Zero Tolerance

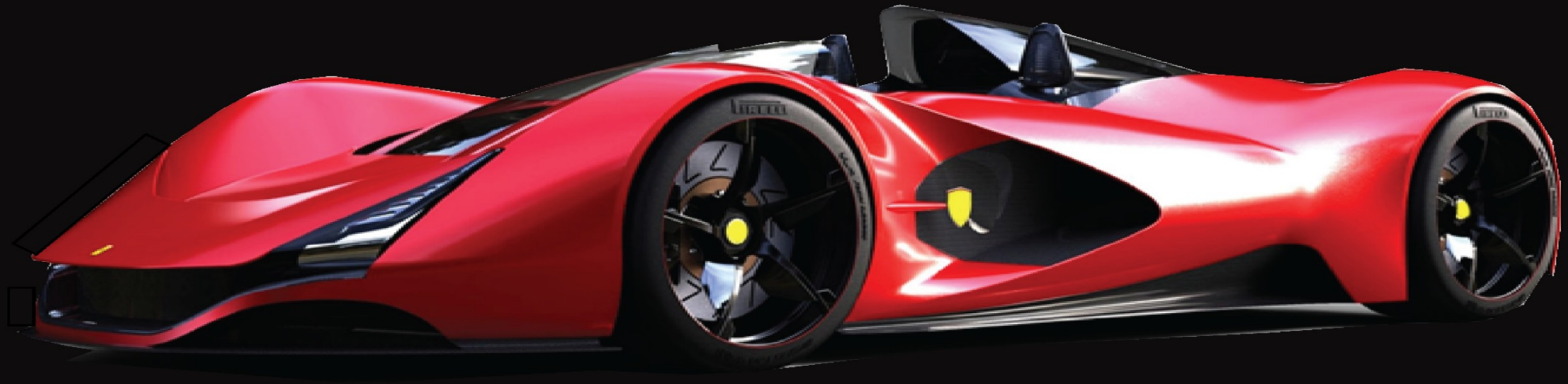
Critical Decision Making

Kentucky Rural Health Association
Henderson, Kentucky

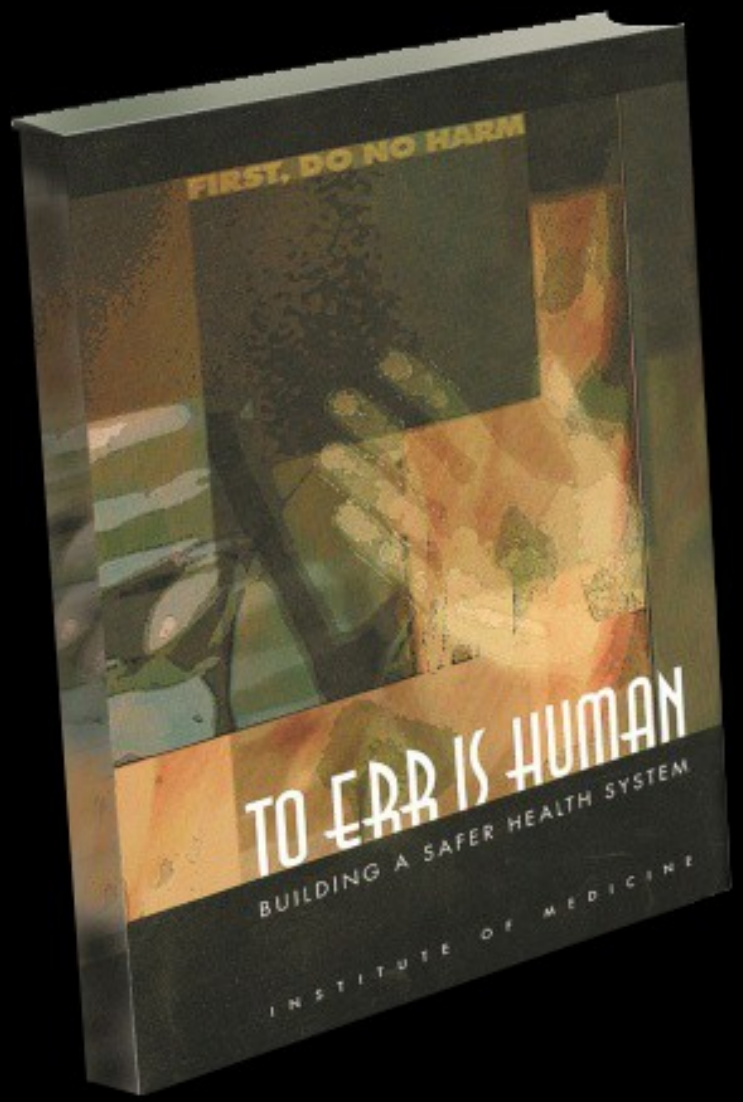
Tuesday, November 09, 2021

KENTUCKY RURAL HEALTH ASSOCIATION

Kaushal V. Patel, MD, MBA, FACP, FACPE, FACHE, FACEP



Dysfunctional Delivery Impact

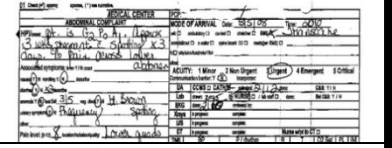


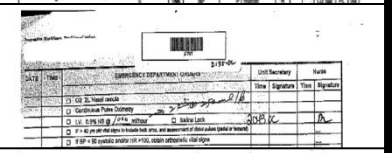
"....*To Err Is Human* asserts that the problem is not bad people in health care rather it is that good people are working in bad systems that need to be made safer. A realization that most errors are out of the clinician's control. Hospitals are obligated to facilitate, identify and establish root cause analysis of healthcare related errors. Disclosure of medical errors is considered an ethical duty and is required by JCAHO. Institutions must make sure that patients harmed by adverse events do not face additional financial burdens; conduct a root cause analysis; and develop an action plan if necessary. If an actual error transpired, the appropriate institutional representative should apologize to the patient. Institutions should also adopt policies that encourage smooth transitions to new technologies, and foster communication as the key to improving patient safety. Despite all efforts current study from John Hopkins revealed number of healthcare related errors have not changed from first reported in 1999 by Institute of Medicine (IOM). This accounts for our third leading cause of death in the US..

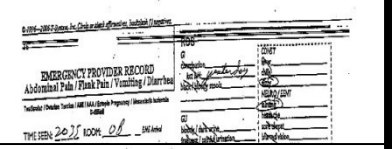
"..... "It's the system more than the individuals that is to blame," Makary said. The U.S. patient-care study, which was released in 2016, explored death-rate data for eight consecutive years. The researchers discovered that based on a total of

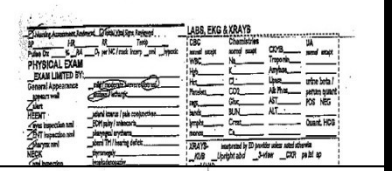
John Hopkins
CNBC, February 22, 2018
The third-leading cause of death in US Most doctors don't want you to know about
https://www.cnbc.com/2018/02/22/medical-errors-third-leading-cause-of-death-in-america.html

