

# Impact of a Pediatric Value Curriculum on Resident Knowledge, Attitudes, and Behavior

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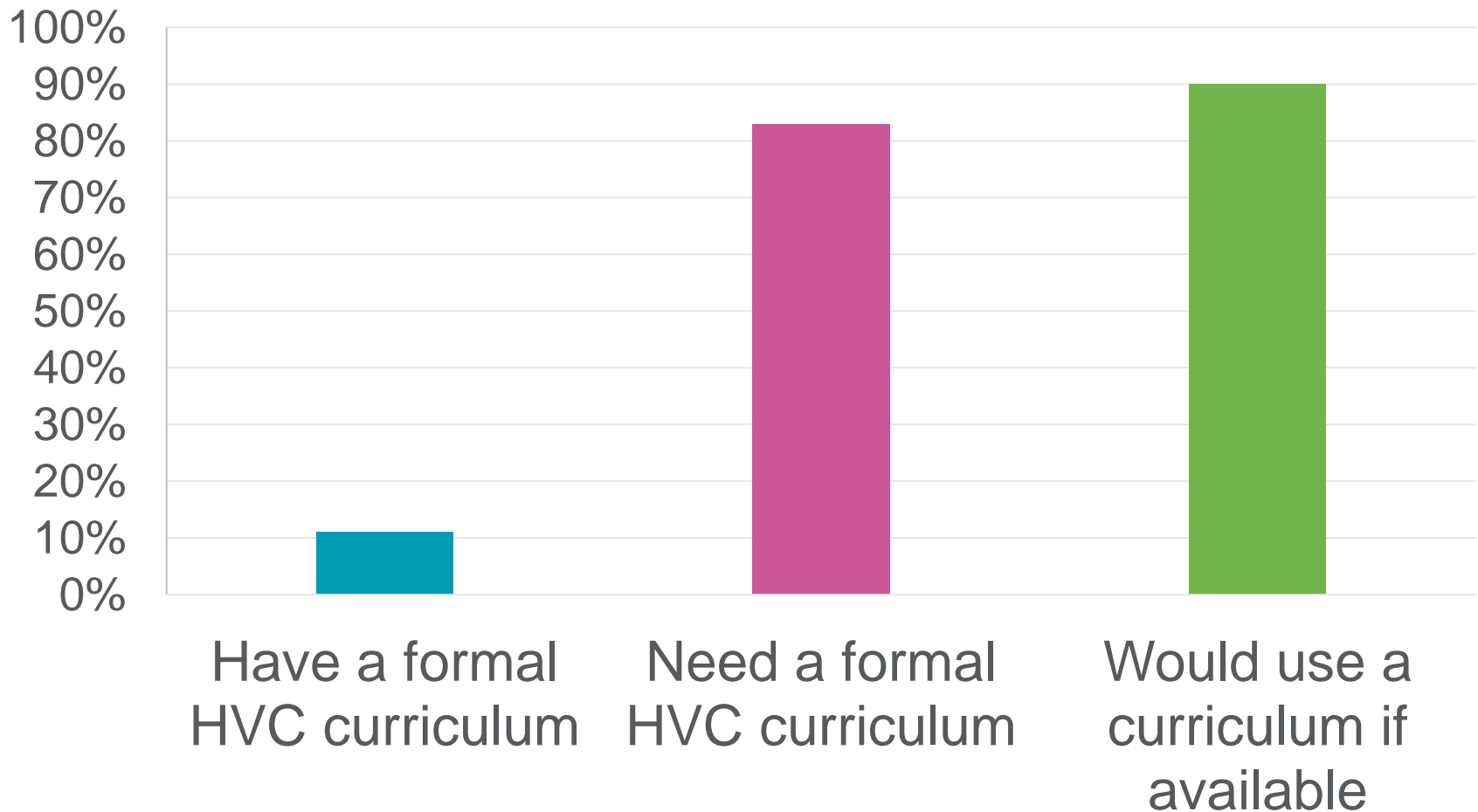
# Disclosures

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- The authors have documented no other financial relationships to disclose or Conflicts of Interest to resolve
- This presentation will not involve discussion of unapproved or off-label experimental or investigational use

# Background

$$\text{Value} = \frac{\text{Outcomes} + \text{Patient Experience}}{\text{Cost and Inputs}}$$

