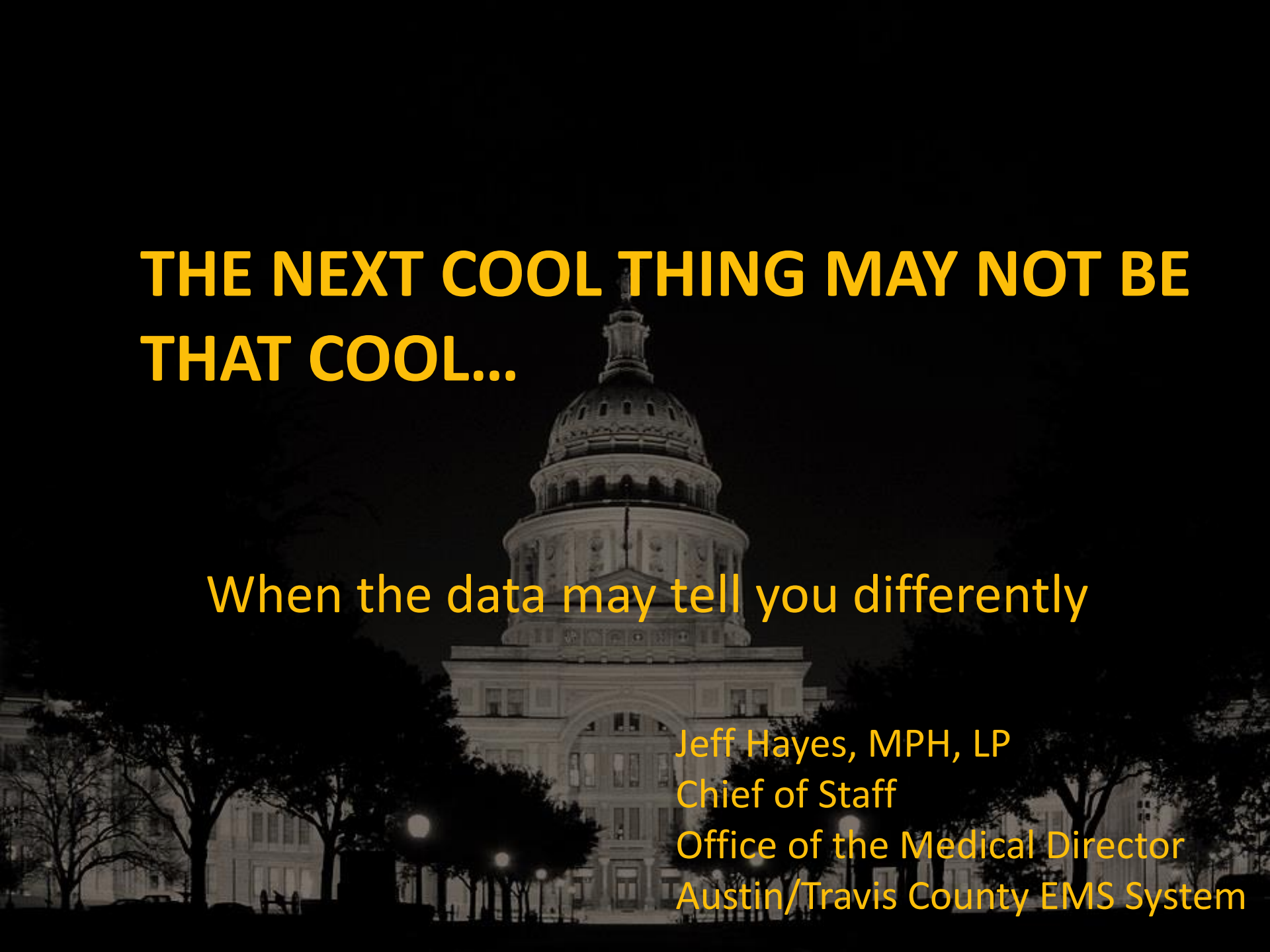


THE NEXT COOL THING MAY NOT BE THAT COOL…

When the data may tell you differently

Jeff Hayes, MPH, LP
Chief of Staff
Office of the Medical Director
Austin/Travis County EMS System