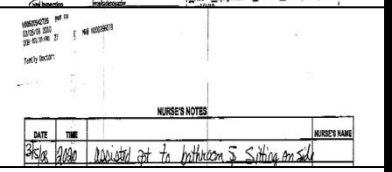

Any given clinic Any given day

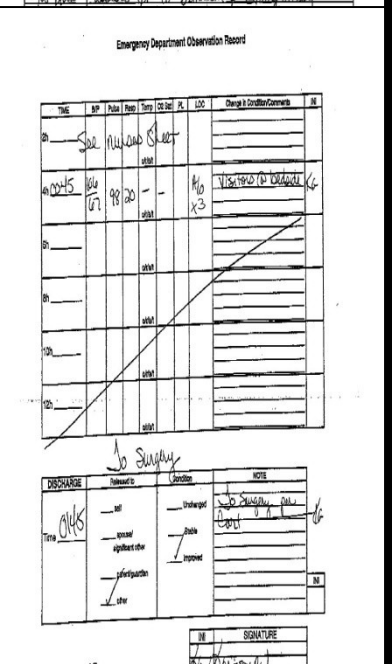




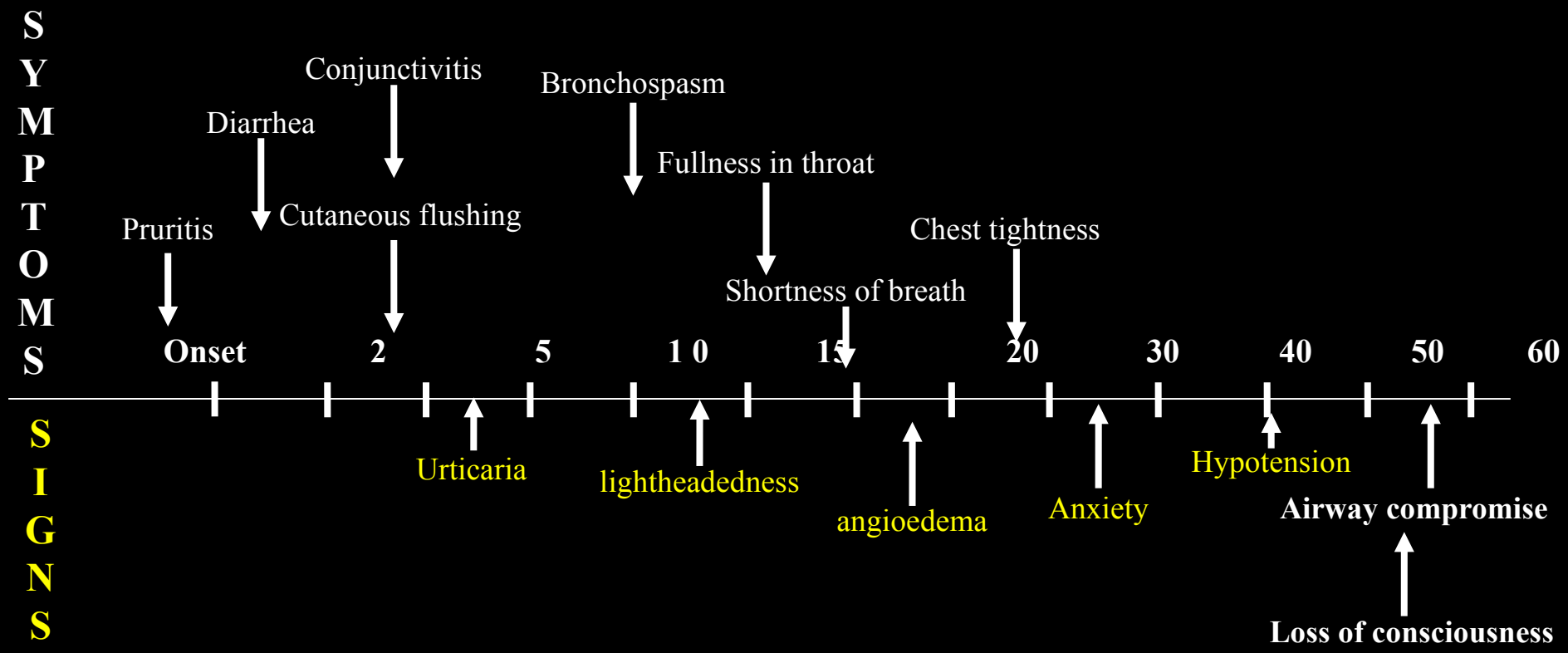








A 26-year-old female complaint of sore throat.



Faster the onset of symptoms the more severe the reaction.

“Once a patient starts becoming hypoxic from either upper or lower airway obstruction you have missed your **ideal window of intervention**.”

Intelect vs Systems


1 mL
Epinephrine
Injection, USP
1:1000

1:1,000

Adult: 0.3 – 0.5 ml

Peds: 0.01 mg/kg

1:10,000

0.1 – 0.5 mg

1:100,000

10 ml


See other side for instructions
Rx only
After use, most of liquid stays in auto-injector and can't be reused.
Delivers 0.3 mg intramuscular dose of epinephrine from epinephrine injection 1:1000 USP (0.3 mL).
Each 0.3 mL also contains 1.8 mg sodium chloride and 0.5 mg sodium metabisulfite.
NDC 49502 5001 5
EPIPEN®
0.3 mg EPINEPHRINE
AUTO-INJECTOR
for Allergic Emergencies (Anaphylaxis)
REPLACE IF SOLUTION IS DISCOLORED
STORE AT 68° TO 77°F (20° TO 25°C)
EpiPen® is a registered
EPIPEN
0.15 mg
AUTO-I
for Allergic Emerg
EpiPen Jr® is a r
of Mylan Inc. licensed
NDC 49502 50101 2

ACLS Trained

Office Staff BLS Trained

Crash Cart

Got Epi.

Disclosures

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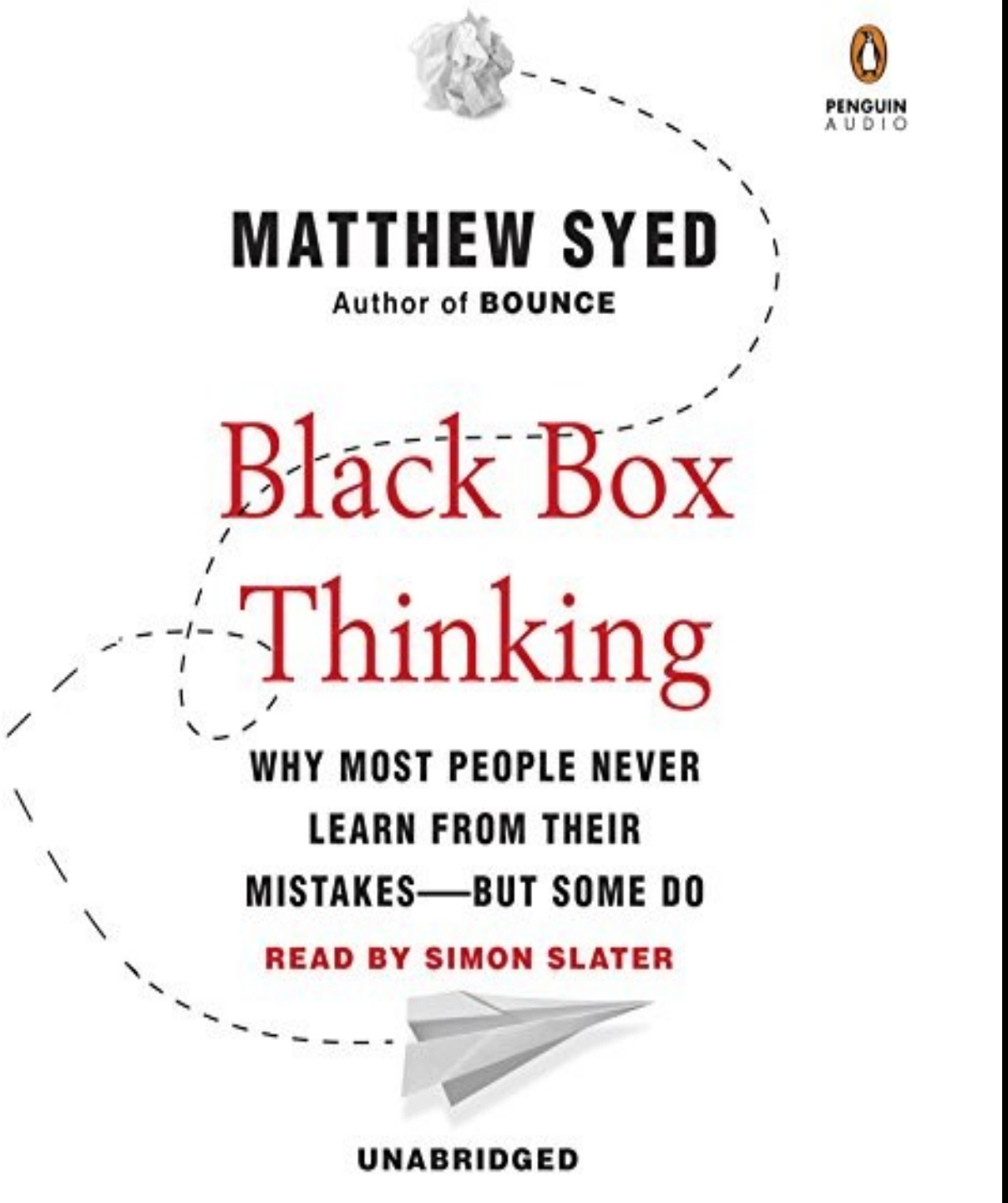
317-285-8062


