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Sepsis

Guidelines (V0001Sep2023)

المظلة هيلثكير مانجمنت
ALMADALLAH
HEALTHCARE MANAGEMENT

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A life-threatening organ dysfunction, caused by dysregulated host response to infective or non-infective cause.

1 Medical Evaluation:

A-SIRS: 2 or more:
T>38C or <36C, Heart rate :>90 BPM, Tachypnea:>20breathperminute, WBCs: >12 K /dl

B-Sepsis:
(SIRS + suspected/confirmed infection).
(procalcitonin, LDH, CRP, WBCs count, IL-6, TNF alpha, other bacterial specific anti-toxin, ...)
Will respond to volume support (250ml bolus, correction of arterial blood pressure)

C-Severe Sepsis:
(sepsis + hypotension +/- increased lactate) (correctable with 30ml/kg body weight)
Non-adequate response to bolus treatment, correctable end organ damage:
-hypotension (SBP <90, MAP <65, drop of SPB more than 40mmHg from initial)
-signs AKI (increasing Sr Cr. Of urine output less than0.5 ml/kg/hr.
-signs of liver failure : bilirubin >2.0 mg/dl , INR >1.5 , PTT >60 sec.
-platelet <100 K count, lactate >2 mmol in labs.

D-Septic shock :
-confirmed severe sepsis + end organ damage + failure to respond to IV fluid management +/- need for vasopressor management.

Hospital Acquired Infection:

Criteria could be considered in HAI:

1-multiresistance bacteria as per Culture and sensitivity report.

2-type specific organism (pseudomonas , candida , Enterobacteriaceae, Klebsiella pneumonia).

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Sepsis

3 Intial infection workup (admission +/- first 3 days) negative workup.- excluding long incubation period bacteria-.

4 Collection site: wound site infection, tracheal sampling, urinary Cath. sample, chest infection -pneumonia, central venous Cath. Sample)

5 Increasing inflammatory markers that is not related to initial admission illness.

6 Increasing level of care (extension of stay, mechanical ventilation, antibiotic management ..etc), which is not in line with initial admission cause/etiology.

2 Coding (Sepsis) 3M :

Initial coding for sepsis : A41.9 : to be coded, confirmation of sepsis diagnosis as per above, (high or increasing procalcitonin, positive blood cultures) are of main confirming elements for A41.9.

Despite that negative blood culture does not exclude sepsis diagnosis.

A41.9 can be coded as primary diagnosis if sepsis was documented on admission or within initial workup after admission (DRG coding PDX as A41.9 , secondary will be confirmed /suspected infection e.g. pneumonia, URTI , UTI).

A41.9 should not be coded as Primary diagnosis, and could be coded as secondary in case of confirmation of diagnosis A41.9 after admission (day 3 and after wards).

Initial admission with no sepsis, then patient developed sepsis after words during the course of hospitalization.

In case of A41.9 coded as secondary, primary diagnosis should be assigned to suspected/ confirmed infection

Hospital acquired infection should be excluded for coding /billing of A41.9.

R65.2 is assigned for severe sepsis, the code R65.2 is always secondary diagnosis, (R65.2 NEVER primary), and subject to confirmation as per above medical notes and evaluation.

R65.2 requires at least 2 codes: primary underlying systemic infection , then R65.2 as 2ry code. - coding of end organ dysfunction can be added if documented as per secondary diagnosis rules.

Sepsis due to A post procedural infection

Code identifies the site of infection SHOULD be coded first, e.g. (T81.40, to T81.43 Infection following a procedure, or a code from O86.00 to O86.03, Infection of obstetric surgical wound).

Sepsis codes are present to sepsis following procedure e.g. (T81.44 / O86.04).

Sepsis associated with non-infectious conditions (e.g. burn , serious injury) the code for the non-infectious conditions should be primary -if meeting the criteria – and followed by coding of resulting infection.

If both codes meet the criteria for primary coding (either codes could be assigned, hence revision of DRG cost as per primary codes, and approve s per cost/effectiveness parameters).

Severe sepsis + end organ dysfunction: if end organ dysfunction is not documented due to sepsis (R65.2 not justified for coding).

Septic shock: codes for septic shock e.g. R65.21 , T81.12) NEVER to be coded as primary codes.

coding of end organ dysfunction can be added if documented as per secondary diagnosis rules.

Code O85 is assigned for puerperal sepsis and code for causative organism should be assigned.

Code O85 should not be coded pot Obstetrical procedure .

Reading reference:

1. Tachypnea - StatPearls - NCBI Bookshelf (no date). Available at: https://www.ncbi.nlm.nih.gov/books/NBK541062/ (Accessed: March 31, 2023).
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3. Andre Kalil, M.D. (2022) Septic shock, Practice Essentials, Background, Pathophysiology. Medscape. Available at: https://emedicine.medscape.com/article/168402-overview (Accessed: March 31, 2023).
4. Kamran Boka, M.D. (2022) Systemic inflammatory response syndrome (SIRS), Background, Pathophysiology, Etiology. Medscape. Available at: https://emedicine.medscape.com/article/168943-overview (Accessed: March 31, 2023).

Sepsis

System	0	1	2	3	4
Respiration PaO2/FiO2, mmHG (Kpa)	>400 (53.3)	<400 (53.3)	<300 (40)	<200 (26.7) with respiratory support	
Coagulation Platelet,*103/ul	>150	<150	<100	<50	<100 (13.3)with respiratory support
Liver Bilirubin, mg/dl (umol/L)	<1.2(20)	1.2-1.9 (20-32)	2.0-5.9 (33-101)	6.0-11.9(102-204)	>12.0 (204)
Cardiovascular	MAP >70mmHG	MAP<70mmHG	Dopamine <5 or dobutamine (any dose)	Dopamine 5.1-15 or epinephrine <0.1 or norepinephrine <0.1	Dopamine >15 or epinephrine >0.1 or norepinephrine >0.1
CNS \GCS score	15	13-14	10-12	6-9	<6
Renal Creatnine, mg/DL(umol/L) Urine out put ,ml/D	<1.2(110)	1.2-1.9 (110-170)	2.0-3.4 (171-299)	3.5-4.9 (300-440) <500	>5.0 (440) <200

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The Sequential Organ Failure Assessment (SOFA) score.