SYSTEMIC APPROACH TO TEACHING CLINICAL JUDGEMENT

AKA "CRITICAL THINKING"

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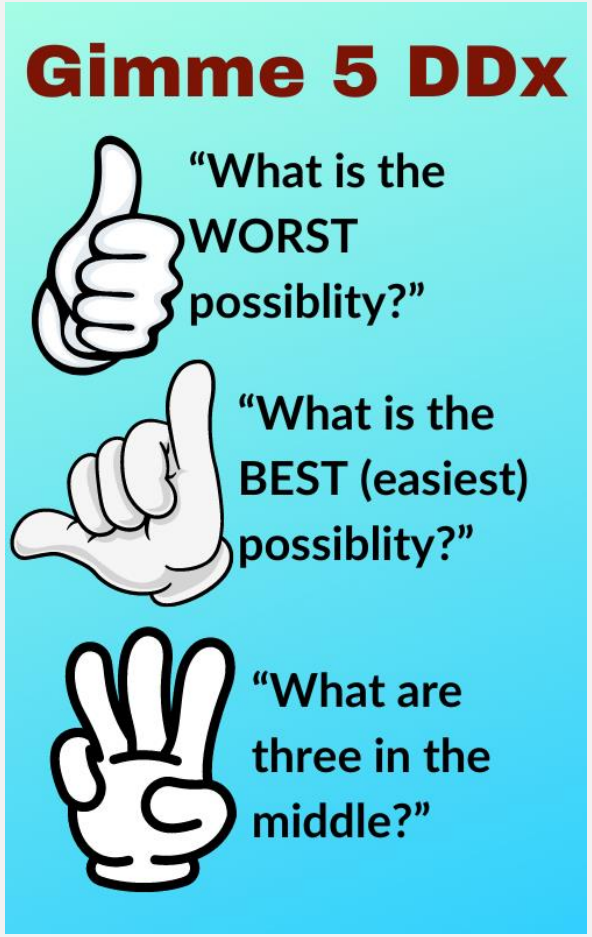
HOW DO **YOU** PRACTICE?

- Use this presentation to help you structure your OWN process into useable framework/guide.
- Learn how to exercise the "critical thinking" synaptic pathways even with EMT students on day one.
- KEYS: *consistency, repetition, questions, silence*
- Adults need RELEVANCE to enhance learning—this process provides that and thereby cuts study time

DEMO--CONTEXT

- Responding for 65 yo man, "unconscious"
  - DDx? Gimme 5
    - At dispatch
    - After primary
    - After secondary

Anything which interrupts brain function
--Chemical: low blood flow, low O2, low sugar, toxins
--Physical: trauma (external/internal)



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DDX
BY ANATOMY

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PRIMARY ASSESSMENT

- On Scene: left lateral recumbent on floor, pale/glistening, multiple bruises (various stages of healing)
  - Make them go through the Primary Assessment!! *(fully 30% of any level exam comes from this step)*
  - Do not supply ANY info until specifically asked and do not allow them to progress out of order

Gen Impression, AVPU; A—no noises

B—slow-ish w/ good chest rise

C—no obv bleed; radial rapid/weak/thready, skin cool/moist

HUNTING THE CORRECT FIELD DX

- Bystanders: "He's an alcoholic who has been falling a lot lately."
  - DDx now?
  - What are the PRIORITY Secondary Assessments to narrow the DDx?
    - ALL EASY ones should be routine (FSBG)
    - Medical: most important questions?

