

Addressing the needs of the struggling medical learner

Malathi Srinivasan, MD FACP
Visiting Professor, IRCME
University of Tokyo School of Medicine
November 16, 2015



Special Thanks: Todai

- AKISHITA Masahiro, MD PhD
- BITO Haruhiko, MD PhD
- KASAI Kiyoto, MD PhD
- KITAMURA Kiyosi, MD PhD
- KOBAYASHI Koki, MD PhD
- HOSOYA Noriko, MD PhD
- MIURA Wakako
- MIYAZONO Kohei, MD PhD
- ONISHI Hirotaka, MD PhD
- SAITO Nobuhito, MD PhD
- SAWAYAMA Yoshie, MS
- SON Daisuke, MD PhD
- YAMADA Hiromi
- YAMADA Hideomi, MD PhD
- YAMAMOTO Ken, MD
- YAMAMOTO Kazuhiko, MD PhD



Special Thanks: USA

- Mark Servis, MD
- Michael Wilkes, MD PhD
- Margaret Ray, PhD
- Rich Kravitz, MD MSHP
- Mitch Feldman, MD Mphil
- Andrew Nevins, MD (Stanford)
- Karen Hauer, MD (UCSF)
- Win May, PhD (USC)
- Roy Gurmeet Roi, MBA
- Ryan Tranham
- John Drummer
- Haydee Pineta-Johnson





Paris, November 2015
122 bystanders

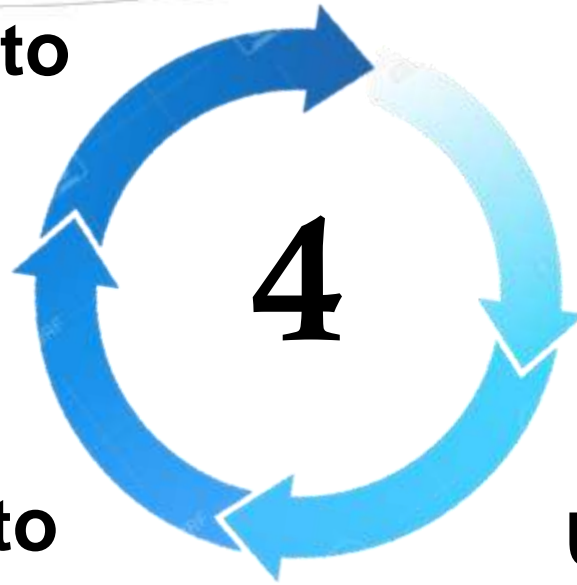


Garissa University, Kenya
April 2015
147 students/faculty



Learning Objectives

Identify methods to coach struggling learners



Recognize characteristics of a struggling medical learner

Identify systems to support struggling learners

Utilize an anchoring framework to guide inquiry



How do you identify a struggling medical learner?





*A struggling medical learner is
someone who is...*

*unable to meet stage appropriate
professional milestones*

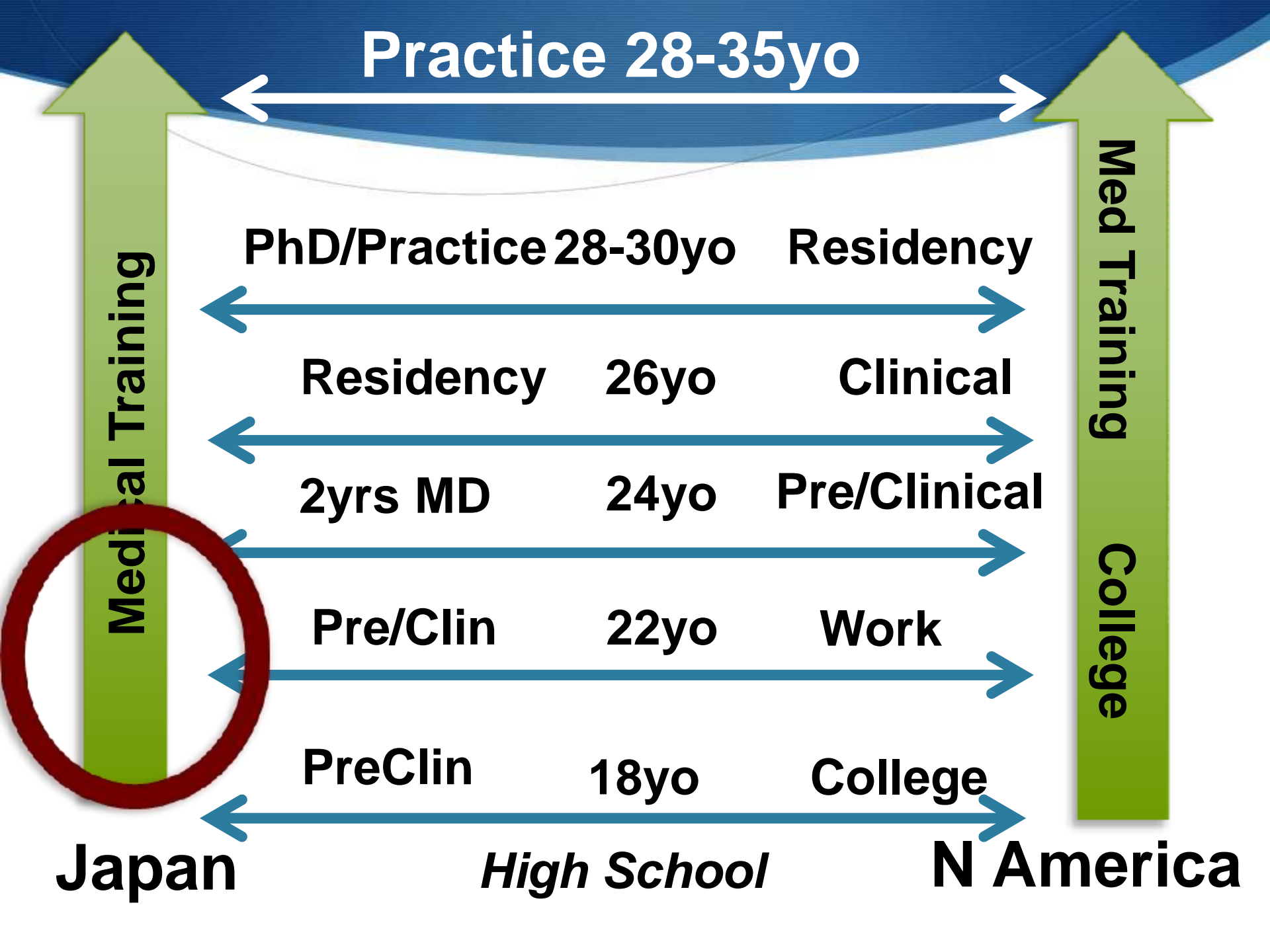
Types of Problems: Japan

- ◆ Motivation
- ◆ Professionalism
- ◆ Performance: PreClinical
- ◆ Mental Health
- ◆ Financial Concerns
- ◆ Communication

Types of Problems: North America

- ◆ Performance: Clinical
- ◆ Performance: Knowledge/Synthesis
- ◆ Mental Health
- ◆ Professionalism

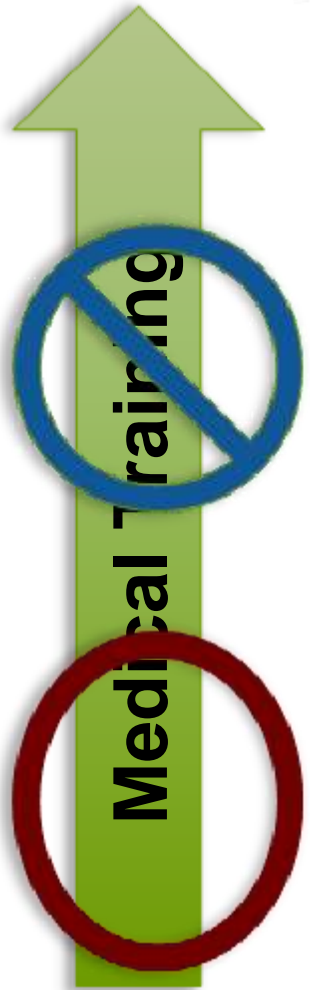




Clinical Performance & Assessment

Professional Training

**Maturation
into Adulthood**



Japan



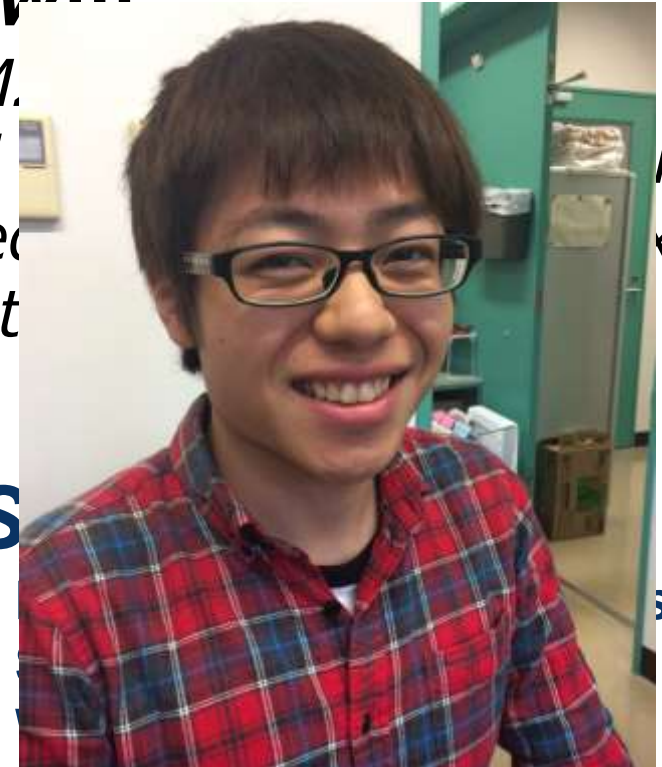
N America



So-San... Struggling Medical Learner

What we know....

- 21 years old M.
- SP complained
- Previously failed
- At risk to fail ot



icat
kam

s?



