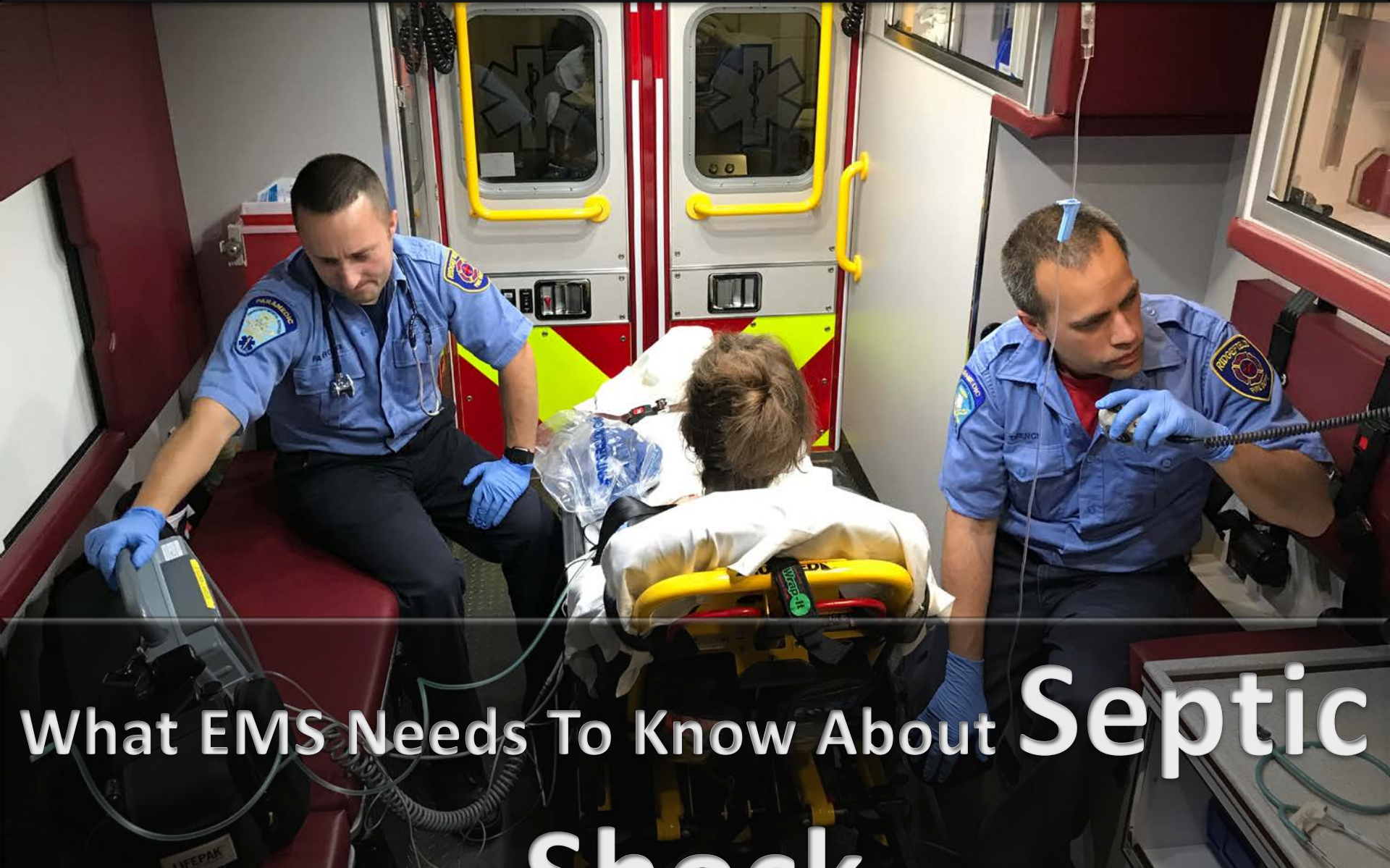


New Criteria for Sepsis



What EMS Needs To Know About **Septic**
Shock

lancet puncture to confirm the diagnosis of meningitis. The lancet puncture should generally be considered a

lancet puncture, unless previous problems exist or the child is very ill. The

Risks of Procedure. When stable patients are treated, the serious risks of the procedure are minimal. However, but serious complications should not diminish the physician from examining the cerebrospinal fluid. Lumbar pain may be abolished with the use of an anesthetic agent. Particular puncture asepsis is managed by restricting the sampled fluid volume to 3 ml and

