



# Uncovering Clinicians' Gaps and Attitudes Toward Biosimilars: Impact of a 2-Phase Educational Program

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## Background

- Biosimilars are biological products designed to be equivalent to an already-approved biologic. Eleven biosimilars have been approved by the FDA since 2015
- We sought to measure clinicians' understanding of biosimilars to identify and address educational gaps related to their clinical application and acceptance

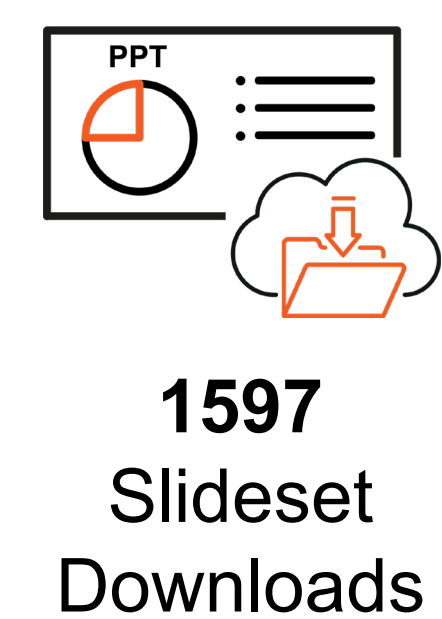
## Methods

- We designed a 2-phase online educational program on biosimilars
  - Questions measuring clinicians' knowledge and competence were asked before and then repeated after the education was delivered
  - Clinicians also submitted their own questions about biosimilars
- To uncover key educational gaps, we identified questions with high incorrect responses at baseline, persistence of incorrect responses, and queries submitted by clinicians during Phase 1 of the education
  - These gaps were used to refine Phase 2 of the education
- Results of oncology participants have been presented elsewhere<sup>[1]</sup>
  - Current study analyzes results of non-oncology participants

### Educational Phase 1

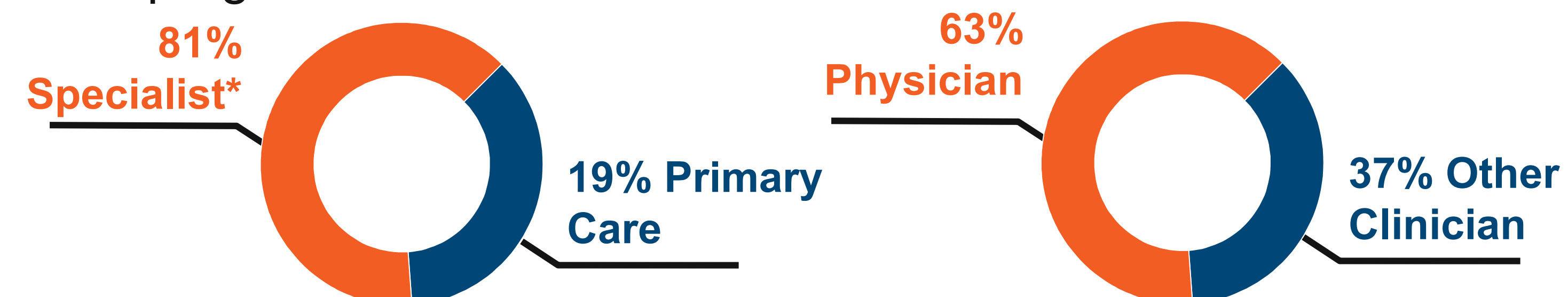


### Educational Phase 2



## Participant Demographics

- Between March 2017 and April 2018, N = 1585 clinicians participated in the program



\*20% gastroenterology; 9% rheumatology; 6% dermatology, allergy, immunology; 9% infectious diseases, HIV/AIDS; 5% hepatology, 2% surgery, 31% other.

