Levine Children's Hospital

A Novel Approach from the Pediatric Emergency Medicine Fellowship Experience

Competency Based Education in Scholarship

Emily MacNeill, MD. Alice Mitchell, MD. Stacy Reynolds, MD.
Carolinas Medical Center and Levine Children's Hospital Pediatric Emergency Medicine Fellowship Program, Department of Emergency Medicine, Division of Pediatric Emergency Medicine, Charlotte, North Carolina

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Disclosures

None

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Main Objective

Introduce a novel approach to scholarship education that addresses ABP expectations for fellowship training and builds the requisite skills required by junior faculty to launch successful academic careers.

Levine Children's Hospital

Workshop Structure

- Discuss the rationale for our strategy
- Introduce educational theory
- Demonstrate the curriculum
- Review outcomes from our experience
- Discuss future initiatives
- Collaborate with our audience to improve this & other such programs

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Requisite Skill Gaps

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Our Goal

Convert a checklist of required concepts and tasks to a reflective learning model that allows fellows to build skills now and in the future.

Levine Children's Hospital

Curriculum Goals: Three Different Perspectives

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Case 1: Educator's Dilemma

Are the fellows unmotivated in an 80-hour era?

- Third year fellow, no proposal
- Clear question, clear project outline
- Includes constructed database and statistical plan
- Current draft lacks background, introduction and aims

Levine Children's Hospital

Case 1: Educator's Dilemma

- SOC questions motivation & time management
- PD has evidence for strong clinical performance, teaching & commitment to the program

Is this a reflection of motivation, time management or requisite skills?

Levine Children's Hospital

Analysis

- Project with clear aims & a clear analysis plan
- Learner completes data collection with ease
- Lacks knowledge to perform
  - A literature search
  - Synthesize existing observations
  - Construct a concise background

Levine Children's Hospital

Curriculum Director Response

- Basic skill deficits surprise us
- Pre-fellowship training mostly clinical
- No exposure to junior faculty role
- “No research please, I’d rather teach”
- Intervene early

Levine Children's Hospital

Case 2: Director's Disappointment

- Inquires about productive, former fellow
- Presented nationally, internationally & published
- Awarded 50% protected time & start-up funds
- Administrative support & office space
- Statistician on-site
- No completed, independent projects in 3 years

Levine Children's Hospital

Case 2: Director's Disappointment

- Landed an underway project with prewritten protocol
- Pre-constructed database & statistical support
- PD wrote the abstract & publication
- Detailed guidance through presentations

Does the PD's time-intensive approach to mentorship build capable junior faculty?

Levine Children's Hospital

Analysis

- Intensive mentorship=successful scholarly project
- Difficulty developing and managing projects
- Loses interest despite requisite talent

ABP requirements may not empower interest & productivity in research!

Levine Children's Hospital

Program Director Response

- ABP requirements produce scholarly projects
- Begin with the end in mind
- Ultimate goal: competent junior faculty
- Checklist of requirements not enough

Levine Children's Hospital

Case 3: RD's Open Door Disaster

- Updated scholarship curriculum based on ABP
- Stats lectures & mock writing exercises

- Goals:
  - Improve in-service scores on statistical measures
  - Build requisite skills to launch scholarly projects
- Evaluation tool: Survey
  - Enthusiasm for 1 to 1 teaching
  - Fellows support the program

Levine Children's Hospital

Case 3: RD's Open Door Disaster

- SOC chair suffers daily complaints during program
- In-service scores fail to improve
- Fellows struggle to complete protocols
- Improve the program with measurable outcomes

What are the important outcome measures in scholarship education?

Do the ABP requirements provide a sufficient outline?

Levine Children's Hospital

Analysis

- PD initiative meets the ABP expectations
- Fellows “like” the experience
- Important outcomes fail to improve
- Did not increase research productivity
- ABP requirements did not provide the mechanism

Levine Children's Hospital

Research Director's Response

- Research & Academic Production
- Excellence in Education
- Independent & Productive Fellows→ Faculty
- Institutional Reputation & Recognition
- Stellar Journal Reviewers

Levine Children's Hospital

Research Director's View:

but what I won't (easily) say….

