



UMC Utrecht

Waterman Oration
Flinders University, March 7, 2016

Reframing the goal of training in health care:

Trusting trainees and graduates to
care for the patients of the future

Olle ten Cate, PhD

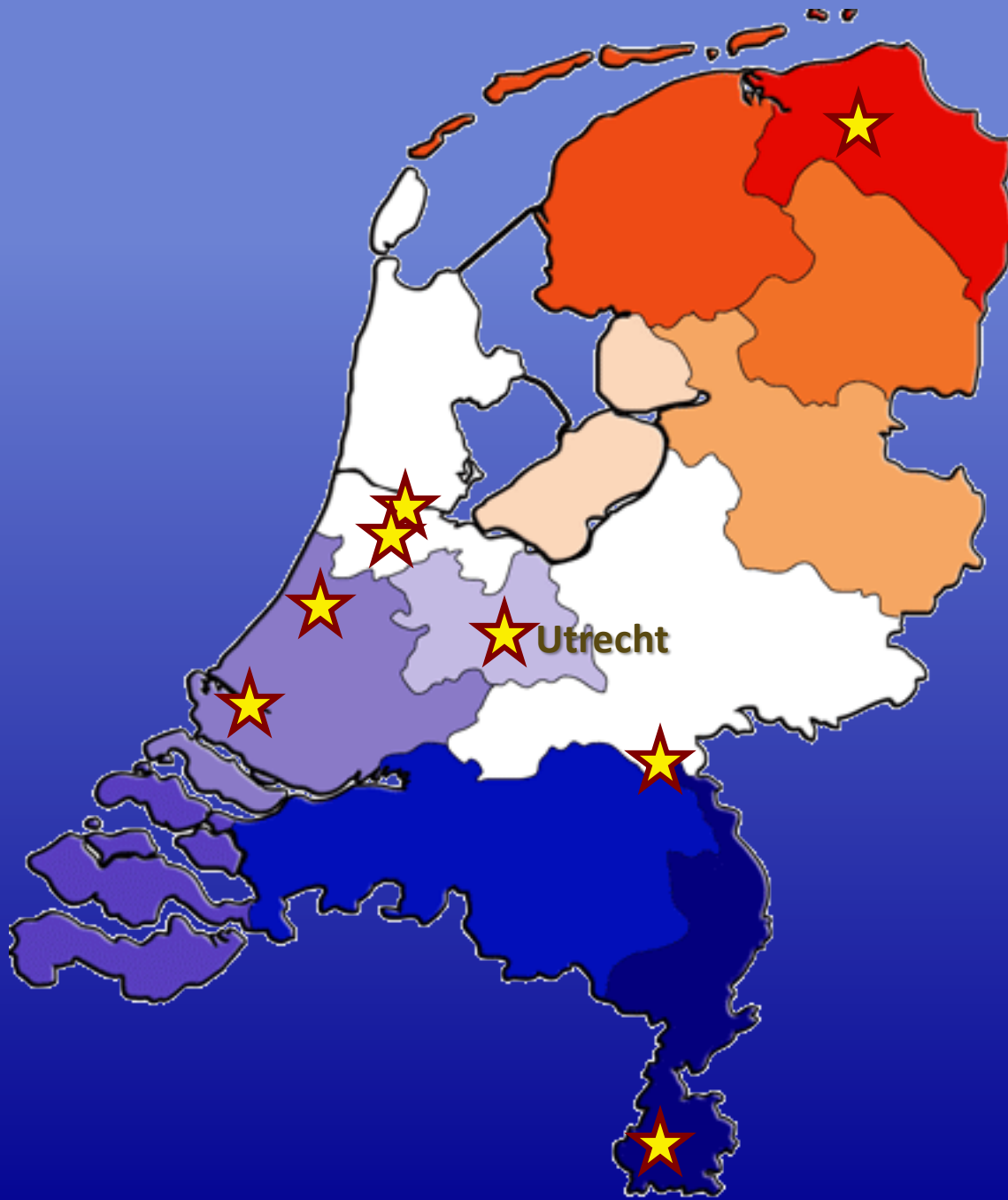
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Disclosure statement