Suspected Nosocomial Origin. Bacterial infections must be considered most strongly in the differential diagnosis of an infant less than 4 weeks of age who is not doing well. Current practice advocates that the probability of well. Current practice advocates that the probability of a serious bacterial infection is to be considered and excluded with an 18-gauge needle. The use of an 18-gauge needle is associated with an increased risk of infection. The use of an 18-gauge needle is associated with an increased risk of infection. The use of an 18-gauge needle is associated with an increased risk of infection.

For their poor prognosis. When the history or physical examination gives no obvious clue to the source of an infection given to a child who appears well with an apparent source of infection, a lumbar puncture should be considered.

Final Infections with Peripheral Swelling. Partic

infections, pneumonia, meningitis, and sepsis have been described in association with increased infections. Establishing an apparent infection

Increasingly Toxic Child with Previously Negative Lumbar Puncture. When there are no obvious clues to

may change from normal respiratory to marked pleuro-pneumonia within as little as 30 minutes. A re-examination of the cerebrospinal fluid may be invaluable in establishing the nature of an acutely intracranial infection. Children with infectious meningitis may be treated with antibiotics. Children with meningitis and bacteremia species. Children with an unexplained fever who have a recently confirmed bacteremia or those with a documented intracranial focus of infection associated with bacteremia should undergo a repeat clinical assessment, repeat blood cultures, and lumbar puncture before the initiation or continuation of therapy.

Febriile Illness Following Intimate Contact. The

epidemiology for all family members and contacts of a child with meningitis should be considered. The use of prophylactic therapy to prevent secondary cases. A secondary case has been reported in up to 1% of household members who have had intimate contact. Rifampin, the current drug of choice to minimize spread, which typically covers within 1 days of the index case. Similarly, prophylactic therapy with rifampin is recommended for household members, and day care center contacts of an individual with invasive *Haemophilus influenzae* type b infection. Secondary spread is infrequent among household members who have contacts less than 4 years of age. Secondary cases may occur up to 1 month following the index case.

Prophylaxis may not be uniformly effective. There are all individuals who have prolonged and close physical contact with patients with either *H. influenzae* type b or *Neisseria meningitidis* who develop a febrile illness should have prompt medical evaluation. Strong consideration should be given to the possibility of positive disease in these situations.

Febriile Illnesses. The issue is on the physician to a child an intracranial infection when presented with a febrile illness has been accompanied by a

febrile illness. The issue is on the physician to a child an intracranial infection when presented with a febrile illness has been accompanied by a febrile illness. The issue is on the physician to a child an intracranial infection when presented with a febrile illness has been accompanied by a febrile illness.

the vast majority of cases, with the central nervous system may be excluded. History and physical examination of children less than 4 years of age. With this age group a lumbar puncture may be an unnecessary diagnostic procedure. **Mental Rigidity.** A lumbar puncture to a child who has rigidity of neckal rigidity is present in a child who has meningitis. Many clinicians are taught that a lumbar puncture should be performed in any child in any case who has meningitis, regardless of the child's clinical appearance. However, upper limb proprioceptive deficits, orthopedic abnormalities, joint contractures, osteomyelitis, meningitis, and other conditions may be associated with neckal rigidity. When neckal rigidity is established in a child who is not ill other manifestations of an intracranial infection and other conditions regarding the need for a lumbar puncture are acceptable. If there is any concern that bacterial meningitis is a reasonable possibility, then a lumbar puncture should be performed.