- More fellows/residents/students/projects…
- Low priority (even if I'm interested)
- ABP-who?
- Mentoring ≠ Random drive-bys of my office

Levine Children's Hospital

Fellow's View

- Direct mentorship
- Choice of mentors
- Clear progression
- Timely feedback
- Apprenticeship

Levine Children's Hospital

Fellow's View

- Skill specific training
- Cohesion among mentor, PD, ED
- Protection from institutional barriers
- Coordinated and scheduled demands

What is my role?

Levine Children's Hospital

Summary Rationale

- Curricular Design
- Mentorship Team

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Summary: Curricular Design

- 1. Begins with rudimentary basics
- 2. Intervene early
- 3. Teaches relevant, requisite skills
- 4. More than theory:
  - Drives production of quality research
- 5. Time efficient for fellows and mentors

Levine Children's Hospital

Summary: Mentorship Team

- 6. Composed of novice and expert scholars
- 7. Clear communication among team members
- 8. Consistent feedback to fellows between members
- 9. Timely, preemptive feedback
- 10. Reduce institutional barriers to research

Levine Children's Hospital

Skill Building for Professionals: The Educational Theory

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Learning the Lingo

- Scholarly works are a second language
  - Motivated by **Meaning** not form
  - Improve with experience
  - Use it or loose it
  - Immersion

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

How We Learned

- Pedagogical
  - Form vs. Meaning
  - Out of Context
  - Extrinsic Motivation
  - Sequential Outcome
  - Unimodal communication

Levine Children's Hospital

Task-Based Learning

- Pedagogical
  - Form vs. Meaning
  - Out of Context
  - Extrinsic Motivation
  - Sequential Outcome
  - Unimodal communication
- Task-Based
  - Form & Meaning Combined
  - Context-based
  - Intrinsic Motivation
  - Concurrent Outcome
  - Multimodal communication

Levine Children's Hospital

Linguistic Learning Theory

- Pedagogical
  - Non-target utterances = NO Communication
  - Repetition = same
- Task-Based
  - Non-target utterances = Communication
  - Repetition = evolved

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Pre-Task Phase

- "Priming"
- "Expert Novice" Phase
- Objectives
  - Motivation
  - Focus on tasks

Levine Children's Hospital

Pre-Task Phase

- Approach
  - Mimicking
  - Modeling
  - Skill-building
  - Planning

Levine Children's Hospital

Task-Phase

- Objectives
  - Relatable
  - Contextual
  - Combine form & meaning

Levine Children's Hospital

Task Phase

- Approach
  - Small group
  - Large group
  - Individual

Levine Children's Hospital

Task Phase

- Format
  - With or without pressure
  - With or without access to input data
  - With or without “surprise” element