ALM
100

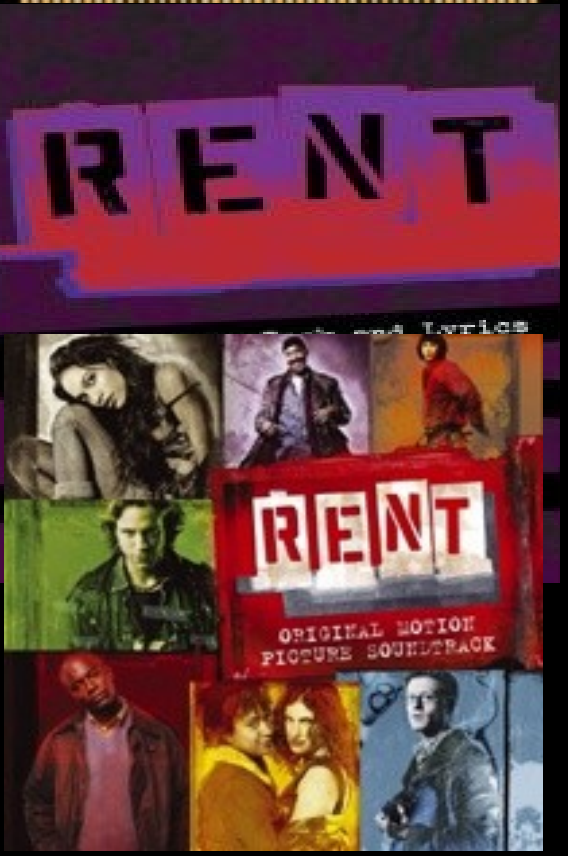


Infallible

Junior MDs speak up

TPS

Transferable.



35-year-old Male

ER – food poisoning

3 days later – ER – URI

Died at home

Who is this celebrity?

Jonathan Larson

Jonathan Larson, 35, Composer Of Rock Opera and Musicals

By MEL GUSSOW

Jonathan Larson, the composer and author of the musical "Rent," which had been scheduled to begin previews at the New York Theater Workshop last night, died yesterday at his home in Manhattan. He was 35.

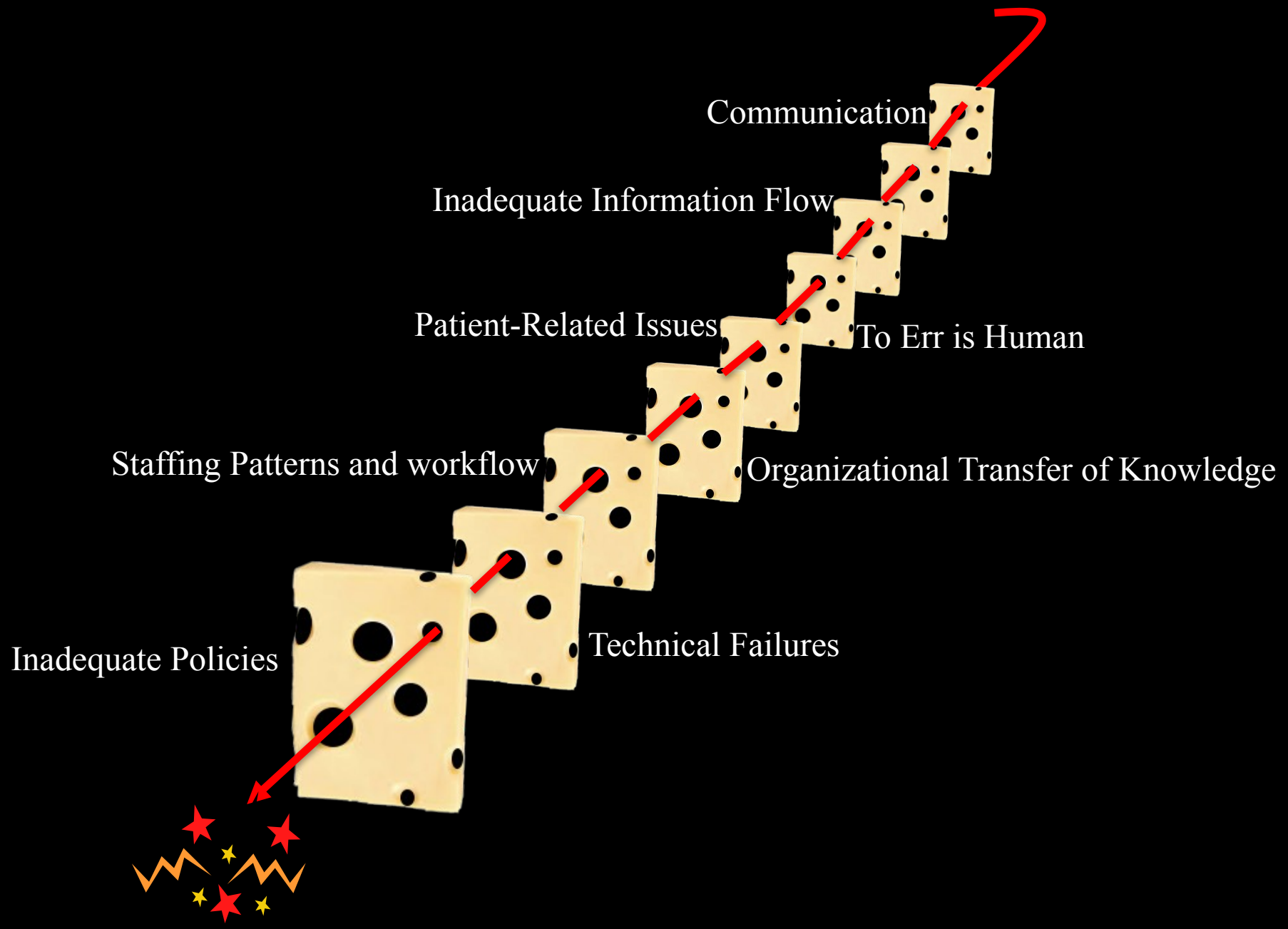
James C. Nicola, the artistic director of the New York Theater Workshop, said that an autopsy would be performed to determine the cause of death. Last night's preview of the show was canceled, and the company announced that it would sing the score for Mr. Larson's friends and family at the theater instead.

Mr. Larson had returned home on Wednesday night after the show's final dress rehearsal. The production of "Rent," a modern rock opera version of "La Bohème" set in the East Village in Manhattan, was the composer's first major New York effort.