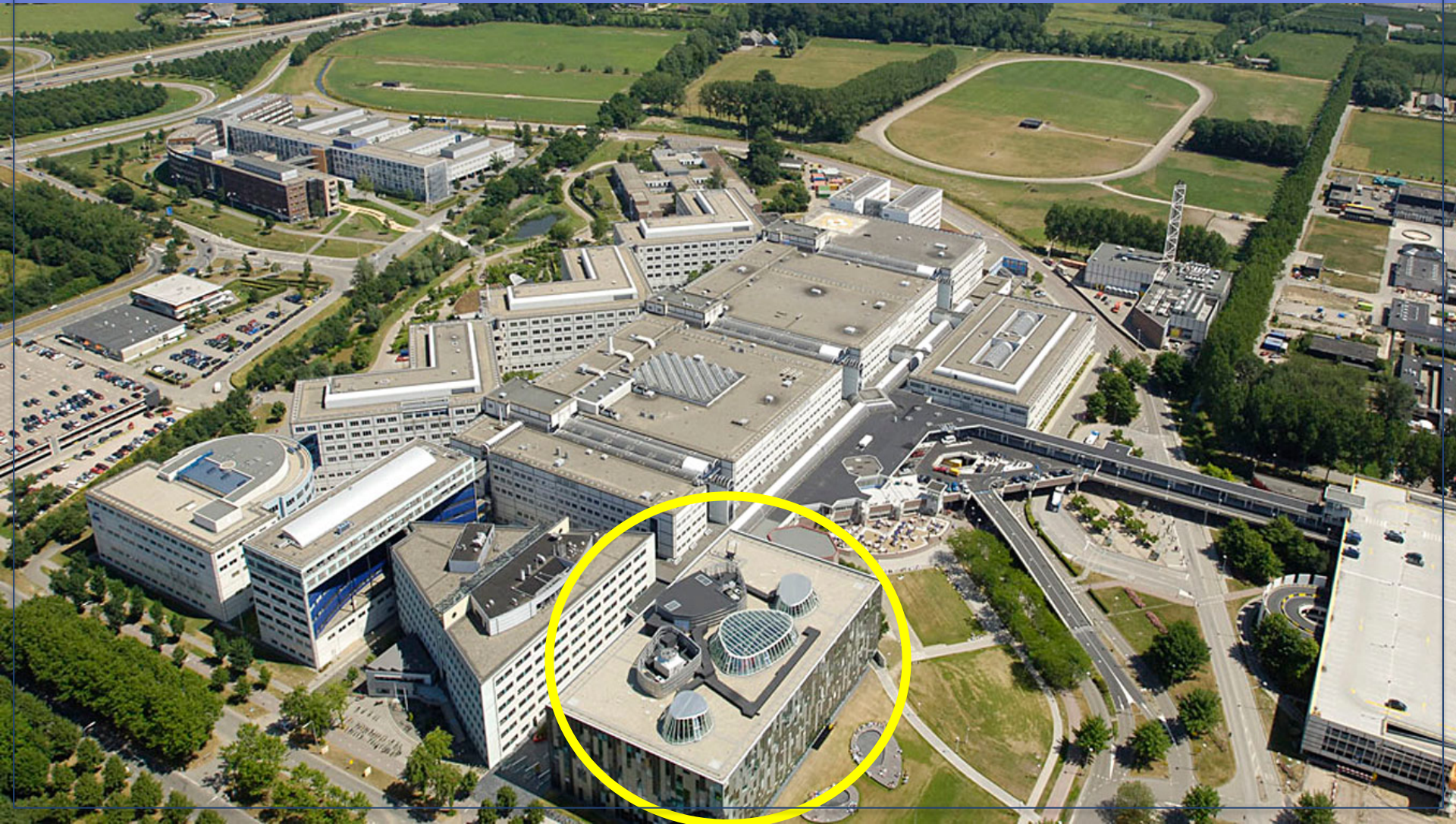
No conflict of interest reported



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University Medical Center Utrecht



“X-ray” of UMCU’s education building, designed to resemble a body with lungs and CV system

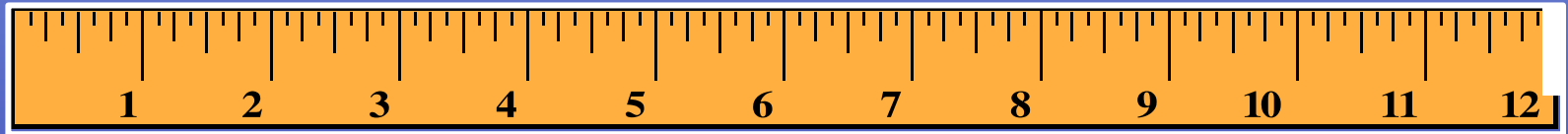




An anecdote

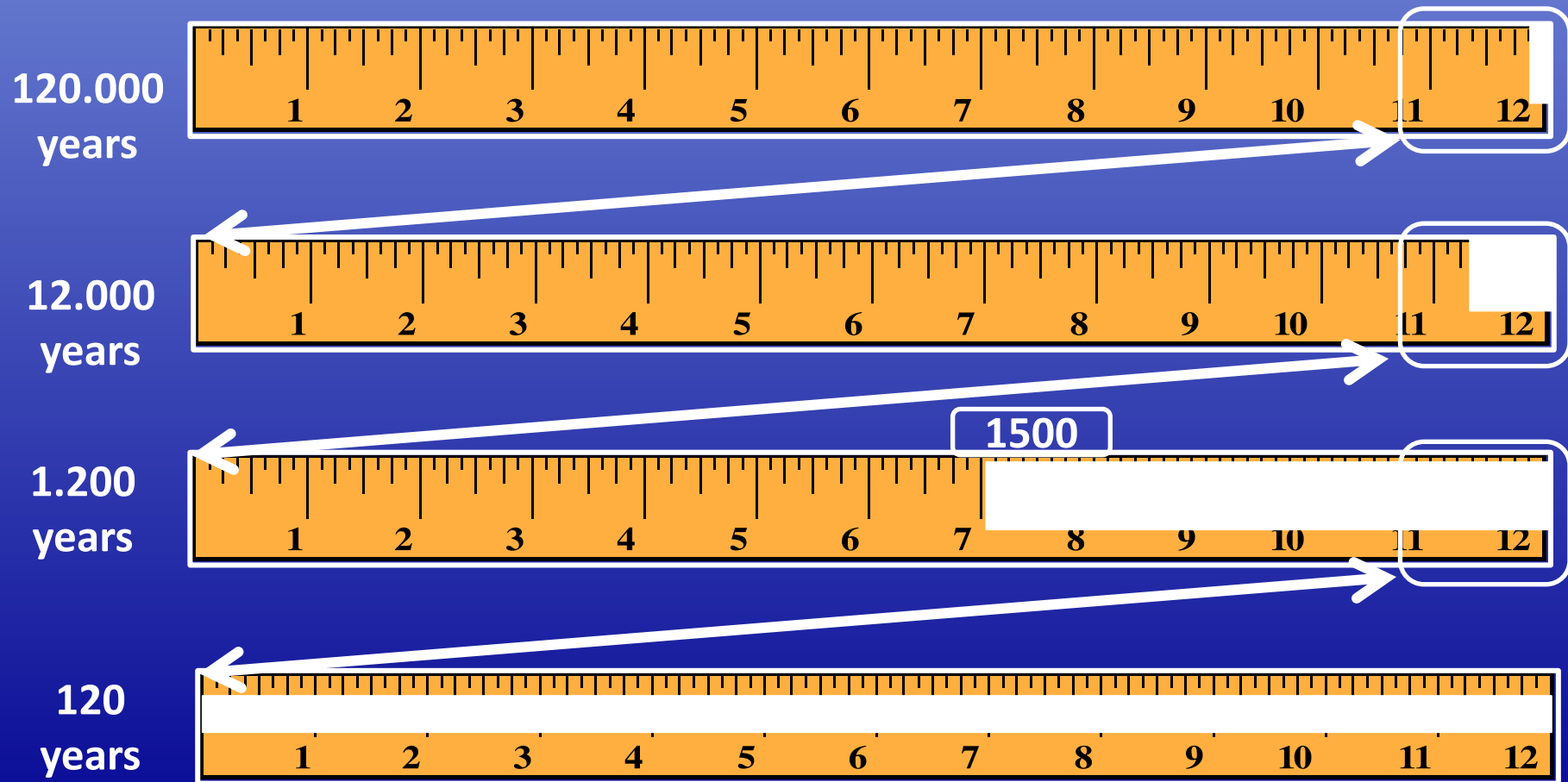
History of schooling*

120.000
years



*Stephen Billett, 6-6-2013

History of schooling: $> 99.9\%$ learning by doing in the workplace, $< 0.1\%$ in school*



