

# Emphasizing High Value Care in Physical Examination Instruction – A Qualitative Study of Expert Educators



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**CHICAGO**  
MEDICINE

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## BACKGROUND

High value care (HVC) has emerged as a curricular priority in medical education.<sup>1-3</sup>

Performing physical examination (PEX) remains a core competency for trainees, but instruction in PEX is evolving with several reported paradigms:

- Traditional “head to toe”<sup>4</sup>
- Hypothesis testing / hypothesis-driven approach<sup>5</sup>
- “Core and clusters” model<sup>6</sup>
- Hybrid approaches<sup>4</sup>

Viewing the intersection of HVC and PEX could lend insight on how to better design curricula in both competency domains.

**Primary aim:** Elucidate how experts understand the concept of a “high value, cost effective physical examination”

### Additional aims:

1. Understand real-life barriers to using physical examination in high value care
2. Determine optimal teaching strategies and content for a curriculum in high value physical examination

## METHODS

### Design overview

Qualitative study of semi-structure interviews with national experts in physical examination instruction and application

### Recruitment

Subjects identified through both purposeful and snowball sampling. Inclusion criteria included:

- Authorship of peer-reviewed publication on PEX instruction
- Authorship or contribution to PEX textbook
- Active membership in AAMC’s Directors of Clinical Skills (DOCS)
- Directorship of PEX or clinical skills course at home institution

### Data collection

Interviews recorded between August 2015 and January 2016

### Data analysis

Open coding with qualitative content analysis using a phenomenological framework. Transcripts coded independently by 2 members of team with 3<sup>rd</sup> member available to adjudicate disagreement.

## RESULTS

20 physicians with an educational focus on PEX participated:

- 95% had local or national educational leadership roles
- 60% had peer-reviewed publications or textbook authorship

### During interviews, 3 major themes emerged.

**Theme 1:** Physical examination’s value includes both economic benefits and *value* in a broader sense.

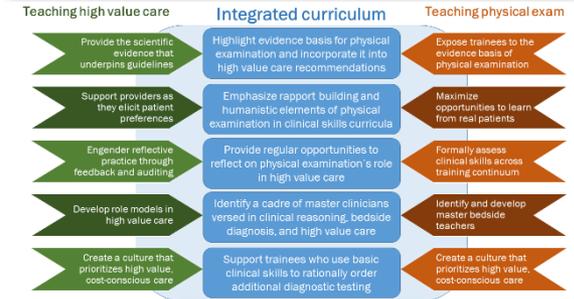
Value added by physical exam	Related concepts & synonyms
Enhancing diagnostic reasoning	Hypothesis testing, evidence basis, integration with clinical history
Reducing downstream costs	Fewer diagnostic tests, reassurance to patients
Assessing impact of disease	Functional assessment, triaging severity of complaint
Establishing clinical diagnoses	Syndromes defined by clinical findings, face validity of examination
Fostering connections	Trust building, patient-physician communication, healing touch
Adding joy to practice	Intellectually stimulating, “detective work” of using senses
Providing fringe benefits	Procedural guidance, screening, enhancement with technology

**Theme 2:** There are practical factors and educational barriers to advancing role of PEX in HVC.

Selected factors	Specific limitations experienced
Physician-specific factors	Inadequate clinical experience, lack of confidence, poor diagnostic reasoning, poor sensory perception
Patient-specific factors	Patient expectations, poor mobility, anxieties about uncertainty
Routines / Standards of care	Algorithmic protocolized care, culture of diagnostic testing
Intolerance to uncertainty & Defensive medicine	Innate fear of “missing something”, added layer of security with labs and imaging
Inadequate evidence basis	Not validated in all settings, diagnostic performance suboptimal
Instructor-related factors	Availability of skilled bedside teachers, intolerance to curricular innovation
Curricular factors	Breadth of curriculum, number of skills needed to master, lack of formal assessment

## RESULTS (continued)

**Theme 3:** There are opportunities to integrate best practices in high value care<sup>7</sup> instruction and PEX curricula.



## KEY FINDINGS and DISCUSSION

Teaching **diagnostic reasoning** is the key link between HVC curricula and PEX instruction.

PEX skills need to be developed **longitudinally** – from the preclinical medical school curriculum into residency and beyond.

Educators should explicitly emphasize myriad ways in which PEX holds value<sup>8</sup> and should **prioritize certain topics** to advance HVC:

Experts’ recommended topics for further teaching	
Top chief complaints	Top clinical findings
Pain in large joint e.g. knee	Cardiac murmurs
Back pain	Jugular venous examination
Headache	Lung percussion

### Limitations

- Subjects were experts in clinical skills instruction, not HVC per se.
- Experts avoided discussing costs of care, interpreting *value* in its broadest sense.
- The majority of experts were generalists and had a background in internal medicine; specialties were under-represented.

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