Is Geriatrics still out of the EBM movement?

Sani Hlais, MD, MPH

September 2017

Objectives:

- 1. Assess the challenges of conducting and interpreting research in geriatric population.
- 2. Evaluate the applicability of EBM in geriatrics

Case:

- An **80 years** old **man** consults you because he has been noticing elevated **BP** on many occasions **150 /90**.
- He showed you recent lab tests: ***FBS of 125 and HbA1c 6.5%***. Otherwise, normal CBC, renal, thyroid and liver tests. You noticed TC = 237, HDL = 50, ***LDL = 152***, Trigl =146 mg/dl.

Case : Q1: Do we have evidence from research to treat elderly patients?

- Geriatric population has been classically excluded from research, especially the clinical trials which provide the best evidence.
- Exclusion may be:
  - Direct: upper limit for age in the inclusion criteria,
  - Indirect: excluding participants with certain conditions that are highly prevalent in elderly (low glomerular filtration rate, polymedication, cognitive impairment and dementia).
- This leads to low generalizability of the results of studies to the geriatric population.

Case : 80 yrs HTN

- JNC- 8 (2014) recommended that systolic BP goal in patients aged ≥ 60 be relaxed to < 150 mmHg.
- HYVET study (NEJM 2008): patients ≥ 80 (mean : 84) active treatment (144 mmHg) compared to placebo significantly reduced mortality and CV events.
- What about newer evidence? → SPRINT (2016):

SPRINT: Intensive treatment of hypertension to a SBP < 120 mmHg in patients ≥ 75 yrs (JAMA *2016; 315:2672-83)*

- Mean age = 80
- 62% Men
- Median follow- up = 38 months

- Inclusion: Medium high/ CV risk identified by previous CV events (except stroke), high Framinghmam score, or age ≥ 75 yrs
- Exclusion: Diabetes, recent heart failure.

SPRINT: RCT randomization to intensive treatment (goal 120 mmHg) vs standard goal 140 mmHg)

- NNT = 83 to prevent 1 death over 3.3 years
- Hypotension (NNH = 100), syncope (NNH = 200), electrolyte imbalance (NNH = 125), acute kidney injury (NNH = 59)
- *Note: automated measurement average of 3 measurements → add 7- 10 mm Hg for equivalent measurement in clinical practice*

Case:

- You opted for a follow up on BP without treatment, after discussion with the patient.
- The patient is still worried about his BP, but you told him we're following the evidence and the guidelines.
- You found a lot of controversy about statines in primary prevention to start > 75, but you opted for a statin.
- Patient asked you about aspirin? And a treatment for his pre- diabetes? Need for vitamins?...

Multiple interventions/ Polymedication

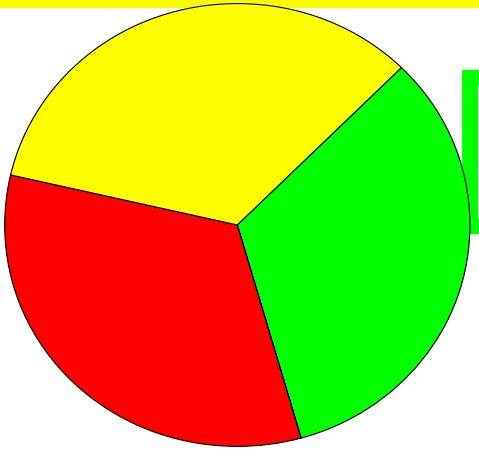
- When considering interventions in elderly, keep in mind that in general they are **not synergistic**. (*HOPE 3 – NEJM 2016*: statines have consistent 25% relative reduction of baseline risk, with without hypertensive drugs)

Is it only the problem of research /evidence?