The Plan…

- Use data to drive EMS education programs to prepare students
- Understand what the data means to their program
- Appreciate the decision-making by medical directors involving data
- Understand how to walk the fine line of student/programmatic needs vs. dogma

Austin's Story (c. 2006-ish – 2018)

- 2005 AHA (ILCOR) Guidelines
  - "New CPR"
    - 30:2 adult
    - 15:2 pedi
  - Therapeutic Hypothermia
    - Now TTM
  - De-emphasis on ventilations

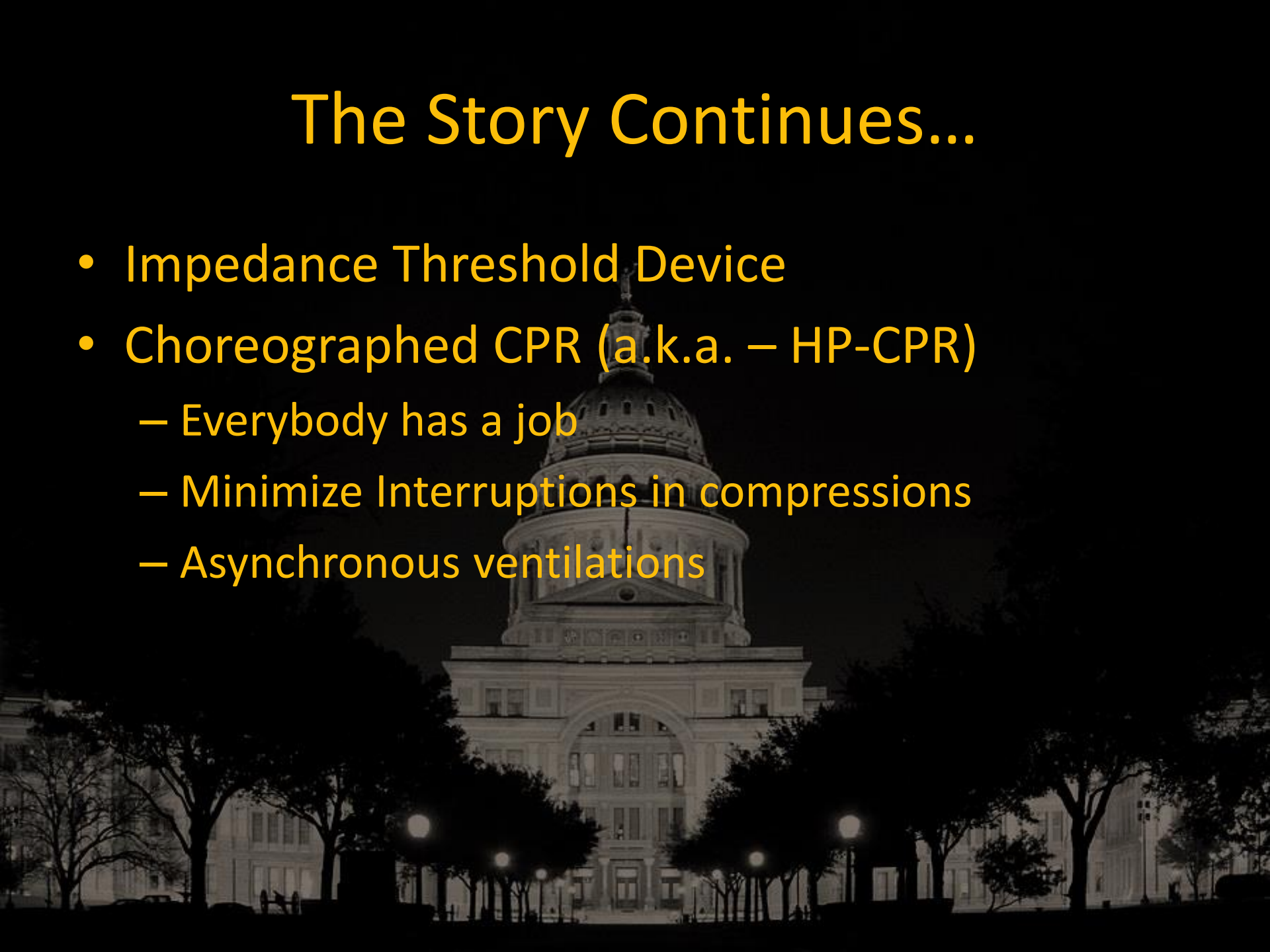
Improved Out-of-Hospital Cardiac Arrest Survival After the Sequential Implementation of 2005 AHA Guidelines for Compressions, Ventilations, and Induced Hypothermia: The Wake County Experience