Levine Children's Hospital

Pressure

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

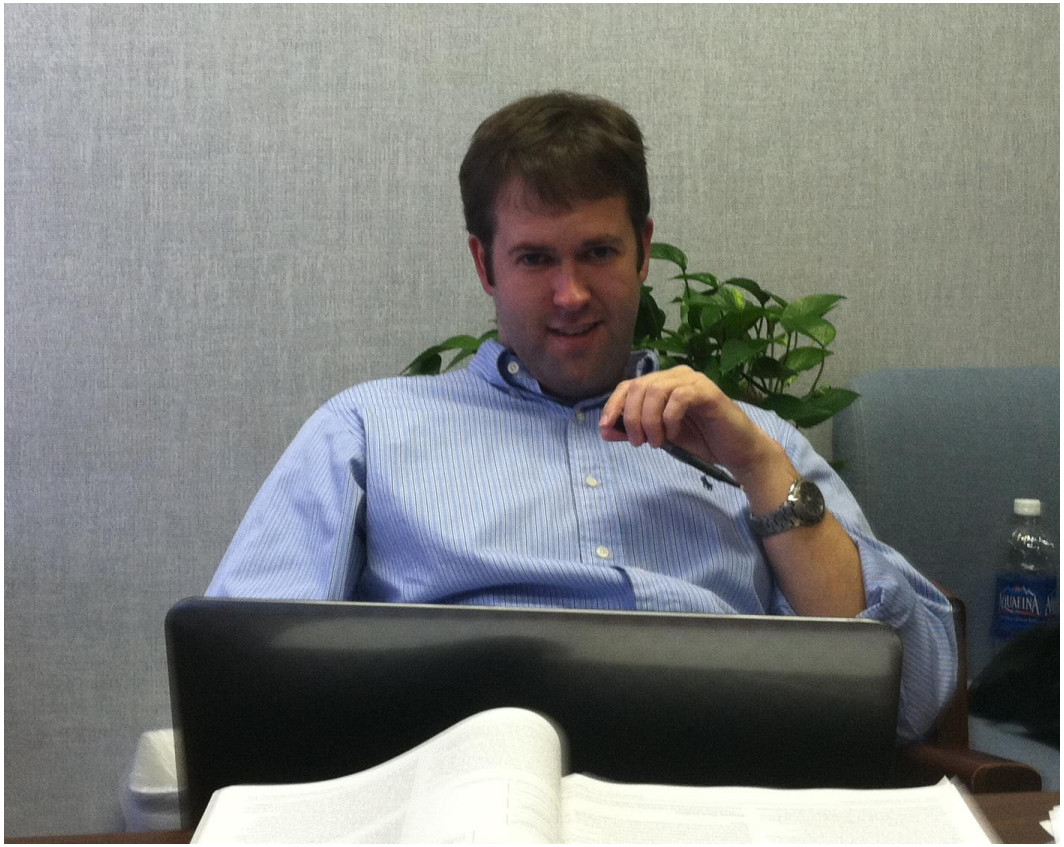
Input Data

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Surprise



Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Post- Task Phase

- Objectives
  - Motivation
    - Increase willingness to participate again

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Post- Task Phase

- Objectives
  - Motivation
    - Increase willingness to participate again
  - Feedback
    - Reactive & pre-emptive

Levine Children's Hospital

Post- Task Phase

- Objectives
  - Motivation
    - Increase willingness to participate again
  - Feedback
    - Reactive & pre-emptive
  - Demonstration of Mastery
    - Increase complexity, clarity and fluency