# High-Value Care (HVC) Curricula



# High-Value Pediatrics



Core Didactics

Healthcare Value

Healthcare Costs

Balancing Benefits and  
Cost

High-Value Diagnosis

# High-Value Pediatrics



## Core Didactics

- Healthcare Value
- Healthcare Costs
- Balancing Benefits, Harms & Cost
- High-Value Diagnosis



## Monthly HVC Morning Report



# High-Value Pediatrics

Test:

Lab:

Shopping Cart:

X-Ray: Chest [\$53]
Transthoracic Echocardiogram (TTE) [\$435]
Complete Blood Count (CBC) with Differential [\$20]
C-Reactive Protein (CRP), High Sensitivity [\$33]
Sedimentation Rate [\$7]
Urinalysis [\$6]
Comprehensive Metabolic Panel [\$27]

\$581

\$1,000

[www.pedsvalue.com](http://www.pedsvalue.com)

# High-Value Pediatrics



## Core Didactics

- Healthcare Value
- Healthcare Costs
- Balancing Benefits, Harms & Cost
- High-Value Diagnosis



## Monthly HVC Morning Report

- Using \$1000 Work-up Cost Calculator



## Value-focused QI projects

[www.pedsvalue.com](http://www.pedsvalue.com)



# Study Aim

- To evaluate the impact of High-Value Pediatrics on pediatric resident knowledge, attitudes, and behaviors

# Methods

- Pediatric residents at CHOP and CCHMC exposed to curriculum in 2016-17 academic year
- Linked pre/post-curriculum anonymous survey
  - Based on previously published survey tool
  - Evaluated knowledge and attitude change
- Post-curriculum focus groups
  - Explored impact on resident attitudes, behaviors, and practice