Paul R. Hinchey, MD, MBA, J. Brent Myers, MD, MPH, Ryan Lewis, MS, EMT-P, Valerie J. De Maio, MD, MSc, Eric Reyer, MSN, ACNP, Daniel Licatese, RN, Joseph Zalkin, BSHS, Graham Snyder, MD, For the Capital County Research Consortium

From WakeMed Health and Hospitals (Hinchey, Myers, De Maio, Reyer, Snyder); the Clinical Research Unit, Emergency Services Institute (Hinchey, De Maio); Wake County EMS (Hinchey, Myers, Lewis, Zalkin); and Rex Healthcare (Licatese), Raleigh, NC.

The Story Continues…

- Impedance Threshold Device
- Choreographed CPR (a.k.a. – HP-CPR)
  - Everybody has a job
  - Minimize Interruptions in compressions
  - Asynchronous ventilations



And More…

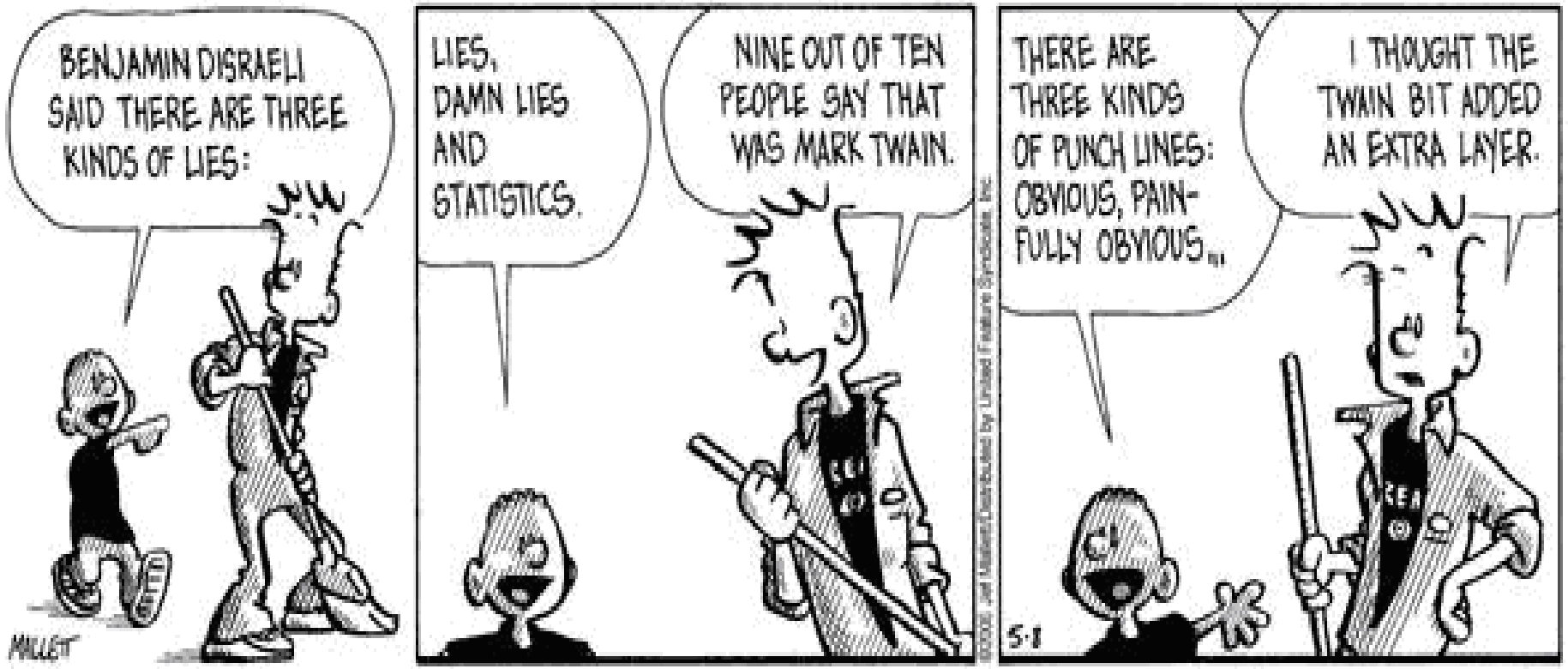
Mechanical CPR

vs

Manual CPR

by Jef Mallett

May 08, 2006



What did the data tell us?

- 2006
  - Witnessed VF/VT – ~30%
  - All Rhythms - <8%
- 2009
- ~32% & 10%, resp
- 2013
  - ~42% pectively

- 2016
  - %, respectively
  - 52% & 14%, respectively

No Mechanical CPR!!

What did the data tell us?*

- 2013
- ~25% & 13%, respectively
- 2016
  - 17% & 9%, respecti
- 2018
  - Data no

Mechanical CPR!!

*201 liable mCPR data due to system change

Contents lists available at ScienceDirect

American Journal of Emergency Medicine

journal homepage: www.elsevier.com/locate/ajem

Out-of-hospital cardiac arrest outcomes with "pit crew" resuscitation and scripted initiation of mechanical CPR☆,☆☆,★,★★

Louis Gonzales [a], Brandon K. Oyler [b], Jeff L. Hayes [a], Mark E. Escott [a], Jose G. Cabanas [c], Paul R. Hinchey [c], Lawrence H. Brown [b,d,*]

[a] Office of the Medical Director, Austin-Travis County Emergency Medical Services System, Austin, TX, USA
[b] Emergency Medicine Residency Program, Department of Surgery and Perioperative Care, Dell Medical School at the University of Texas, Austin, TX, USA
[c] Wake County Emergency Medical Services, Raleigh, NC, USA
[d] James Cook University, Mount Isa Centre for Rural and Remote Health, Townsville, QLD, Australia

Hayes Corollary

While the data shows a trend of problems associated with management of cardiac arrest with mCPR, these data MAY be a result of the way the procedure is applied, not the procedure itself

It is also clear that everyone needs to critically evaluate every step of the fundamentals.