IS

-
-
- **Performance anxiety**
- **Needs work with communication skills**
- **Studying, but not able to apply**

Case derived from work of HOSOYA Noriko, MD PhD

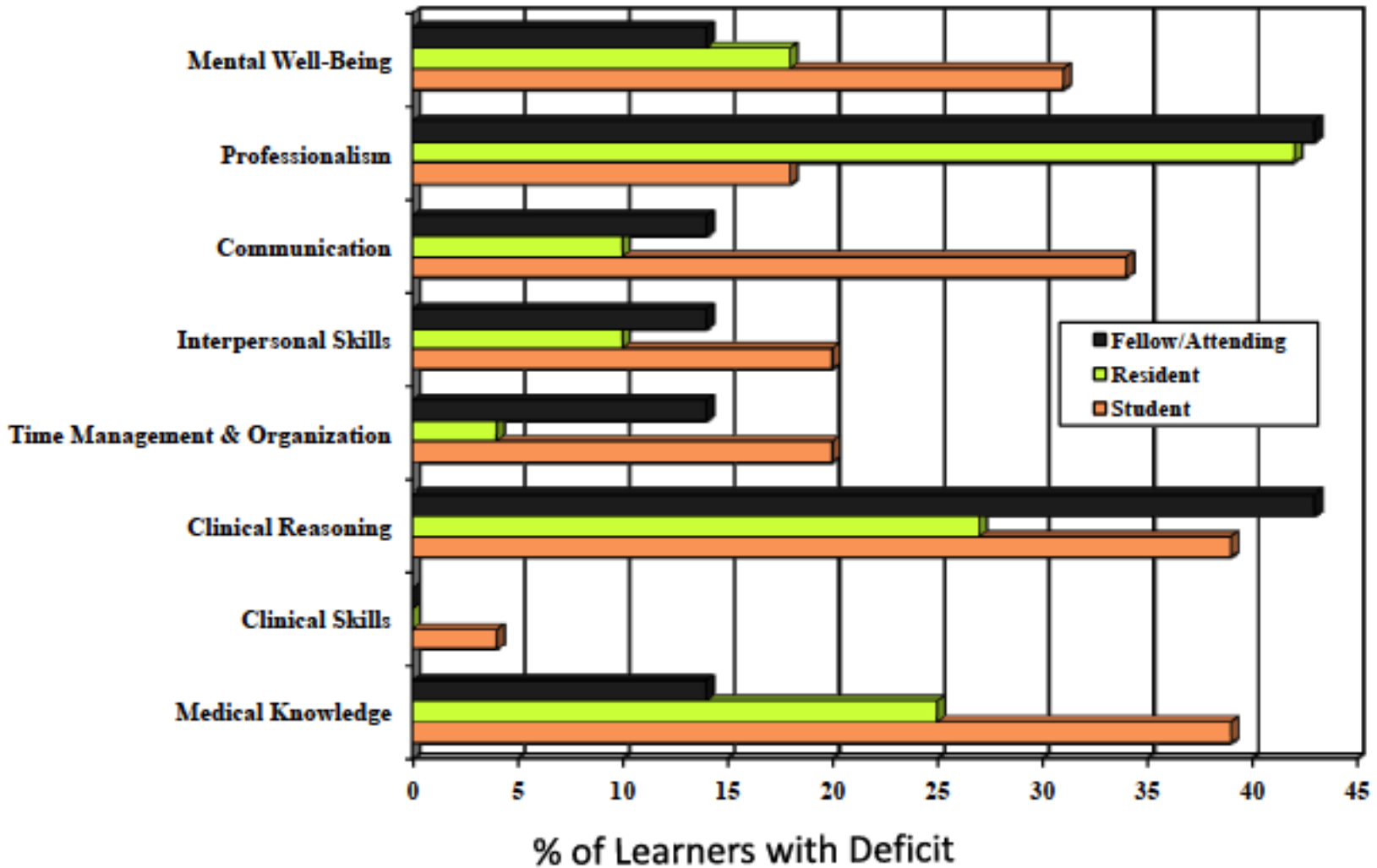
How many medical learners struggle?

💧 15% (7-28%)

of most medical school and
(7-15%) residency classes

Varies by Training Level and Domain

(of 151 learners referred to a remediation center)

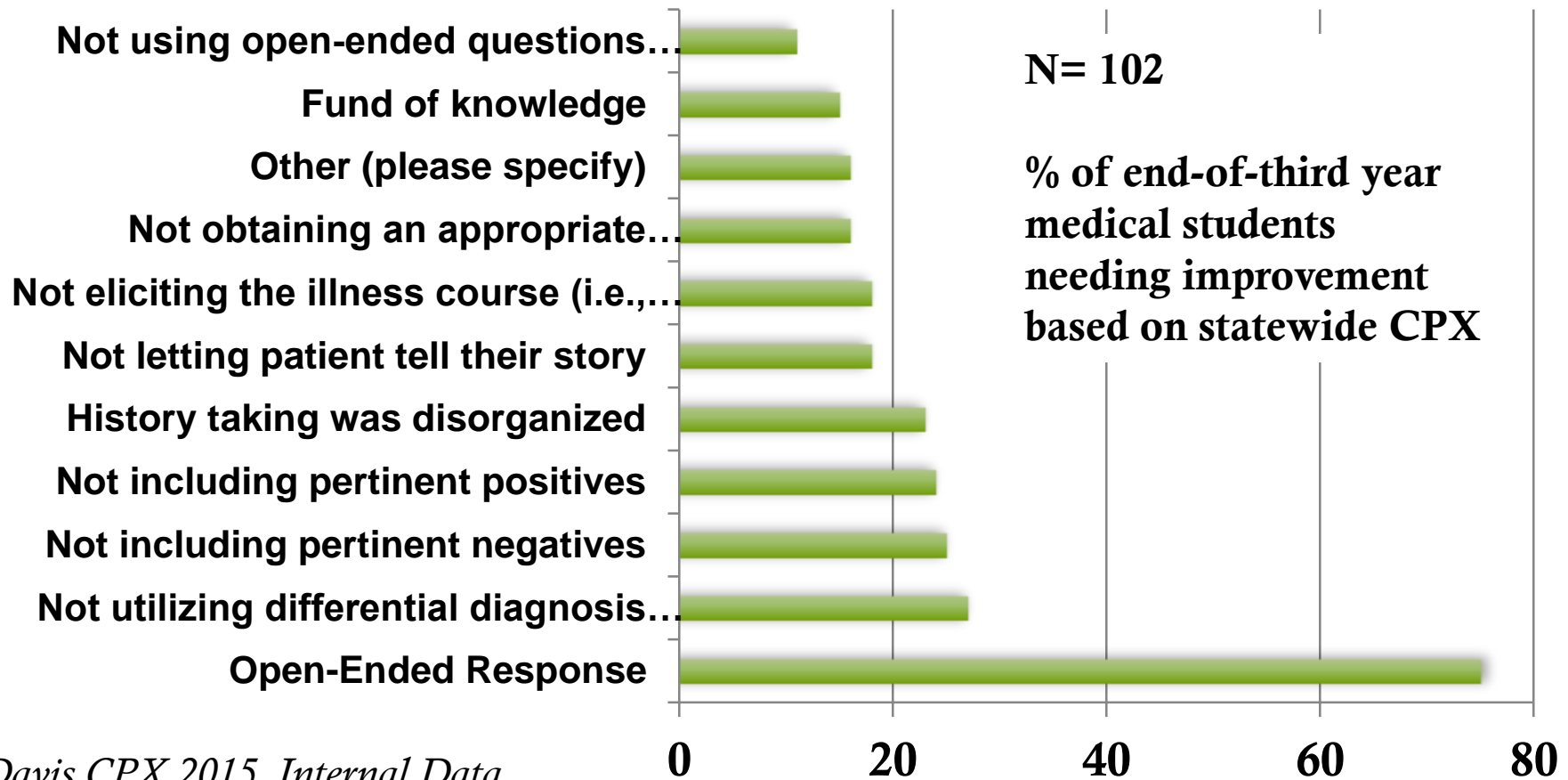


Guerrasio, 2014, AIAMC presentation (from AcadMed 2014)

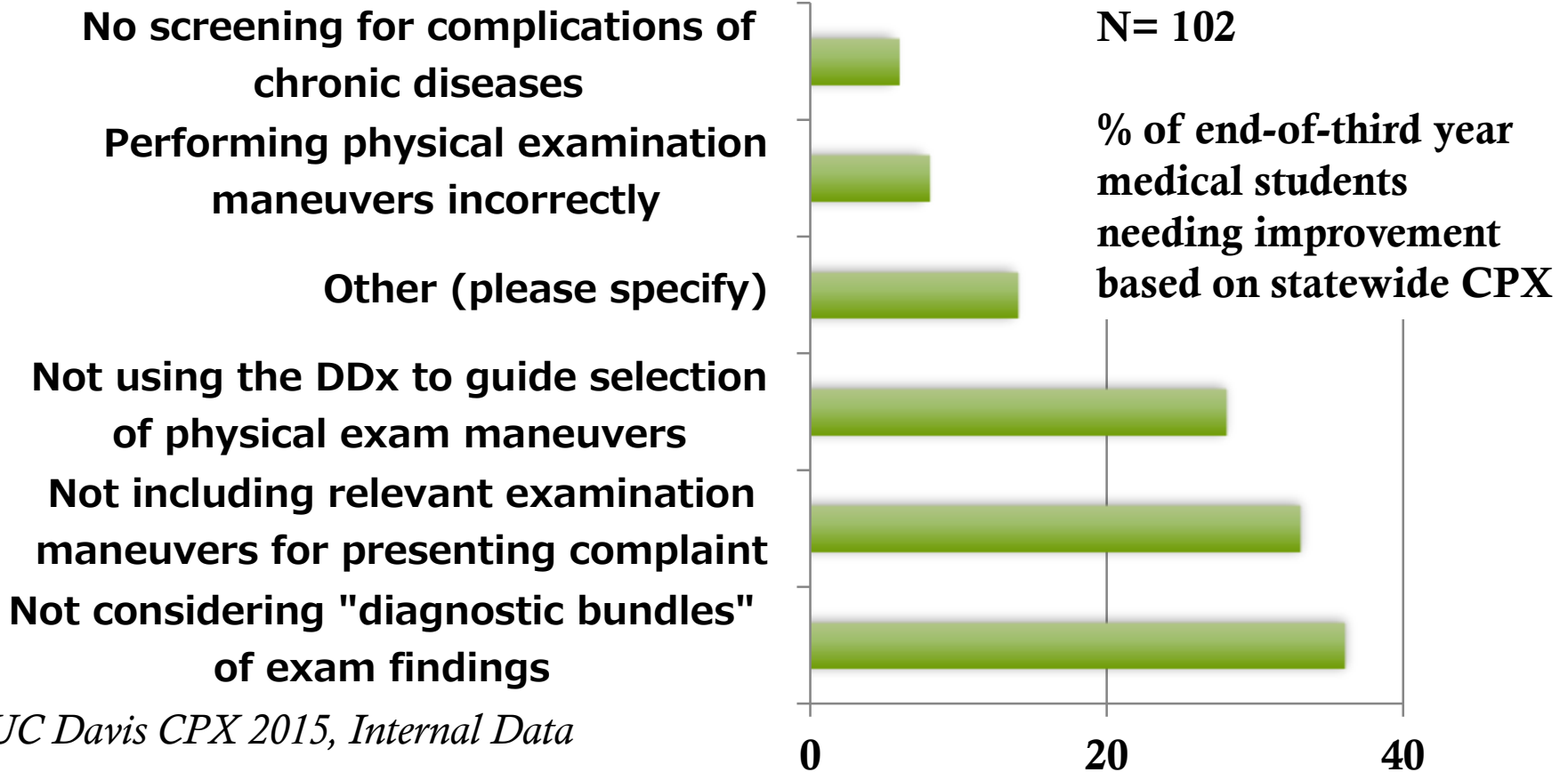
Post-Clerkship 8 Station OSCE + Faculty Review