Levine Children's Hospital

Post-Task Phase

- Approach
  - Review
  - Reflect
  - Repeat

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Post-Task Phase

- Format
  - "Proof listening"
  - Peer interaction

Levine Children's Hospital

Reactive Feedback

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Pre-Emptive Feedback

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

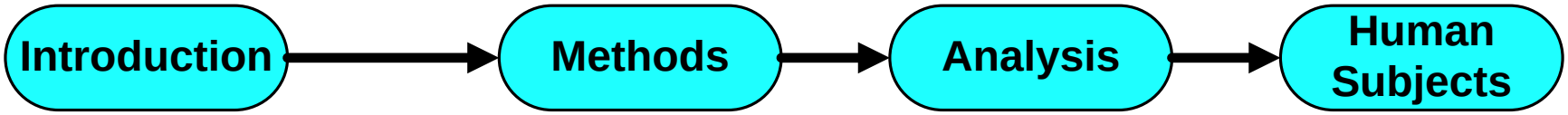
Proof Listening

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Cyclic Phase

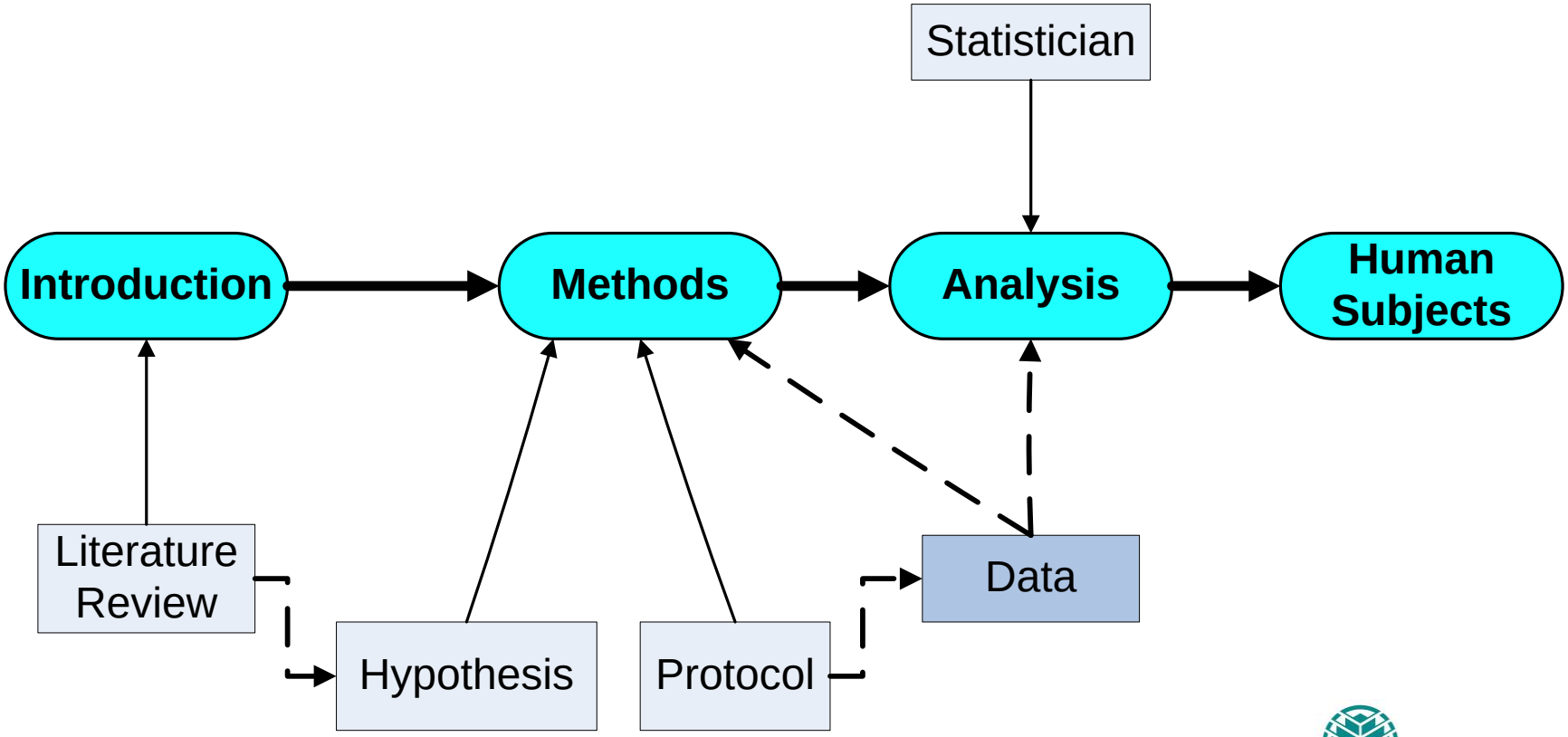


Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Cyclic Phase

