

# CERIAS

## Use of Information Technology by Primary Care Physicians in the U.S.

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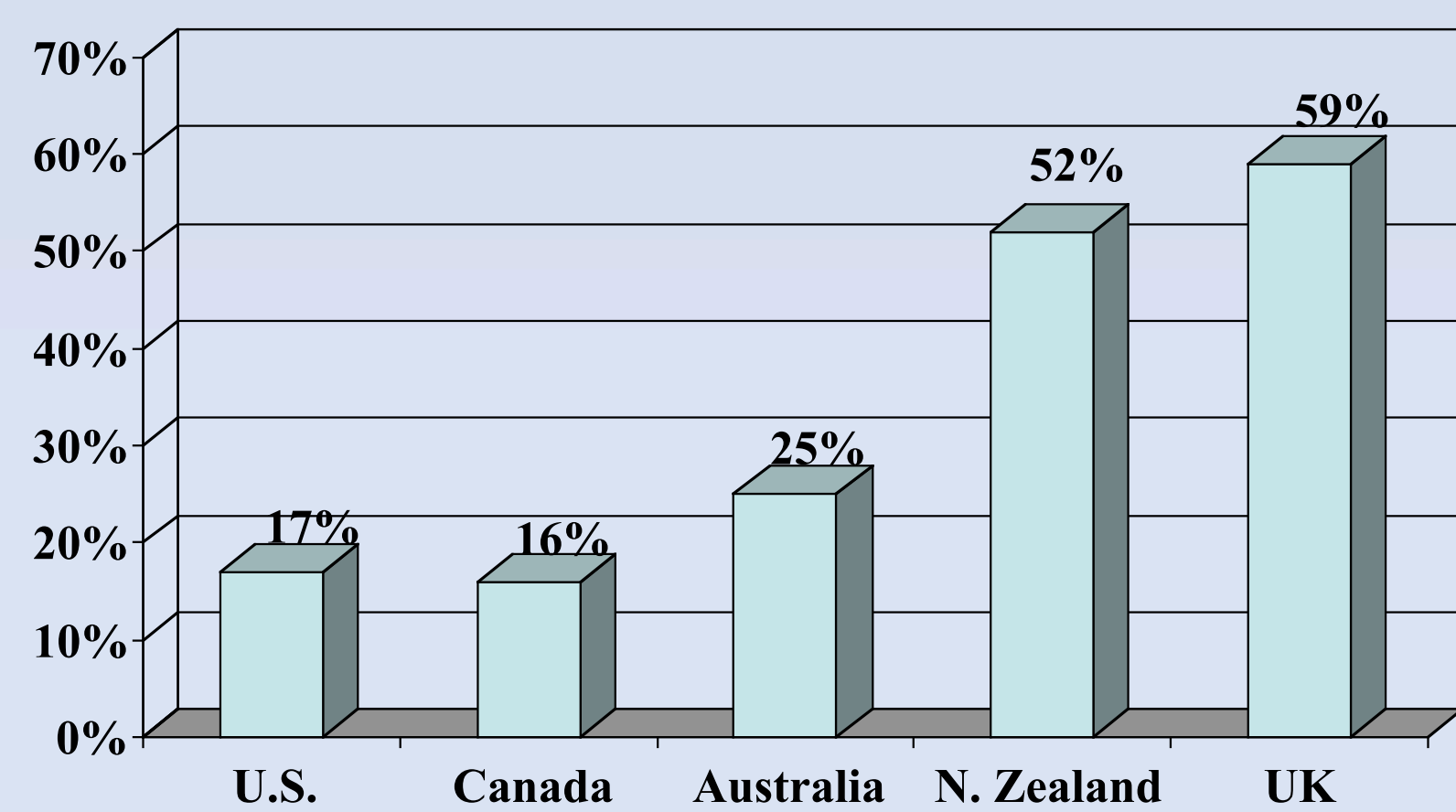
## Objectives

- To model the current use of information technology (IT) by primary care physicians in the U.S.
- To predict the rate at which primary care physicians will adopt information technology (IT) in their practice.

