

The 45 minute rule is gone. The antibiotic still goes first.

In 2021 the guideline printed a figure for how long a culture draw may hold the antibiotic, in the rationale under recommendation 11: draw cultures first only where that causes no substantial delay in the start of antimicrobials, under 45 minutes. In 2026 the figure is gone and a rule stands in its place, and this chapter is written on 2026. This is the whole sepsis chapter of the book with nothing taken out: the first six hours as five moments on one page, the card on page 7 that says which drugs the guideline doses and which it only names, ten chart lines with a worked day 3 review on page 8, and six things the 2026 panel says not to do, each with its recommendation number.

One chapter of nine. Free, no email, nothing held back.

Tonight's next admission is probably not sepsis. The paid file has the other eight chapters, built the same way as this one: pneumonia, AF with RVR, hyperkalemia, hyponatremia, DKA and HHS, COPD, asthma, and pain and opioid safety. Three of the nine guidelines changed edition in 2026, sepsis, COPD and asthma, and the book is written on the new ones. It adds a **phone edition** of all nine rebuilt on a page the size of a phone screen so the type reads larger in your hand rather than shrunk to fit, and **note-lines.txt**, every chart line in the book in plain text, loaded into Epic or Cerner once so it costs you nothing at three in the morning. Three files, \$29 once, every later edition free. Thirty day refund, no questions asked, and you keep the files. Written by a practicing clinician, thirteen years in.

theattending.net/go/notes

The first hours, five decisions

The 2026 guideline is written as scores of numbered recommendations. On a shift it is five moments. This page is the whole chapter; the rest is detail.



On recognition

Recognise. Blood cultures as soon as possible, ideally before antimicrobials. Strong.

Hour 1

Antimicrobials immediately for any septic shock, and for probable or definite sepsis. Strong, both.

Hour 3

At least 30 mL/kg crystalloid for sepsis induced hypoperfusion or septic shock, conditional. And for possible sepsis without shock, the drug by now, or a written reason it was deferred.

After the acute phase

Take the fluid back off. New in 2026, and the one direction this edition adds to day two.

Every day after

Shorter over longer. De escalate on the culture.

THE NUMBER THAT LEFT THE GUIDELINE

The 2021 edition put a figure on how long a culture draw may hold the antibiotic, in the rationale it prints under **recommendation 11**: draw cultures first only where that causes **no substantial delay in the start of antimicrobials, under 45 minutes**. The 2026 edition prints no figure here. It prints a rule instead: collect blood cultures as soon as possible and ideally before antimicrobials, but do not let that delay the start, **particularly in a hypotensive patient**. The cost of drawing late is measured, not guessed, and the 2026 blood culture rationale prints it: in 325 emergency department patients with sepsis induced hypotension or hypoperfusion, culture positivity fell from **31.4 to 19.4 percent** at a median **70 minutes** after the first dose.

Cultures, lactate, and the question before the drug

BLOOD CULTURES, RECOMMENDATION 7, NEW

Collect as soon as possible and ideally before antimicrobial therapy. **Strong recommendation, low certainty.** A pathogen is identified in about **60 to 70 percent** of patients with sepsis, yet blood cultures are positive in only about **10 to 20 percent**. Generally two different sites, **10 mL per tube**; sensitivity for bacteremia rose from **91.5 to 99.3 percent** with two sets rather than one. Repeat cultures to confirm clearance for *Staphylococcus aureus*, *Staphylococcus lugdunensis* and *Candida*. A single set can be justified where resources are short.

Lactate, recommendation 8, carried over

Measure it Suggested, **conditional recommendation on low certainty.** The panel carried the 2021 statement over rather than restating its rationale.

2 mmol/L 4 mmol/L or more was historically the threshold for fluid resuscitation. Elevation above 2 and below 4 is common, is associated with increased mortality, is consistent with the lactate threshold for the Sepsis 3 definitions of septic shock, **over 2 mmol/L**, and may also benefit from resuscitation.

Hypoperfusion Identified by hypotension, for example MAP under **65 mmHg**, systolic under **90 mmHg**, or a pressure markedly below a known baseline, or by an elevated lactate.