- ◆ Major Deficits in Overall Clinical Performance
 - ◆ 10% -- SP Scores (content)
 - ◆ 10% -- Faculty Review (approach/reasoning)
- ◆ Overall, about 15 students/102
 - ◆ 50% do well with just direction
 - ◆ 50% need more intense help

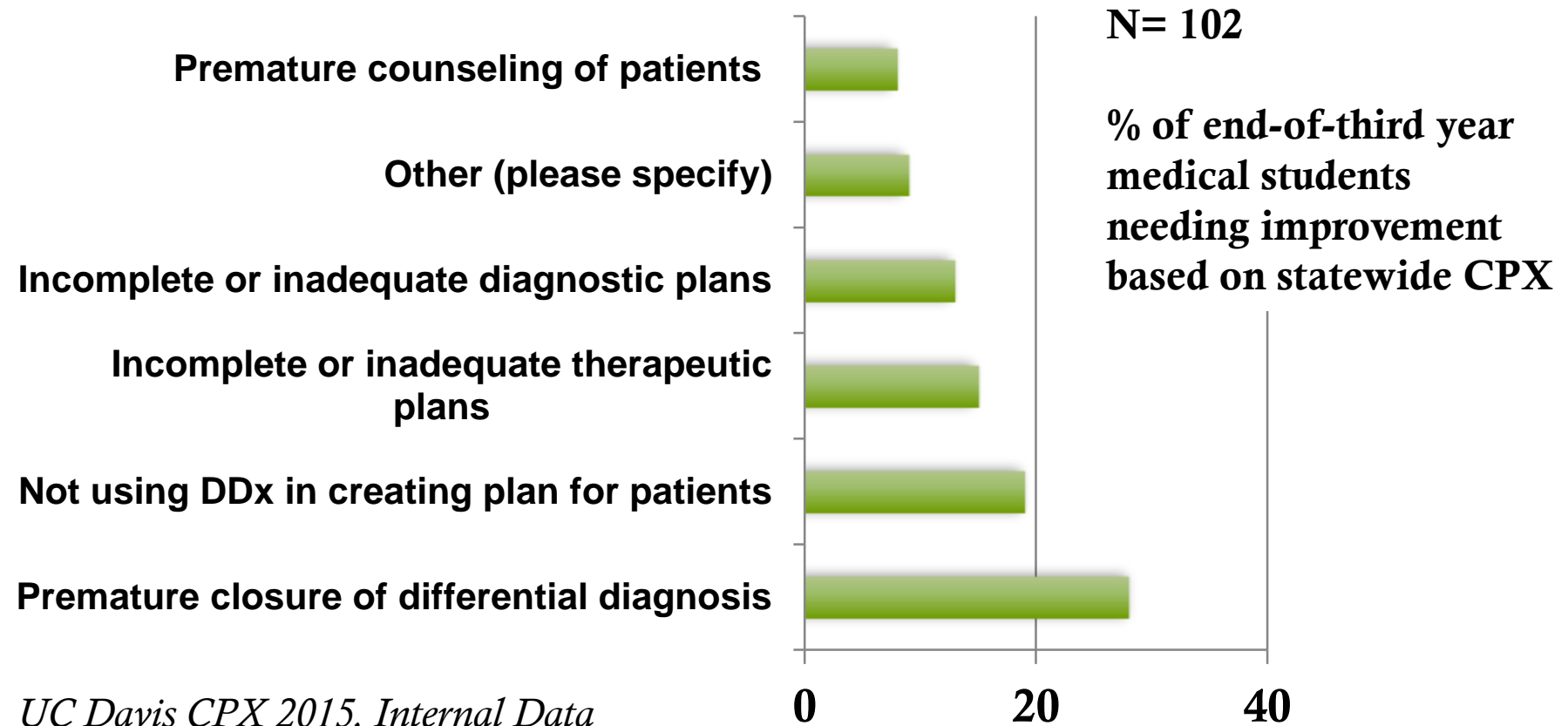
History



Physical Exam



Decision-Making



Professionalism

(UCD clinical rates 5%)

- ◆ Late and not timely in work delivery
- ◆ Incomplete and inconsistent work
- ◆ Indiscrete, disrespectful, rude
- ◆ Poor teamwork
- ◆ Not a flexible thinker, doesn't take feedback well
- ◆ Low percentage of substance abuse

*How do we systematically think
about So-san's many, many issues?*

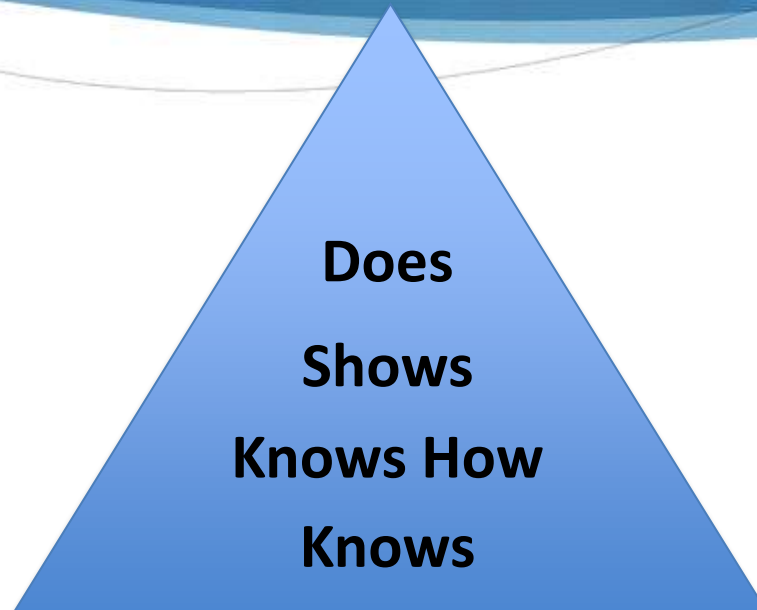


2

Theoretical Framework to anchor approach

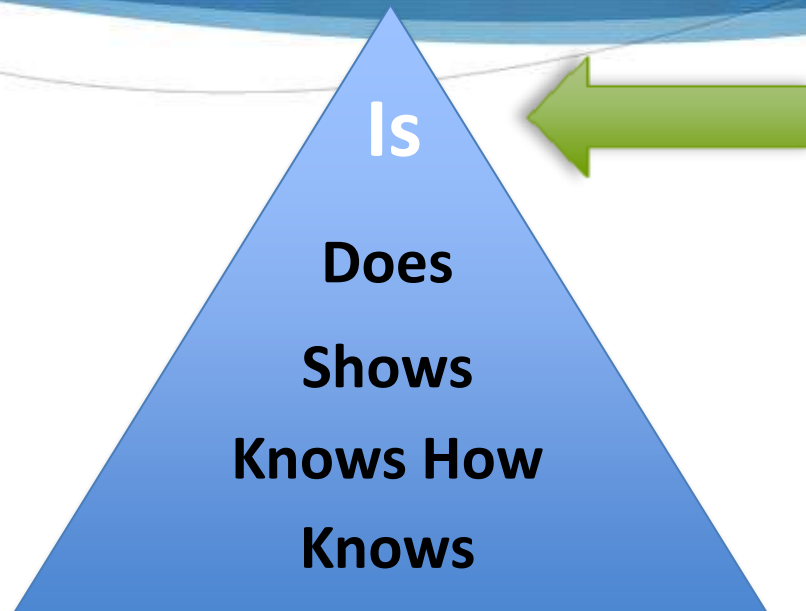


Competency Framework: Adequate?