*Stephen Billett, 6-6-2013







EN

TOUS GENDES

Emil Wagn

Copyright 1916 by the artist





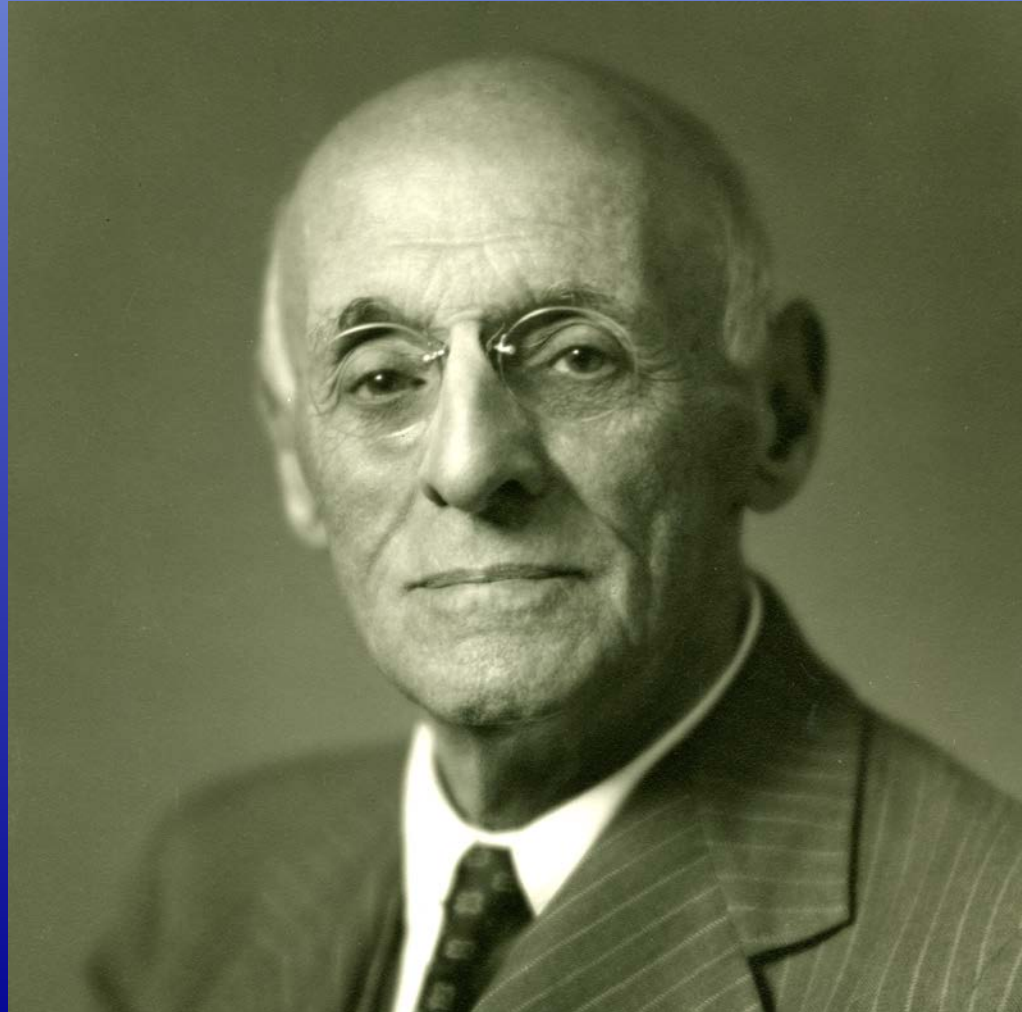
Exams at the Royal College of Surgery in London, 1986



What happened in the 20th century?

- What have we gained?
- What have we lost?
- What must we regain?

From practice-based knowledge to knowledge-based practice



Have we gained qualities?

- Scientific knowledge and rigor
- Structured curricula
- Sophisticated teaching methods
- Medical technology
- Specialized expertise
- High quality of care

But at a cost...?

Have we lost qualities?

- Connection of science and care?
- Patient care as continued focus?
- Suitable workplaces?
- Longitudinal and personal coaching and supervision?

THE
LOST ART
OF
HEALING

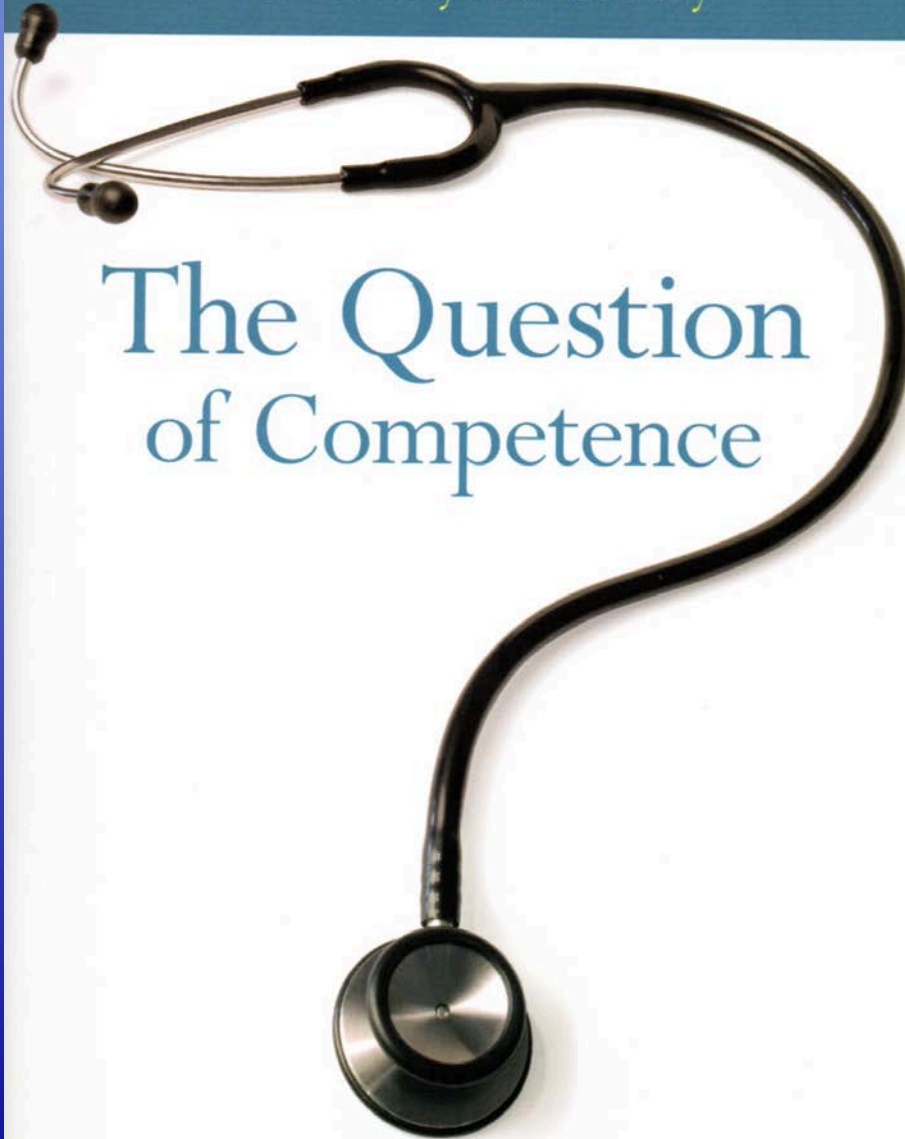


BERNARD LOWN, M.D.