THE QUESTION THE PANEL PUTS BEFORE THE ANTIBIOTIC

For possible sepsis without shock, perform a rapid assessment of infectious versus non infectious causes of the acute illness. That is a good practice statement, recommendation 19. And when the likelihood of infection is **low** and there is no shock, recommendation 20 suggests **deferring** antimicrobial therapy while continuing to monitor closely. Conditional, very low certainty.

SCREENING: WHICH TOOL, AND THE ONE IT TELLS YOU NOT TO USE ALONE

Recommendation 4, revisited in 2026. Strong, moderate certainty: in acutely ill patients in hospital, use **NEWS, NEWS2, MEWS or SIRS over qSOFA** as a single tool to screen for sepsis. The reason is sensitivity, not principle: in a cohort of over 221,000 patients NEWS2 had the greatest sensitivity and specificity of the four and qSOFA the lowest, and a positive qSOFA still raises the possibility of sepsis in any setting. It is ruled out as the **only** tool, not as a tool.

Recommendation 3, new in 2026. Conditional, very low certainty: en route to hospital by ambulance or flight, use a standard screening tool over using none.

Thirty per kilo, and which kilo

30 mL/kg

At least this much IV crystalloid in the first 3 hours, for sepsis induced hypoperfusion or septic shock. Recommendation 10, and read the grade: **conditional recommendation, low certainty evidence**. A survival benefit was seen when the volume was completed within 3 hours, on low certainty.

Which kilo

Changed. Calculate on **actual body weight**, or on adjusted or ideal body weight when the body mass index is above 30. The 2016 figure the **2021** edition carried was ideal body weight. Adjusted body weight here is ideal plus 0.4 times the difference between actual and ideal.

Not a ceiling

Consider the individual patient and the context when choosing the initial volume, reassess frequently, and monitor for the harms of both under and over resuscitation. Fluid related harm generally appears at far larger volumes, above **50 mL/kg**.

Read the verb

This edition suggests administering **at least** 30 mL/kg. The European society guideline it names suggests administering **up to** 30 mL/kg. Same number, opposite direction, and the panel says so in the text.

Which fluid, and day three

2021: crystalloid first line, balanced over saline, albumin after large volumes, no starch, no gelatin. Enteral nutrition and goals of care within 72 hours.

AFTER THE BOLUS, WHAT GUIDES YOU

Serial lactate measurements, recommendation 51, conditional on low certainty. Capillary refill time as an adjunct to other measures of perfusion, recommendation 52, conditional on low certainty.

AND WHAT DOES NOT

The remark attached to recommendation 51 is the point of it: individualise fluid after the initial bolus and watch the lactate fall, **rather than continuing fluids until the lactate normalises**.

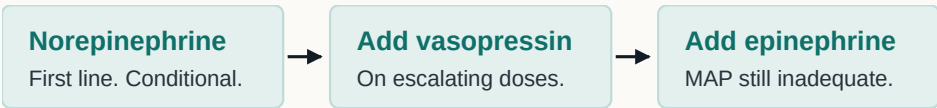
RECOMMENDATION 89, NEW, AND THE REASON THIS PAGE IS NOT OVER AT HOUR 3

After the acute resuscitation phase, **active fluid removal** is suggested in septic shock. Conditional, very low certainty. The panel defines both terms rather than leaving them to you. **Acute resuscitation** means escalating vasopressor doses, ongoing high doses, or a continuing need for volume expansion. **Active fluid removal** means diuretics, and ultrafiltration or extracorporeal removal if diuretics are not enough. What it says to weigh: cardiorespiratory function, vasopressor dose, clinical course, peripheral edema, weight, and fluid balance.

Sixty five, and the two edits to it

- MAP 65** Initial target over higher targets, recommendation 13. **Strong recommendation, moderate certainty**, and the strongest grade on this page.
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- Within 5** **New remark.** Holding a MAP at exactly 65 is not feasible in practice, so use a reasonable range, within about 5 mmHg, and titrate vasopressors to stay inside it.
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- 60 to 65** **New recommendation 14.** For adults **with septic shock** 65 years old or older, an initial range of 60 to 65 mmHg over higher ranges. Conditional, low certainty. In the trial behind it, ninety day mortality was similar, **41.0 against 43.8 percent**, with less vasopressor exposure; in the guideline meta analysis restricted to that age, the lower target was associated with reduced mortality, risk ratio **0.89**, high certainty.
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The ladder, recommendations 55 to 58



Norepinephrine first line **over vasopressin or angiotensin II**, conditional. Adding vasopressin is the better graded step, conditional on **moderate** certainty; adding epinephrine is conditional on very low. Where vasopressin is not available, epinephrine can be added to norepinephrine alone. No dose is printed for any of the three: the dose card on page 7 says who holds each number.