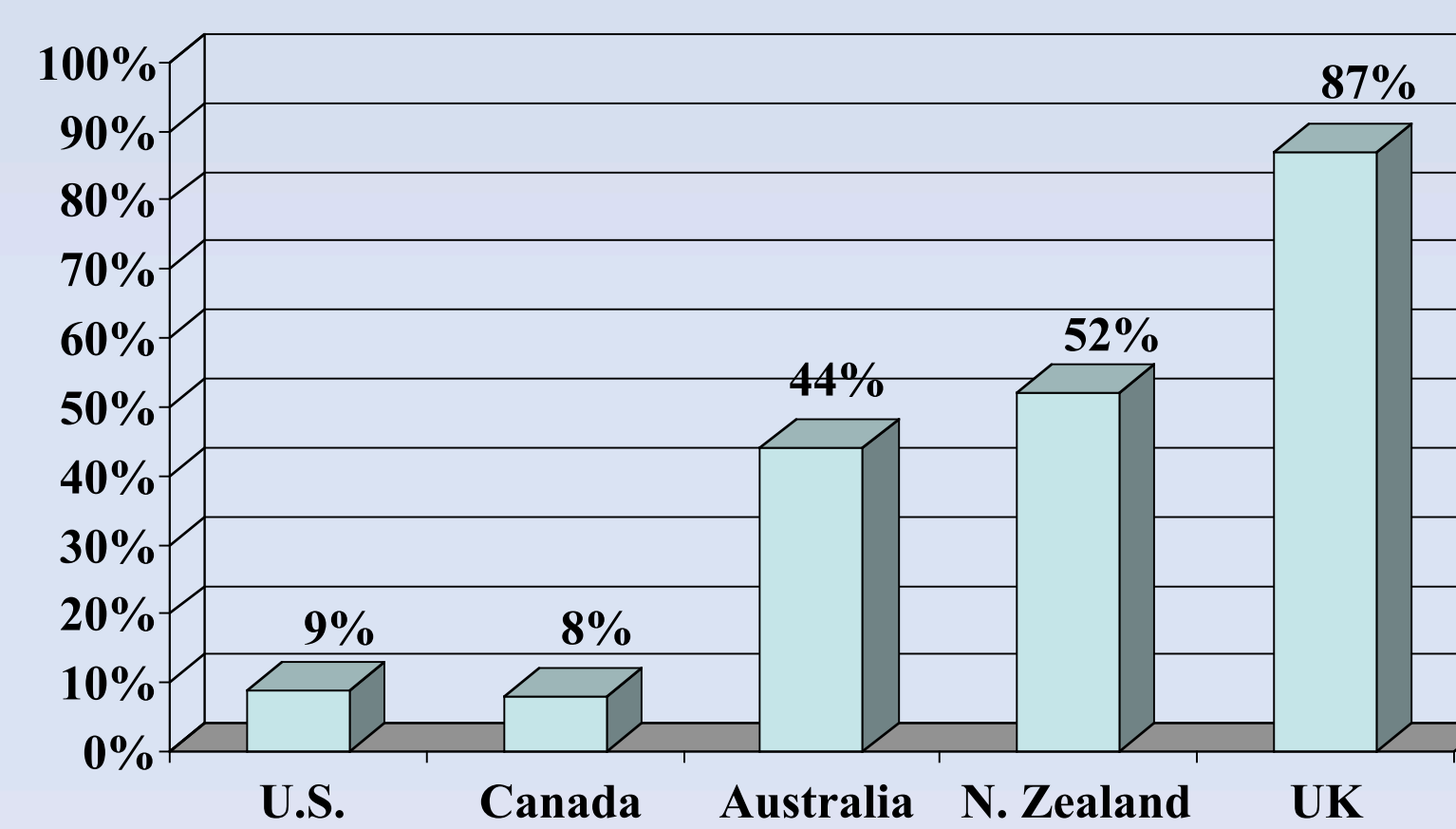
## Primary Care Specialties

- Family Practice
- Internal Medicine
- Pediatrics
- OBGYN
- Other (e.g., geriatrics, occupational medicine, etc.)