Sara Krulwich/The New York Times

Jonathan Larson

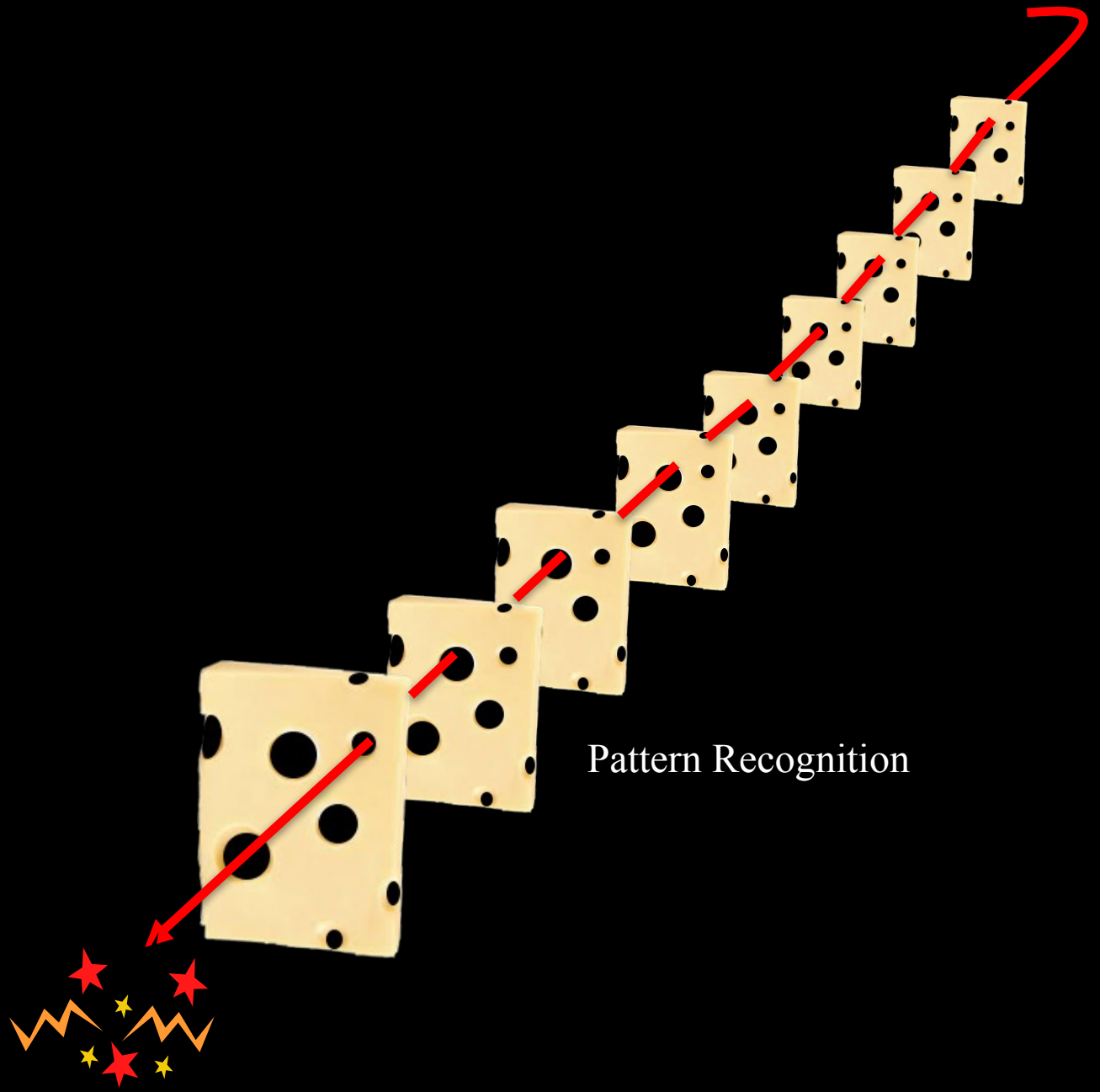
".....It is believed that if the aortic aneurysm had been properly diagnosed and treated, Larson would have lived. He had been suffering chest pains and nausea for several days prior, but doctors at St. Vincents Hospital could not find signs of a heart attack and so misdiagnosed it either as flu or stress....."



https://alwaysculture.com/hcahps/communication-medications/8-most-common-causes-of-medical-errors/

Critical Decision Making

1) Acute coronary syndromes
2) Pulmonary embolism
3) Thoracic aortic dissection



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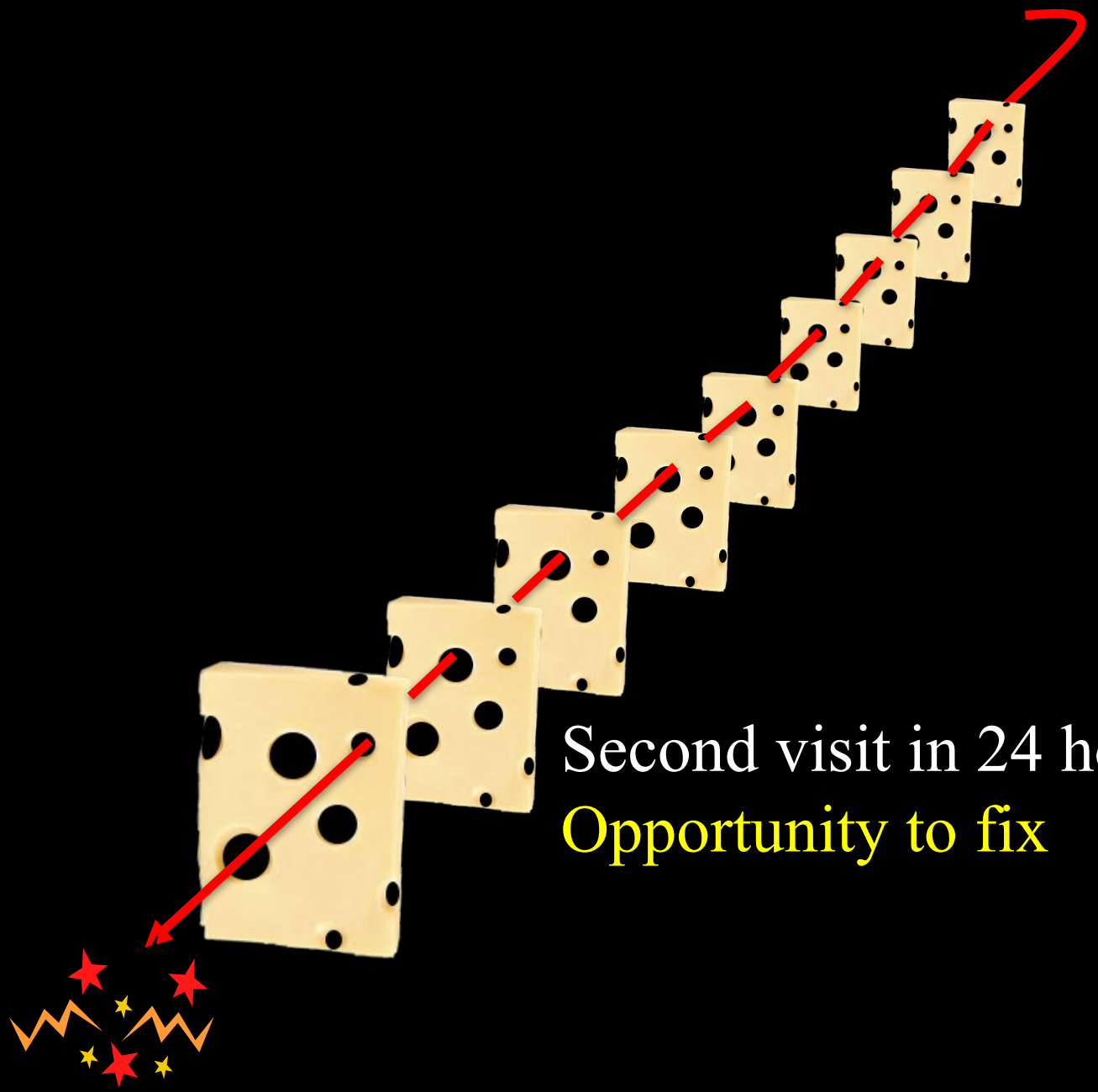
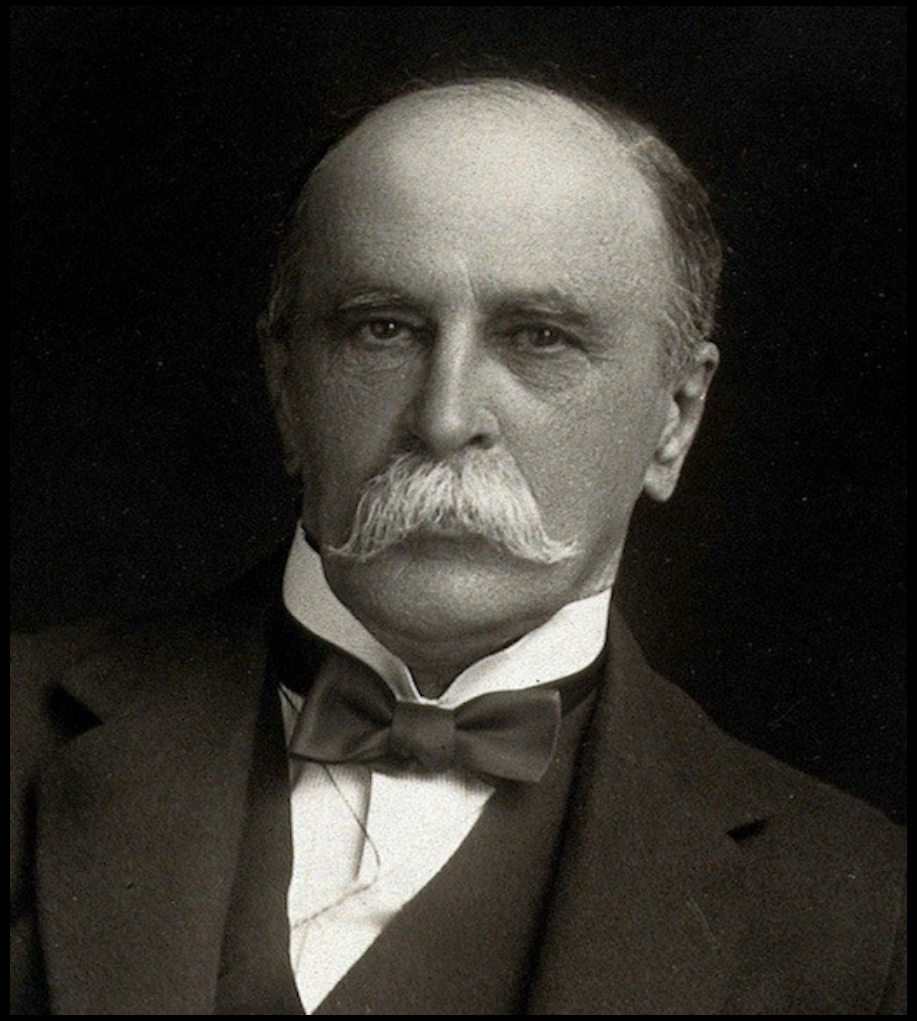
Your Unique Filters



