

Teaching Mentors  
to Challenge Youth:  
An Experiment

# Purposes

- Test and refine conceptual framework on workplace mentor teaching
- Identify differences in teaching behaviors of expert and novice mentors
- Test efficacy of training

# Study Design

- “Pre-experiment”
  - 5 sites
  - 66 mentors
  - 61 youth
- Experiment
  - 8 sites, matched regionally
  - 2 training sessions at 4 “treatment” sites

# Interview

- Brainstorm: list the main things you tried to teach
- Describe a situation when you taught. . . (an item from your list).
  - Stories and key incidents
  - What did you do?
  - Why you did you do that?

# The Grid: Competencies and Teaching Behaviors

| <b>Competencies</b> |                                    | <b>Teaching Behaviors</b> |                    |                    |                            |                              |                      |
|---------------------|------------------------------------|---------------------------|--------------------|--------------------|----------------------------|------------------------------|----------------------|
|                     |                                    | <b>Demonstrate</b>        | <b>Explain How</b> | <b>Explain Why</b> | <b>Monitor Performance</b> | <b>Question Reflectively</b> | <b>Problem Solve</b> |
| <b>Technical</b>    | <b>Organize Work Tasks</b>         |                           |                    |                    |                            |                              |                      |
|                     | <b>Perform Job Tasks</b>           |                           |                    |                    |                            |                              |                      |
|                     | <b>Meet Productivity Standards</b> |                           |                    |                    |                            |                              |                      |
|                     | <b>Meet Safety Standards</b>       |                           |                    |                    |                            |                              |                      |
| <b>Personal</b>     | <b>Self-Confidence</b>             |                           |                    |                    |                            |                              |                      |
|                     | <b>Drive</b>                       |                           |                    |                    |                            |                              |                      |
|                     | <b>Career Planning</b>             |                           |                    |                    |                            |                              |                      |
| <b>Social</b>       | <b>Systems</b>                     |                           |                    |                    |                            |                              |                      |
|                     | <b>Rules</b>                       |                           |                    |                    |                            |                              |                      |
|                     | <b>Teamwork</b>                    |                           |                    |                    |                            |                              |                      |
|                     | <b>Communication</b>               |                           |                    |                    |                            |                              |                      |
|                     | <b>Non-Work</b>                    |                           |                    |                    |                            |                              |                      |

# Universal Teaching Behaviors

- Demonstrate
- Explain How
- Explain Why
- Monitor Performance

# Challenging Teaching Behaviors

- Question Reflectively
- Problem Solve

# Beach Environment

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“We had to create a beach environment.

We had a space within the exhibit that was 12 feet this way and 14 feet that way and went from so many inches deep at one end to zero at the other end as it ramped up the beach.

‘How much water is in there?’

How did you figure that out?’

You’ve got to use approximations,

you’ve got to use triangulations, trigonometry,  
geometry.

‘How much water is in there when we lower the water level six inches when the tide goes out?’

Now draw that up in a picture, label all of the parts and put the dimensions in.’”