START PERIPHERALLY

Start vasopressors peripherally rather than delaying until central access is secured, which the 2026 panel suggests in those words, in line with the 2021 edition. The three figures that follow are from the 2026 peripheral vasopressor rationale. Across 7 studies and 1657 patients the pooled complication rate was **5.97 percent**, on very low certainty. Of the panel, **86.6 percent** use a peripheral vasopressor at least sometimes, and of those, **46.6 percent** use one for up to 6 hours. The 2021 remark keeps two limits: **only for a short period of time**, and **in a vein in or proximal to the antecubital fossa**. 2021 also prints the reason, not restated in the 2026 passages read: in a meta analysis, **85 percent** of extravasation events occurred with a catheter distal to it.

NEW: WHEN THE HEART IS THE PROBLEM TOO

With concomitant cardiac dysfunction, recommendation 58 suggests **either norepinephrine or epinephrine** as the first line agent. Norepinephrine may be preferred with tachyarrhythmia or marked sinus tachycardia, epinephrine with bradyarrhythmia or marked sinus bradycardia. For persistent hypoperfusion despite adequate volume and pressure, recommendation 61 **suggests** adding **dobutamine** to norepinephrine or using epinephrine alone, **conditional, very low certainty**. Give an inotrope **in addition to** a vasopressor, never instead of it. Dobutamine versus milrinone: data were insufficient.

Four doors, three clocks

This is where the 2026 edition is furthest from a single rule for everyone. The clock is set by how sure you are, and by whether there is shock.

WHICH PATIENT	WHEN, AND HOW STRONGLY
Septic shock, possible, probable or definite	Immediately, ideally within 1 hour of recognition. Recommendation 16. Strong, on very low certainty.
Sepsis without shock, probable or definite	Immediately, ideally within 1 hour of recognition. Recommendation 17. Strong, on very low certainty.
Sepsis without shock, possible	A time limited course of rapid investigation first; if concern for infection persists, within 3 hours from when sepsis was first suspected. Recommendation 18. Conditional.
Low likelihood of infection, no shock	Defer and keep monitoring closely. Recommendation 20. Conditional. Recommendation 19 makes the rapid assessment itself a good practice statement.

STOPPING, AND WHAT DECIDES IT

Shorter over longer with adequate source control, recommendation 39, conditional on very low certainty. The trial new since 2021 is BALANCE, **7 against 14 days** for bloodstream infection, 7 days non inferior. Where the duration is unclear, recommendation 40 suggests **procalcitonin and clinical evaluation together** to decide when to stop.

THE SAME TEST, THE OTHER DIRECTION

To decide whether to **start**, the panel suggests **clinical evaluation alone** over procalcitonin plus clinical evaluation. Conditional, very low certainty. One assay, opposite advice at the two ends of a course: read which end you are at before you order it.

DE ESCALATION

Recommendation 36, strong: de escalate once **a confirmed microbiological diagnosis and susceptibility profile** is available. **Recommendation 37, conditional:** de escalate when **no pathogen is identified on final cultures**. Both very low certainty.

CHOOSING THE DRUG: WHAT 2026 DECIDES, AND WHAT IT HANDS TO SOMEONE ELSE

2026 decides two of these itself. Recommendation 33, strong, moderate certainty: after a loading dose, run beta lactams by **prolonged infusion**, extended over at least half the dosing interval or continuous, rather than a bolus of 30 minutes or less. **Recommendation 27, conditional against, low certainty:** do **not** start empiric **antifungal** therapy in every adult; consider it case by case where fungal risk is high. **The rest it hands away:** empiric **MRSA** cover and how many **gram negative** agents to run are agent selection, which 2026 places **beyond its own scope** and refers to the ESCMID and IDSA guidelines on resistant pathogens. **2021** printed a rule for both; 2026 did not restate it and this page prints neither, so the risk factor in chart line 3 comes from your antibiogram and those guidelines, not from here. No antimicrobial dose is printed in this chapter; the dose card on page 7 names who holds it.