George Miller
Academic Medicine 1990

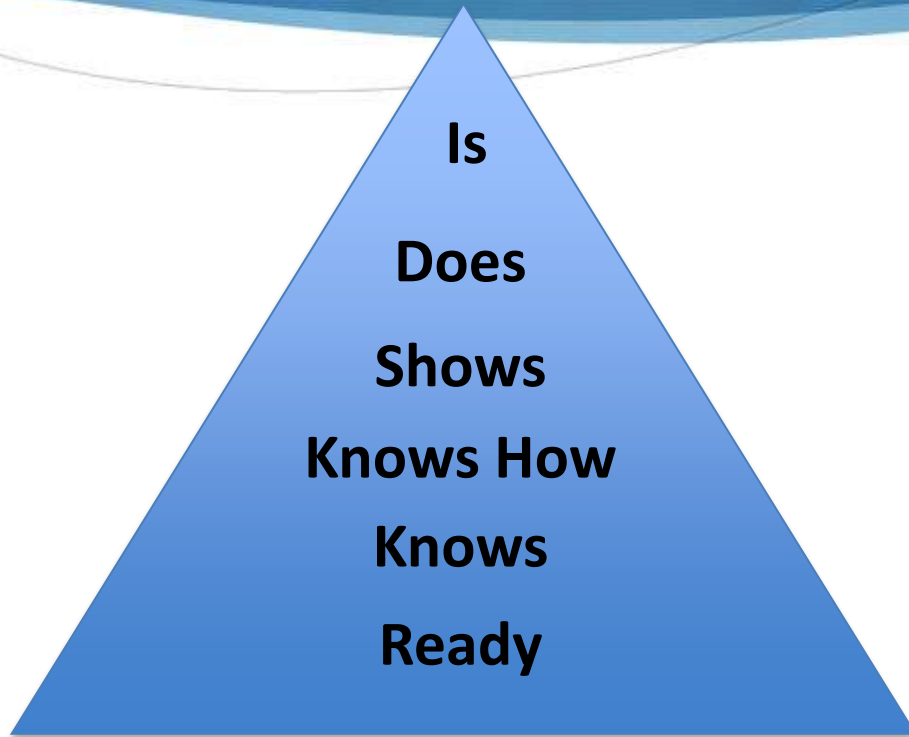
Theoretical Framework



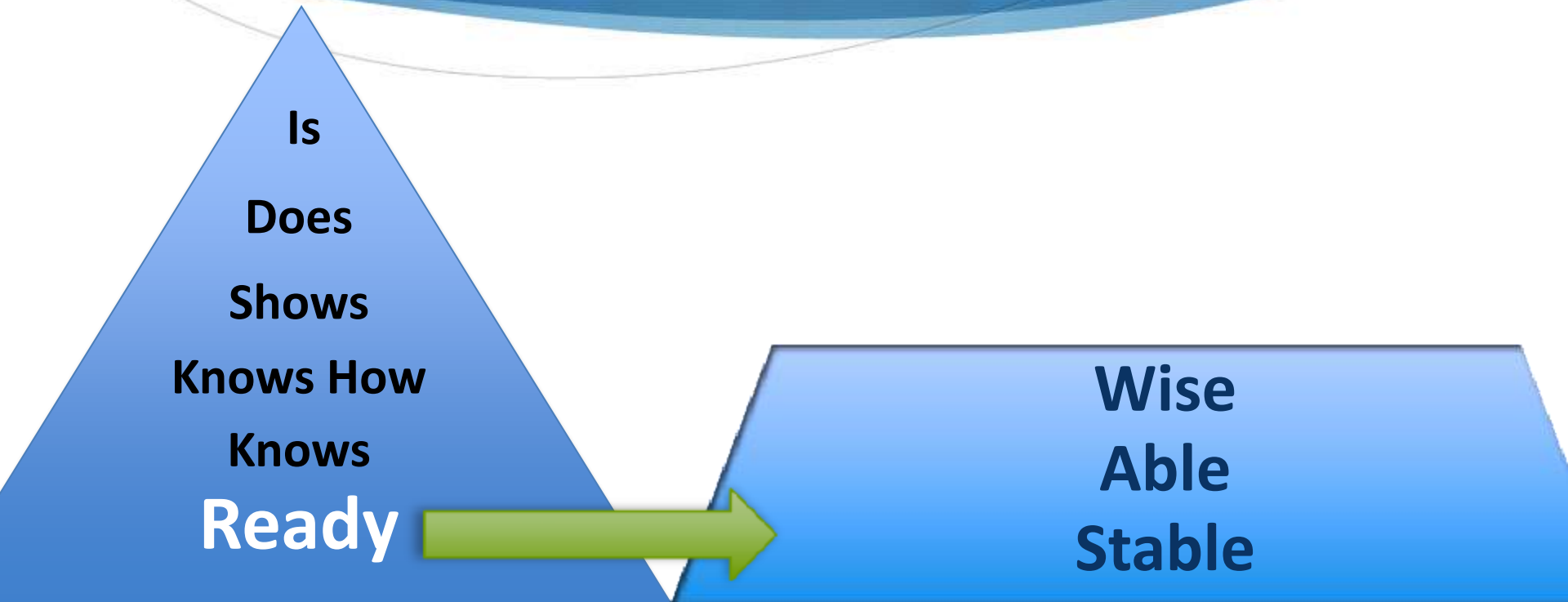
Professional Identify of a Physician:

- Behaviors
- Attitudes
- Values
- (Self-directed learning)

How does this inform our approach to the struggling learner?



Base of the Pyramid “Ready to Learn”



*Srinivasan, Nevins, et al.
Pending submission*

Base of the Pyramid

“Ready to Learn”

Is
Does
Shows
Knows How
Knows
Ready

Stable

- ***Life stability, to concentrate***
No life chaos, ill family members, personal turmoil, children/divorce, finance
- ***No active mental health problems***

Wise
Able
Stable

Base of the Pyramid “Ready to Learn”

Is
Does
Shows
Knows How
Knows
Ready

Able

- **Cognitive Preparation**
Prior Content Knowledge
Know how to learn
- **Not High functioning, learning disabled** (*Aspbergers, processing errors*)

Wise
Able
Stable

Base of the Pyramid “Ready to Learn”

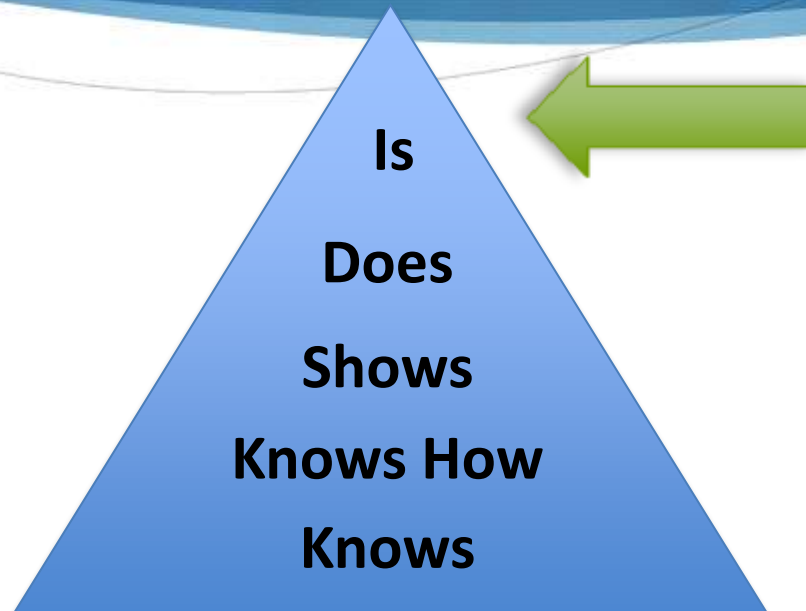
Is
Does
Shows
Knows How
Knows
Ready

Wise

- *Maturity*
- *Adapts to culture & expectations*
- *Responds well to feedback*
- *Adopts professional values*

Wise
Able
Stable

Theoretical Framework



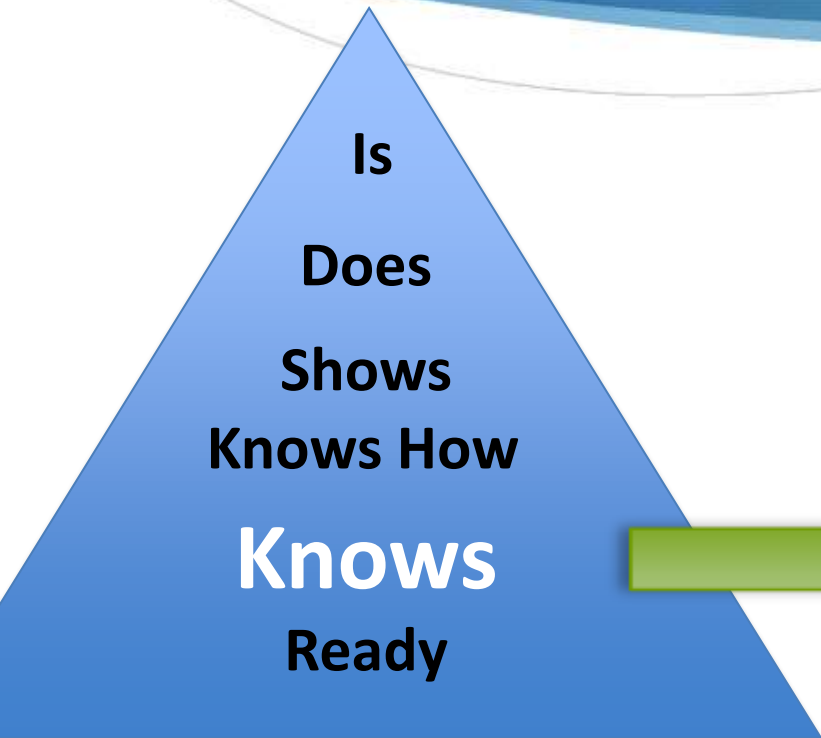
Professional Identify of a Physician:

- Behaviors
- Attitudes
- Values
- (Self-directed learning)

George Miller
Academic Medicine 1990

Cruess, Cruess, Steinert
Academic Medicine, ePub 2015

Srinivasan, Nevins, et al.
Pending submission



Knowledge
(declarative knowledge)

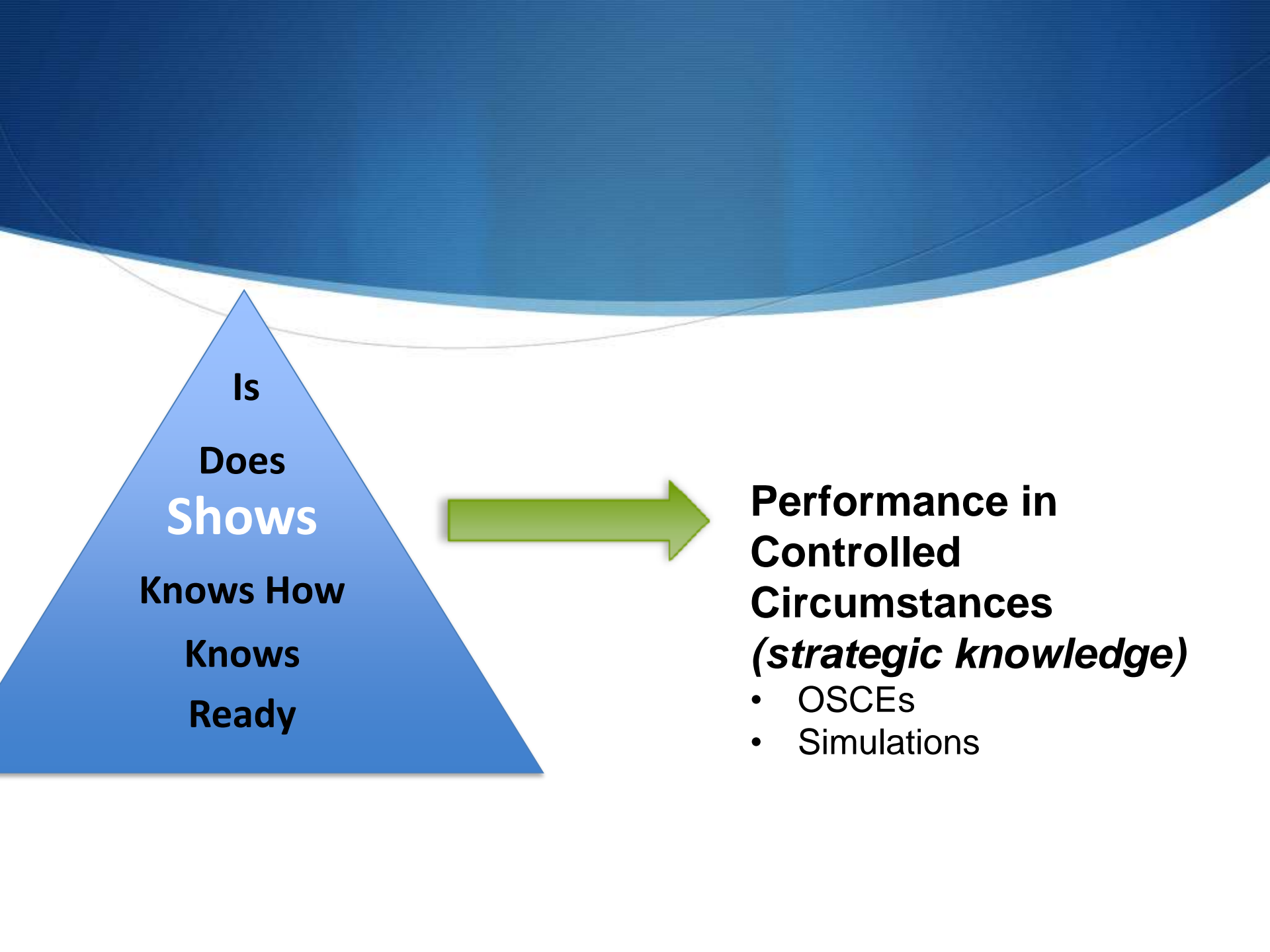
- MCQ
- Presentations
- Discussion

Is
Does
Shows
Knows How
Knows
Ready

A blue pyramid is positioned on the left side of the slide. Inside the pyramid, the words "Is", "Does", "Shows", "Knows How", "Knows", and "Ready" are stacked vertically from top to bottom. The words "Is", "Does", "Shows", "Knows", and "Ready" are in black, while "Knows How" is in white. A green arrow points from the right side of the pyramid towards the right side of the slide.