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Paternal Risk. Treatment and prognosis can be the result of unexplained factors, unexplained meningitis, and bacteremia disease. When the meningitis is infectious the prognosis can be determined only in the blood stream or when the meningitis is meningitis. Lumbar puncture may be necessary to exclude meningitis from the differential diagnosis.

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The body's overwhelming and life-threatening *response* to infection which can lead to tissue damage, organ failure, and death.

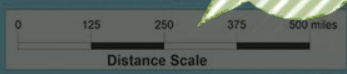
Sepsis is Common

For every 4 Heart Attack

Patients cared for by EMS

10 Pts are hospitalized w/

Severe Sepsis



Sept 13

CANADA

Costly

750,000 Cases annually



at a cost of over

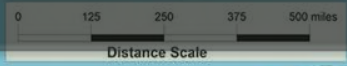
\$20 Billion in the US alone.

PACIFIC OCEAN

ATLANTIC OCEAN

Increasing 11.9%

Annually!



MEXICO

Sepsis is

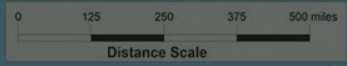
CANADA

Deadly



Mortality from Sepsis is 25-30%

Septic Shock is 40-70%



What Goes Wrong?



Failure to identify Sepsis
Failure to call Sepsis Alert

What's the Goal?



Learn your **ABC's**

Use Patient's **CHART**

Be a **Patient Advocate**

EMS

Proper identification of
Sepsis decreased TTT

30-60 minutes *and*

improved mortality

The Point

Infection + Bad Vitals = Sepsis

Sepsis + Shock = Septic Shock

Патристы

у



Рационалы

у



Рационалы

у



Патристы

у





SISEPSSIS

Sepsis Progress



Acquired
Infection



Load Vessel
Problems



Follow the Patient's

C
H
A
R
T



CHART

A hand holding a pen writing on a clipboard with a patient chart form. The chart form is a medical history and physical examination form, with sections for Chief Complaint, History of Present Illness, Past Medical History, Social History, Family History, and Physical Examination. The form is held by a hand, and another hand is holding a pen, writing on the form. The background is a blurred clinical setting.

Complaint

History

Assessment

Red Flags

Treatment

CHART

Complaint

History

Assessment

Red Flags

Treatment



Sepsis



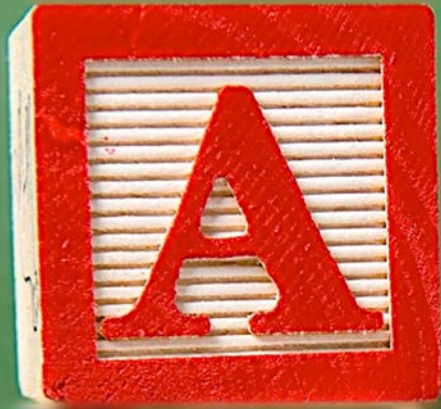
Acquired
Infection



Load Vessel
Problems



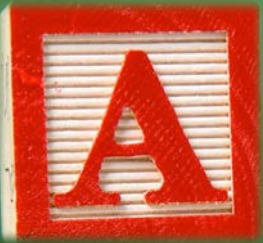
Sepsis



Acquired

Infection





quired
Infection

Complaints

NOT an infection

Infection or sepsis related

CHART



Complaint

History

Assessment

Red Flags

Treatment

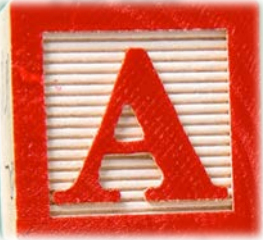


quired
Infection

History

NOT an infection

Infection / sepsis related



Acquired

Very Young & Very Old

Recent Trauma or Surgery

Recent Delivery

Breaches of Skin: Burns, IVDA

Indwelling Catheters

Impaired Immunity

Comorbidities



CHART

A hand holding a pen is writing on a clipboard. The clipboard has a patient chart form attached, which includes sections for 'Complaint', 'History', 'Assessment', 'Red Flags', and 'Treatment'. The background is a blurred clinical setting.