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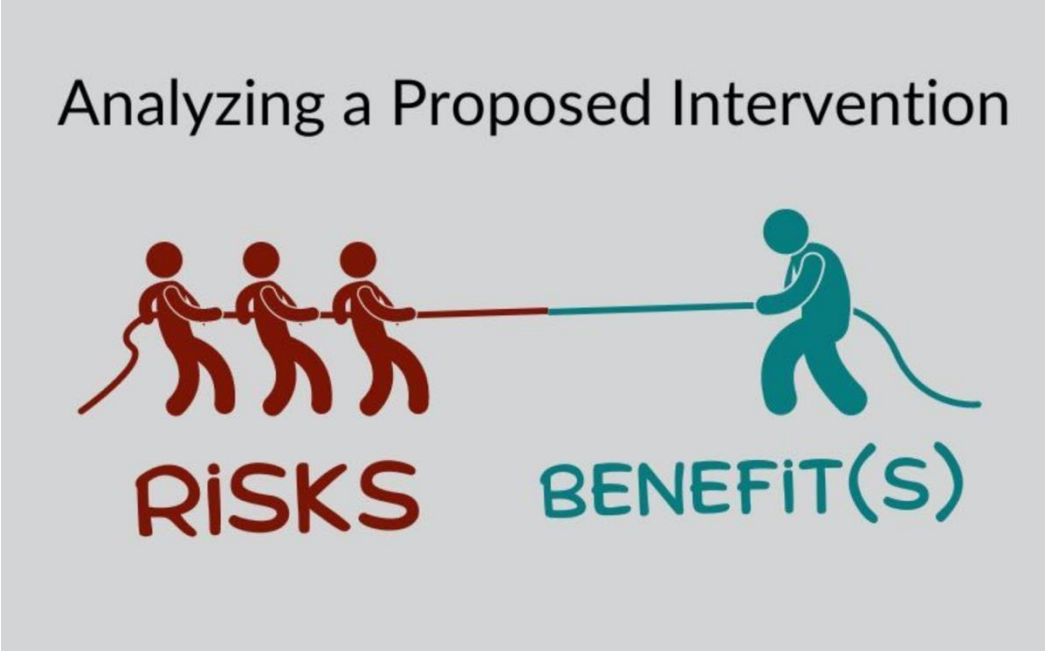
DEMO—SECONDARY FINDINGS

- Secondary assessment—DO NOT VOLUNTEER anything!
- If students are missing key assessments, wait until they get stuck
- Allow dead ends
- Ask questions to facilitate them in a productive direction (even if not "right" for this pt)
- Our pt: hypoglycemia
  - Proposed intervention: Glucose…route?
- Allow silence…open discussion back up with a question

HOW DOES THIS LOOK IN PRACTICE?

3. Why might it be a good idea to hyperventilate the patient with herniation syndrome (first, what are s/s of herniation syndrome and what does it indicate?) and a BAD idea to hyperventilate the brain injured patient without herniation syndrome?
4. Define: cerebral perfusion pressure (CPP), mean arterial pressure (MAP), intracranial pressure (ICP) and give normal ranges for these pressures.
    a. Why would a hypotensive event be problematic for the severely injured brain?
5. We find head-injured patients (both traumatic and non-traumatic) develop severe hypertension (ex: 280/130).
    a. How does this B/P affect CPP, MAP, ICP?
    b. What is your IV therapy of choice and justify your action.
    c. When positioning the hypertensive, head-injured patient, would you prefer supine, semi-fowler's, trendelenburg and why?
    d. If you had the opportunity to decrease this patient's blood pressure (as a paramedic, with meds), would you choose to or not? Why or why not?
6. What are the signs of Cushing's triad? What is happening, anatomically?
    a. Airway treatment and why?
    b. IV therapy and why?
    c. Mannitol is a hyperosmotic solution. It is no longer used in the prehospital setting, but why MIGHT it be helpful in a patient with Cushing's?

