.001 |
| 8  | Abnormal skin Paleness, wounds or wound infection, sweaty, cyanosis, redness, icterus, mottling, bruises, rash, blisters or peteckiae, change of skin turgor, exuding skin   | 125 | 26.1 (22.4-30.2) | 96  | 26.9 (22.6-31.7) | 29 | 23.8 (17.1-32.1) | 0.498  |
| 9  | Abnormal urination Abnormal urination (such as haematuria without trauma, bad smelling or cloudy urine, increased frequency of urination) OR urinary tract pain OR decreased urinary volumes OR dysfunction of urinary catheters defined as obstruction/leakage/problematic urinary catheters including nefrostomias | 118 | 24.6 (21.0-28.7) | 92  | 25.8 (21.5-30.6) | 26 | 21.3 (15.0-29.4) | 0.324  |
| 10 | Decreased mobility In turn including primary keywords remained sitting or lying in an abnormal way OR decreased miscellaneous mobility OR the following combined keywords:   | 106 | 22.1 (18.6-26.1) | 93  | 26.1 (21.8-30.8) | 13 | 10.7 (6.3-17.4)  | <0.001 |
|    | -Weakness of the legs Decreased ability to stand or walk including need to carry/lift the patient OR fallen OR found on the floor or corresponding place   | 93  | 19.4 (16.1-23.2) | 81  | 22.7 (18.7-27.3) | 12 | 9.8 (5.7-16.4)   | 0.002  |
|    | -Fallen or being found on the floor or corresponding place   | 59  | 12.3 (9.7-15.6)  | 57  | 16.0 (12.5-20.1) | 2  | 1.6 (0.5-5.8)    | <0.001 |
| 11 | History of deranged<br>laboratory tests taken<br>previous to EMS arrival<br>High blood sugar OR history of high<br>CRP OR history of positive findings<br>in blood culture taken previous to<br>EMS arrival  | 43  | 9.0 (6.7-11.9)   | 30  | 8.4 (6.0-11.7)   | 13 | 10.7 (6.3-17.4)  | 0.452  |

| 12 | Abnormal neurology  Focal neurological findings, photosensitivity, sound sensitivity, seizures or dysarthria | 40 | 8.4 (6.2-11.2) | 32 | 9.0 (6.4-12.4) | 8 | 6.6 (3.4-12.4) | 0.407      |
|----|--|----|----------------|----|----------------|---|----------------|------------|
| 13 | Soiled patient Bloodstained or wetted from stool or urine  | 18 | 3.8 (2.4-5.9)  | 16 | 4.5 (2.8-7.2)  | 2 | 1.6 (0.5-5.8)  | 0.154      |
| 14 | Mood change<br>Anxiety or fear OR feeling of<br>depression   | 12 | 2.5 (1.4-4.3)  | 8  | 2.2 (1.1-4.4)  | 4 | 3.3 (1.3-8.1)  | 0.512 (F*) |

EMS= Emergency Medical Services, Cl=Confidence Interval, IV= Intravenous, CRP= C-Reactive Protein

F\* Fischer's exact test was used for statistical analysis due to expected count being <5.

## References:

1. Wallgren UM, Bohm KEM, Kurland L. Presentations of adult septic patients in the prehospital setting as recorded by emergency medical services: a mixed methods analysis. Scand J Trauma Resusc Emerg Med. 2017;25(1):23.

<sup>\*</sup>for comparison between EMS and non-EMS patients. P-values are presented without adjustment for multiple comparisons. In total 18 tests were performed. Bonferroni-adjusted significance level is 0.05/18=0.0028. P-values indicating significant differences after adjustment for multiple comparisons by Bonferroni correction are bolded and considered significant in the current study.