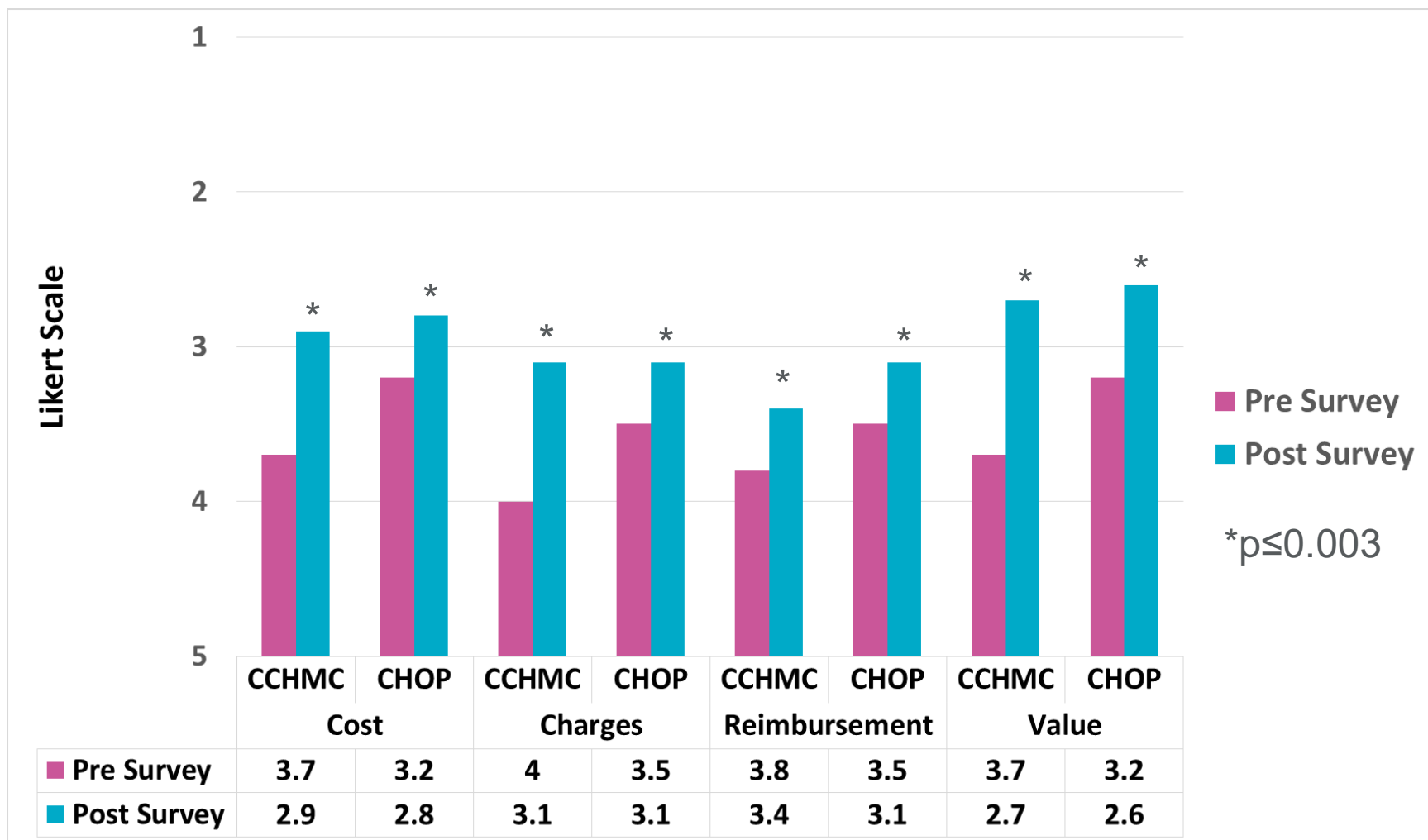
# Methods – Data analysis

- Quantitative:
  - Descriptive statistics
  - Paired t-tests and Wilcoxon rank sum tests
- Qualitative:
  - Thematic analysis using grounded theory approach with inductive and deductive analysis

# Results - Participation

- 291 residents exposed to curriculum
  - 50 residents (17.2%) were exposed to both the curriculum and a value-based QI project
  - 80 residents (27.5%) responded to both pre- and post-survey
- 3 post-curriculum focus groups (11 residents)

# Results – Surveys (Knowledge)



# Results – Focus Groups

## Theme 1: Curriculum contribution to understanding of HVC

*“The value of the curriculum is just starting the conversation or making it something to think about or be aware of. Because I think there’s so many nuances . . . cost, medications, and things like that. So, just helping us know some of those things and setting the conversation.”*

# Results – Focus Groups

## Theme 2: How HVC affects individual practice

*“And I found myself ordering less and different kinds of lab tests on a lot of patients . . . before the curriculum I would have practiced differently.”*

*“I think it forces us to be better clinicians, because it forces us to think about what we’re doing and why we’re doing it, what information it’s going to give us and whether or not it’s actually going to give us any information that we would act on.”*

# Limitations

- Curriculum instituted at academic institutions with similar residency program characteristics
- Selection bias for survey completion/focus group participation
- Surveys assess self-reported knowledge and practice change



# Conclusions

- Participation in the High-Value Pediatrics curriculum improved self-perceived knowledge of healthcare costs, charges, reimbursement, and overall understanding of healthcare value
- Focus groups demonstrated potential clinical practice changes as a result of curriculum participation

# Acknowledgements

Co-authors and collaborators at CCHMC and CHOP

APPD for their support of the development of this curriculum and the opportunity to present this work

Residents who participated in surveys and focus groups

Questions?

For more information on High-Value Pediatrics:

[www.pedsvalue.com](http://www.pedsvalue.com)

# References

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# Results – Surveys (Attitudes)

CCHMC	CHOP
Cost to society is important in my decisions to use or not use an intervention.	Physicians should adhere to clinical guidelines that discourage the use of interventions that have small proven advantage over standard interventions but cost more.
I am aware of the costs of the tests or treatments I recommend.	
Decision support tools that show costs would be helpful in my practice.	

# Curriculum Survey Questions

## Cost-Value Perceptions:

- How would you rate your understanding of healthcare COSTS?
- How would you rate your understanding of healthcare CHARGES?
- How would you rate your understanding of healthcare REIMBURSEMENT?
- How would you rate your understanding of healthcare VALUE?

# Curriculum Survey Questions

## Self-reported Attitudes:

- It is unfair to ask clinicians to be cost-conscious and still keep the welfare of their patients foremost in their minds.
- There is currently too much emphasis on costs and procedures.
- Trying to contain costs is the responsibility of every ordering clinician.
- Cost to society is important in my decisions to use or not to use an intervention.

# Curriculum Survey Questions

## Self-reported Attitudes (continued):

- Physicians should adhere to clinical guidelines that discourage the use of interventions that have a small proven advantage over standard interventions but cost more.
- I am aware of the costs of the tests/treatments that I recommend.
- Decision support tools that show costs would be helpful in my practice.