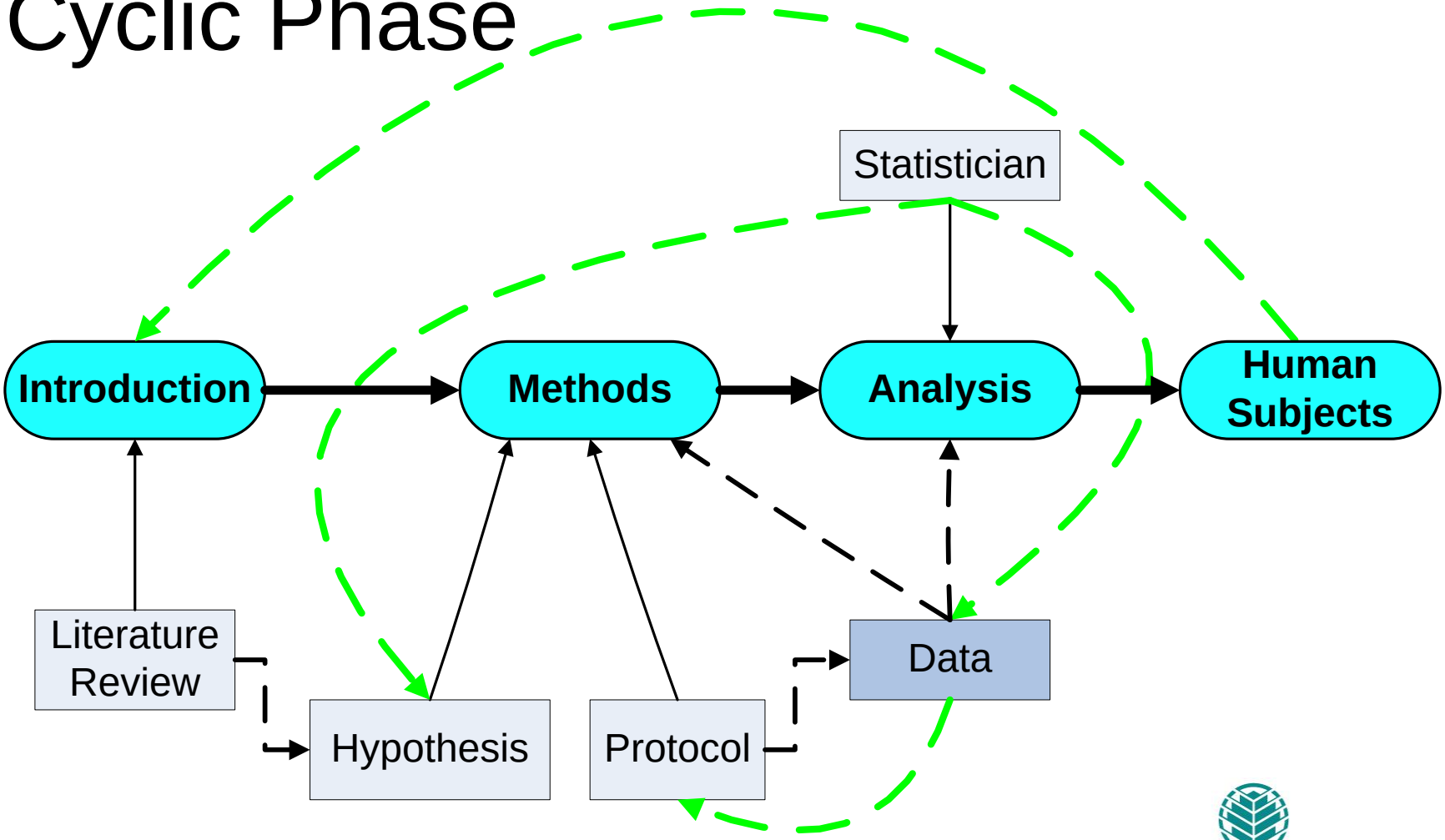


Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Cyclic Phase



Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Scholarship in Fellowship: ACGME Competency Standards and The Milestones Project

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Scholarship and Competence

- Limited exposure
- No exposure to researchers mastering research
- Inability to rapidly translate master approaches
- Entrench our learners in scholarship
- Competence vs. content: ACGME and Milestones Project
- Applies for scholarship education