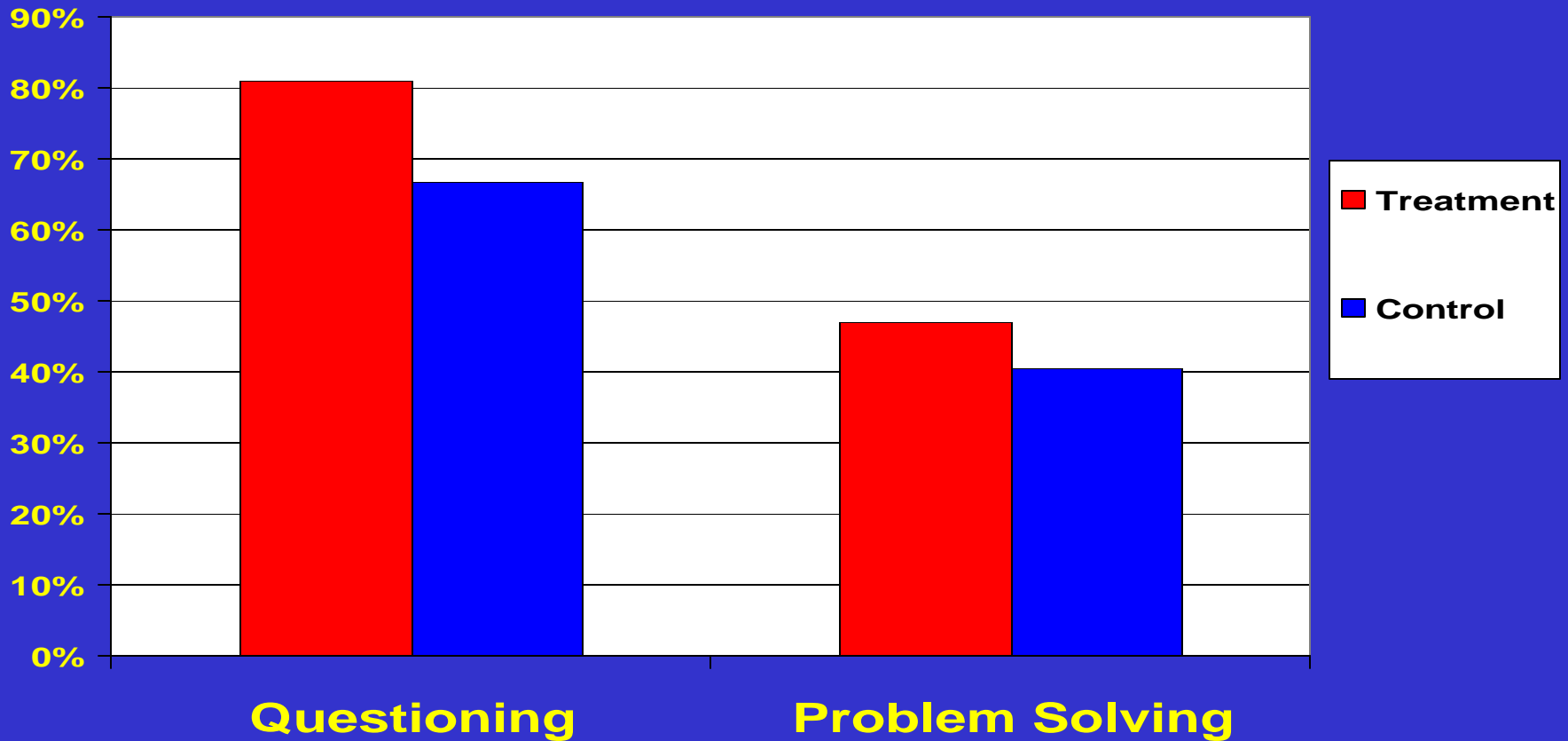
‘I had never built one of these before, and the kid knew that up front.’

And so we had ponds around the zoo with flamingos and stuff like that.