What do we struggle to regain?

- The concept of medical competence
- General competencies of physicians
- Integration within education
- Continuity in teaching, coaching, care

Reconsidering Medical Education
in the Twenty-First Century



The Question of Competence

Edited by Brian D. Hodges and Lorelei Lingard

Foreword by M. Brownell Anderson

Competency-Based Medical Education

Philosophy

- Better description of the physician
- Only graduate physicians meeting standards
- Based on competence, not on time in training

Practice

- Detailed description of competencies
- Struggle with teaching and assessment

What critics say

MEDICAL EDUCATION AND THE TYRANNY OF COMPETENCY

The Incapacitating Effects of Competence:
A Critique

Monkey see, monkey do: a critique of the competency model in graduate medical education

U.K.

MARTIN TALBOT

A critical time for medical education: the perils of competence-based reform of the curriculum

Karen Malone · Salinder Supri

Competency-based training: who benefits?

Alexandra Brightwell,¹ Janet Grant^{2,3}

ABSTRACT

...describes progression through
The problem with this assumption to medical education, is that being

BMJ

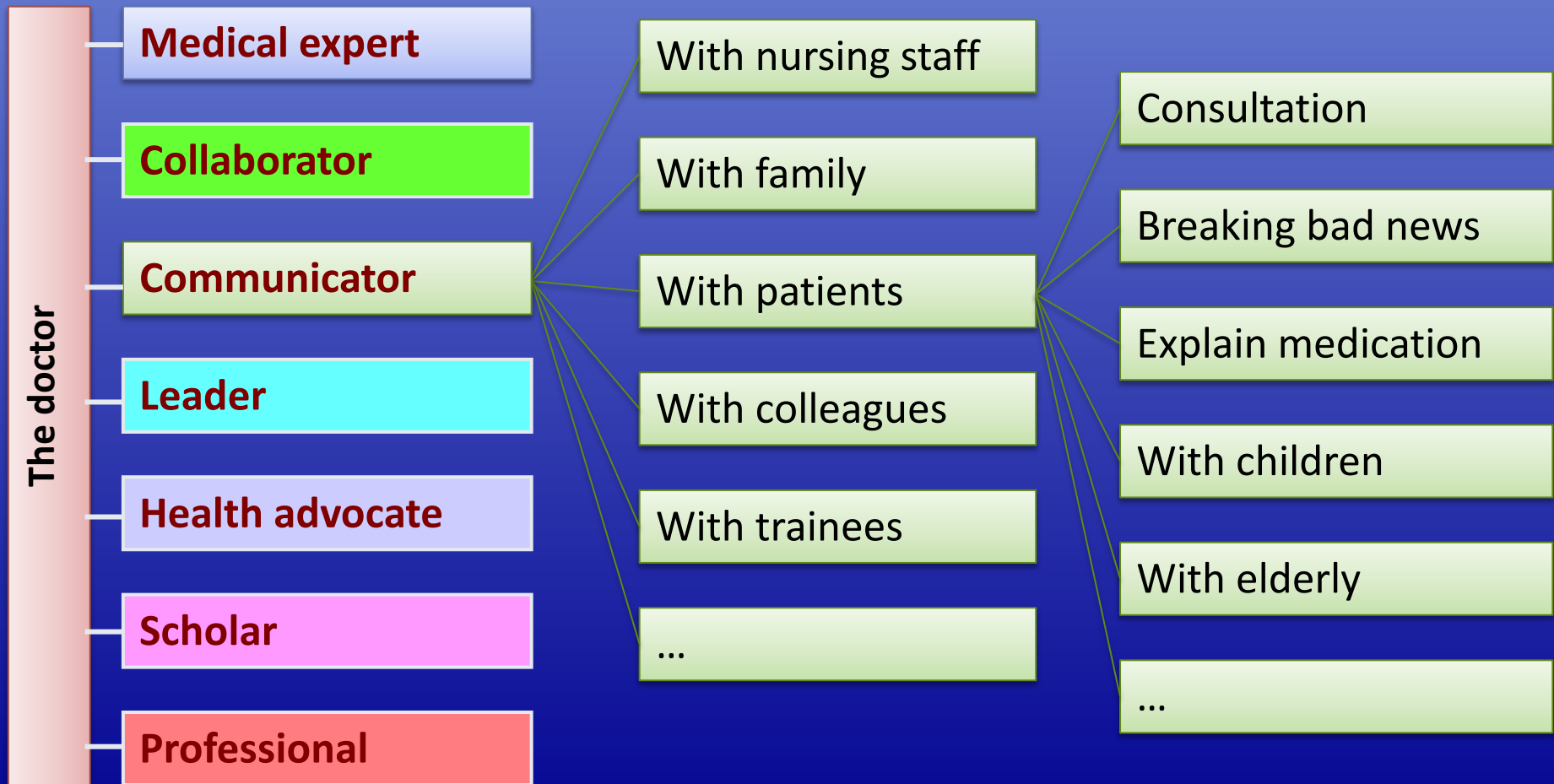
Competency based training is a framework for incompetence

Excellent care for patients cannot be learnt by ticking off arbitrary numbers of activities, writes Jonathan M Glass. We should want to produce masters of our art, not technicians

Causes of the controversies

- For many: Not the principle of CBME, but the implementation
- For some: Fundamentally distinct views on educating doctors

The analytic approach to CBME



The analytic approach to CBME

Role	161 key concepts	28 key competencies	116 enabling competencies	434 milestones (excl CPD)
Medical expert	16	5	21	77
Communicator	27	5	18	66
Collaborator	21	3	8	47
Leader	19	4	13	68
Health Advocate	14	2	13	24
Scholar	39	5	27	85
Professional	25	4	16	67

More fundamentally: two views

1. **Doctors are defined by sets of competencies.** *If* we can identify, train, monitor all required behaviors we can *guarantee* good doctors (the *analytic* view)
2. **Becoming a doctor requires stimulation *identity formation* and *role interalization* over time** (“tea-steeping”). Much of development cannot be regulated (the *holistic* view)

Educating doctors



*Building a house
with bricks?*

*Nurturing a plant
for autonomous
growth?*



- Over-control and external regulation conveys distrust in autonomous growth. External control does not likely stimulate intrinsic motivation of learners.
- Just letting the tea steep or plant grow conveys over-reliance on natural happenings, with no control on quality

We must reconcile the bricks and branches

Back to the foundational questions

1. What work must be done?
2. When to start trusting learners to do it?
3. How prepare them for unsupervised practice?
4. How evaluate their readiness for it?
5. Which competencies needed?