Where each number actually lives

CORTICOSTEROIDS IN SEPTIC SHOCK

Every figure in this card is from the 2026 corticosteroid rationale. **No recommendation number is printed for steroids**, because our copy of the 2026 text does not carry the numbered box and we do not print a number we have not read. **Conditional**, favouring IV corticosteroids, both sides as risk ratios. Shock reversal at 7 days **1.29**, 1.13 to 1.46, **high certainty**. Against it: hyperglycemia 1.19, 1.10 to 1.28, hyponatremia 1.64, 1.32 to 2.03, moderate certainty, neuromuscular weakness uncertain, 1.13, 0.48 to 2.65, very low certainty. Sepsis without shock 1.09, 0.91 to 1.31, subgroups the panel calls **underpowered**.

THE DOSES THIS SOURCE DOES NOT PRINT, AND WHO HOLDS THEM

WHAT YOU WANT	WHAT THE 2026 TEXT ACTUALLY GIVES YOU
Hydrocortisone, the one milligram figure 2026 prints	No added benefit above 260 mg a day of hydrocortisone or equivalent. ADRENAL, the largest trial, used 200 mg IV for 7 days . Of steroid users on the panel, 90 percent prescribe 200 mg per 24 hours, 86 percent in intermittent doses.
Vasopressin, and when	No vasopressin dose, only the norepinephrine dose at which the panel adds it: median 0.3 mcg/kg/min , interquartile range 0.2 to 0.5. The 2021 edition described a fixed 0.03 units/min; the 2026 text read here does not.
Epinephrine, and when	Again a norepinephrine dose, not an epinephrine one: median 0.8 mcg/kg/min , interquartile range 0.5 to 1.0.
Every antimicrobial, and norepinephrine itself	Named with no dose. The current label, and your pharmacist for the renal adjustment.

CARRIED FROM THE 2021 EDITION

NAMED AS SUCH, BECAUSE 2026 DID NOT RESTATE IT HERE

Steroid trigger	2021: 200 mg IV a day, as 50 mg every 6 hours or by infusion. A remark under a weak recommendation, not a gate : suggested at norepinephrine or epinephrine 0.25 mcg/kg/min or more, at least 4 hours after initiation . 2026 prints no starting threshold . It makes a conditional recommendation favouring IV corticosteroids in septic shock, its certainty grade not printed here for the reason given above, and leaves the trigger to you. Panel practice: 34 percent start below 0.2, 38 percent 0.2 to 0.3, 28 percent above.
Glucose and blood	2021: start insulin at 180 mg/dL or above, then target 144 to 180 mg/dL . Restrictive transfusion at 70 g/L, but not on haemoglobin alone : weigh acute myocardial ischaemia, severe hypoxemia, acute haemorrhage.
Lung	2021, recommendation 49: in sepsis induced ARDS , low tidal volume 6 mL/kg over more than 10 mL/kg. Strong, high quality evidence . Plateau pressure 30 cm H2O or less, and prone positioning more than 12 hours daily in moderate to severe ARDS.

The one ventilation number 2026 does print: lower tidal volumes of **6 to 8 mL/kg** of ideal body weight for sepsis induced hypoxemic respiratory failure **without ARDS**.

Ten lines the guideline does not give you

Before any of these enters a record. They are prompts, not attestations. Delete any line for something that did not happen. A line you leave in is a line you are signing. A field with no answer is written as not assessed, with the reason. Do not paste any line unchanged.

What line 3 records. Two separate times, when sepsis was recognised and when the first dose ran, are known at the bedside and cannot be reconstructed from a note timestamp later. Write both, not the interval.

1 Recognition. Sepsis suspected [time]. Suspected source [site, or none identified]. Lactate [value, or not measured because], repeat planned [time, or none planned].

2 Cultures. Blood cultures drawn [time, or not drawn because], [before or after] antimicrobials, [n] sets from [n] sites.

3 First dose. [drug] given [time], [n] minutes from recognition, or no antimicrobial given by [time] because [reason]. MRSA cover [included, not included, or not applicable] because [risk factor, or its absence].

4 Fluid. [n] mL crystalloid by [time, or under 30 mL/kg because], which is [n] mL/kg of [actual, adjusted, or ideal] body weight. Further fluid guided by [serial lactate, capillary refill, or neither].