## Adoption of EMRs in 2000



## Adoption of E-Prescribing in 2000

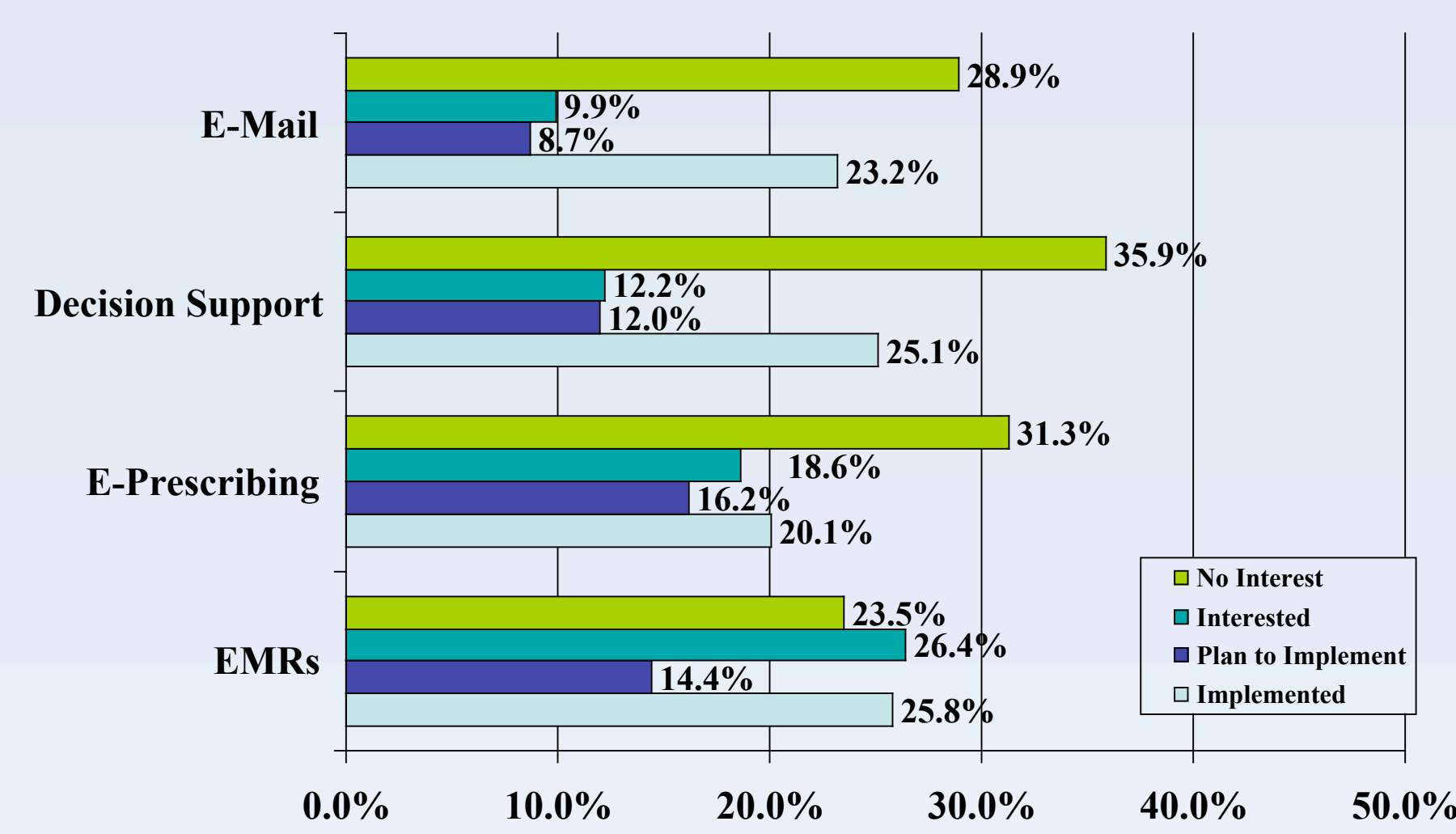


## Data Collection

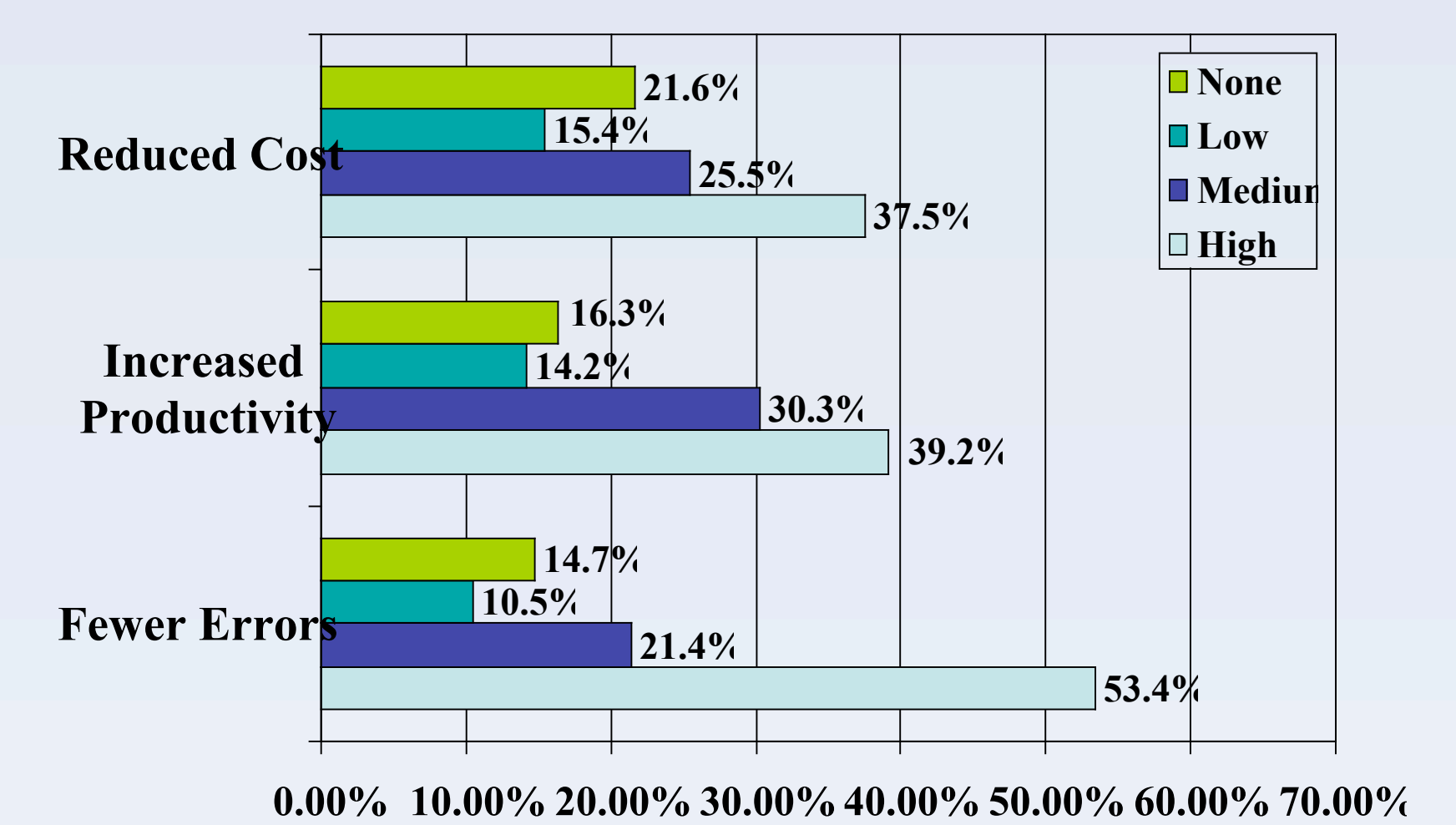
- Web-based survey of use of:
  - EMRs
  - E-prescribing
  - Point of care decision support
  - E-communication with patients
- Primary care physicians listed by the AMA
- 2,145 physicians (7.3%) responded
- 1,665 physicians were included in the final sample

Country	EMR Adoption (%)	E-Prescribing Adoption (%)
U.S.	17%	9%
Canada	16%	8%
Australia	25%	44%
N. Zealand	52%	52%
UK	59%	87%