RISK ANALYSIS



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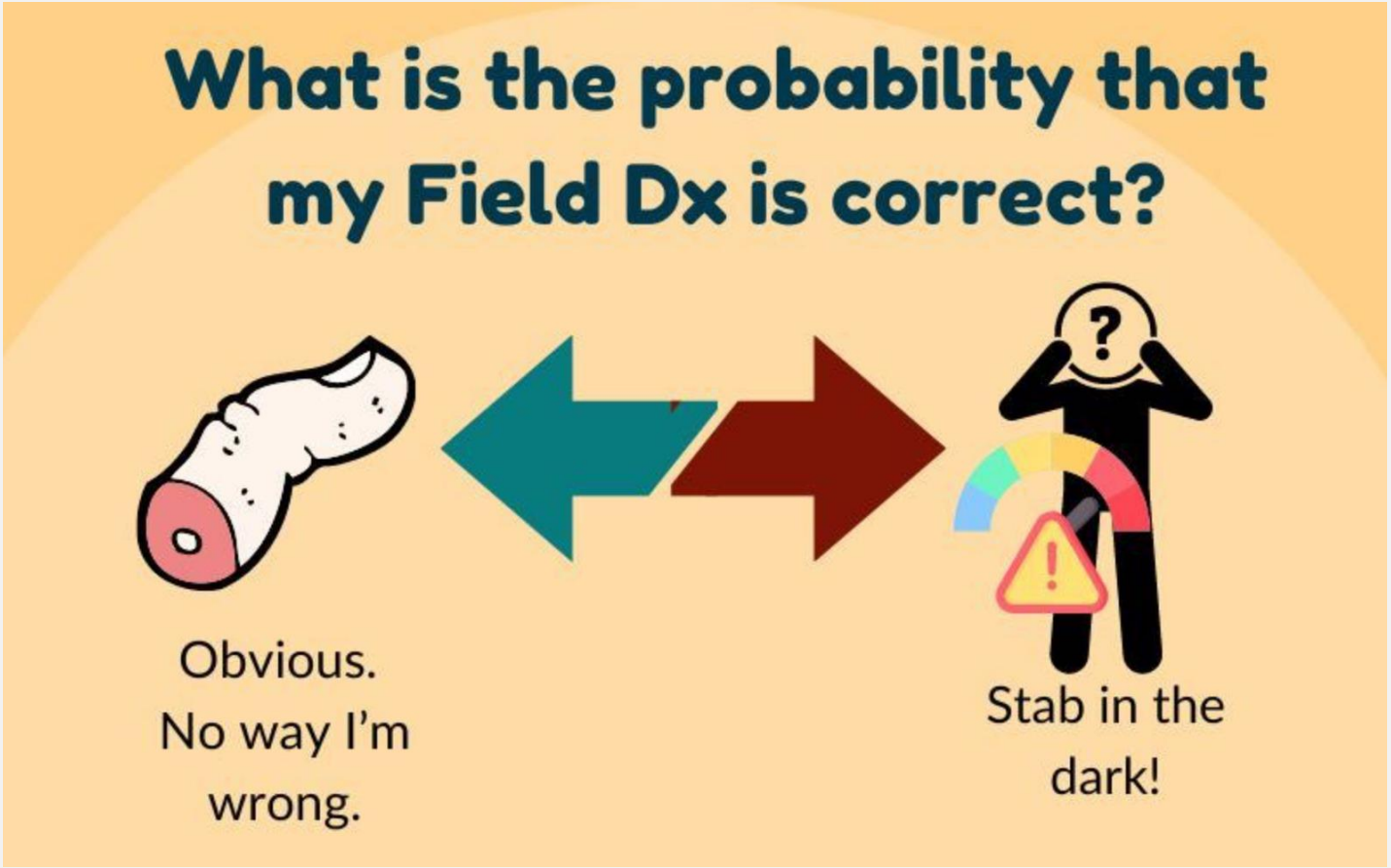
RISK ANALYSIS, STEP ONE: CERTAINTY OF FIELD DX?



Less Certainty = More Risk

Why?
Systems involved
Expected prognosis

Assessments to increase certainty?