5 Pressor. [Norepinephrine, or epinephrine because of cardiac dysfunction] started [time, or no vasopressor started because] for MAP under [target, or no target set] after [n] mL/kg. Peripheral line at [site, or no peripheral line because]. Central line [planned by time, or not planned because].

6 Second agent. [Vasopressin, epinephrine, or no second agent because] at norepinephrine [dose], time [time]. Reason [reason].

7 Source. Source [site, or none identified]. Plan [procedure] by [time, or no source control because]. Method chosen because [reason].

8 Steroid. Hydrocortisone started [time, or withheld because] at norepinephrine [dose] running [n] hours. Then [n] mg per 24 hours, [intermittent or continuous].

9 Daily review. Antimicrobials reviewed [date, or not reviewed today because]. Cultures [result, or none back yet]. Narrowed to [drug], or continued because [reason]. Planned stop [date, or no stop date set because].

WRITTEN OUT · DAY 3, ANTIMICROBIAL REVIEW

Day 3, 08:40. Antimicrobials reviewed at the bedside. Blood cultures drawn 03:10 on day 1 growing *Escherichia coli* susceptible to ceftriaxone, urine the same organism. Meropenem stopped and narrowed to ceftriaxone at 08:55. Source urinary, obstruction excluded on the day 1 imaging. Planned stop day 7, matching the shorter arm of the 7 against 14 day bloodstream infection trial this edition names.

An invented patient, written the way this line is meant to be written. Not a real case and not a template to paste.

10 Goals. Prognosis discussed with [name, relationship, or not discussed because] at [time]. Understanding [summary]. Decisions [summary, or none made].

What not to do, and who said so

- **Do not give antipyretics to improve outcomes.** Recommendation 80, new, conditional against, very low certainty, drug or surface cooling. It does not touch pain relief, symptom control, or another indication for temperature control such as neurocritical care or care after cardiac arrest.
- **Do not use IV vitamin C or IV immunoglobulins.** Recommendations 81 and 82, conditional against, low certainty.
- **Do not use probiotics.** Recommendation 88, new, conditional against, very low certainty.
- **Do not run fluid until the lactate normalises.** Recommendation 51, conditional on low certainty: individualise after the initial bolus and follow the decrement instead.
- **Do not let the culture draw delay the antibiotic** in a hypotensive patient. Recommendation 7 for the culture; 16 and 17, strong, for immediately, ideally **within 1 hour**, in septic shock and in probable or definite sepsis without shock; 18, conditional, for **within 3 hours** in possible sepsis without shock.
- **Do not screen with qSOFA alone.** Recommendation 4, strong in 2026, moderate certainty: NEWS, NEWS2, MEWS or SIRS over qSOFA as the single tool. A positive qSOFA still counts; it is not enough by itself.

SOURCE, HOW CURRENT IT IS, AND WHERE EACH NUMBER CAME FROM

Prescott HC, Antonelli M, Alhazzani W, et al. *Surviving Sepsis Campaign: international guidelines for management of sepsis and septic shock* 2026. Intensive Care Medicine, 2026, volume 52, issue 5, pages 863 to 936. PMID 41870560. DOI [10.1007/s00134-026-08361-1](https://doi.org/10.1007/s00134-026-08361-1). Read on 8 September 2026, and read again on 10 September 2026. **How it was read, because that decides what you are holding:** the publisher's own PDF was extracted whole, 511,106 characters of text, and searched term by term; every recommendation quoted on these pages was read in its own numbered box, and where this chapter says 2026 prints nothing on a question, that is a search of the whole text and not the end of a reading. **Not on PubMed Central:** the identifier converter returns no PMC number for this article, so the free full text is the publisher's own PDF rather than a PMC page. Adults in hospital only; paediatric sepsis is a separate guideline and is not covered here. Statements marked 2021 come from Evans L, Rhodes A, Alhazzani W, et al., the 2021 edition, PMID [34599691](https://pubmed.ncbi.nlm.nih.gov/34599691/). **Currency checked 8 September 2026. This chapter is written on the 2026 edition above.**