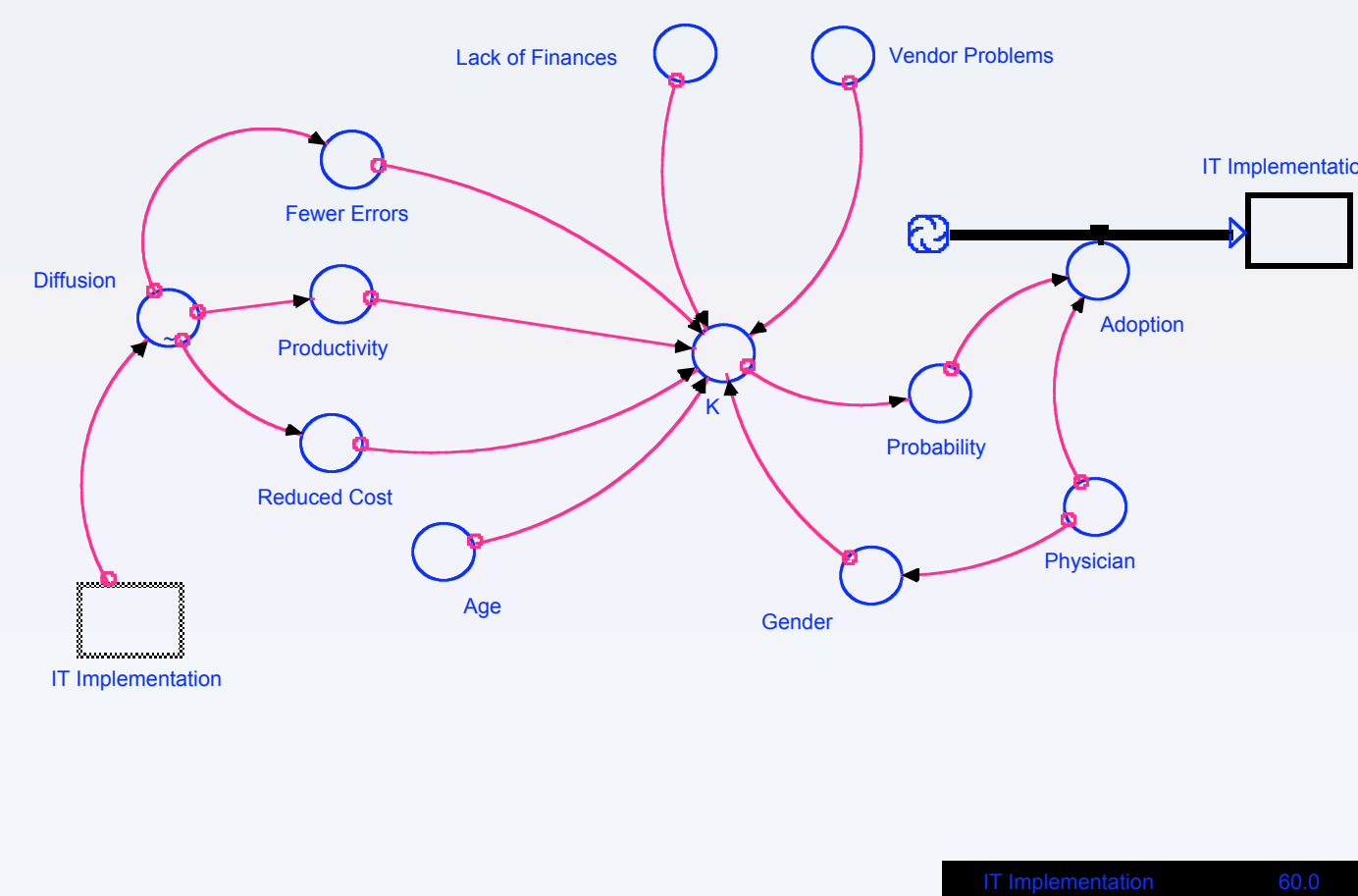
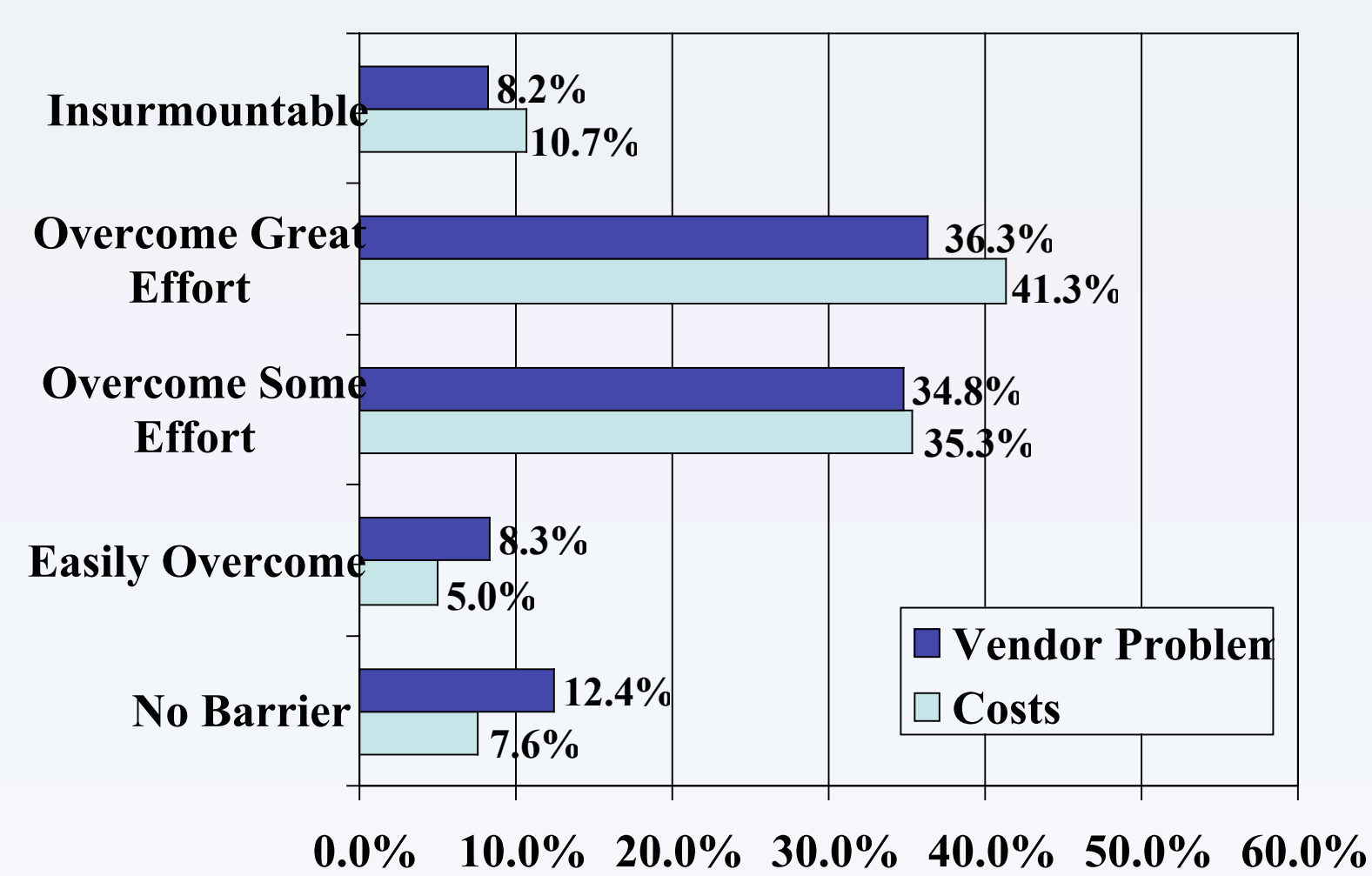
## Use of IT by Primary Care Physicians