Synthesis
(Procedural Knowledge)

- MCQ
- Application Exercises
- Written Essays
- Discussions/Presentation



Is
Does
Shows
Knows How
Knows
Ready



**Performance in
Controlled
Circumstances
(*strategic knowledge*)**

- OSCEs
- Simulations

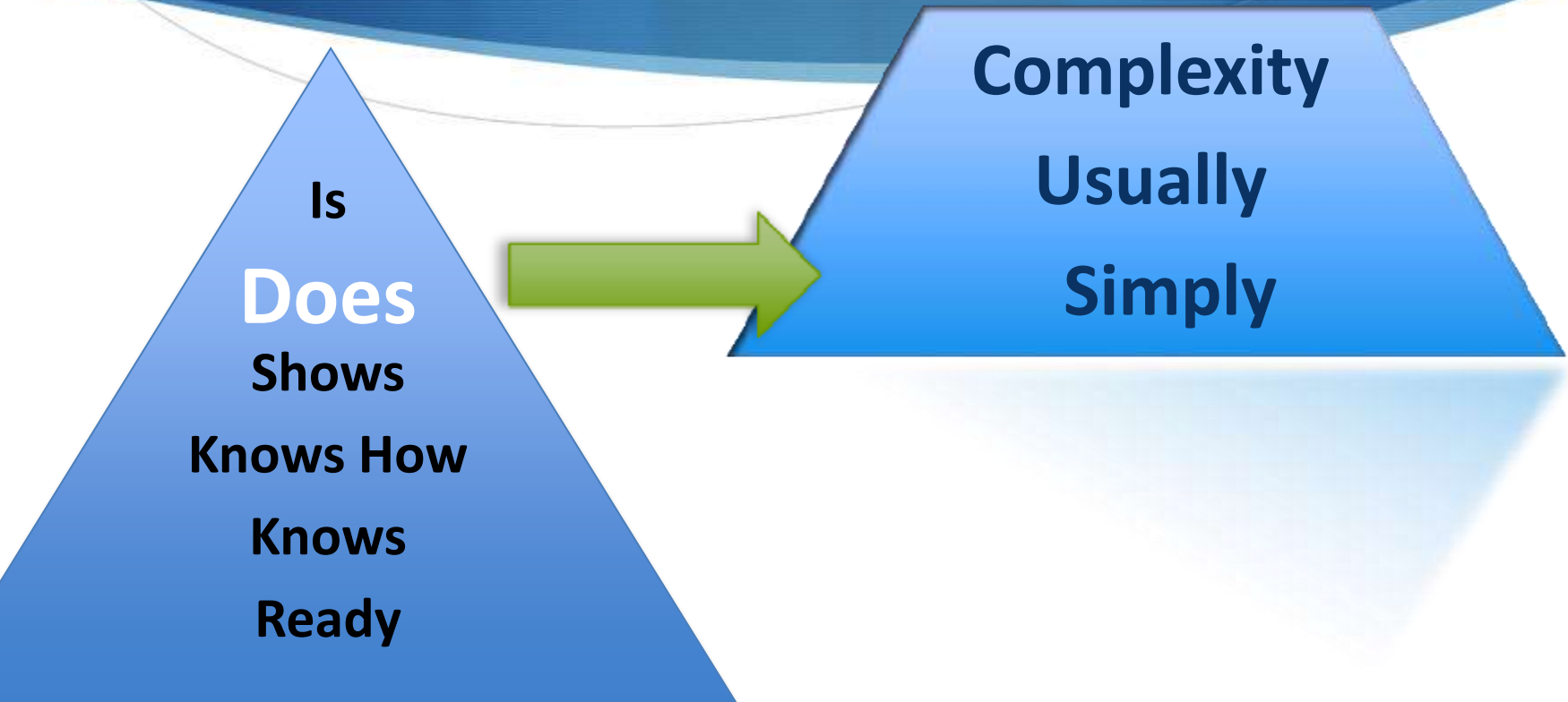
Is
Does
Shows
Knows How
Knows
Ready

A blue pyramid is positioned on the left side of the slide. Inside the pyramid, the words "Is", "Does", "Shows", "Knows How", "Knows", and "Ready" are stacked vertically from top to bottom. "Does" is in white, while the others are in black. A green arrow points from the right side of the pyramid towards the right. To the right of the arrow is the text "Performance in Clinical Settings" followed by a bulleted list of four items: "Observation", "Rating Scales", "360 Evaluation", and "Self-Evaluation".