Every chapter in this book prints three things: the edition it summarises, the date that edition was read, and the date its currency was last checked. The list below is the paragraph address for each page above, for the day you want to read the argument behind a number. It is not meant to be used at the bedside. The clock, recommendations 7, 10, 16 to 20, 39 and 89 with the blood culture rationale · Recognise, recommendations 7, 8, 19 and 20 with the blood culture and initial resuscitation rationales · Fluid, recommendations 10, 51, 52 and 89 with the initial resuscitation rationale and the Table 4 legend, and 2021 recommendations 73 and 75 for the day three line · Pressure, recommendations 13, 14, 55 to 58, 60 and 61 with the arterial pressure, peripheral vasopressor and inotrope rationales · Antimicrobials, recommendations 16 to 20, 39 and 40 with the de escalation and procalcitonin rationales · Where the numbers are, the corticosteroid rationale and dosing evidence and the tidal volume rationale. The Do not page carries each of its numbers in its own line. Anything marked 2021 comes from the previous edition and is marked in the line that prints it.

EVERY CHAPTER TELLS YOU HOW OLD IT IS

All nine chapters were checked against the published record on 8 September 2026: five had no later edition, three were rewritten onto a newer edition and one had a focused update. Where a later edition exists the chapter names it, and where one has been rewritten onto that edition the chapter says so. **The claim is not that a chapter is current. It is that its currency was checked on a date you can see, by someone who wrote down what the check found.**

For licensed clinicians. A summary of one named published guideline as read on the date above, not a substitute for it, not a decision tool, and not advice about any patient. No clinician patient relationship is created. Nothing here is certified, endorsed or reviewed by any society named. Verify every dose against the current label, and check renal and hepatic adjustment, interactions and allergies for the patient in front of you.

The file you install once, and the eight other chapters

NOTE-LINES.TXT, THE PART THAT EXISTS NOWHERE ELSE

A plain text file ships with the book. It holds every chart line from all nine chapters, grouped under its chapter, in the order the pages run, and the book opens with a page called **Set this up once** that walks it in four steps in about ten minutes. That page's middle step, printed here exactly as it appears there:

In Epic: My SmartPhrases, new phrase, name it something you will find at three in the morning such as SEPSISLINES, and paste that chapter block into the body. In Cerner: the same block goes into an Auto Text entry saved under your own name. Any other system: whatever it calls a saved phrase or a template. **In all three, delete the first line of the block once you have pasted it**, the one in capitals that tells you to delete it. It is there so the rule reaches you at the moment you paste, and it is not part of the note. **One phrase per chapter, not one for the book**, because at the bedside you pull nine lines, not ninety.

THE OTHER EIGHT CHAPTERS

Each one is built like the chapter you just read: a first page of the decisions that cannot wait, the detail behind them, a card that names who holds each dose, and the chart lines at the end. And each one holds at least one number or rule you may not be carrying tonight. Community acquired pneumonia, ATS and IDSA 2019: severe CAP is one major criterion or three of the nine minor, and that single count changes the cultures, the urinary antigens and the second drug at the same moment. Atrial fibrillation with RVR, ACC, AHA, ACCP and HRS 2023: diltiazem and verapamil conditioned on an ejection fraction above 40 percent, and what to give while the EF is still unknown. Hyperkalemia, EMCREG International 2025: the binder line that records how many hours it was separated from every other oral drug. Hyponatremia, Korean Society of Nephrology 2022: the demyelination risk features, any one of which lowers the day's ceiling from 9 to 8 mmol/L, written before the first bolus and not after it. DKA and HHS, ADA, EASD, JBDS, AACE and DTS 2024: the sodium fall checked against 10 mmol/L in 24 hours. COPD exacerbation, GOLD 2026: oxygen titrated to 88 to 92 percent, and the four hours of unassisted breathing that let you stop the mask with no wean. Asthma exacerbation, GINA 2026: magnesium sulfate 2 g over 20 minutes, and the four signs that send the patient to intensive care. Pain and opioid safety, SHM 2018: the 25 to 50 percent cut on every change of opioid, and the discharge line that matches the tablet count to the expected days of severe pain.

All nine, three files: the A5 edition, 72 pages, a second file of 190 short pages rebuilt at phone size so the type reads larger in your hand rather than shrunk to fit, and note-lines.txt, every chart line from all nine chapters in plain text. \$29 once. Every later edition free. Thirty day refund, no questions asked, and you keep the files. Written by a practicing clinician, thirteen years in. theattending.net/go/notes

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