Second visit in 24 hours =
Opportunity to fix

https://alwaysculture.com/hcahps/communication-medications/8-most-common-causes-of-medical-errors/



“There is no disease more conducive to clinical humility than aneurysm of the aorta.”
“The tragedies of life are largely arterial.”

47 year old female in your exam room.
How will you evaluate CAD risk factors?

Standard of Care

Standard of Care

Right Care

EMERGENCY PROVIDER RECORD
Altered Mental Status

ROS

LABS, EKG & XRAYS

NEURO / ALTERED MENTAL STATUS / SEIZURE

EMERGENCY DEPARTMENT ORDERS

CARDIAC ORDERS

- Labs: CBC, CMP, Troponin, Myoglobin, CKMB, CK
- Digoxin Level ○ Pt. on Digoxin ○ History not available
- PT ○ Pt. on Antiplatelet Therapy ○ Draw and Hold
- ABG if Oxygen saturations is < 92%
- Chest X-ray portable
- Aspirin 81 mg x 4 PO
- Nitro SL every 5 minutes while having pain x 3 if SBP >100

REPORT OF AMBULANCE RUN

PROCEDURE FLOW CHART

PATIENT:
PHYSICIAN:
ADM. DATE:

MRN #:
ACCOUNT #:
ROOM #:

this point. She went straight to the CT scan. CT scan was interpreted with negative bleed. She returned back to the ER. We placed a Foley and she was put on Versed and Nimbex drip for sedation. She was still tachycardic. We gave her a liter of fluid. Blood was drawn and sent by this time. Her arterial blood gas shows significant acidosis, pH of 6.87, CO2 66, O2 is 442. This was after the intubation. At this point I am concerned about possible bleed, but it was negative on CT. UDS was negative. Her electrolytes were showing CO2 of 13, showing metabolic acidosis. The urine is negative for urinary tract infection. I contacted Dr. Kumar, contacted Dr. Deshpande. The patient will be admitted to the Intensive Care Unit.

On repeat examination, she is sedated at this time. She is paralyzed with the narcotic. Her D-dimer was ordered and it was 13.9. I ordered for a CT of the chest and the patient has a bed in the Intensive Care Unit at this time, so I am going to proceed transferring her upstairs and further CT and I ordered an aspirin and Tylenol level to her primary labs. Her troponin was 0.1 and her salicylate level is 4.2. Alcohol level is less than 10. Acetaminophen level is less than 2. Myoglobin is 388. CK total is 79. Serum osmolality is 304, essentially normal. Given her acidosis at this point, it appears to be metabolic in nature, but I am still awaiting a CT of the chest to rule out pulmonary embolism.

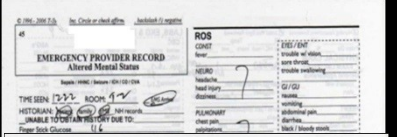
Critical care time is 90 minutes.

FINAL DIAGNOSIS:
1. ACUTE RESPIRATORY FAILURE.

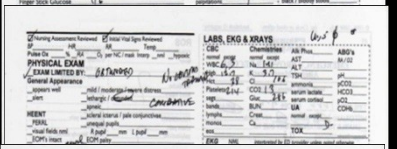
DISPOSITION: The patient is admitted.