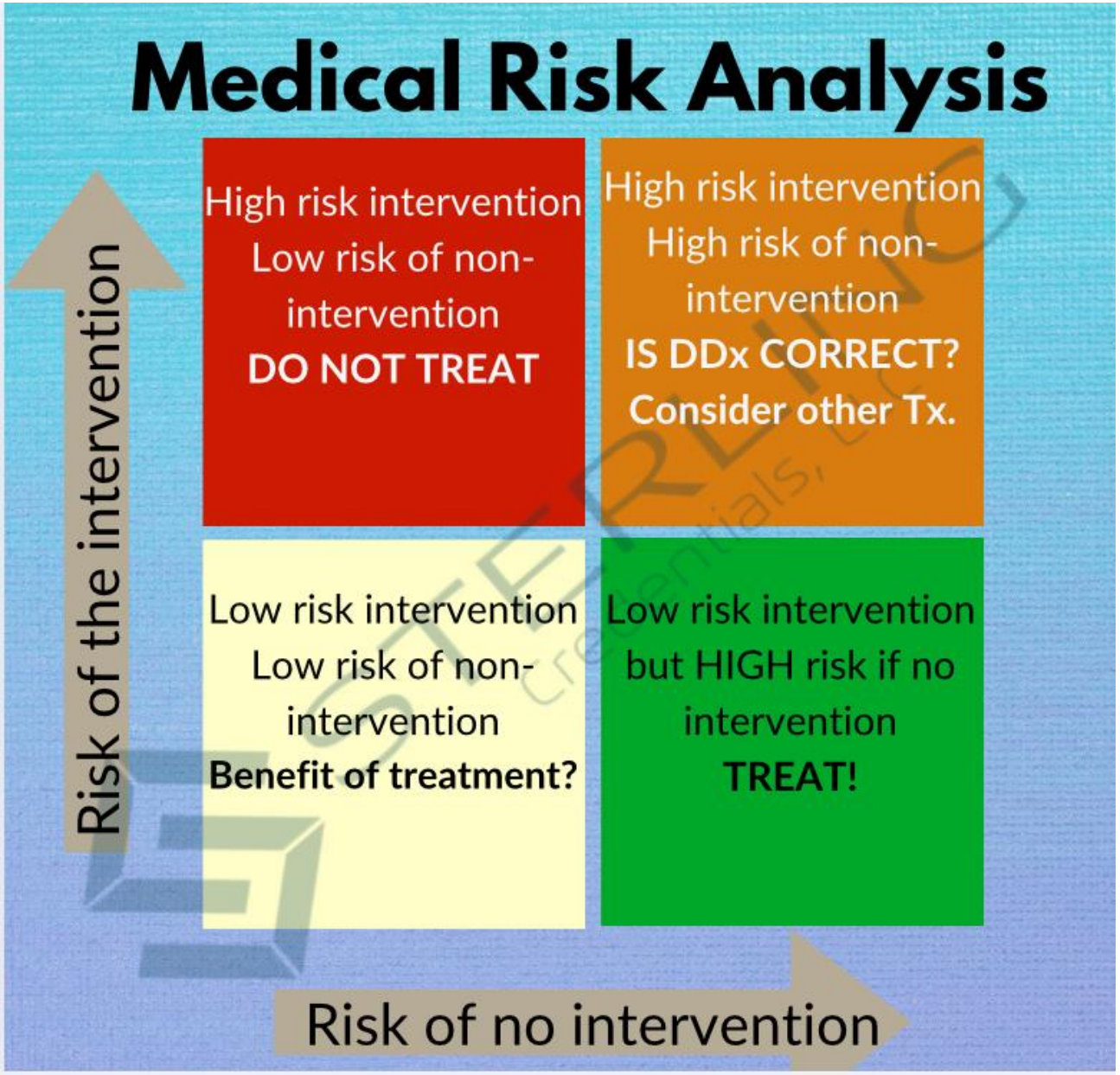
SIMPLIFIED RISK ANALYSIS

Our Hypoglycemic patient?

Intervention = airway management?

Intervention = IV?

Intervention = glucose?