“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.”
-Albert Einstein

Data

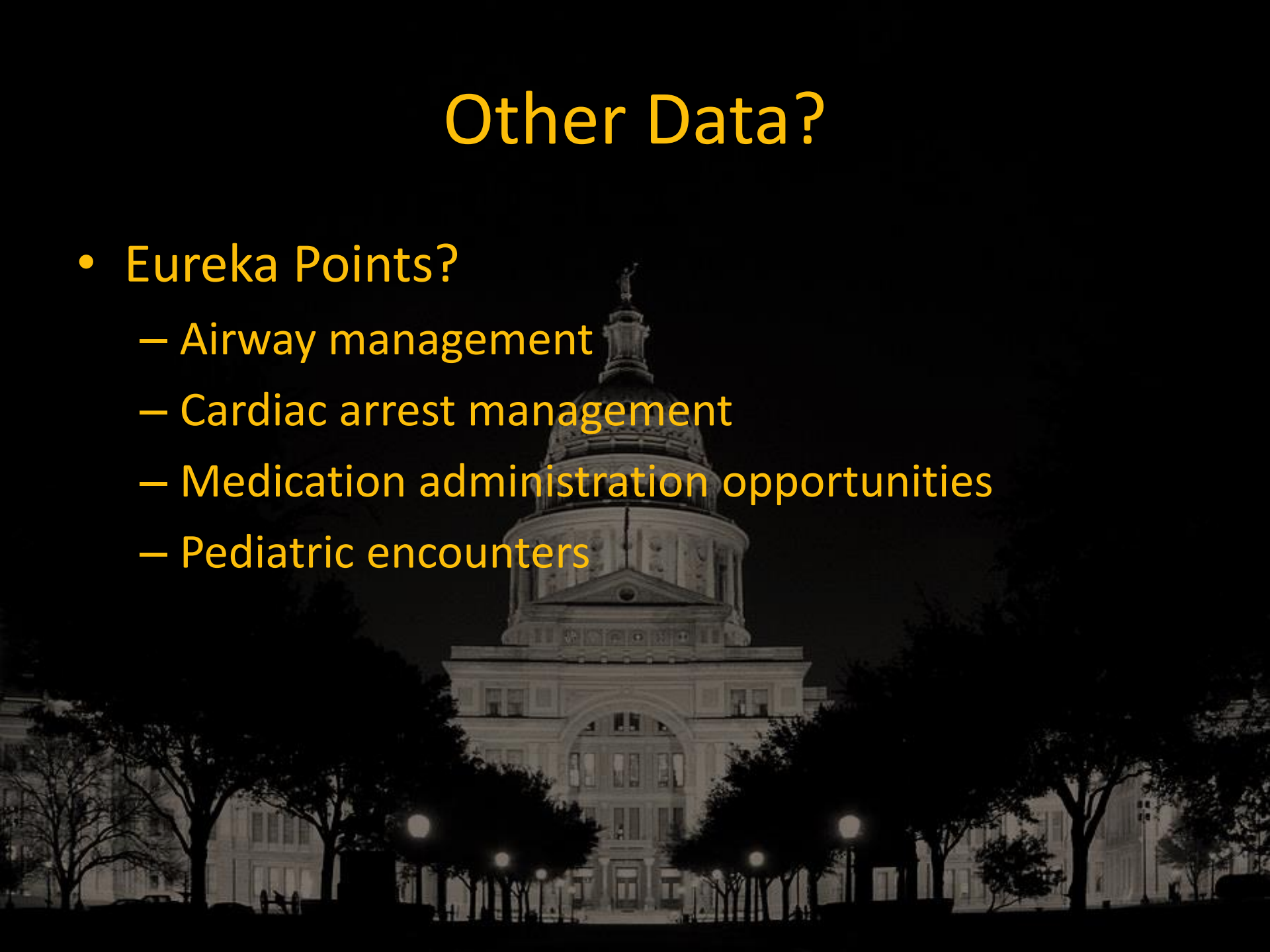
- Obvious programmatic…
  - Grades
  - Successes in lab/clinical procedures
  - Performance measures
    - Faculty AND Students
  - Admission rates vs. graduation rates
  - Employment

Data

- Obvious post graduate…
  - Comparative results…
  - Graduate performance (individual)
    - Procedural successes (not that important)
    - Managing specific patient populations
  - Strengths/deficiencies in specific Pt. populations