KVP/pal
D: 03/30/2007 18:32:05
T: 03/31/2007 08:07:33
JOB#: 146513/146514

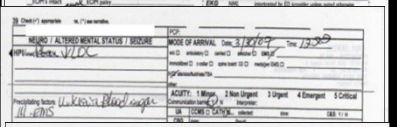
CC:

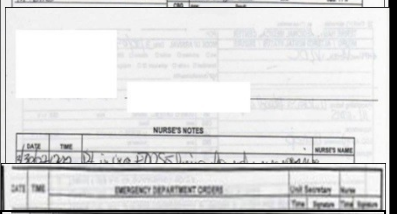

EMERGENCY PROVIDER RECORD
Altered Mental Status

ROS


LABS, EKG & XRAYS

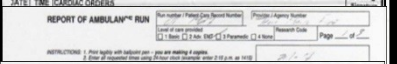
PHYSICAL EXAM


NEURO / ALTERED MENTAL STATUS / SEIZURE


NURSE'S NOTES

EMERGENCY DEPARTMENT ORDERS


CARDIAC ORDERS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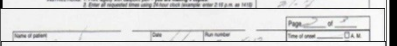
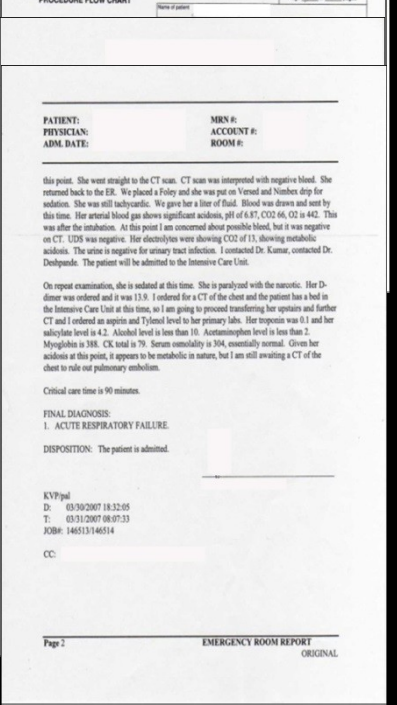

PROCEDURE FLOW CHART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CC:

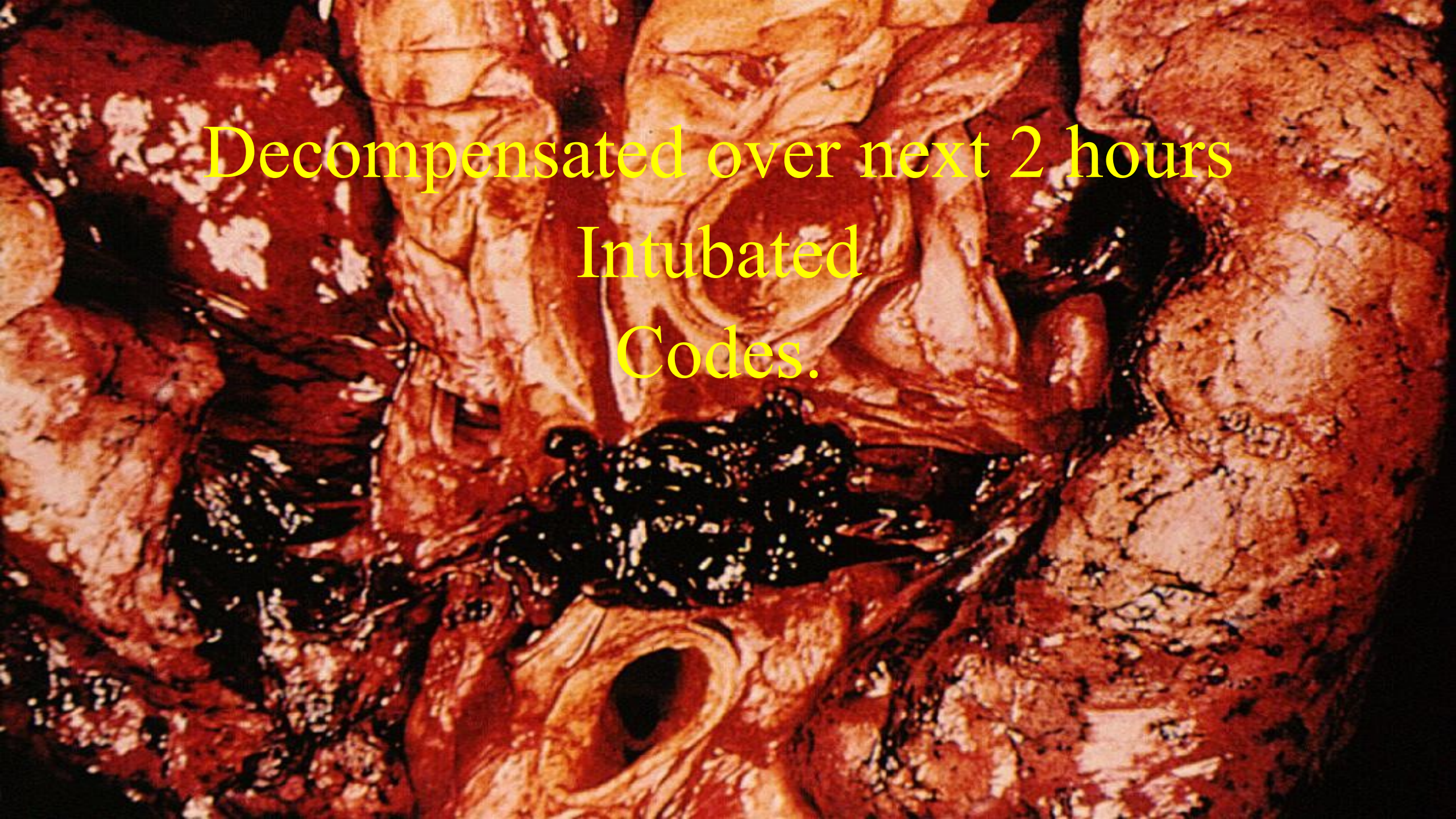
Solumedrol 125mg IVP

Acousterol 2.5/3ml + Atrovent 1 unit Adje via NEB

Levaquin 750mg IVPB

COPD – acute exacerbation

Regular


Decompensated over next 2 hours
Intubated
Codes.

The Next Day

Risk Management

Are we assigning a pretest probability?
Did we think about the “Pre” PERC
Does PERC rule apply?
Documentation of Wells criteria?
Did we order a D-dimer?
Did we think of imaging?

A 55-year-old man whom you have been following for the last 5 years comes to the emergency room because he has increasing difficulty breathing. He has a history of smoking related COPD. The patient has no fever, chills, chest pain or sweats. The mild productive cough he has been having during the last year has not increased. When the patient is supine, his dyspnea is worse. His previous ABGs are pH 7.36, pCO_2: 60, pO_2: 70 His normal peak expiratory flow is 275 cc. You initiate therapy with Ipratropium and Albuterol inhalers, but the patient does not improve with continued inhaler use. On examination, respiratory rate 22, Pulse 125, Temp 99.2, BP 120/80, decreased breath sounds in both lungs with dry inspiratory rales at the bases. Heart: no murmur. Lab: Hgb 12/dL, Hct 53%, WBC 8000/mm^3, Peak expiratory flow is 280 cc, ABGs: pH 7.50, pCO_2 40, pO_2 50 Chest x-ray reveals no changes, EKG shows sinus tachycardia and normal rhythm. Patient was started on oxygen therapy as necessary with a venturi mask with 60% oxygen in order to reach a 90% oxygen saturation. What is the next step in the patient's management?