SIMPLIFIED RISK ANALYSIS

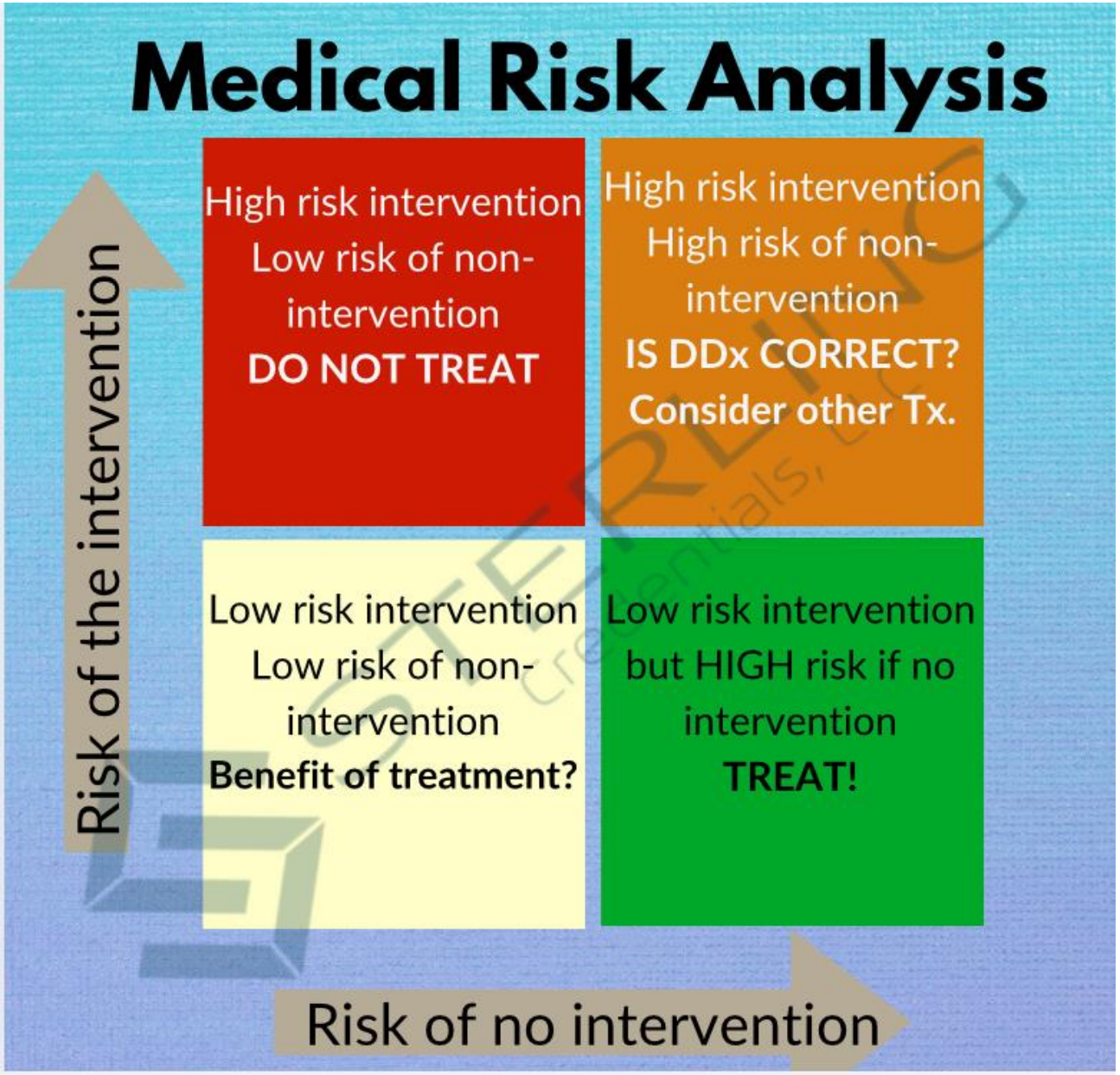
Ok, now instead we find Cushing's triad…

Intervention = transport destination and route?

Intervention = spinal protection?

Intervention = airway management?

Intervention = control hypertension?