Complaint

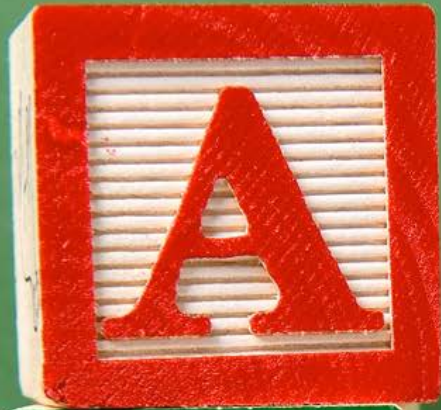
History

Assessment

Red Flags

Treatment

Sepsis



Acquired
Infection



blood Vessel
Problems



Sepsis



lood Vessel
Problems

Blood Vessel Problems

Assessment

Mental Status

Shows clinical distress?

lood Vessel Problems

Assessment

AMS

GCS <12 or Change >3

Rapid deterioration

Blood Vessel Problems

Assessment

Physical Exam

Shows clinical distress?



Blood Vessel Problems

Assessment

Physical signs of infection

Non-blanching rash

Edema

Urine Out <1 ml/kg/hr

lood Vessel Problems

Assessment

Vital Signs

Shows clinical distress?



Blood Vessel Problems

Assessment

Pulse Rate

Blood Pressure


Capillary Refill Time

SpO₂ <94%

etCO₂ <32

MAP <65

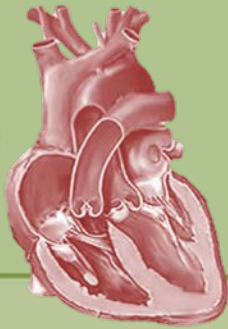
Temp High or Low



Complaint
History
Assessment
Red Flags
Treatment

The qSOFA

Quick Sequential (sepsis-related) Organ Failure Assessment



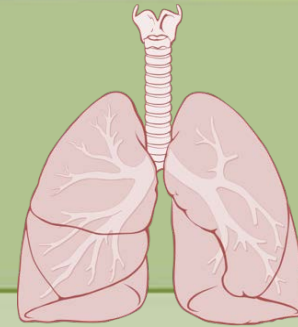
Hypotension

Sys. BP < 100 mm/hg



Altered Mental Status

GCS < 13



Tachypnea

RR > 22 min.

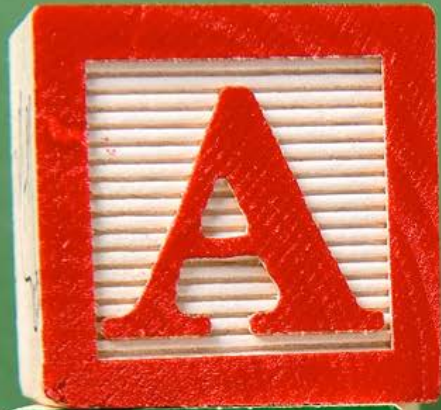
Two or more suggests a risk of poor outcome

H A T

SEPSIS ALERT



Sepsis



Acquired
Infection



blood Vessel
Problems



Sepsis



irculatory
Collaps

CHART

A hand holding a pen is writing on a clipboard. The clipboard has a patient chart form on it. The form has various sections and fields, some of which are filled with text. The background is blurred, showing what appears to be a hospital or clinic setting.