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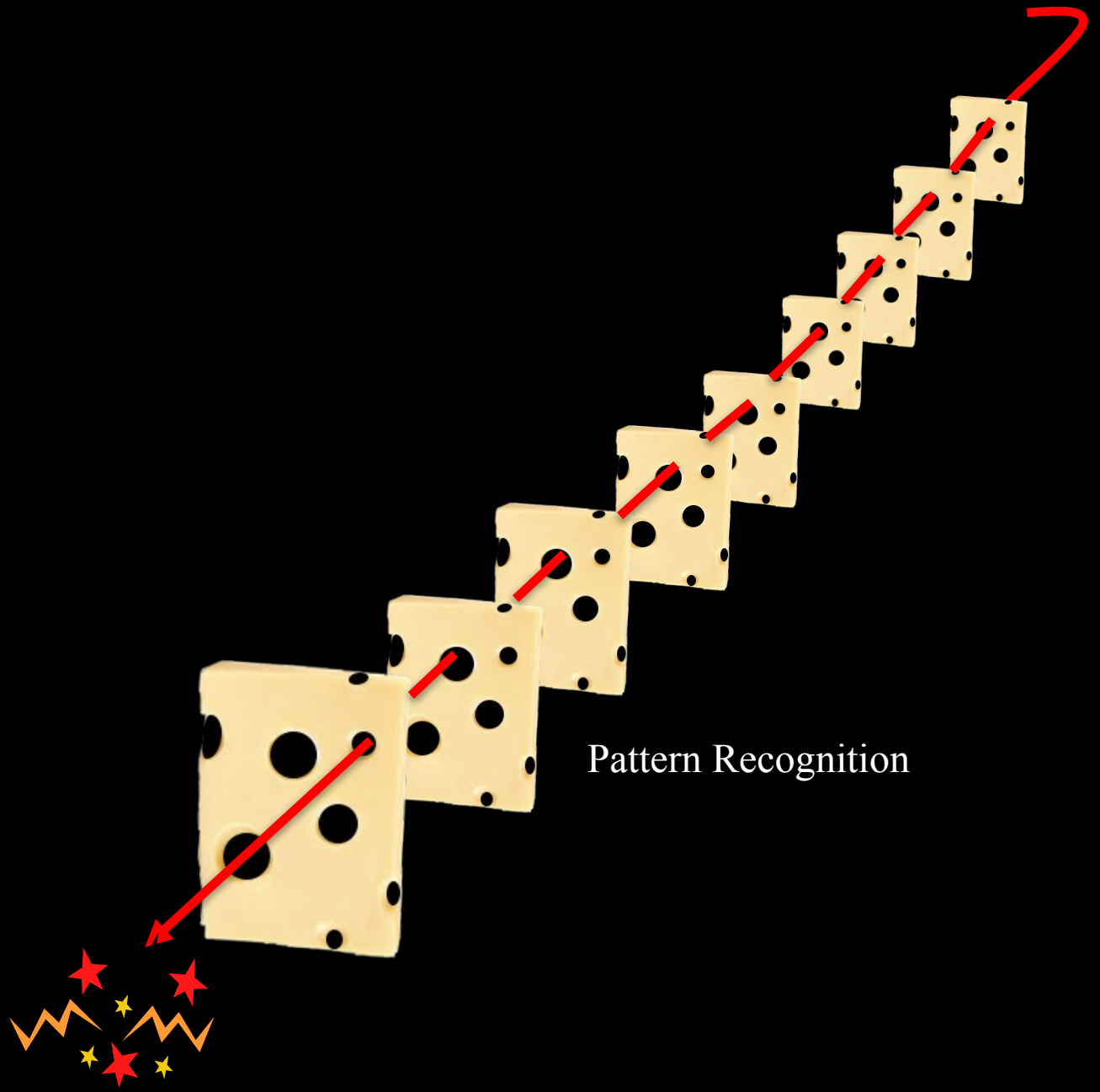

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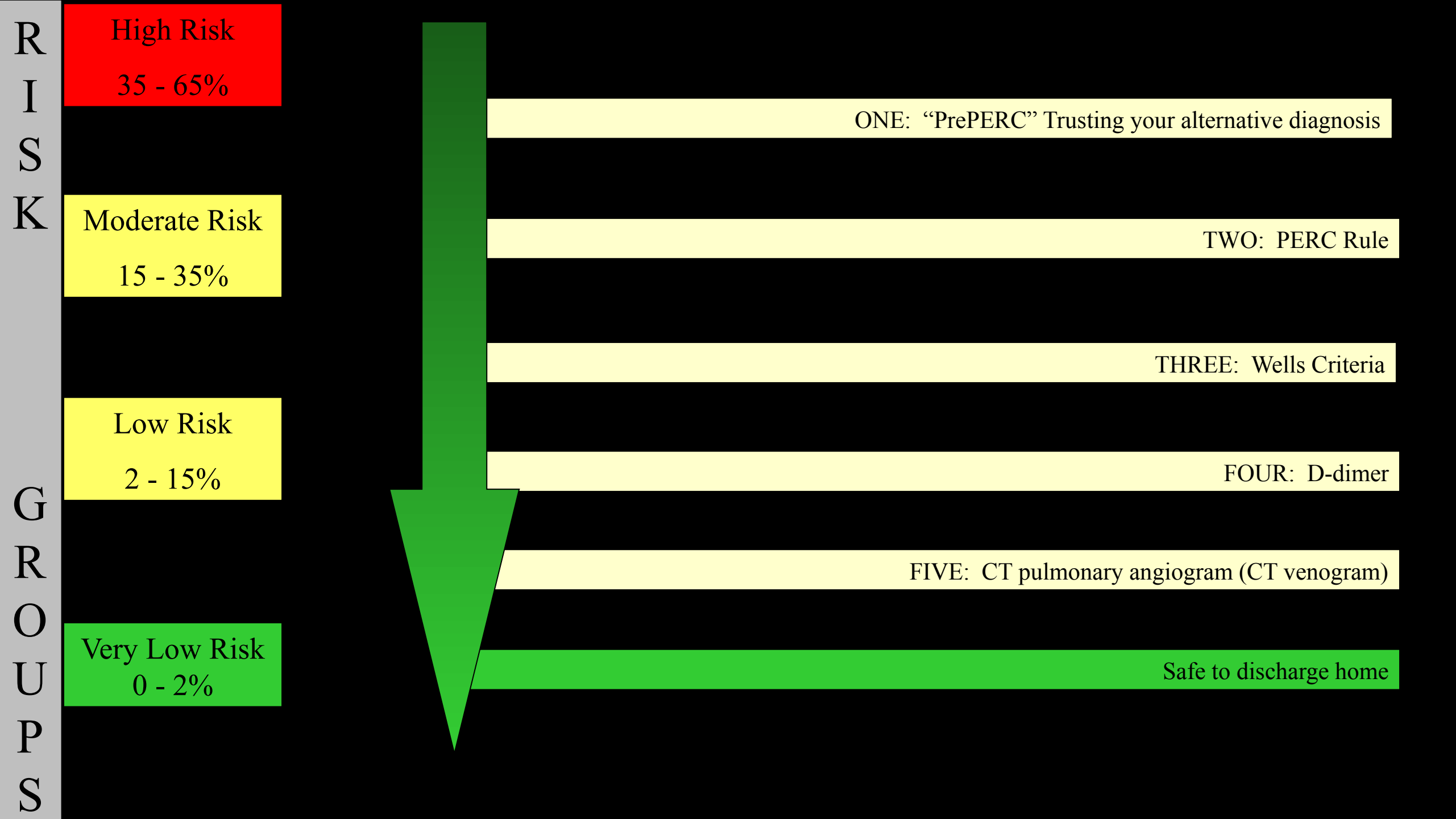
Most common diagnosis for a missed PE?

- COPD
- 12% of proven PE have no risk factors
- 25% of DVT will recur even if treated
- 5-15% of obese patient on an 8-hour flight will have DVT
- 50% of iliofemoral DVT embolize
- 20% of calf DVT propagates and embolizes
- 50% sensitivity for clinical exam
- 30% of PE will have negative ultrasound exam of LE
- 80% of fatal PE have DVTs in LE