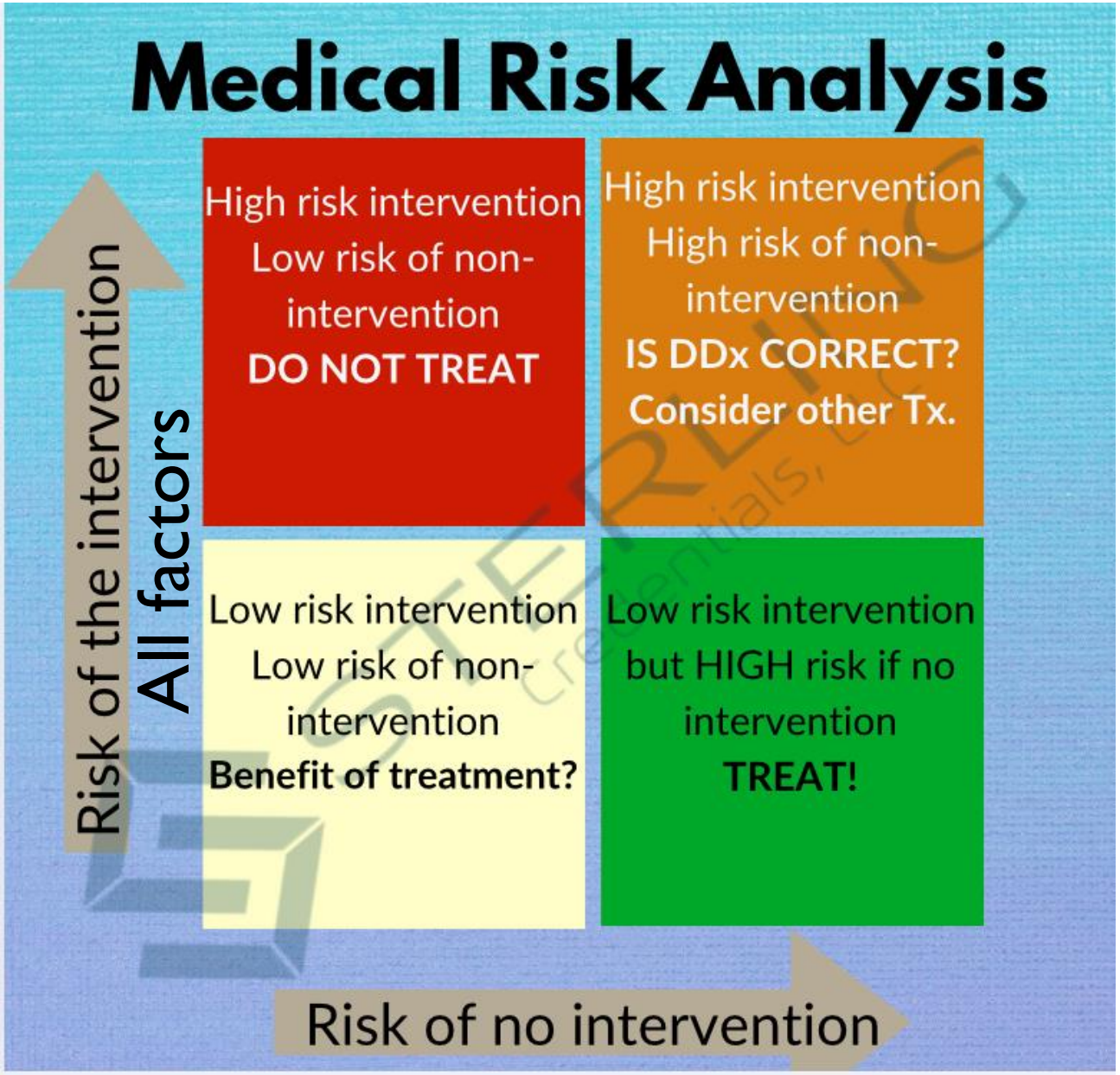
ADDITIONAL CLINICAL CONSIDERATIONS

Factors to Consider During Risk Analysis

The inherent "risk" of an intervention depends on any combination of factors such as: :

- Inherent (known) risks of the intervention
- Certainty of field diagnosis
- Severity of patient's present condition
- Patient history (known, unknown) which may unpredictably interact with proposed intervention
- Provider experience with intervention
- Adequate number of personnel
- Backup equipment/resources
- Strength of other available options

SIMPLIFIED RISK ANALYSIS



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ADDING TO RISK?

DESTINATION

Distance?

- When evaluating the intervention of "TRANSPORT," yes. Others: probably not.
- **NEVER WITHHOLD OR DELAY CARE**
- Is it the appropriate facility?
- Risk of bypassing closer EDs to get to definitive care?
- Count on in-hospital delays to care: wall-time, triage, getting seen, orders put in…etc.