## Perceived Benefits of Implementing IT Applications



## Perceived Barriers to Implementing IT Applications

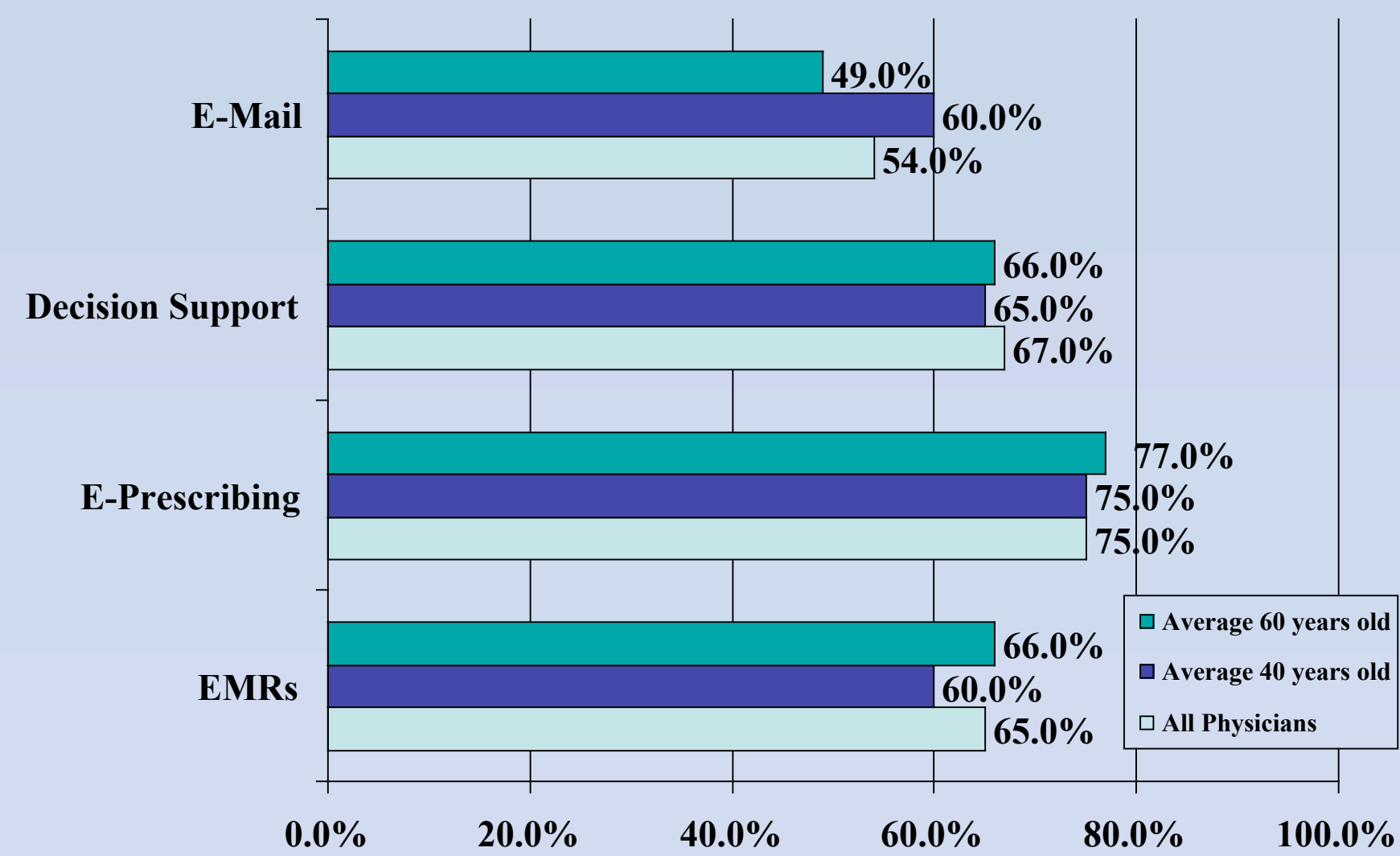


## Model Parameters

Variable	Value
<b>Outcomes</b>	% of physicians implementing IT
Age	M=49 SD=9.45
Gender	Male =1 Female=2
<b>Perceived Benefits</b>	
Fewer Errors	M=3.14 SD=1.10
Increased Productivity	M=2.92 SD=1.09
Reduced Costs	M=2.79 SD=1.16
<b>Perceived Barriers</b>	
Costs	M=3.43 SD=1.01
Vender Problems	M=3.20 SD=1.11