Regaining features of 120,000 years of workplace learning and combine with 21st century context?

Entrustable Professional Activity

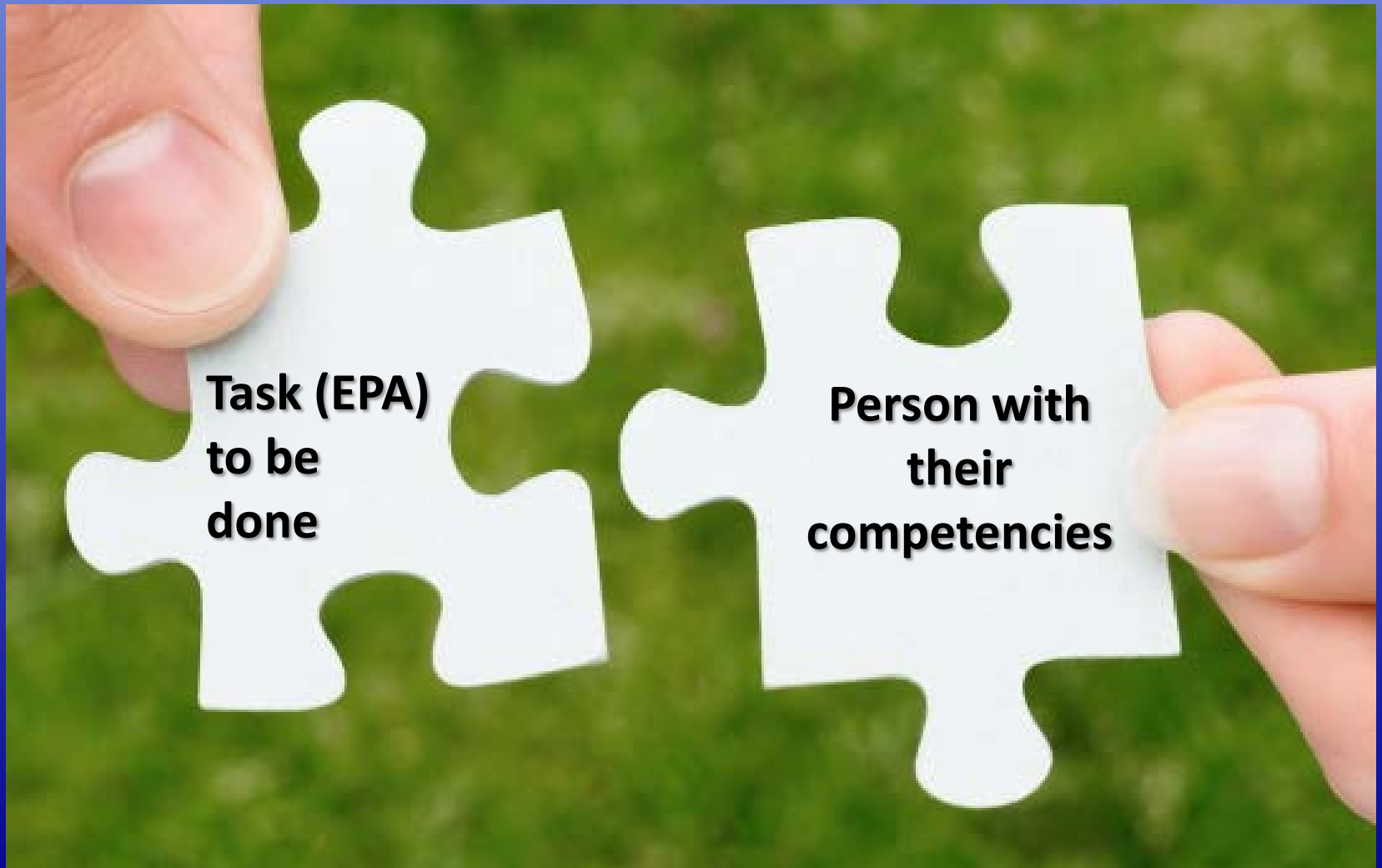
A unit of professional practice that may be entrusted to a learner to execute unsupervised, once he or she has demonstrated the required competence

Competencies versus EPAs

Competencies	EPAs
person-descriptors	work-descriptors
knowledge, skills, attitudes, values	essential tasks in professional practice
<ul style="list-style-type: none">• content expertise• health system knowledge• communication ability• management ability• professional attitude• scholarly skills	<ul style="list-style-type: none">• discharge patient• counsel patient• lead family meeting• design treatment plan• Insert central line• Resuscitate patient

EPAs require workers with competencies

Does it fit?



