

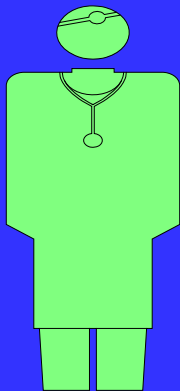
# Medical education research and patient outcomes

Frederick Chen, MD, MPH  
Professor  
Dept of Family Medicine  
University of Washington

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## Mission



To educate students &  
residents to provide  
high-quality patient care



## Medical education research

- ⌘ What has been the state of medical education research?
- ⌘ Authority for medical education historically resides in profession
- ⌘ Intrinsic capacity to self-regulate

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## Medical education research

- ⌘ Past 30 years have focused on:
  - ⌘ Basic research on reasoning
  - ⌘ Use of knowledge
  - ⌘ Problem-based learning
  - ⌘ Performance assessment (OSCE, standard patients)
  - ⌘ Provision of continuing education
    - ⌘ Norman, G. (2002). Research in medical education: three decades of progress. *BMJ (Clinical Research Ed.)*, 324(7353), 1560-1562.

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## Lack of patient outcomes in medical education research

- ⌘ Review of 600 research articles published in medical education journals (1996-98)
- ⌘ Only 4 measured clinical outcomes of patients
- ⌘ Half measured trainee performance
- ⌘ 34% measured trainee satisfaction
  - ▣ Prystowsky, J. B., & Bordage, G. (2001). An outcomes research perspective on medical education: the predominance of trainee assessment and satisfaction. *Medical Education*, 35(4), 331-336.

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## Why haven't we studied patient outcomes?

- ⌘ Focus on undergraduate education
- ⌘ Students able to overcome educational interventions
- ⌘ Not able to conduct randomized, blinded trials
- ⌘ No reliable data on outcomes
- ⌘ No money for research

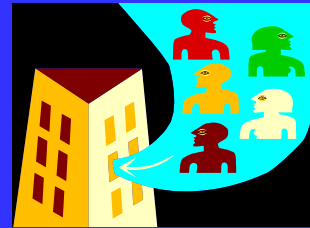
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## Medical education researchers focus on:

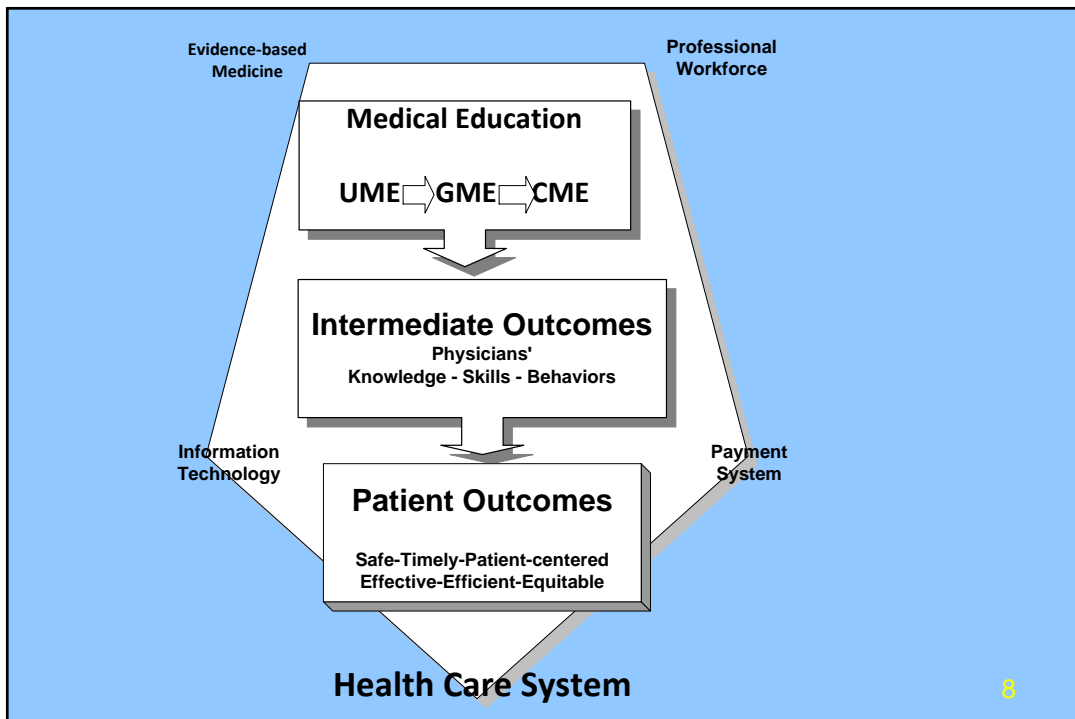
- Changing "individuals"  
(e.g., admitting better students,  
improving faculty teaching)



- Rather than changing "systems"  
(e.g., clerkships, residency, cost)



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## A cautionary note

### ⌘ Reconsidering the focus on “outcomes research”

- ☒ Cook, D. A., & West, C. P. (2013). Perspective: reconsidering the focus on “outcomes research” in medical education: a cautionary note. *Academic Medicine: Journal of The Association of American Medical Colleges*, 88(2), 162-167. doi:10.1097/ACM.0b013e31827c3d78

### ⌘ Dilution – Kirkpatrick’s levels, confounding

### ⌘ Feasibility

### ⌘ Failure to establish a causal link

### ⌘ Biased outcome selection

### ⌘ Teaching to the test

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## Research in medical education and patient outcomes

### ⌘ “[G]oal to build systems to link the education of our physician workforce with the care of our patients”

- ☒ O’Malley, P. G., & Pangaro, L. N. (2016). Research in medical education and patient-centered outcomes: shall ever the twain meet? *JAMA Internal Medicine*, 176(2), 167-168. doi:10.1001/jamainternmed.2015.6938

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## Success stories



- ⌘ Physician workforce outcomes
- ⌘ ACGME and ABMS changes
- ⌘ Better understanding of Quadruple Aim