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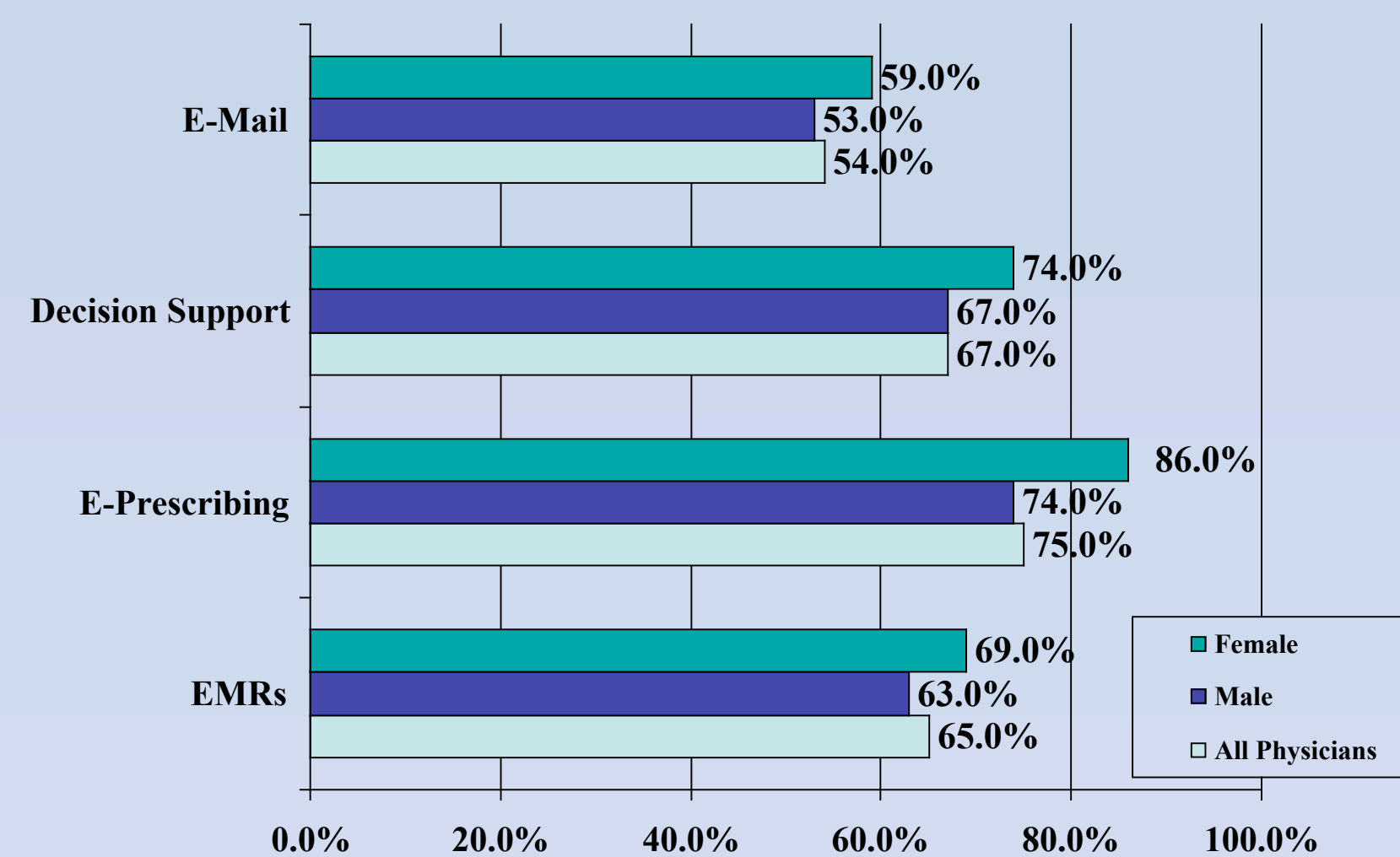
Predicted Use of IT by Primary Care Physicians



## Discussion

- Three out of four primary care physicians are likely to implement e-prescribing.
- In contrast only one out of two primary care physicians are likely to adopt e-mail communication with their patients.

Predicted Use of IT by Primary Care Physicians



## Discussion

- Perceptions of benefits and barriers are significant predictors of implementation of IT by primary care physicians.
- The key to increased implementation of IT applications by primary care physicians may be to convince them that the advantages outweigh the barriers.

## Discussion

- Currently only 20% to 25% of primary care physicians in the U.S. have implemented patient care IT applications in practice.
- Our study predicts that 54% to 75% of primary care physicians will implement these applications in the near future.

## Discussion

- A major barrier to adoption of IT applications by primary care physicians is cost of the hardware and software. If costs could be reduced significantly more physicians would adopt these applications.
- Physicians do not perceive vendors as delivering acceptable products. Vendors will need to take into consideration physician needs and how IT applications fit into clinical practice in order to convince physicians to adopt new IT products.