**Task (EPA)
to be
done**

**Person with
their
competencies**

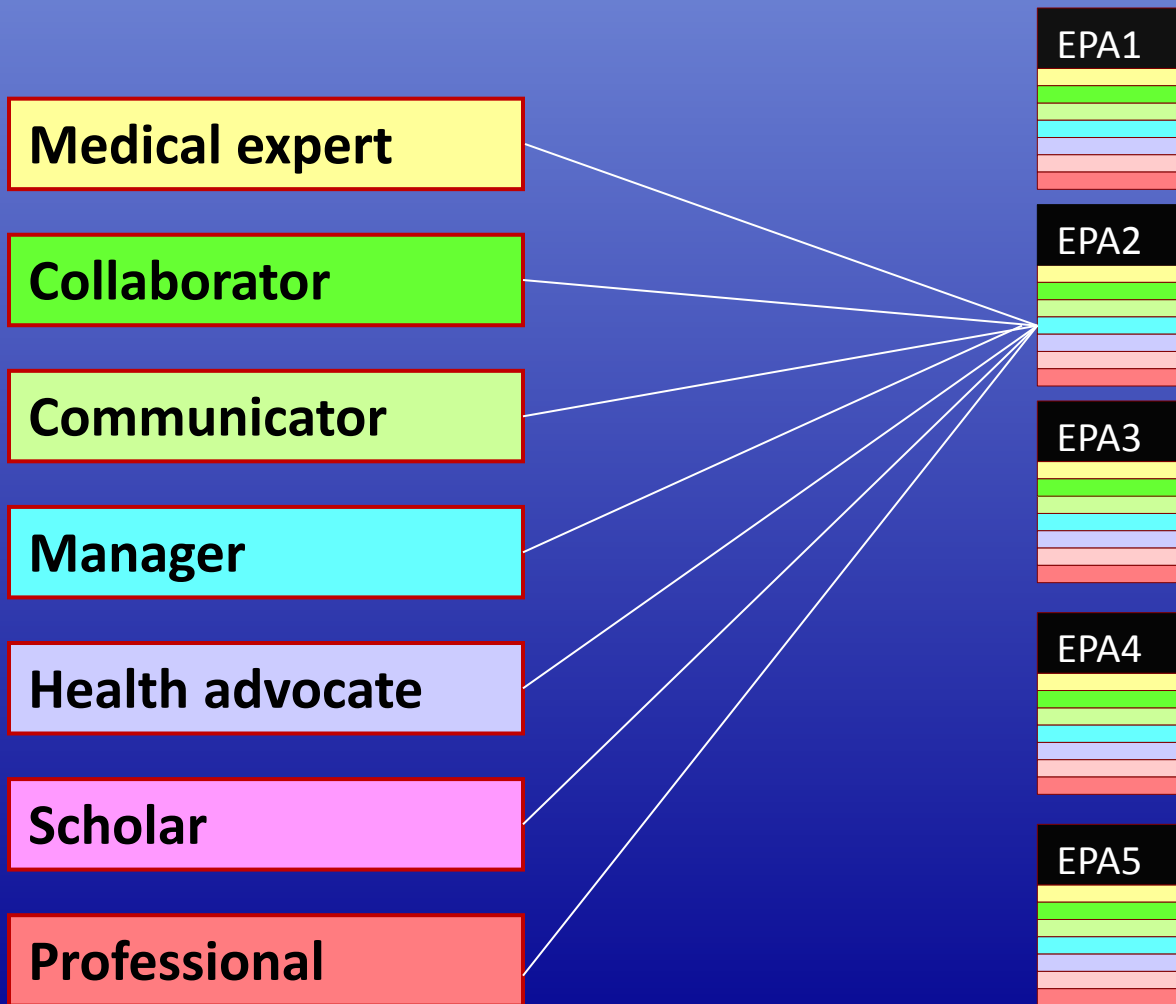
Most EPAs require multiple competencies

	EPA1	EPA2	EPA3	EPA4	EPA5
Medical expert	++	++	+		++
Collaborator	+		+	++	
Communicator	+	++			+
Leader		+	++	++	
Health advocate	+		++	+	
Scholar	+				++
Professional	+	+	+		

competencies inferred

Assessment based on EPAs

EPAs: a synthetic approach



Entrustable professional activity

- Executable within a time frame
- Observable and measurable
- Tasks, allocated to individuals
- Suitable for entrustment decision

Assessment as entrustment = *ability + permission + duty* to act, with designated level of supervision

EPAs

- ***Entrustable***: acts that require trust – by colleagues, patients, society
- ***Professional***: confined to occupations with extra-ordinary qualification and right
- ***Activities***: tasks that must be done

EPAs ground competencies in daily practice

Using EPAs in workplace learning

- Most trainees master most EPAs before the very end of training
- Trainees should be trusted to do the work once their competence is established
- Schools should accommodate individualized pathways to full competence

When is “competence” reached?

When a professional activity is mastered

- ...on a **threshold** level
- ...that permits **trust**
- ...to act **unsupervised**