## Results: Competence in Using Biosimilars



### Gaps in Competence

- Among the subset of n = 336 clinicians who answered at least 1 baseline or posteducation question in Phase 1 or Phase 2, we identified persistent pre-education misunderstandings about biosimilars

### Clinicians' Pre-education Gaps About Biosimilars

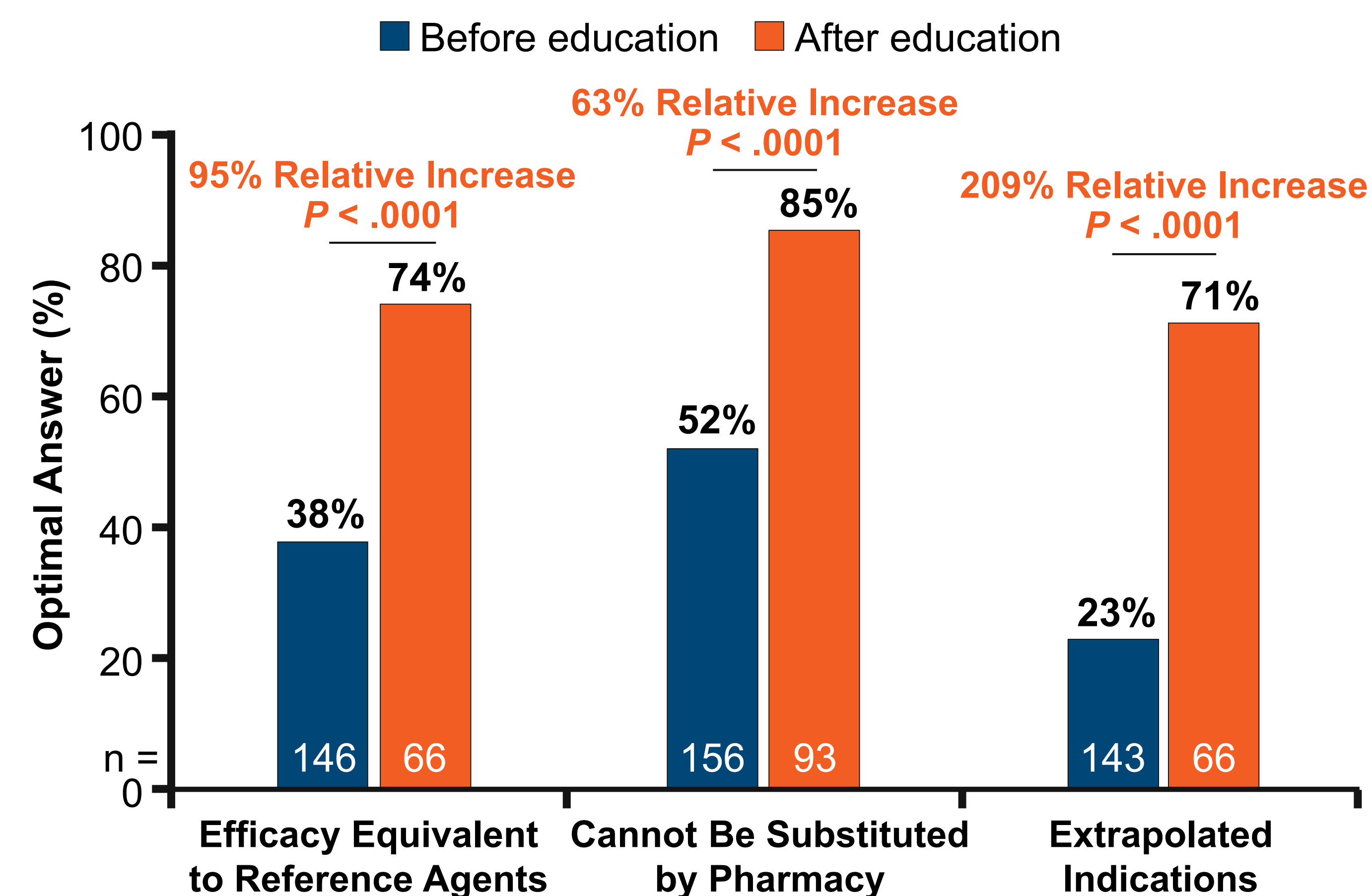
- 61% Mistakenly believed **efficacy** could differ from reference agent (n = 164)
- 62% Did not understand **substitution** rules in the US (n = 157)
- 77% Did not understand **extrapolation of indications** (n = 143)

Switching, substitution, and extrapolation of indications were also common concerns identified from clinician-submitted questions in Phase 1



### Improvement in Competence

- After Phase 2 of the education, clinicians significantly improved their competence in all 3 domains