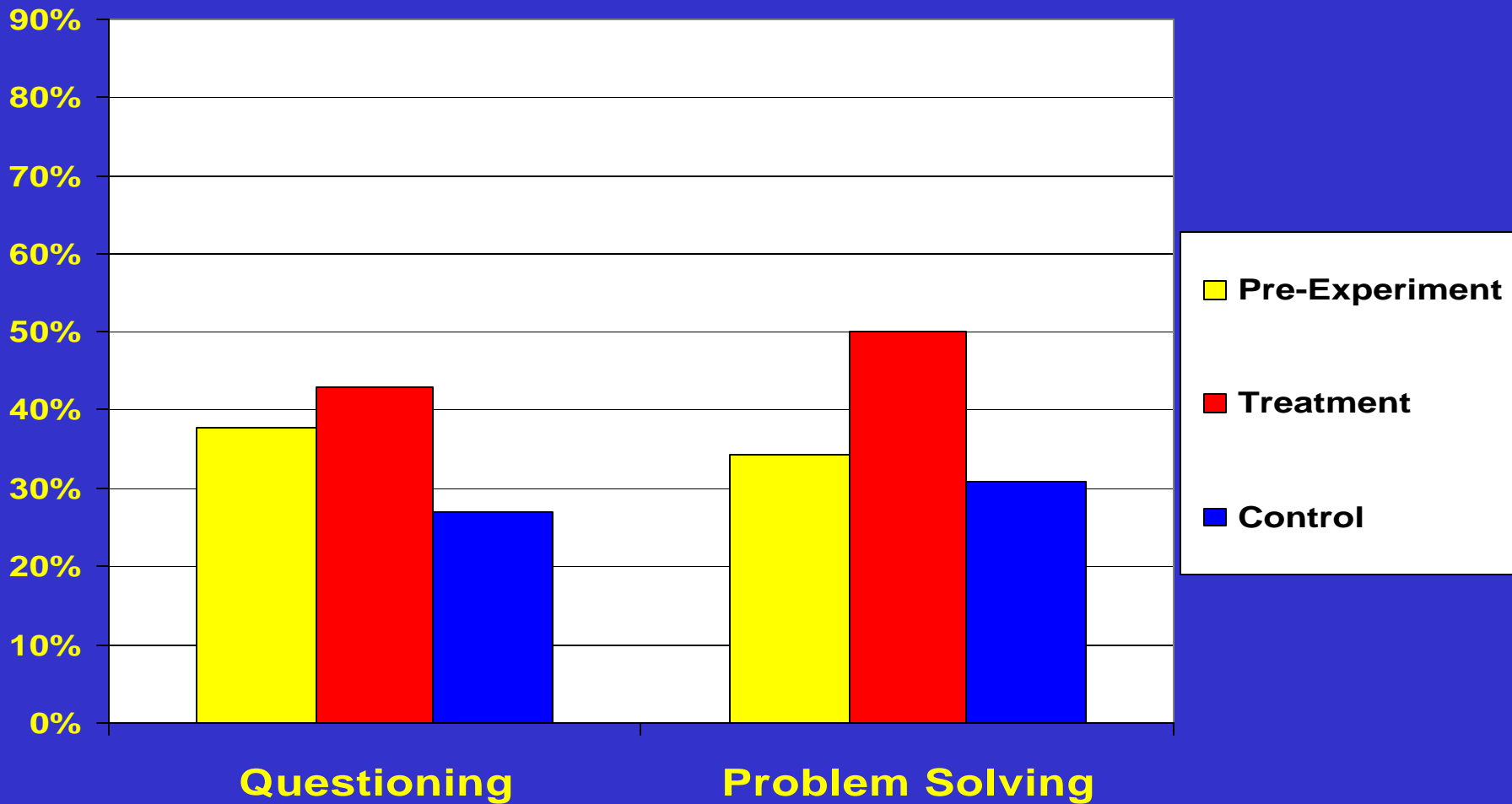
We'd go out with a board and push water around and fiddle around and use the stop watch and say,