Competence is *a stage* in a continuum of development

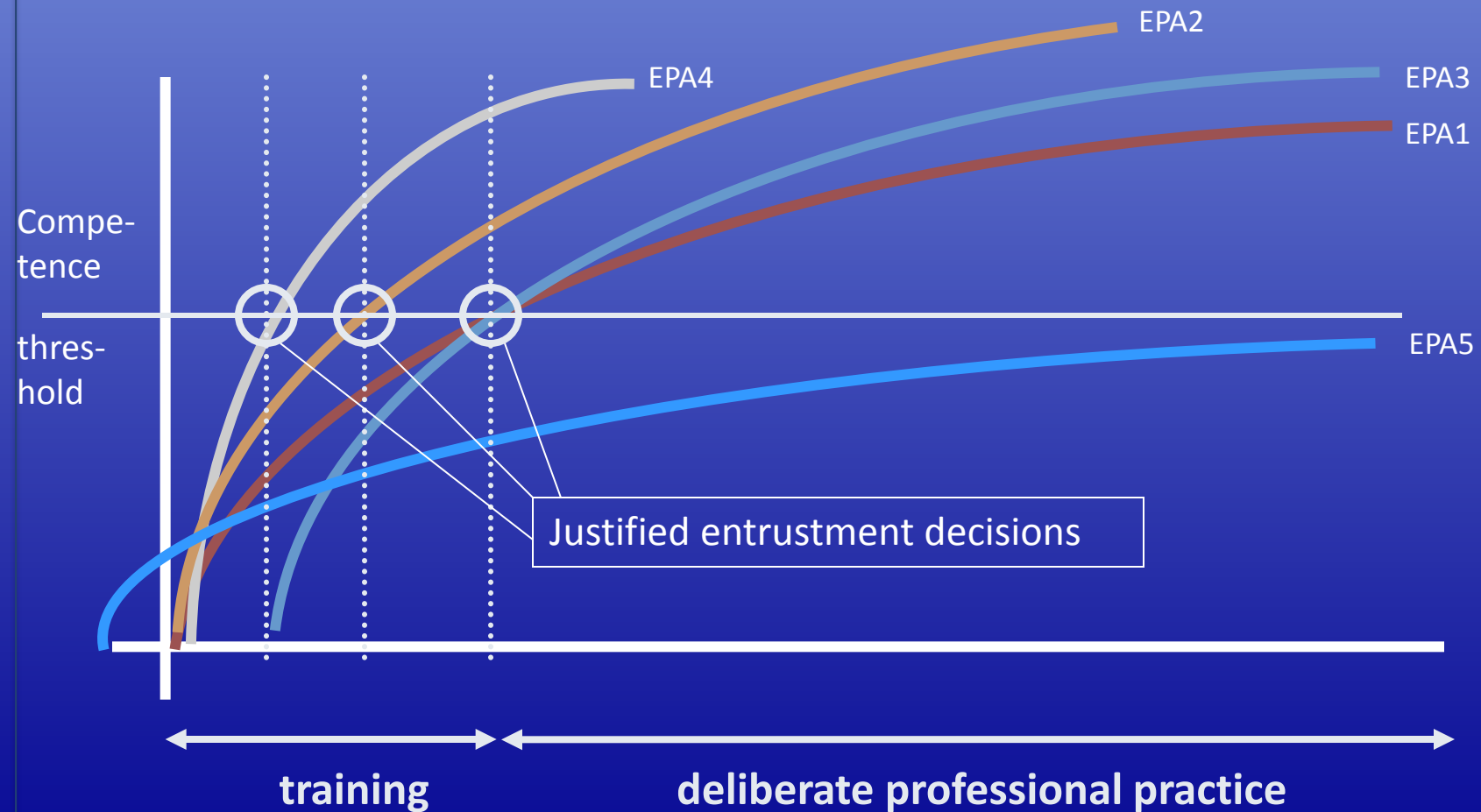
Growth of competence over time



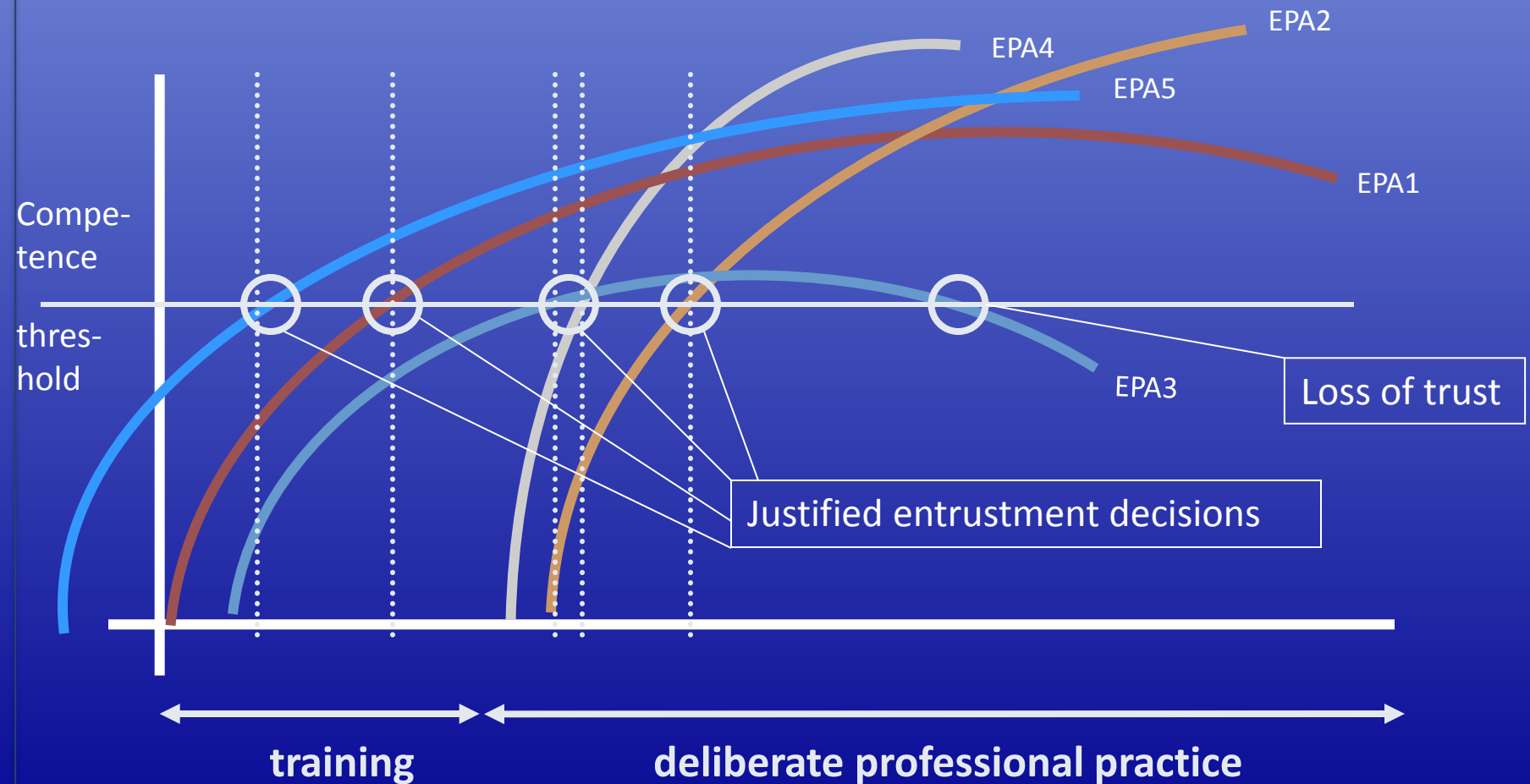
Five levels of supervision, reflecting increasing trust in trainee autonomy

1. Be present but no permission to enact EPA
 2. Practice EPA with direct (pro-active) supervision
 3. Practice EPA with indirect (re-active) supervision
- [threshold]---
4. Unsupervised practice allowed (distant oversight)
 5. EPA may be supervised with junior learners

Competency curves of one trainee



Another trainee



EPA approach serves flexibility

- **Intra-trainee variation**: trainees do not reach competence for everything on last day of training
- **Inter-trainee variation**: different prior knowledge and skills, learning ability, general attitude
- **Context variation**: variable clinical opportunities, local practice (epidemiology, facilities, culture), education-mindedness of staff

One size does not fit all

Accommodating the paradigm of “fixed standards – flexible time”

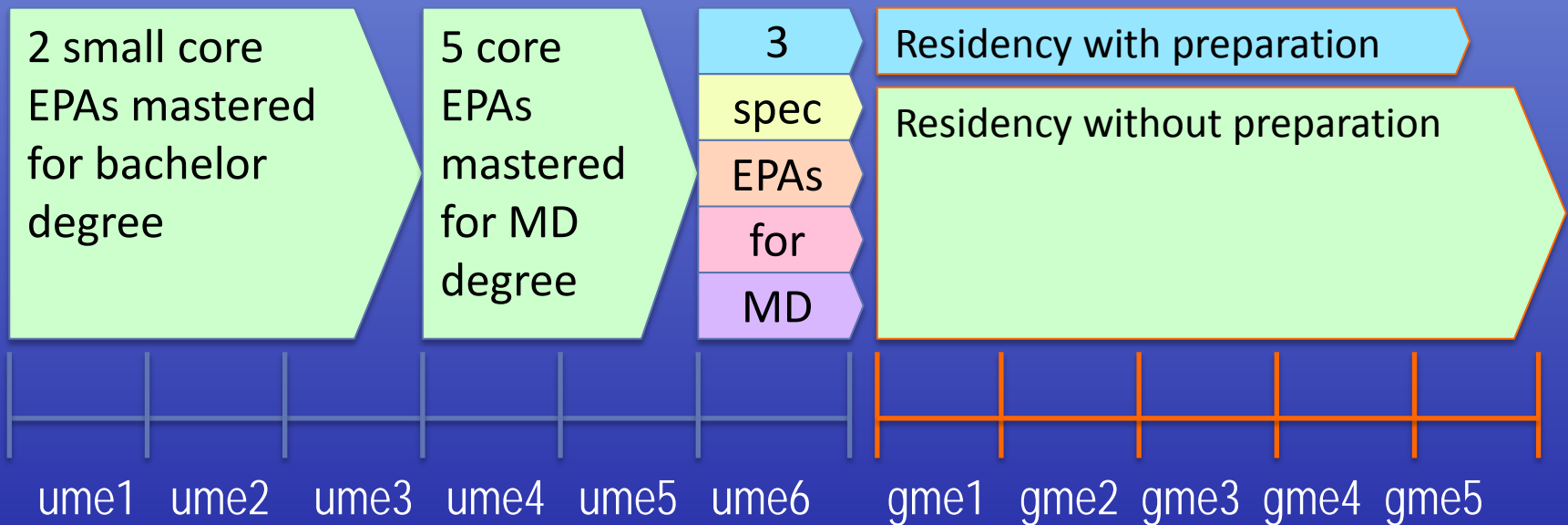
1. Varying time in training

- Take background into account when initially creating individualized workplace curriculum
- Open enrolment and completion of program across the year
- Treat time variations as maternity leaves or MD-PhD programs
- Do not vary too much (more than 25%)