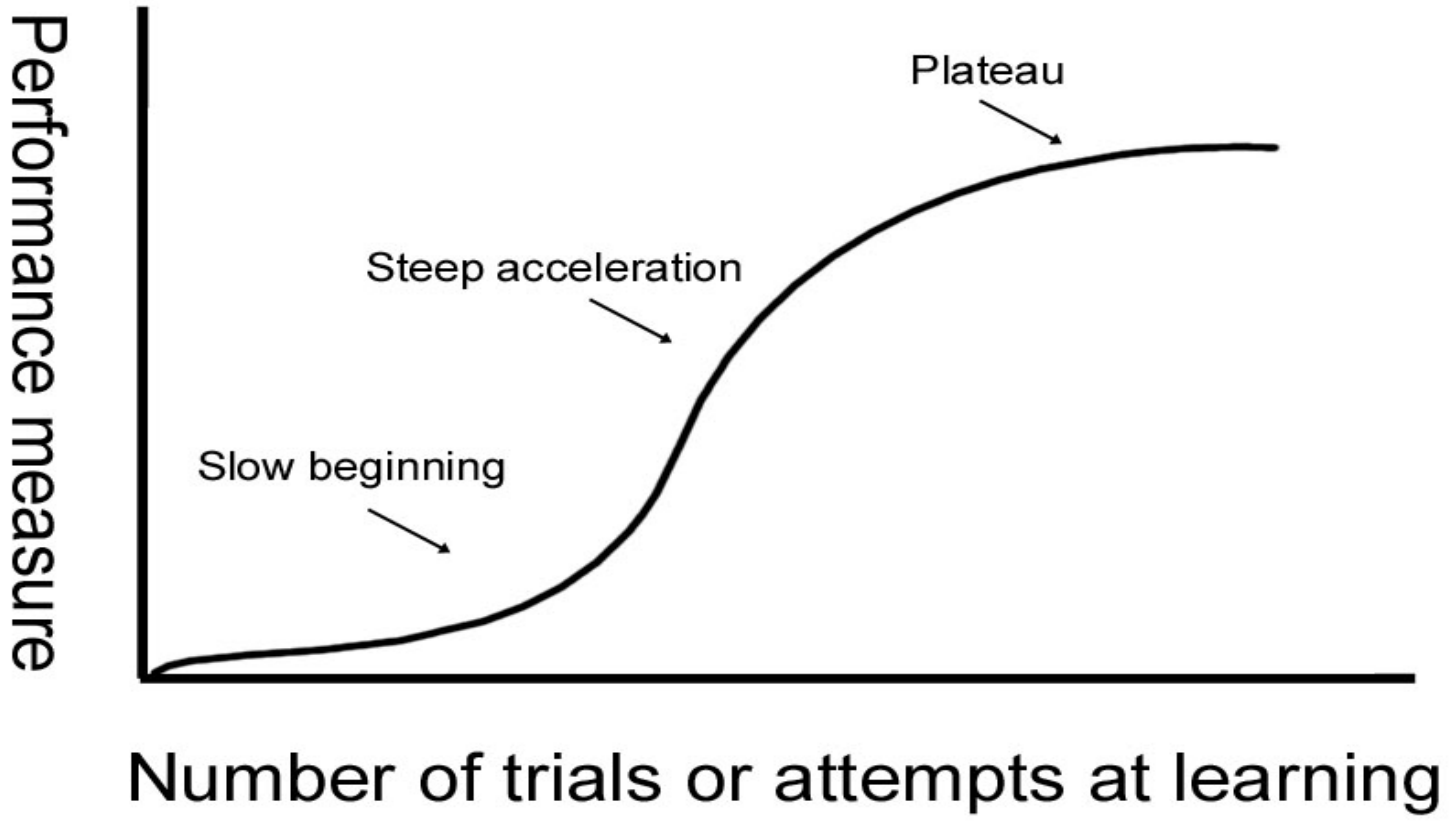
Levine Children's Hospital

Competency Framework

- Attempting to teach translatable skills
- Learners identify personal gaps
- Successful project management
- Starting point for career self-management