- Nowadays, we have more research trials including or limited to elderly.
- Generalizability of research results may still be lower in geriatrics due to selection bias.
- We need more pragmatic RCTs including patients similar to our practice.
- Conclusion: Research in geriatrics has its limitations, but ***EBM is more than research.***

EBM is about decision making: "clinical jazz"

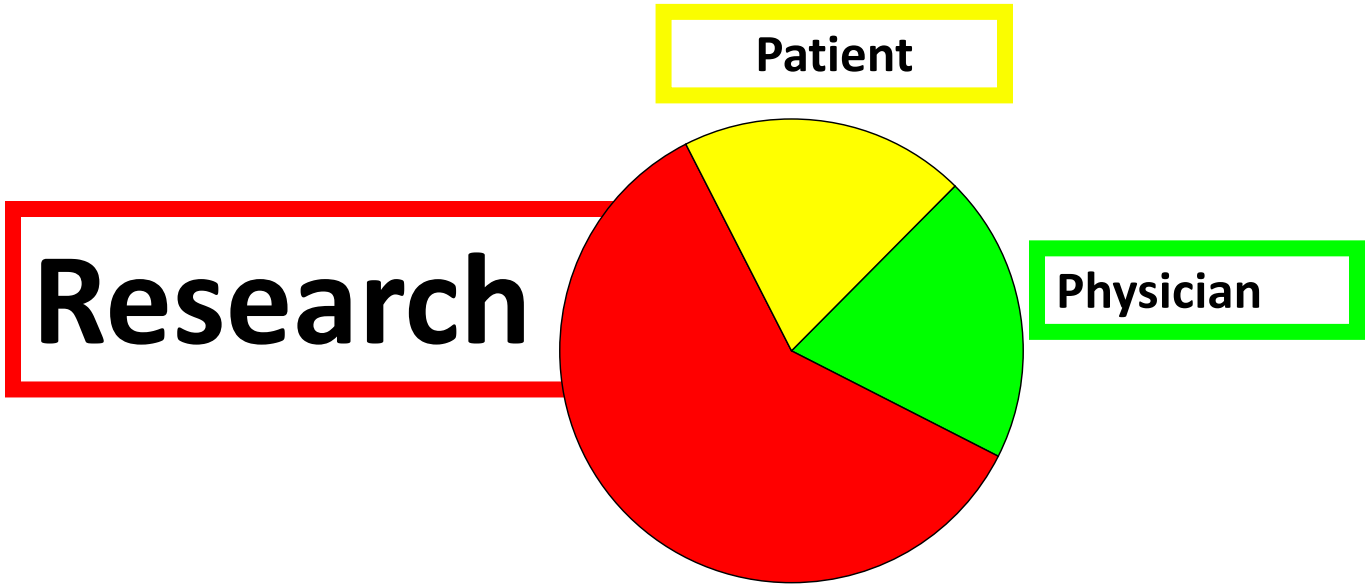
Patient



Physician

Research

EBM dehumanizing Medicine/ average patient/ worshiping numbers and p-values/ Guidelines above mindlines/Dismissing qualitative values…?:



What's wrong with EBM: Bad quality of research?

- Pharmaceutical influence +++
- (EBM: a movement in crisis, journals are secret arms for big pharma, EBM manifesto…)

What's wrong with EBM: Bad application in clinical practice:

- Formalisation of the evidence:
  - Unjustifiable standardisation
  - Ossified in protocols (example: tight glycemic control)
  - Biblical significance

(Timmermans and Berg)

- Patient’s perspective: dismissed in favor of an average effect on a sample or a column of QALYs
- Decision trees to include patient’s perspective proven impossible.
- De- skills practitioners losing the ability to customise and personalise care

All these drawbacks may make us reverse the question:

- Has EBM movement evolved enough to embrace the holistic Geriatrics spirit?

Conclusions:

- Pay attention to exclusion criteria when reading research in geriatrics
- Statistical and clinical significance should not be considered biblical significance: Avoid dogmatism. EBM ≠ new religion.
- Don’t apply all evidence (?) based interventions on a single patient! Effects are generally not synergistic. Avoid polymedication.
- Applying EBM in geriatrics means more than critical reading of articles. It is mainly well trained physicians ready to pay close attention to a patient’s history and preferences.

Suggested Readings: an article:

JUNE 2015 , VOL . 7 3 , N O 5

Suggested Readings: A book