'Oh, that worked. The flamingos didn't like it, but it worked.'

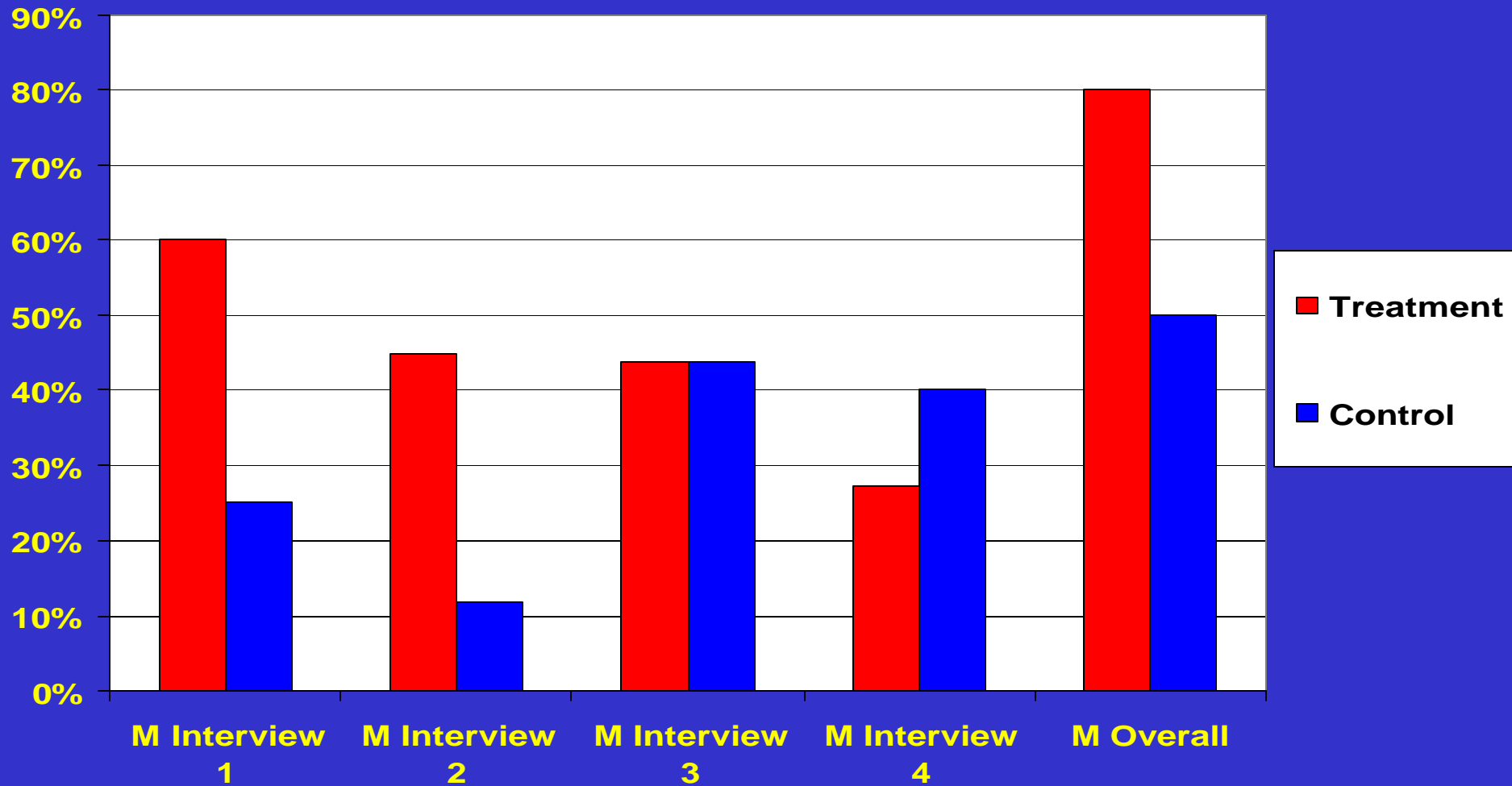
# Challenge: Experiment Mentor Reports