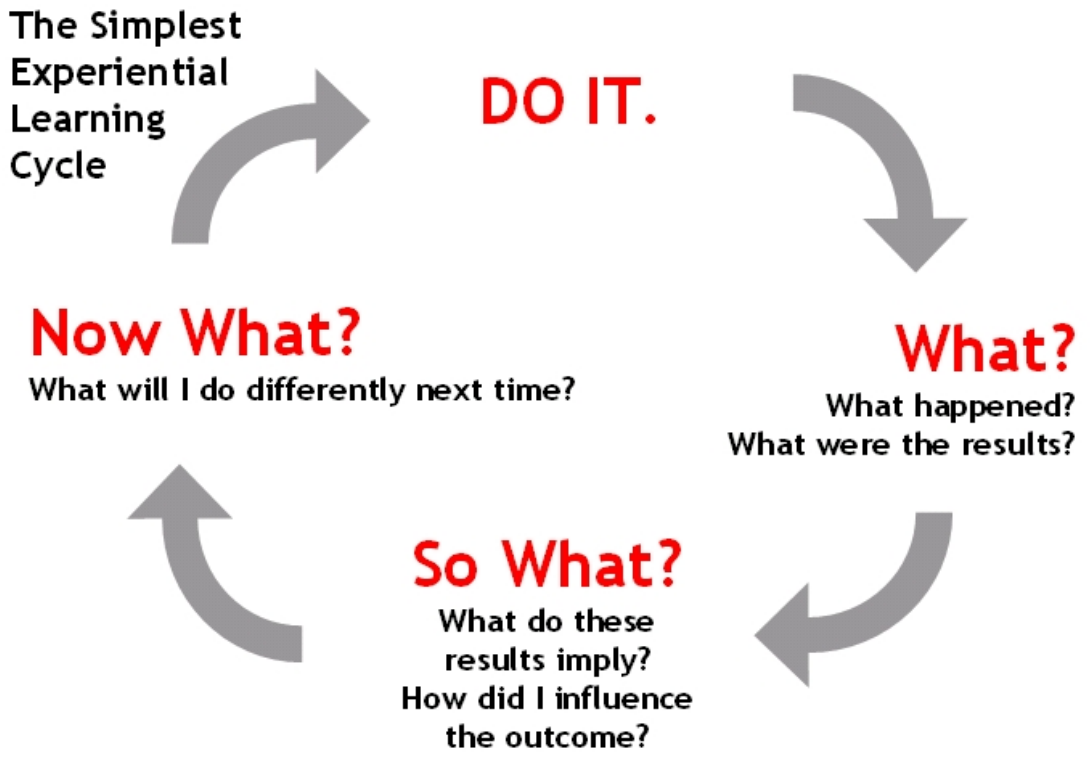
Levine Children's Hospital

Competency Framework



Levine Children's Hospital

Learning "Cycle" vs. Curve



compiled by Andrea Corney
www.edbatista.com/2007/10/experiential.html

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Curricular Design

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

September 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1 Defining Scholarship	2	3
4	5	6 The Structured Review	7	8 Hypothesis Generation & Study Design	9	10
11	12 Statistics	13 IRB & Data Collection Tools	14	15 Peer Review & RRC	16	17
18	19	20	21 How to Talk to a Statistician	22	23	24
25	26	27	28	29 Negotiating a Job	30	

Levine Children's Hospital

Outcomes and Future Directions

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Summary: Curricular Design

- 1. Begins with rudimentary basics
- 2. Intervene early
- 3. Teaches relevant, requisite skills
- 4. More than theory:
  - Drives production of quality research
- 5. Time efficient for fellows and mentors