## Results: Clinician Attitudes



### Likelihood of Prescribing Biosimilars

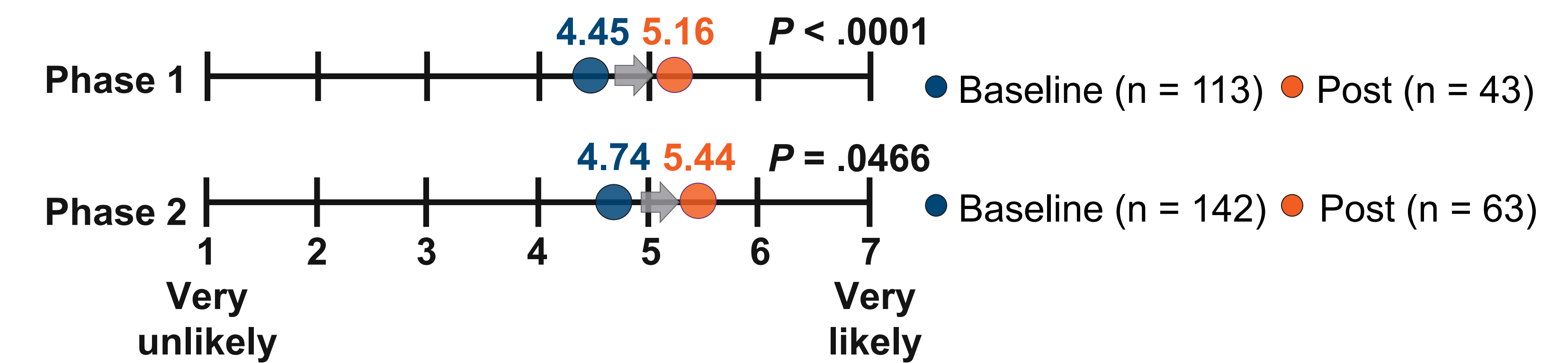
- Clinicians noted that patient education is a key factor required for acceptance of biosimilars

84%

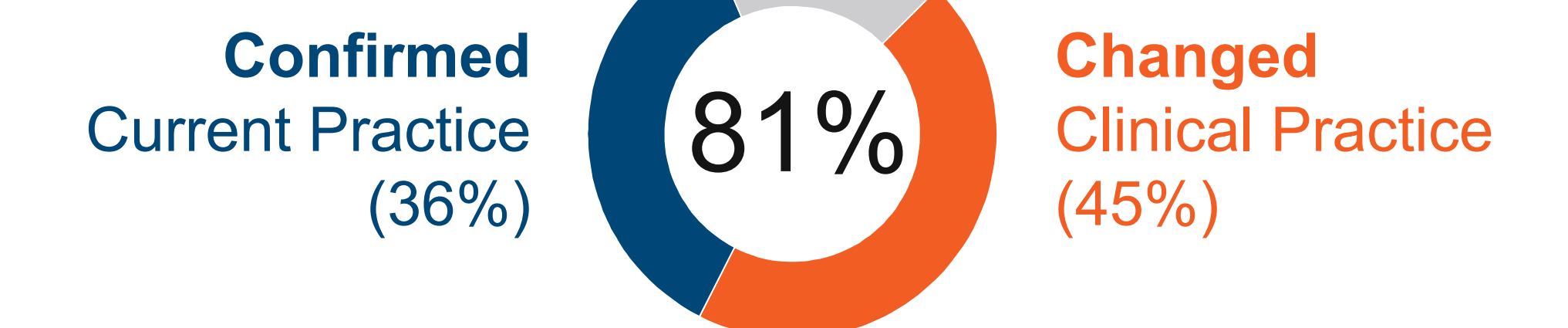
Believed patients will accept biosimilars with appropriate explanation (n = 80)

- The education increased clinicians' likelihood of prescribing a biosimilar

### How likely are you to consider prescribing a biosimilar?



- As a result of the education, participants planned to change their practice patterns



## Conclusions

- Clinicians' gaps in understanding of the **efficacy, substitution, and indications of biosimilars** may explain why some are reluctant to consider this new treatment option
  - Similar baseline gaps were observed in a separate CCO video program available at a similar time (Nov 2017 to April 2018)<sup>[2]</sup>
- This educational program increased clinicians' competence with biosimilars, potentially removing barriers to their use
  - Similar education may further **increase clinicians' willingness to consider biosimilars** as a treatment option for their patients