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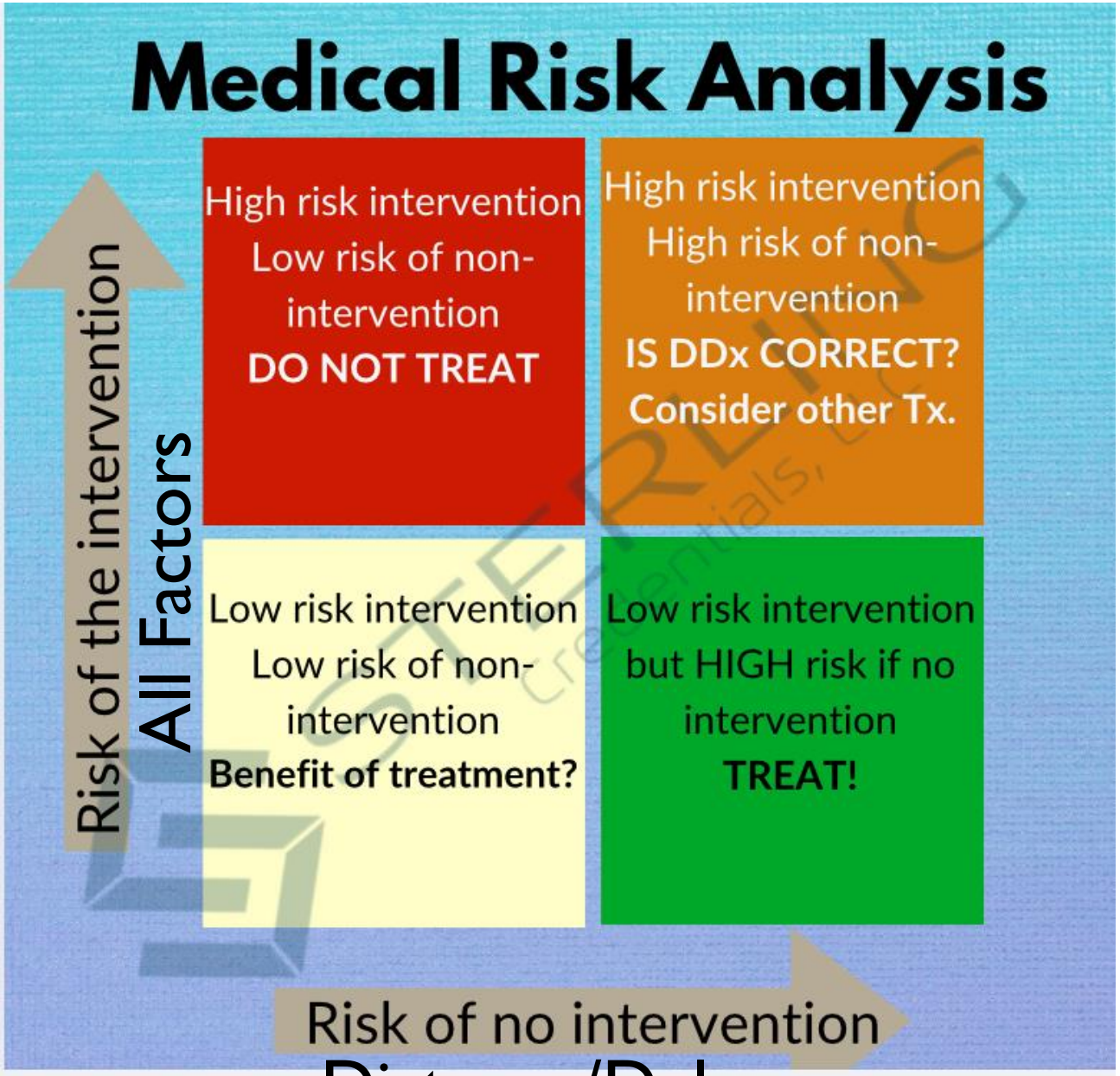
SIMPLIFIED RISK ANALYSIS



GOALS OF TX (BENEFITS)

Brainstorming Benefits

Which benefits actually matter?

Interfering with end-organ damage

Minimizing patient anxiety

Resolving pain and discomfort

THE WHOLE ENCHILADA

Summary

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Clin Judgment Process Outline

1) Blinders Off

- "Gimme 5" DDx
- How certain are we?
- Assessments that can make us MORE certain?
- Prognosis?

2) Possible Interventions

- List available interventions
- Plan A and Plan B

3) Risk Analysis

- Of each considered intervention
- Risks of intervention vs risk of non-intervention
- If HIGH risk intervention, other options? Can we do something else and reassess?

REFERENCES

- NREMT "Clinical Judgment Domain Sample Packet": https://www.nremt.org/getmedia/730156db-c05d-40e8-8003-3f033bc9c6e9/Clinical-Judgment-Domain-Sample-Packet.pdf
- Sterling Credentials "Gimme 5" DDx Process: https://sterlingcredentials.com/use-this-simple-practice-to-teach-clinical-judgment-to-your-ems-students/
- Sterling Credentials Clinical Judgment Scaffold (Risk Analysis): https://sterlingcredentials.com/this-framework-teaches-ems-students-how-to-do-clinical-judgment/

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