Complaint

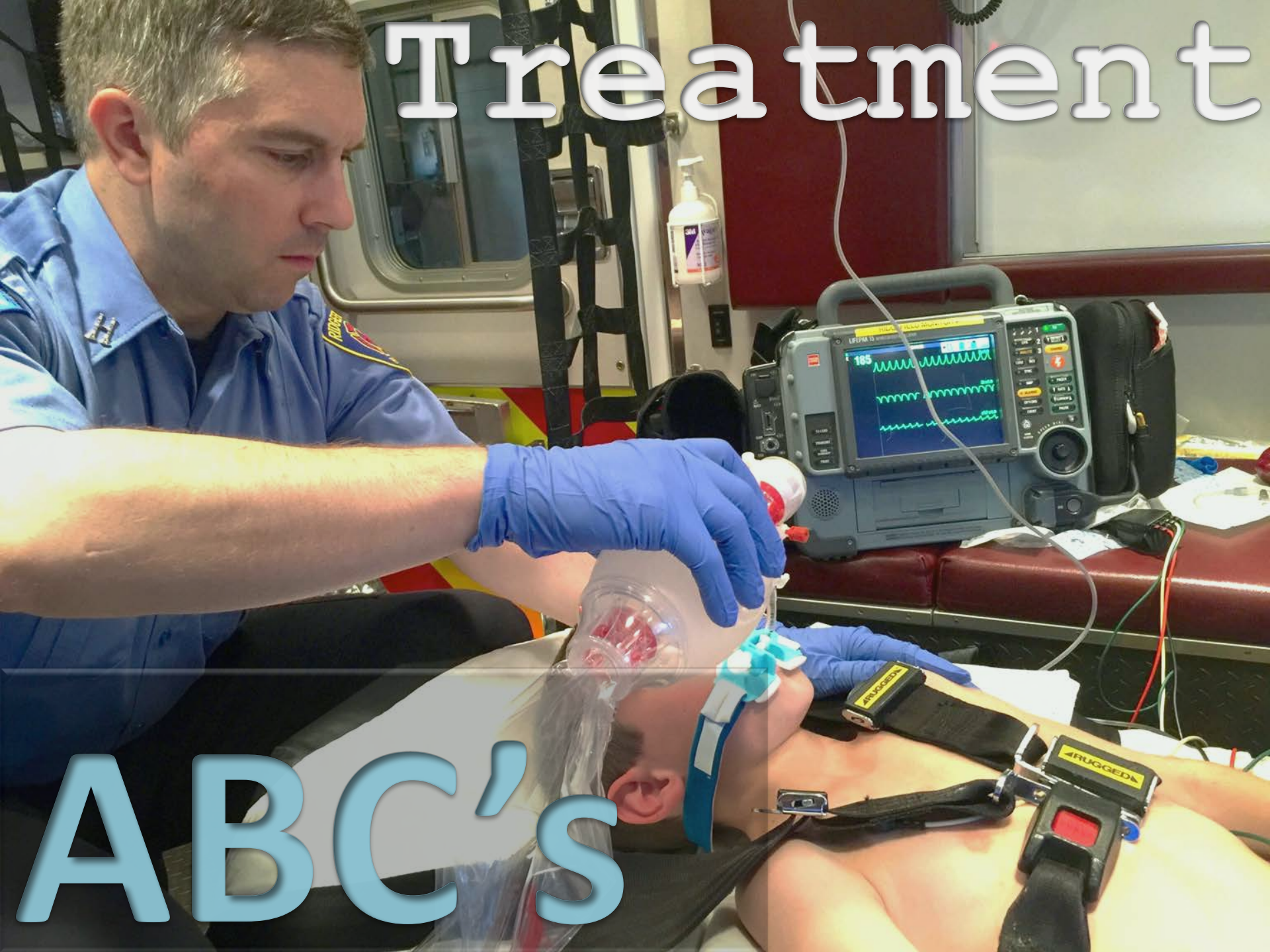
History

Assessment

Red Flags

Treatment

Treatment

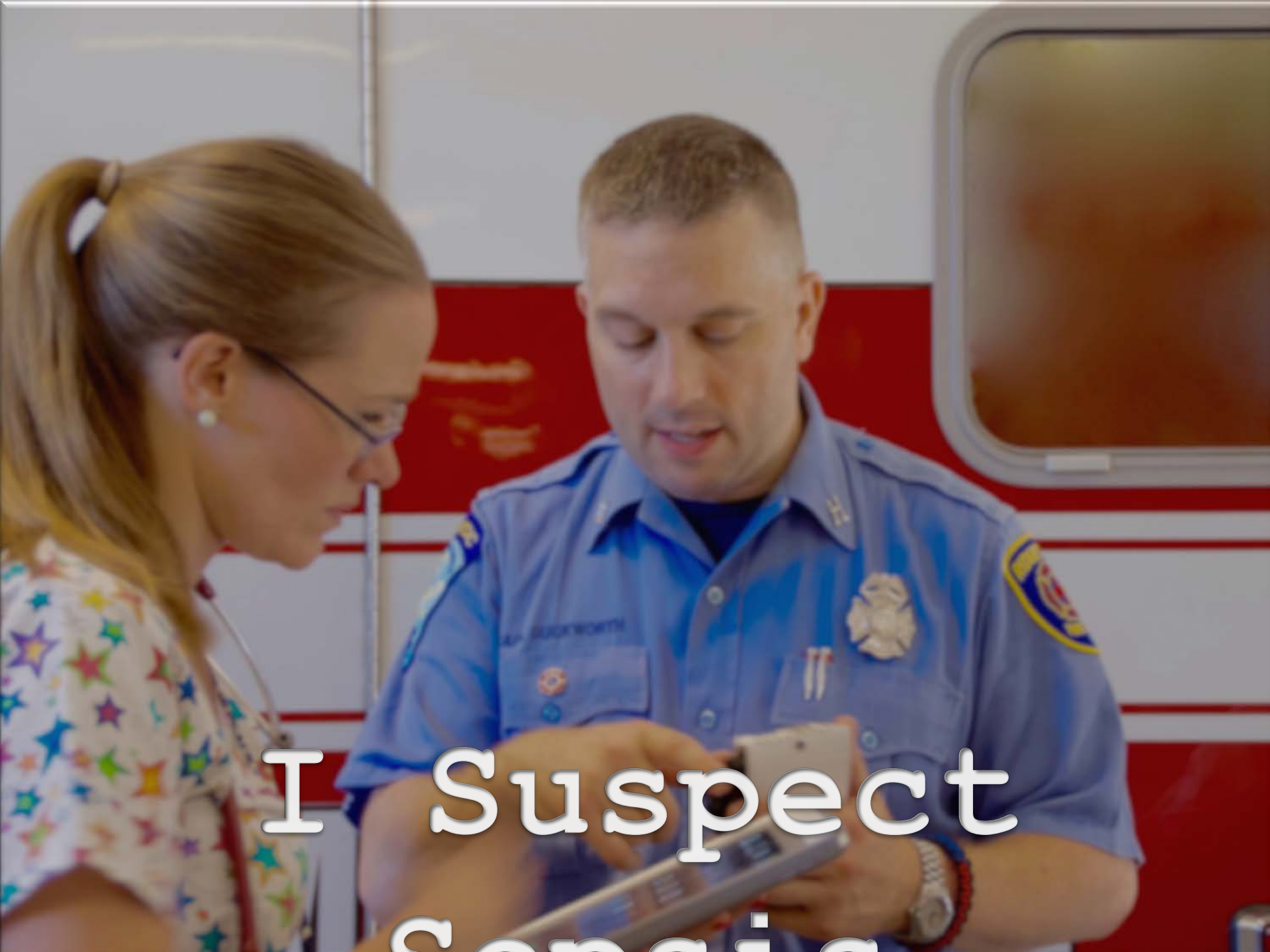


ABC'S



Patient Hand

Off <http://www.flickr.com/photos/59553414@N05/5524668944/>



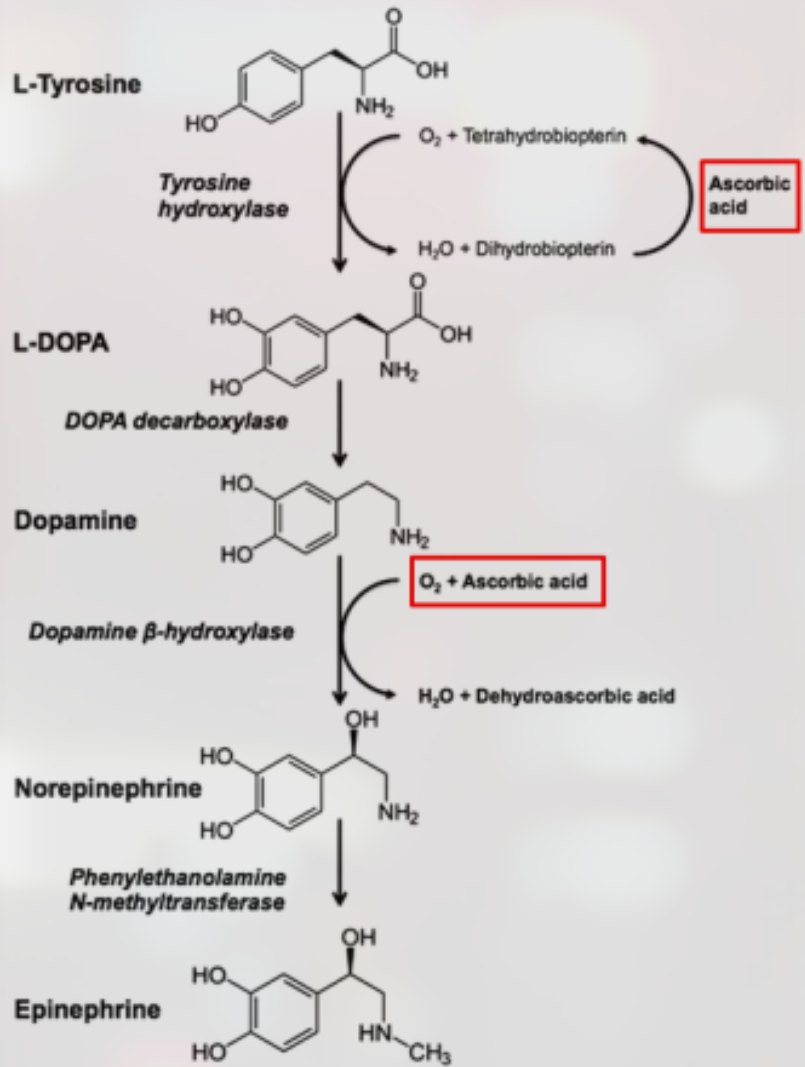
I Suspect
Conjia

The Sepsis Cocktail



Vit. C 1.5g IV q6h
Hydrocortisone 50 MG IV q6h
Thiamine 200mg IV q12h

Vitamin C is required to synthesize catecholamines



Sepsis



Acquired
Infection



lood Vessel
Problems



CHART

A hand holding a pen is writing on a clipboard. The clipboard has a patient chart form on it. The form has several sections with headings like 'Complaint', 'History', 'Assessment', 'Red Flags', and 'Treatment'. The background is a blurred clinical setting.

Complaint

History

Assessment

Red Flags

Treatment

What You Can Do!



Learn your **ABC's**

Use Patient's **CHART**

Be a **Patient Advocate**



Be Heard
Spread the

Word
Unrecognized

***Sepsis
Kills!***



Join Me On Twitter:

@romduck

@RescueDigest



Contact Me:

www.RomDuck.com



Resources:

www.bit.ly/PedSepsisEMS

www.RescueDigest.com