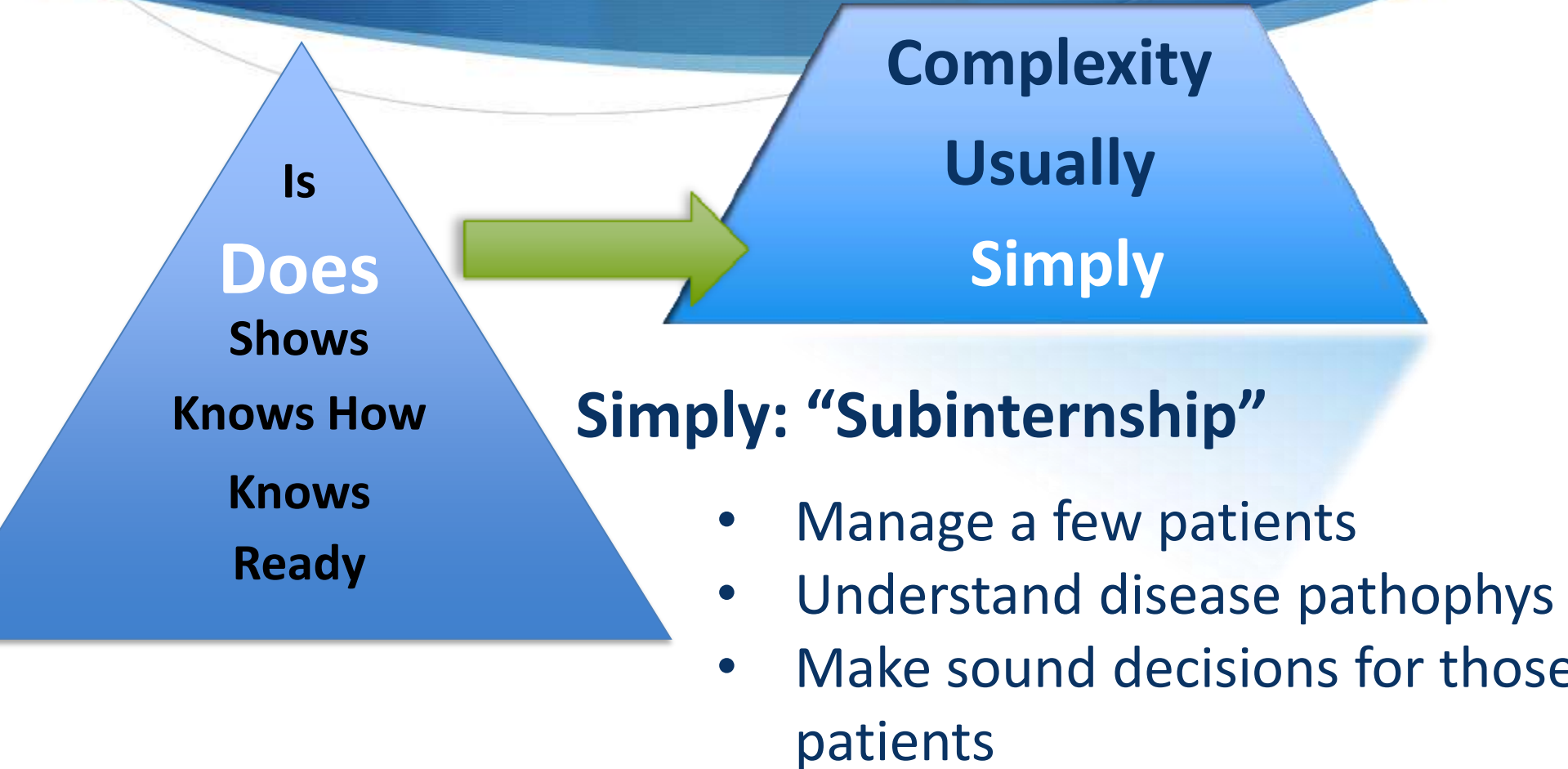
Performance in Clinical Settings

- Observation
- Rating Scales
- 360 Evaluation
- Self-Evaluation

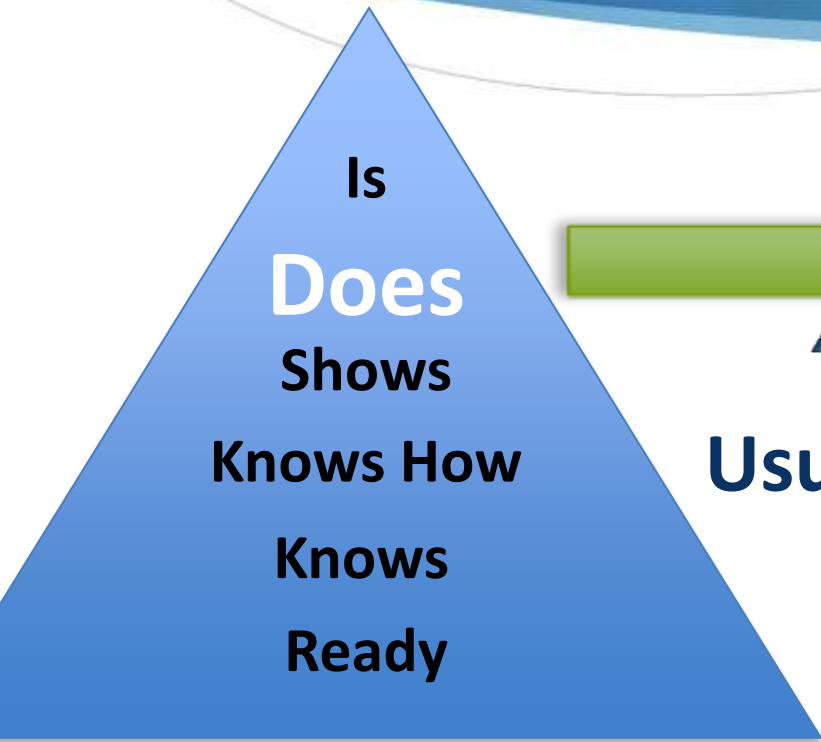
Clinical Performance



Clinical Performance



Clinical Performance



Is
Does
Shows
Knows How
Knows
Ready

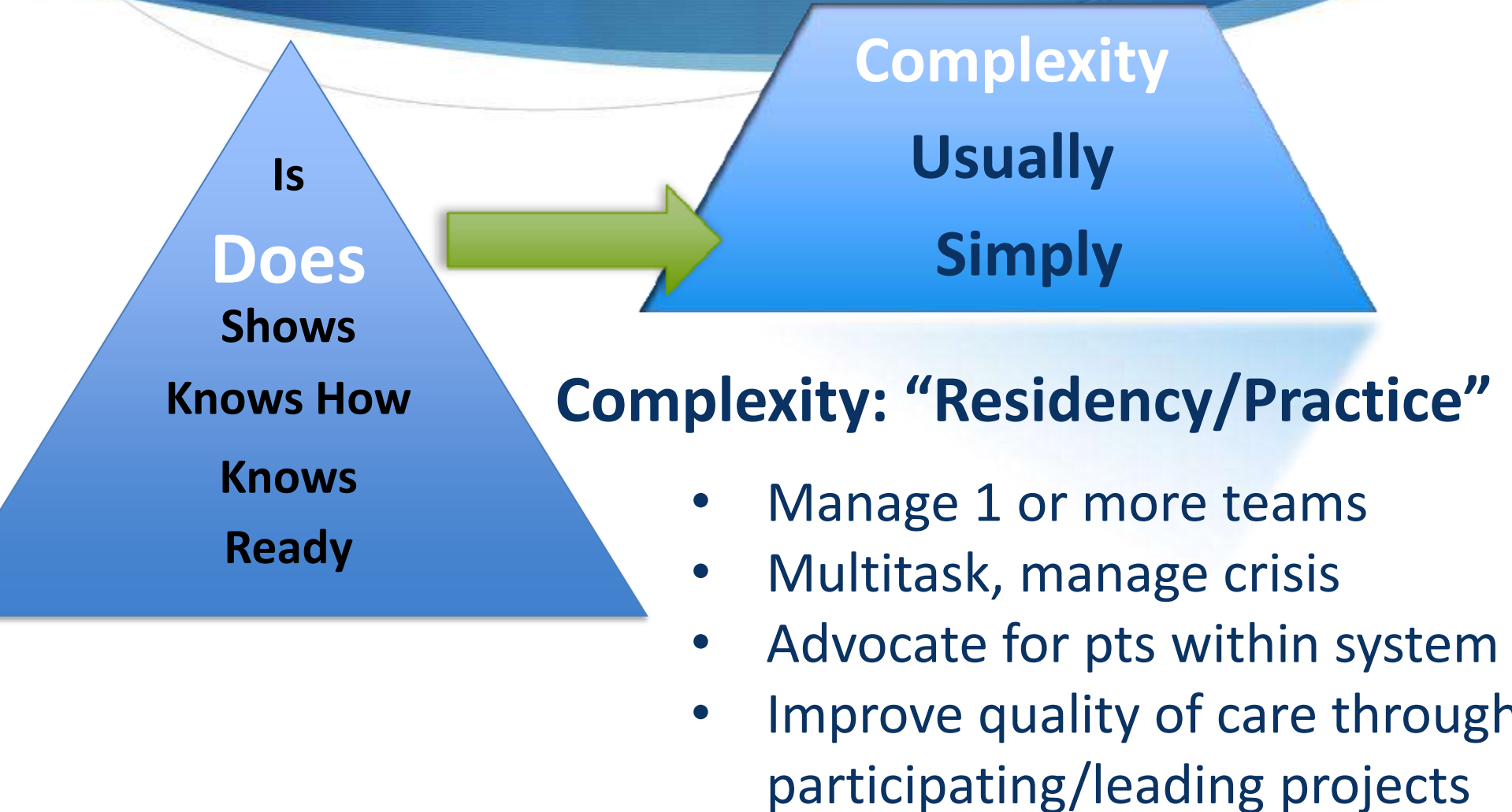


Complexity
Usually
Simply

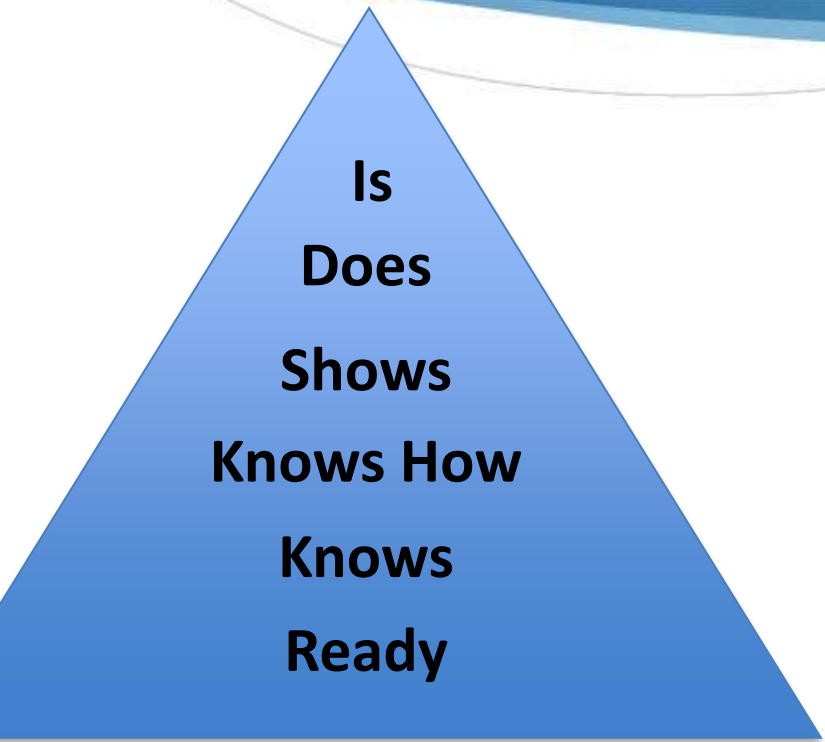
Usually: “Internship”

- Manage a panel of patients
- Prioritization of Needs
- Time Management
- Organization

Clinical Performance



Expanded Miller's Pyramid



Is
Does
Shows
Knows How
Knows
Ready

How can the institution support So-san?



Case derived from work of HOSOYA Noriko, MD PhD

3 Systems to Support Learners



UC Davis Medical Center at Night

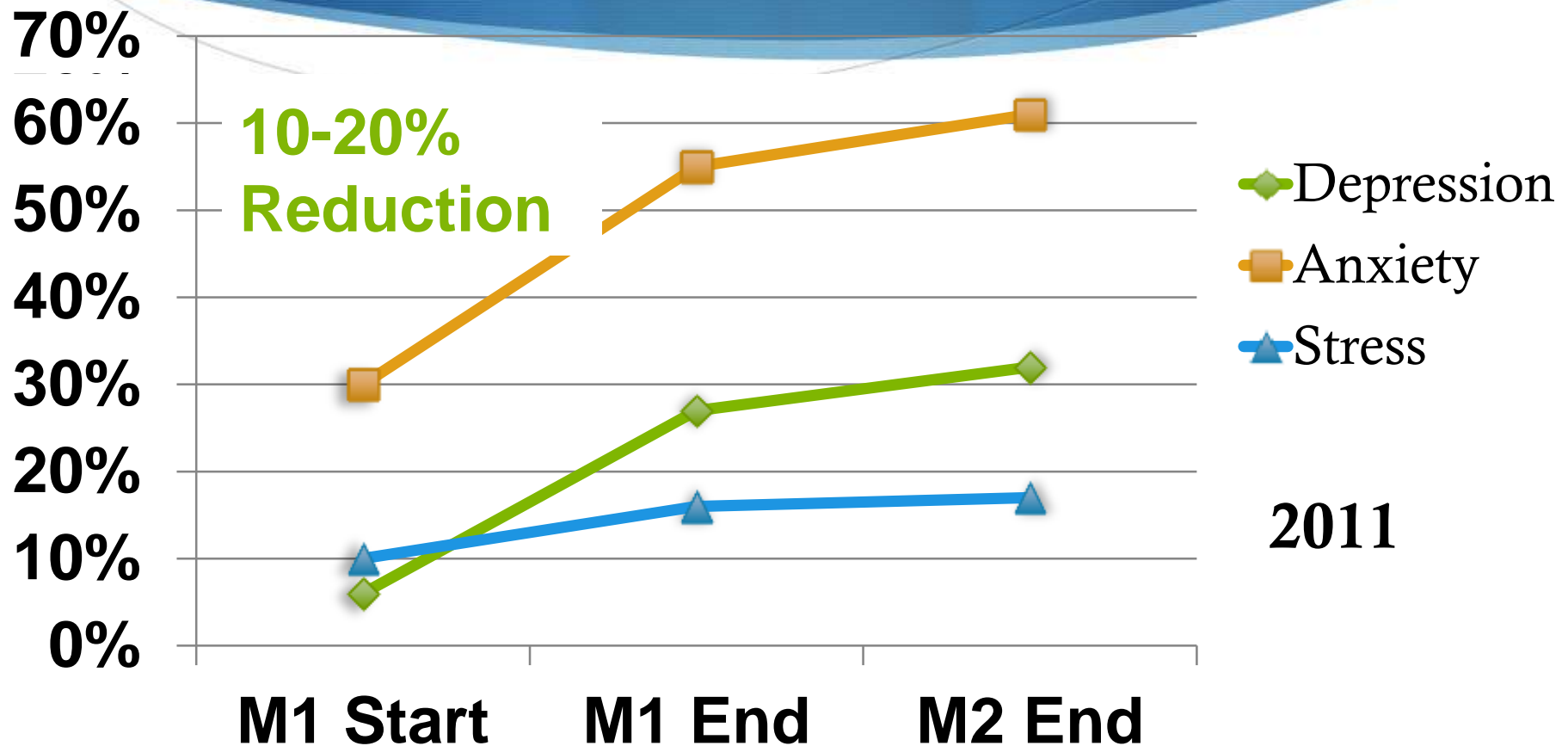
Systems: 5 Questions



1. Is the rate of the problem too high at our institution?

If so, does the system need to change?