2. Varying the portfolio of EPAs

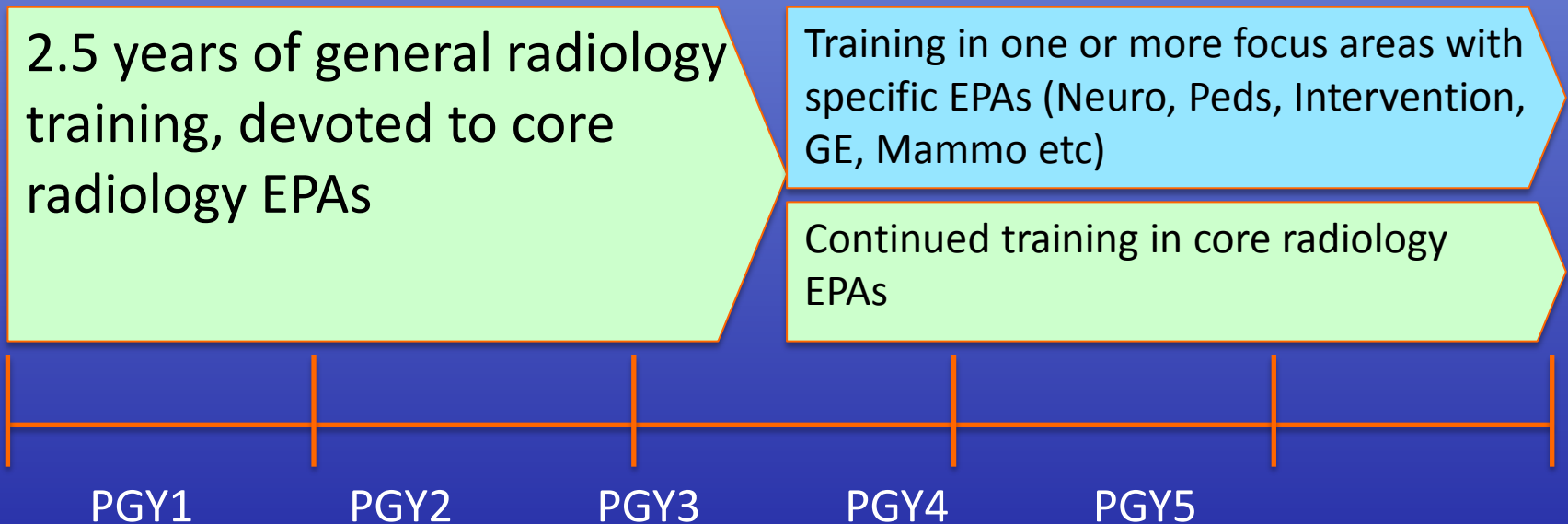
- Play with elective EPAs and focus areas of expertise

Plans for the new Utrecht UME curriculum



- All UME **core EPAs** required to graduate
- **Speciality specific EPAs** for shortened residency
- **Elective EPAs** for upper level students

Plans for new the national radiology residency program in the Netherlands



- All **core radiology EPAs** required to graduate
- Flexibility in nr of **focus area EPAs** (0 to 2 areas)
- EPAs determine **certification for autonomous practice**

EPAs may change your view of competency-based medical training and practice

- **Curriculum:** individualized and clear targets
- **Assessment:** entrustment decisions
- **Legitimate participation of trainees**
- **EPA-based MOC:** better for re-registration


An individualized workplace curriculum

Graded supervision allows for

- 1 Observing the activity
- 2 Acting with direct supervision present in the room
- 3 Acting with supervision available within minutes
- 4 Acting unsupervised, i.e. under clinical oversight
- 5 Providing supervision to juniors

Portfolio of:	PGY1		PGY2		PGY3		PGY4	
<i>trainee Jones</i>								
EPA a	1	2	2	2	3	4	4	5
EPA b	1	1	2	2	2	3	3	4
EPA c	2	2	3	4	5	5	5	5
EPA d	2	3	4	4	4	4	5	5

Psychology of traditional workplace assessment



She's nice and works hard, it won't hurt and will stimulate if I mark her 'superior'

Please... mark me 'superior'

Psychology of EPA-based workplace assessment

She's nice and works hard, but it may hurt my patients if I mark her 'ready for unsupervised practice'

Please... mark me 'superior'

Entrustment decisions: more than traditional workplace assessment

- Trusting a trainee is accepting risk and becoming vulnerable
- Recognizing *ability** + *right** + *duty* to act

*Oxford Dictionary: “Competence”



Maintenance of Competence

- EPAs gained during specialty training may serve well as MOC focus
- Continued and deliberate practice of EPAs should suffice to maintain the portfolio
- Disrupted or not maintained EPAs for years should lose the status of 'Level 4': renewed supervision mandatory
- New EPAs could be added after specialty registration




Women's Health

Digital Badge for an EPA in Pap Smear

Clicking on the badge will display the meta-data



Pap Smear



Issuer Details

Name — Dr. Sally Jones, Cleveland, OH
URL — <http://my.abccollegemedicine.org>
Organization — ABC College of Medicine, Cleveland, OH

Badge Details

Name — Pap Smear
Description — Skills —

- Pt education
- ThinPrep Pap smear technique and specimen handling
- Cervical cancer screening guidelines

Criteria — <http://my.abccollegemedicine.org/badges/criteria/>

Issuance Details

Recipient — jane.smith@gmail.com
Evidence — <http://my.abccollegemedicine.org>
Expires On — 1/1/2020

Wrapping up

- Competency-based medical education is a great advance
- Operationalizing competencies for teaching and assessment is problematic
- Entrustable professional activities can revitalize CBME by connecting competencies to practice
- EPAs can serve to create the flexibility in programs that CBME requires
- Entrustment decisions deepen the nature of workplace-based assessment
- EPAs may serve to make MOC more meaningful

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