Critical Decision Making

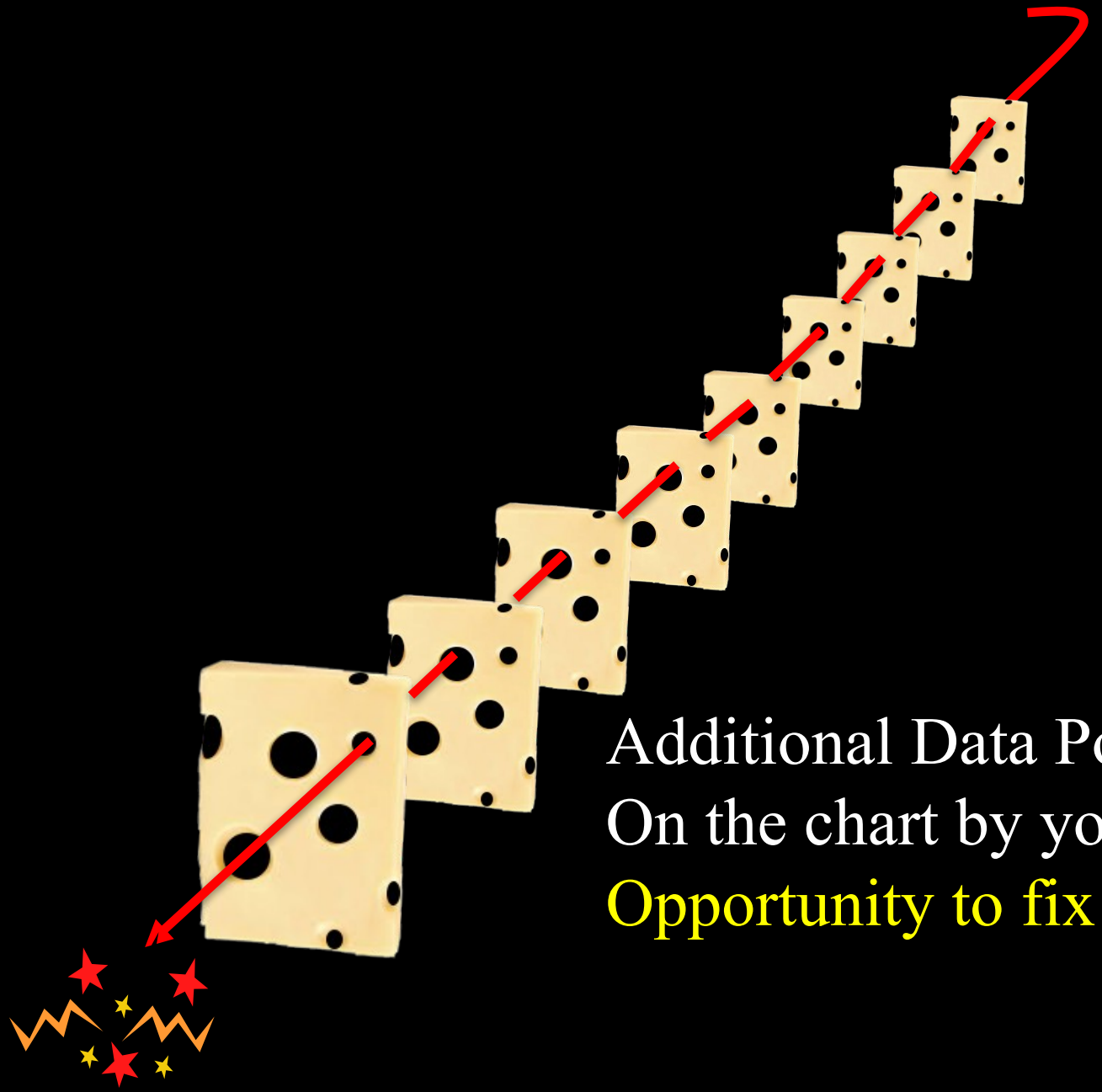
What is the Pretest Probability?

$$\frac{[(1 - \text{specificity}) \times R]}{\{[(1 - \text{specificity}) \times R] + [\text{sensitivity} \times B]\}}$$


RISK GROUPS
High Risk
35 - 65%
Moderate Risk
15 - 35%
Low Risk
2 - 15%
Very Low Risk
0 - 2%
ONE: "PrePERC" Trusting your alternative diagnosis
TWO: PERC Rule
THREE: Wells Criteria
FOUR: D-dimer
FIVE: CT pulmonary angiogram (CT venogram)
Safe to discharge home

Deeper Message

Your Unique Filters



Additional Data Points
On the chart by your RN? =
Opportunity to fix

https://alwaysculture.com/hcahps/communication-medications/8-most-common-causes-of-medical-errors/

New Vital Signs.

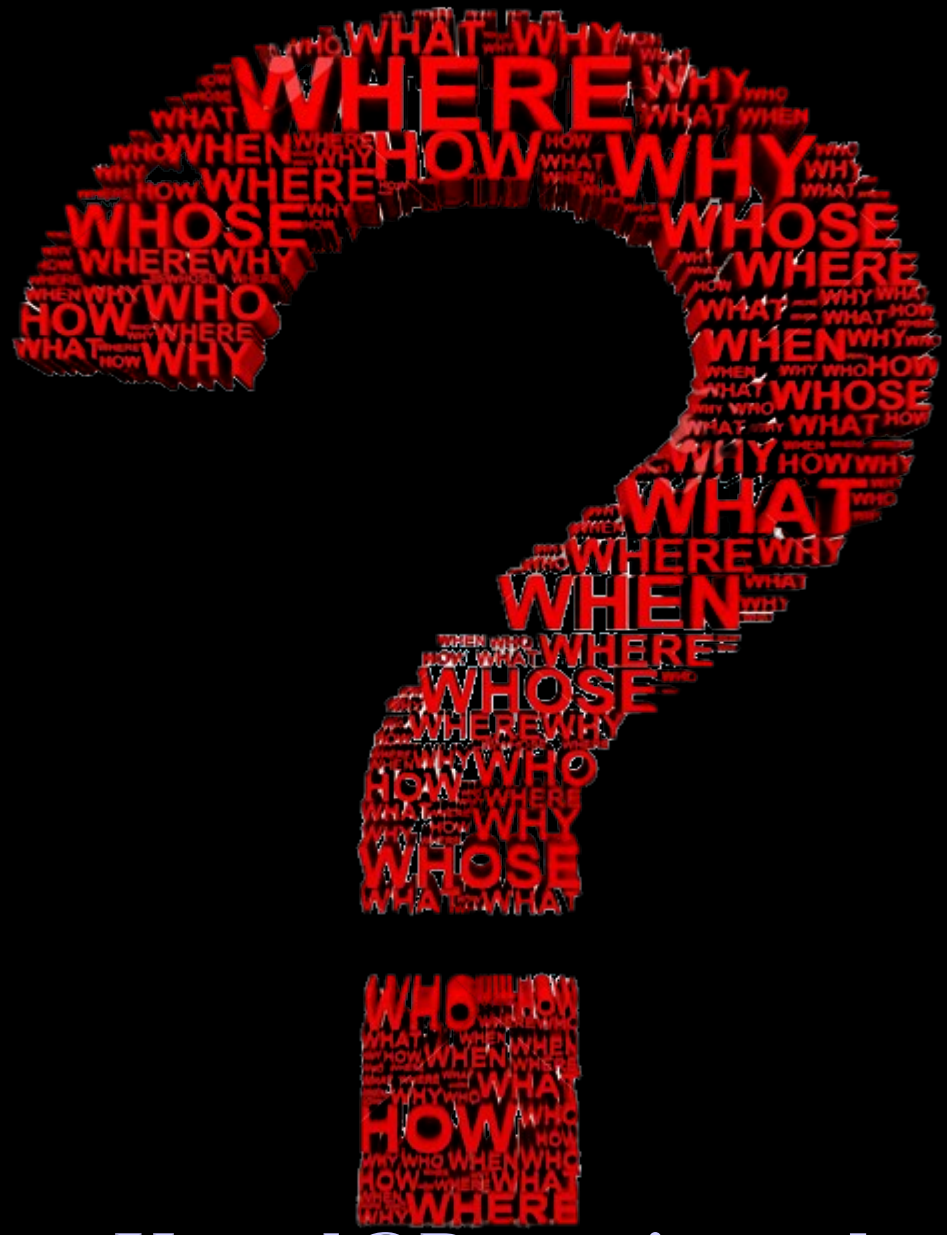
Marginal Gains

?

KNOW it All vs **LEARN** it all

A Culture of Zero Tolerance

Vision vs Dream



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