Wellness and Mental Health



Curricular Changes

◆ **EVALUATION:**

- ◆ Honors/Pass/Fail → Pass/Fail

◆ **COURSE:**

- ◆ Reduced contact hours by 10%
- ◆ Reduced less useful/irrelevant details in courses
- ◆ Mindfulness and relationship training

◆ **CHOICE:**

- ◆ Longitudinal electives (1/2 day every 2 weeks)

◆ **COMMUNITY:**

- ◆ Learning communities
- ◆ Service/advocacy, global health, research, wellness, medical education

Communication Skills, *Why?*

*Natural part of
adult maturation?*

*Gets better with
experience?*

*Problem with
Admissions Process?*

- *Add communication skills testing to admissions process*

*Problem with
Curriculum?*

Systems

2. Can we identify which learners are having problems?



Assessment & Evaluation Systems

- ◆ Identify limited numbers of competencies/Milestones/EPAs
- ◆ Use Evaluation Software



1. Meaningful contact, timely feedback

The screenshot shows the E*VALUE web application interface. At the top, there is a navigation bar with links for Home, Help, My E*Value, and My Account. Below this is a header for "Internal Medicine Clerkship" and a row of icons for Profile Manager, Schedules, Evaluations, Sessions / Conferences, and My Profile. The main content area displays a profile for Malathi Srinivasan, MD, and a student profile for Cesar Soria, MS3. The evaluation details include: Activity: MS3 UC Wards II; Site: University of California Davis Medical Center; Period: 2015-16 Rotation 3, Block 1; Time Period: 08/31/2015 - 09/27/2015; Request Date: 09/16/2015; Evaluation Type: Medical Student; Evaluator: Malathi Srinivasan; Participation Dates: 08/31/2015 - 09/27/2015. A question at the bottom asks, "Do you want to use auto-scrolling on this evaluation?" with radio buttons for Yes and No.

2. Limit Open-Ended Comments

Summative Comments: *(Question 29 of 30 - Mandatory)*

the best of himself to each patient encounter, and was REMARKABLE in much he helped the team -- for all patients, not just his own. He went his way to show kindness to patients, and even came on palliative care visits to the home a patient who was dying. He was a pleasure to work with and will be an extraordinary doctor.

Formative Comments: *(Question 30 of 30)*

Wonderful job, Kevin. Keep up with good work. Self-reflect often (as you have been doing) and focus on where you think you need to spend a little more time, such as physical examination.

If you are satisfied with the evaluation, click the Submit button. Once satisfied, click the Save For Later button.

Save For Later Submit

3. Rating Anchors; Select Scale

Carefully reflecting upon how you have evaluated this student's achievement of milestones above, we ask that you also assign a 1-9 global score below. *(Question 28 of 30 - Mandatory)*

1	2	3	4	5	6	7	8	9
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

1, 2 or 3 indicates that this student consistently failed to meet expectations for this rotation and that you feel the student should not pass the rotation

4= Below average UC Davis student but passing clerkship

5= Average UC Davis Medical Student (10-50th percentile)

6= 51-75th percentile of UC Davis medical students

7= top 20% of UC Davis students

8= top 10% of UC Davis students

9= top 5% of UC Davis students

Systems

3. Does our system support our learners?



UCD Student Support



Office of Student Affairs



OSLER (Academic Services)

- Educational Specialist (100%)
2 Staff
- Learning Strategies
 - Learning Workshops
 - Educational Accommodation
 - Disability services



Student Wellness

- Director (50%)
Psychologist (100%)
Psychiatrist (50-100%)
Staff
- Counseling
 - Wellness and prevention



Mentoring

- Faculty Director
20 Mentors (10% paid time)
1-2 Staff
- Socialization
 - Support
 - Coaching
 - File Review

Curricular Support



Office of
Student Affairs



OSLER
(Academic Services)



Student
Wellness



Mentoring

50% students

30% students
*(50 students since
July 2015)*

100% students
(114 for each year)

Systems

4. Do we have clinical educators who can provide more intensive help for students?



UCD Academy of Master Clinical Educators

- ~ 6-20 faculty: 20-40% time “bought out”
 - to teach courses
 - to coach struggling students
- ~20 who advanced edu training,
 - educational roles in residencies



Systems

5. Can we hold our learners accountable?



Motivation/Professionalism, ex

Is it an individual issue that will get better with coaching?

Problem with Admissions Process?

Competing Interests

- *Financial Aid*
- *Restrict work to “good standing”*

Accountability Process?

- *Oversight Committee with power to dismiss student*

Should the curriculum be more engaging?

- *Help them love medicine – early exposure*
- *Relevant and engaged learning*

Accountability: clear pathways

Notify

Pathways
of Action

Devise
Learning
Plan

Oversees
Learning
Plan

Outcome
Met or Not

Table 1

Administrative Oversight of Remediation of Professionalism Lapses in Medical Students by Stage of Process, 93 U.S. and Canadian LCME-Accredited Medical Schools, 2012–2013 Study

Individual/committee	Oversight by stage, no. (%) of medical schools ^a				
	Is notified initially about lapse	Determines course of action after lapse	Devises remediation	Oversees remediation	Assesses outcome of remediation
Student affairs dean	69 (74.2)	54 (58.1)	46 (49.5)	48 (51.6)	45 (48.9)
Course or clerkship director	63 (67.7)	30 (32.3)	44 (47.3)	37 (39.8)	38 (41.3)
Medical education dean	19 (20.4)	26 (28.0)	17 (18.3)	19 (20.4)	16 (17.4)
Professionalism program director	5 (5.4)	8 (8.6)	9 (9.7)	10 (10.8)	9 (9.8)
Promotions committee	5 (5.4)	35 (37.6)	41 (44.1)	20 (21.5)	40 (43.5)
Honor court	4 (4.3)	9 (9.7)	9 (9.7)	6 (6.5)	6 (6.5)
Medical school dean	2 (2.2)	3 (3.2)	3 (3.2)	0 (0)	3 (3.2)
Other	6 (6.5)	9 (9.7)	12 (12.9)	9 (9.7)	11 (12.0)

Abbreviation: LCME indicates Liaison Committee on Medical Education.

*Support systems are fine, but
now So-San is in my office....*



Case derived from work of HOSOYA Noriko, MD PhD

*Let's try a different
approach!*



Case derived from work of HOSOYA Noriko, MD PhD



4

Working Directly with Struggling Learners

Ask 4 sets of questions



Learner-centered approach

- 1. What is my practical approach to diagnosing the learner's issues?

Is
Does
Shows
Knows How
Knows
Ready



Learner Centered Diagnostic Strategy


**Mentoring
and
Coaching**



**Competency Assessment:
Multimodal**



**Diagnosis of Issues, then
Individualized Learning Plan**



Instruction/Remediation



**Feedback, Reassessment and
Certification of Competence**

Learner-centered approach

- 2. What do I say? What tools do I use?



Learner's Frame of Mind



Support is Critical!

What to say...

🔹 **Normalizing and supportive statements:**

- 🔹 “Skills mature at different rates, you will be good at some things, and need to work on others.”
- 🔹 “Everyone is on their own path.”
- 🔹 “Don’t judge yourself by other people’s standards.”
- 🔹 “You don’t need to be perfect NOW, you just need to meet the benchmark before you graduate.”
- 🔹 “We are here to support you. I’ll be with you through this process”

🔹 **NOT False Reassurance**

- 🔹 ***NOT: “Don’t worry. You will be just fine”***

Tools:

Initial Diagnostic Interview

- ◆ Most powerful tool is INQUIRY and OBSERVATION:
listening for understanding
 - ◆ 2-3 hours session (*for me*)
 - ◆ Ask open-ended questions
- ◆ Comfortable setting
- ◆ SUPPORTIVE (not punitive, or judgmental)

“Ready to Learn”

What to say...

- ◆ Tell me about yourself.
- ◆ How have things been going?
- ◆ What is your family like? Where did you grow up?
- ◆ How did you decide to upon medicine?
- ◆ How do you like it so far?
- ◆ What has been easy and hard for you (now/past)?
- ◆ When have you succeeded or failed?
- ◆ What else do you do outside of school?

“Knows/Knows How”

What to do

- ◆ **File Review:** Review grades, comments, and test scores
- ◆ Have student do multiple choice questions with you
- ◆ Then probe their thinking and metacognition:
 - ◆ “What did you choose that answer?”
 - ◆ “Walk me through the process.”
 - ◆ “What would you do if the statement said XXXX, YYY or ZZZ?”

I
Do
Sho
Knows
Kno
Rea

“Shows”

What to do, options

- ◆ OSCE – watch at least 2 (acute, chronic)
- ◆ Observe full H&P with actual patient
- ◆ Role play with you, if no SP is available
- ◆ Student presents the patient
- ◆ Student discusses their reasoning and their decisions
- ◆ Videotape, have student discuss reasoning