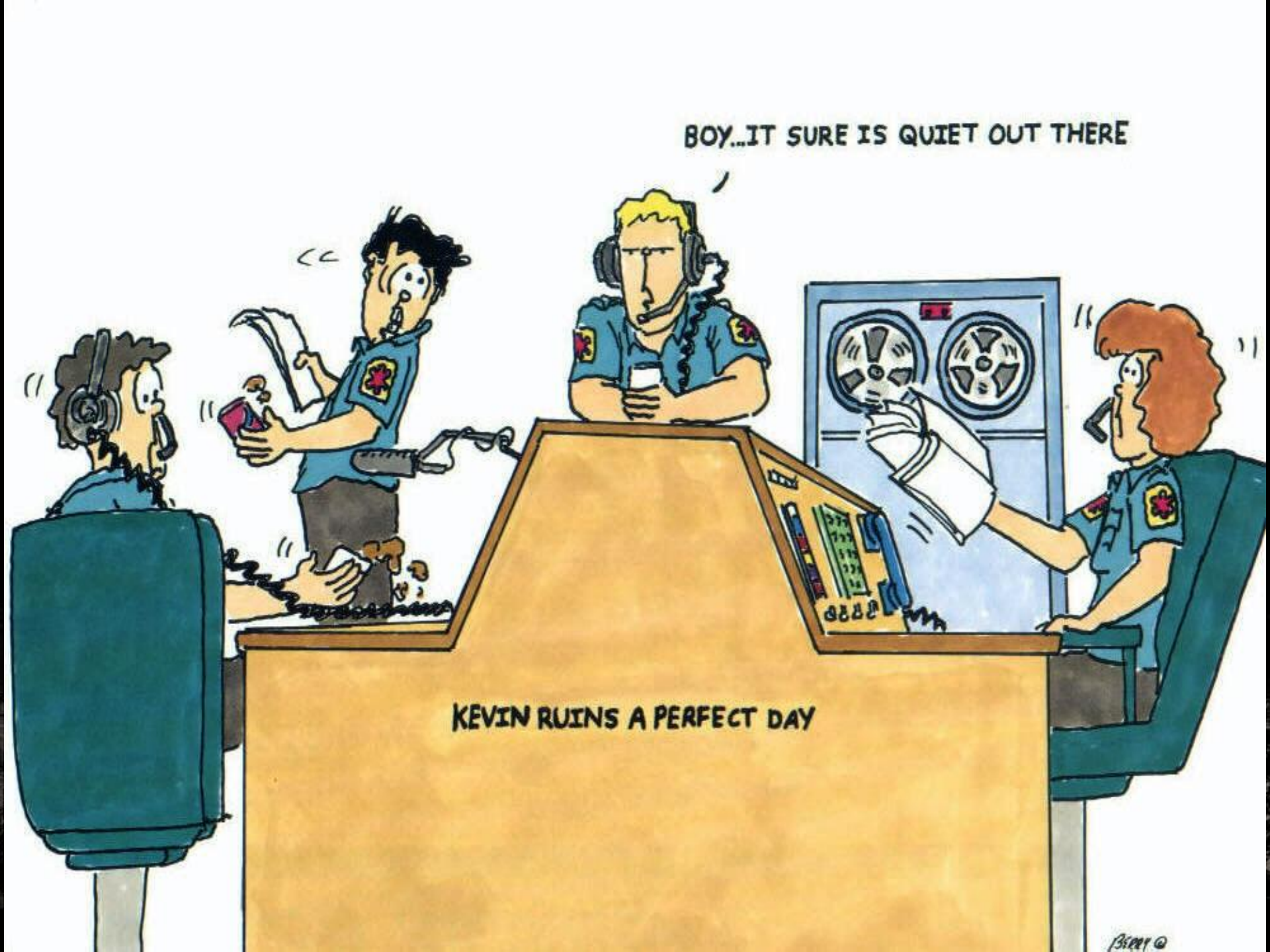
Other Data?

- Eureka Points?
  - Airway management
  - Cardiac arrest management
  - Medication administration opportunities
  - Pediatric encounters



Other Data?

- What defines your Eureka Points?
  - Wilson, et al (Fisdap/Kim Grubbs)?
    - >80% success for more than 20 attempts
  - Other?
    - Percent of successes >80% per exposure
    - FTO/Faculty sign-off (inter-rater reliability)
    - Medical Director certification


BOY...IT SURE IS QUIET OUT THERE
KEVIN RUINS A PERFECT DAY

Challenges

- Field Internship sites
  - Teach their culture
  - Teach new procedures
    - Outside of National Standard Curriculum
    - VL
    - HP-CPR/mCPR
    - Blood Administration
    - Non-standard medications
  - You're program is not a NEO

Challenges

- Available clinical experiences
- Non-simulated pathology exposure
  - NOT an indictment on simulation
- Data/evidence-based curricular content
  - Often outside of NSC

Challenges

- Competent/employable graduates
- Consumers fail to appreciate educational methods of programs
  - Think: Concepts vs. specifics
- Limited review of current literature beyond what is required