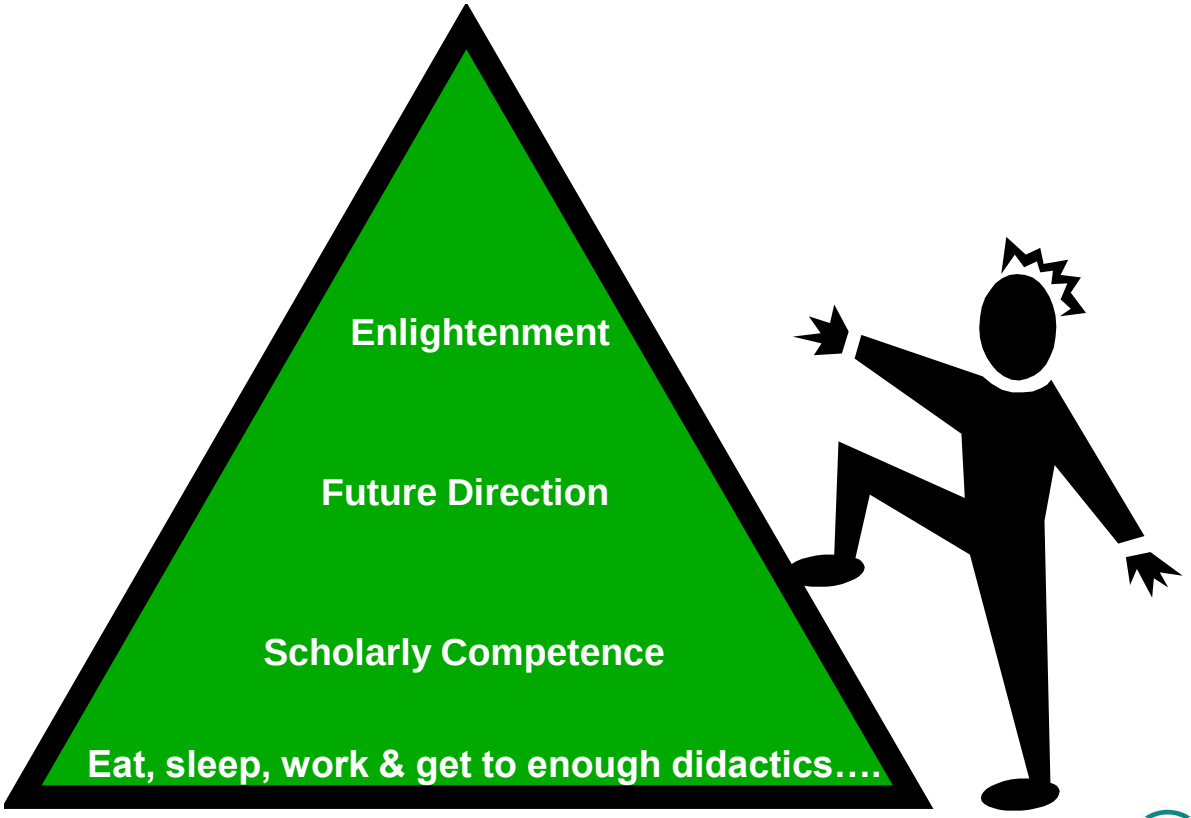
Levine Children's Hospital

Summary: Mentorship Team

- 6. Composed of novice and expert scholars
- 7. Clear communication among team members
- 8. Consistent feedback to fellows between members
- 9. Timely, preemptive feedback
- 10. Reduce institutional barriers to research

Levine Children's Hospital

Fellow's View



Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Future Directions: Balancing Motivations

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

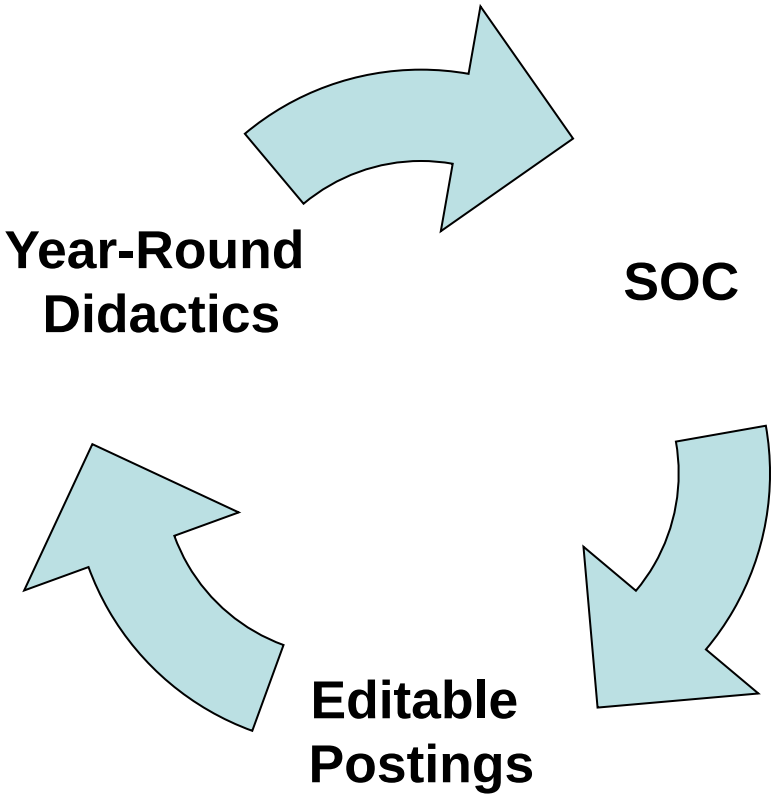
Future Directions: Balancing Interests

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Future Directions: Cyclic Phase



Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.

Levine Children's Hospital

Closing discussion

How do we challenge fellows without overwhelming them?

What is the right amount of “mentorship” when it comes to scholarly projects?

Levine Children's Hospital

Closing discussion

Are other programs using a similar model?

What feedback do you have regarding the scholarship education we presented?

Do you have any recommendations for us?

Levine Children's Hospital

Carolinas Medical Center
Levine Children's Hospital
Pediatric Emergency Medicine Fellowship Program

Stacy.Reynolds@carolinas.org

Carolinas Medical Center

Uncompromising Excellence. Commitment to Care.