I
Do
Sho
Knows
Know
Rea

Watch their diagnostic reasoning

- Errors
- Biases
- Fallacies

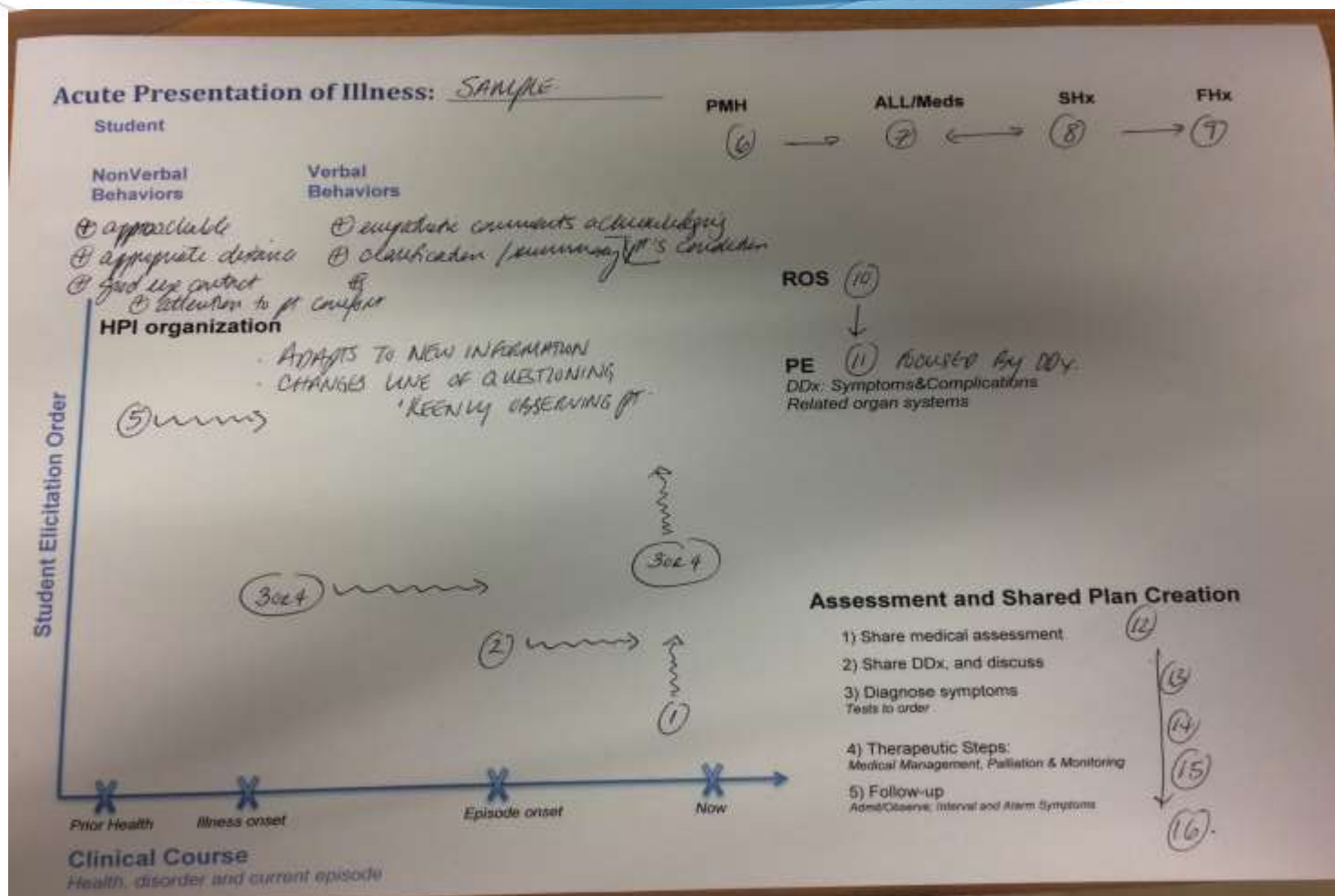
OSCE aggregate data

Skill Area / Case	Ada Buck Foot Problems	Belinda King Sore Throat	Eric Howe Pain in the lower back and down	Freddie Cage Medication-induced	Hannah Wesley Abdominal Pain	Jane Mack Chest Pain	JB Burns Cough	Ray Kessler Diabetes	Skill Area Total	Skill Area Mean	Skill Area StDev	Skill Area High	Skill Area Low	Skill Area Passing Multiplier	Skill Area Passing Cut-off	Comment
History (Hx)	83.3%	80%	83.3%	100%	66.7%	70.6%	90%	87.5%	80.9%	75.1%	6%	89.4%	58.5%	1	69.1%	
Overall Satisfaction	75%	75%	100%	75%	75%	75%	75%	0%	68.8%	78.3%	7.2%	93.8%	56.3%	1	71.2%	Not a pass score
Patient Education and Counseling	60%	50%	66.7%	66.7%	68.7%	66.7%	20%	66.7%	56.7%	69.1%	8.6%	90%	50%	1	60.4%	Not a pass score
Patient Physician Interaction	70%	50%	95%	60%	80%	85%	85%	40%	70.6%	78.4%	7.4%	93.8%	60.6%	1	71%	Not a pass score
Physical Exam (PE)	16.7%	42.9%	55.6%	78.6%	85.7%	66.7%	66.7%	50%	58.5%	63%	8%	84%	37.7%	1	55%	
Case Total	64%	59.2%	78.6%	78.2%	74.3%	73.6%	72.7%	58.3%	Total Test Score		Class Mean	Class StDev	Class High	Class Low	Class Passing Cut-off	
Case Mean	68.6%	70%	73.9%	75.7%	83.5%	70.7%	75.6%	65.6%	70.2%	73.1%	4.1%	82.3%	62.4%	69%		
Case StDev	8.4%	9.8%	8%	7.8%	7.5%	7.2%	9.4%	9.6%								
Case High	87.5%	89.2%	91.4%	91.9%	100%	85.8%	93.8%	89.2%								
Case Low	42.6%	42.5%	54.3%	54%	64.6%	52%	43%	38.3%	Comment							

within ± 1 SD of the mean
 between 1 & 2 SDs ABOVE the mean
 between 1 & 2 SDs BELOW the mean

greater than 2 SDs ABOVE the mean
 greater than 2 SDs BELOW the mean

Map approach to encounter (acute disease – more organized)



Map approach (chronic disease student example)

Chronic Disease Management: *hypertension*

Student: [Redacted]

NonVerbal Behaviors
 ① good body language
 ② good

Verbal Behaviors
 ① "Tell me why you are here"
 ② "only need them often", "they will irritate"
 ③ let patient talk & tell story
 ④ asked good follow-up questions
 ⑤ counselling was 80% ^{almost} _{no input from patient}

PMH
 ⑩ diabetes?

ALL/Meds
 ④ what medication - [lisinopril?]

SHx

ROS
 (HTT most relevant complaints)
 ②5 examined feet & pulses on
 ②4 listened to heart
 ②6 attempted fundoscopic exam

FHx

PE:
 Screening
 Symptoms

HPI

Clinical Course <i>opening Tell</i> ① How long have you had this chart	Complications ⑤ symptoms of hypoglycemia ⑥ change in vision? due to optical neuropathy [peripheral neuropathy] ⑦ chest pain, palpitations ⑧ tingling in feet ⑨ orthostatic dizziness
Lifestyle/Self Care ① adherence ② are you able to take your medication ③ Exercise ④ diet ⑤ "What do you do?"	Self-Monitoring/Screening ⑩ do you check your blood sugar? @ 6 AM or a reason why @ 4x ⑪ the times that you do check them, do you remember the numbers? ⑫ ⑬ got low blood sugar ⑭ check feet - @ 4x

Assessment and Shared Plan Creation [give pt the goal of HbA1c screened]

- 1) Share medical assessment [assessed a bit last] + HbA1c -
- 2) Share complications, and discuss
- 3) Diagnose patient behavior
 Health beliefs, Experiences, Stage of change, Expectations
- 4) Therapeutic Steps:
 Common Goal and Behavioral Plan
 Medical Management/Monitoring
 ②2 A1C's & not below 1000'
 ②5 foot right
 ②6 TAD HbA1c to cut down on STEAKS
- 5) Follow-up:
 Reinforcement
 Biologic change

“Does”

What to do

- ◆ Shadow team and watch student
- ◆ Get 360 evaluation from residents, faculty, other students
- ◆ Have student self-assess
- ◆ Review critical incident reports, and think aloud exercises
- ◆ Have learner provide alternative actions

I
Do
Sho
Knows
Kno
Rea

Planning for Success: Individualized Learning Plans



Case derived from work of HOSOYA Noriko, MD PhD

Learner-centered approach

- 3. I've gathered data, how do I create a plan?



Stimulate Student Self-Reflection & Self-Directed Learning



Collaborative Planning

- ◆ Help learner reflect and build insight
- ◆ Let the learner try to develop the plan
- ◆ Tell them what you can contribute
- ◆ Coach, guide, provide encouragement
- ◆ Help and be concrete when they get stuck



Individualized Learning Plan

- ◆ Prioritize
- ◆ Create a network of support
- ◆ Refer to other groups
- ◆ Schedule your coaching and feedback
- ◆ Set a time to meet again with learner



Specifically...

- 🟢 **Clinical Performance** – Practice, reflection, feedback
- 🟢 **Communication** – Coach with SPs
- 🟢 **Knowledge Synthesis** – Frameworks, think aloud questions
- 🟢 **Fund of Knowledge** – Reading and self-assessment plan
- 🟢 **Profession socialization and expectations** – work on reading the room, observational skills, discuss expectations, provide action templates. Increase support
- 🟢 **Life skills** – Social worker, *or* take learner shopping/cooking, *or* recruit a friend to help
- 🟢 **Stable/Able/Wise** – Refer to appropriate group (wellness, counseling, financial aid, educational strategies, etc)

Learner-centered approach

4. Does this approach work?



Time Intensive

151 learners: hrs mean (range)

◆ Medical Knowledge	10hrs	(2-20)
◆ Clinical Skills	3hrs	(2-4)
◆ Clinical Reasoning	20hrs	(5-38)
◆ Time Management	16hrs	(2-24)
◆ Professionalism	10hrs	(5-28)
◆ Interpersonal Skills	17hrs	(6-30)
◆ Communication	19hrs	(5-39)
◆ PBLI	2hrs	(1-3)
◆ SBP	12hrs	(5-24)
◆ Mental Well-being	9hrs	(5-20)

Success of Remediation Programs

Of 151 learners on academic probation, over 6 years....

- ◆ Medical students (n=72) 51% graduated; 40% in good standing
- ◆ Residents (n=65) 48% graduated; 31% in good standing
- ◆ Post-residency (n=14) 14% graduated; 50% in good standing

Success of UC Davis Remediation Programs



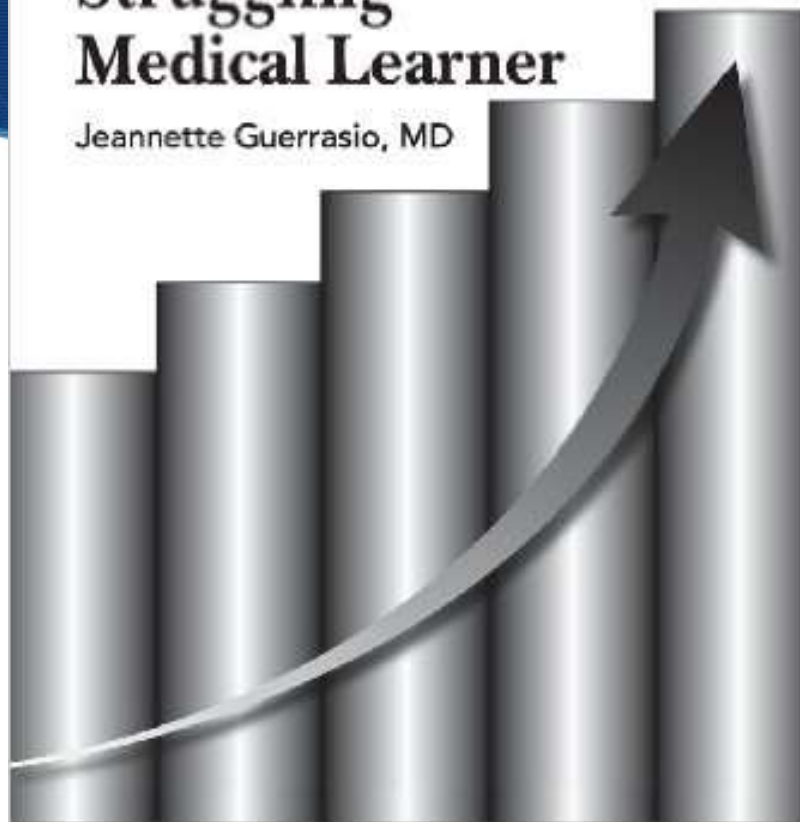
Take Home

The background of the slide features a scenic mountain range under a bright, hazy sky at sunset or sunrise. In the foreground, the dark silhouettes of three people stand on a rocky peak, their arms raised in a gesture of triumph or celebration.

- Use an organizing framework
- System should support your goals
- Change the system when is it not optimal
- Diagnose your learner's problems systematically
- Coach your learners in a prioritized manner
- Be supportive. Be very very supportive.

REMEDICATION OF THE
**Struggling
Medical Learner**

Jeannette Guerrasio, MD



Association for
Hospital Medical Education

Adina Kalet
Calvin L. Chou
Editors

Remediation in Medical Education

A Mid-Course Correction

 Springer



Thank you!