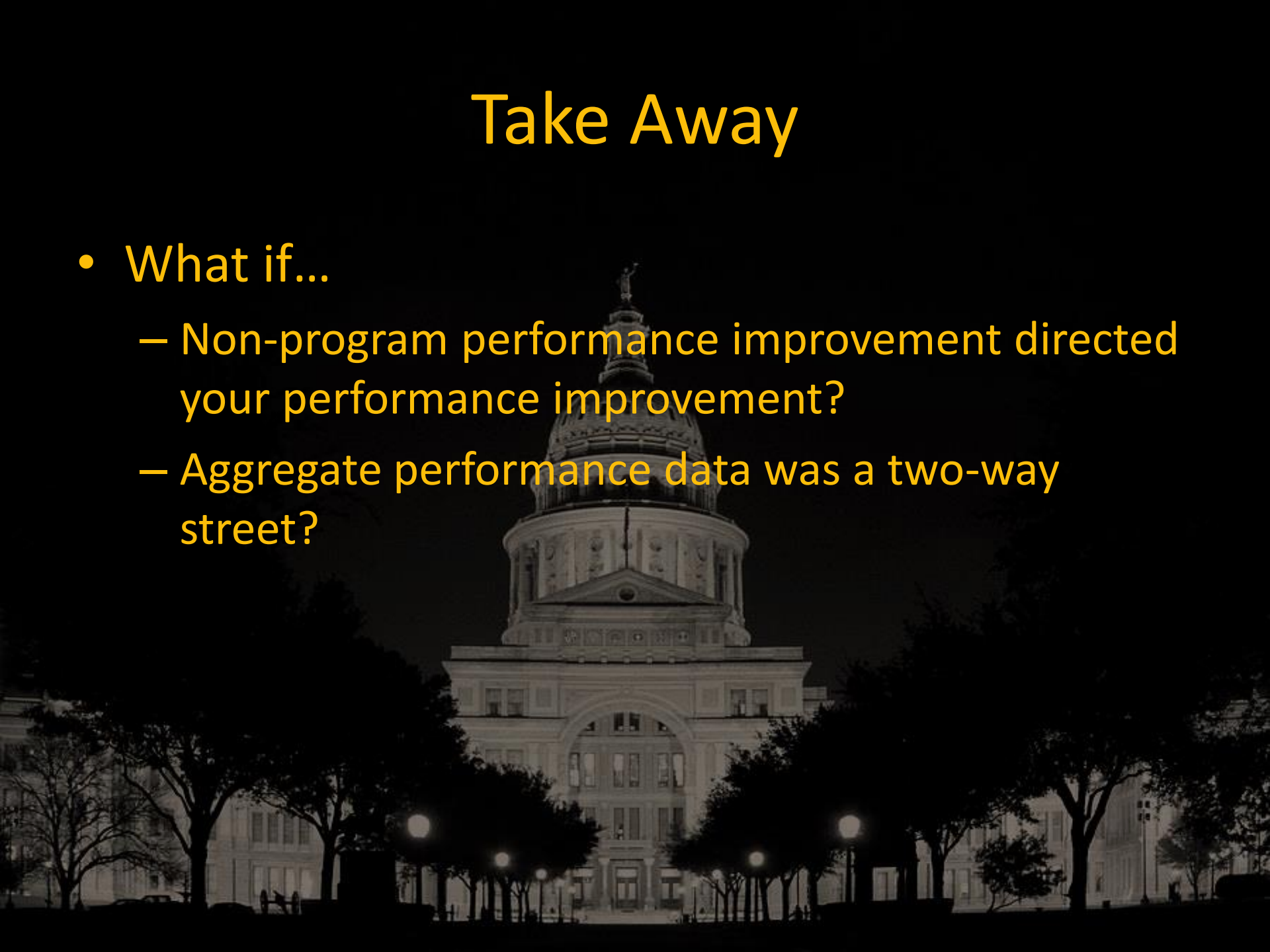

"I think this means no candy."

Take Away…

- Stay current on the literature
  - Enough to argue your position
- Teach to the "Why"
- Use data to your advantage
  - Improve student success
  - Improve your program

Take Away

- What if…
  - Non-program performance improvement directed your performance improvement?
  - Aggregate performance data was a two-way street?




Fin
Thank You!