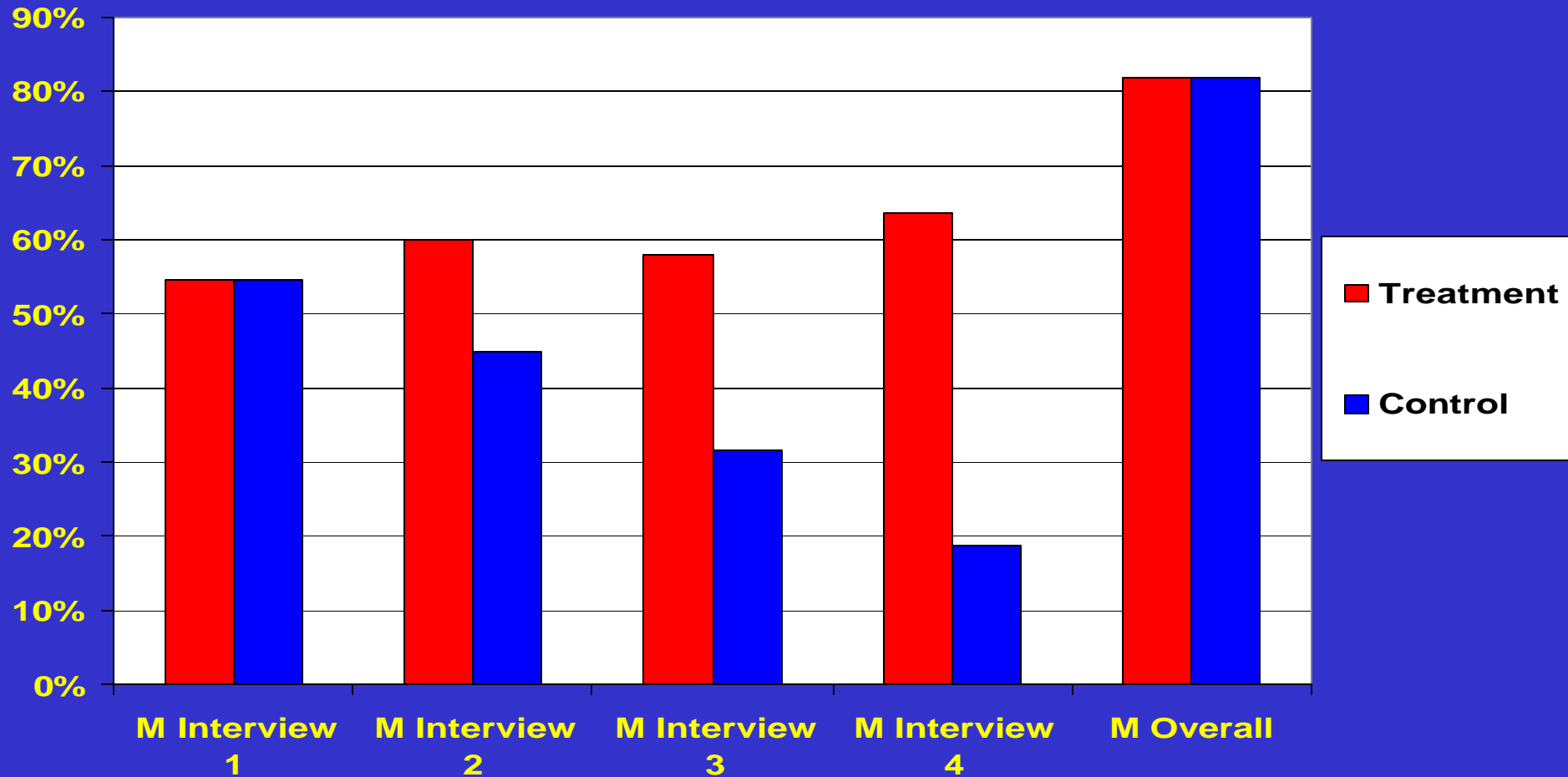
# Challenge: Youth Reports



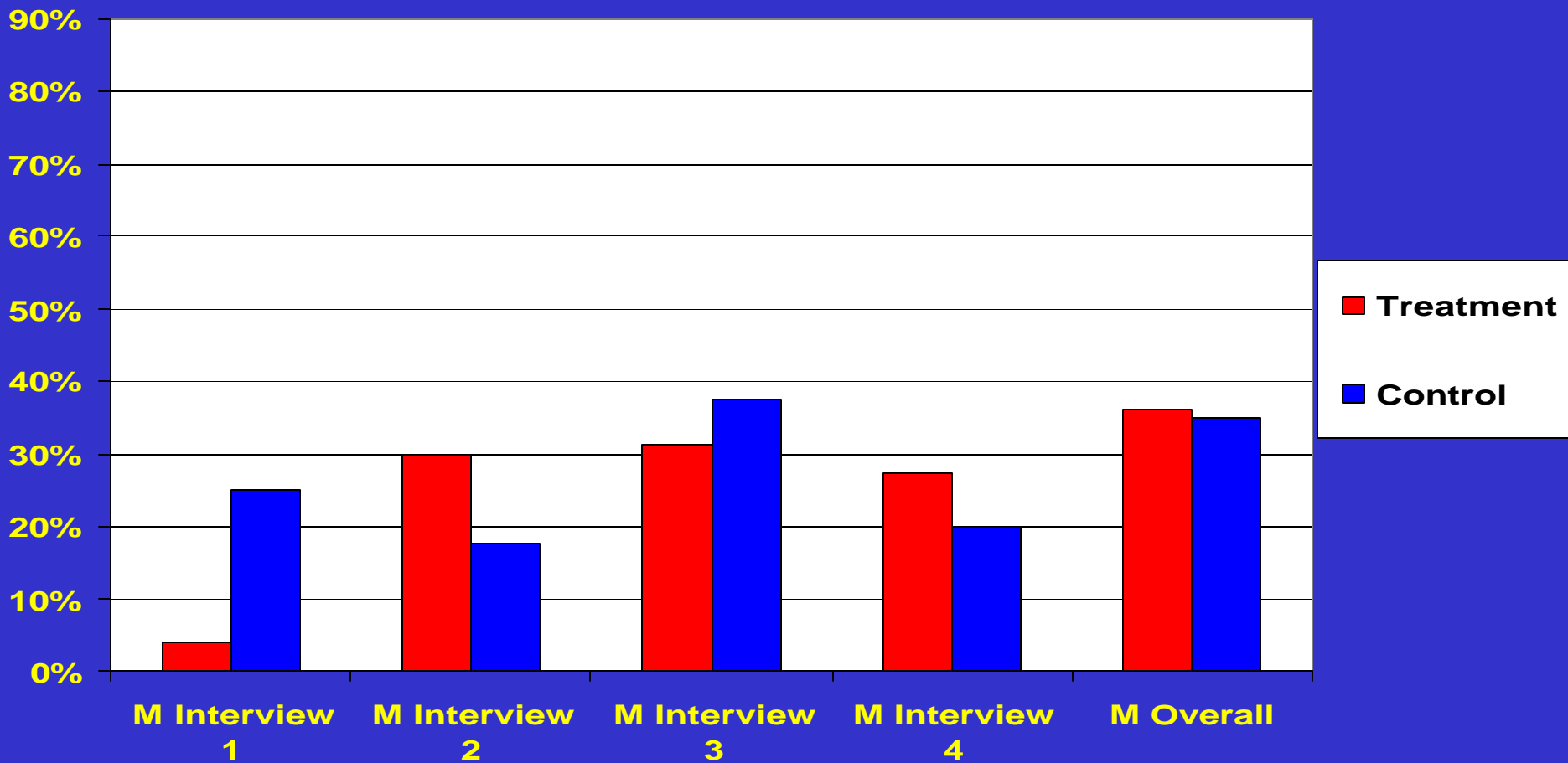
# Question: Novice Mentor Reports



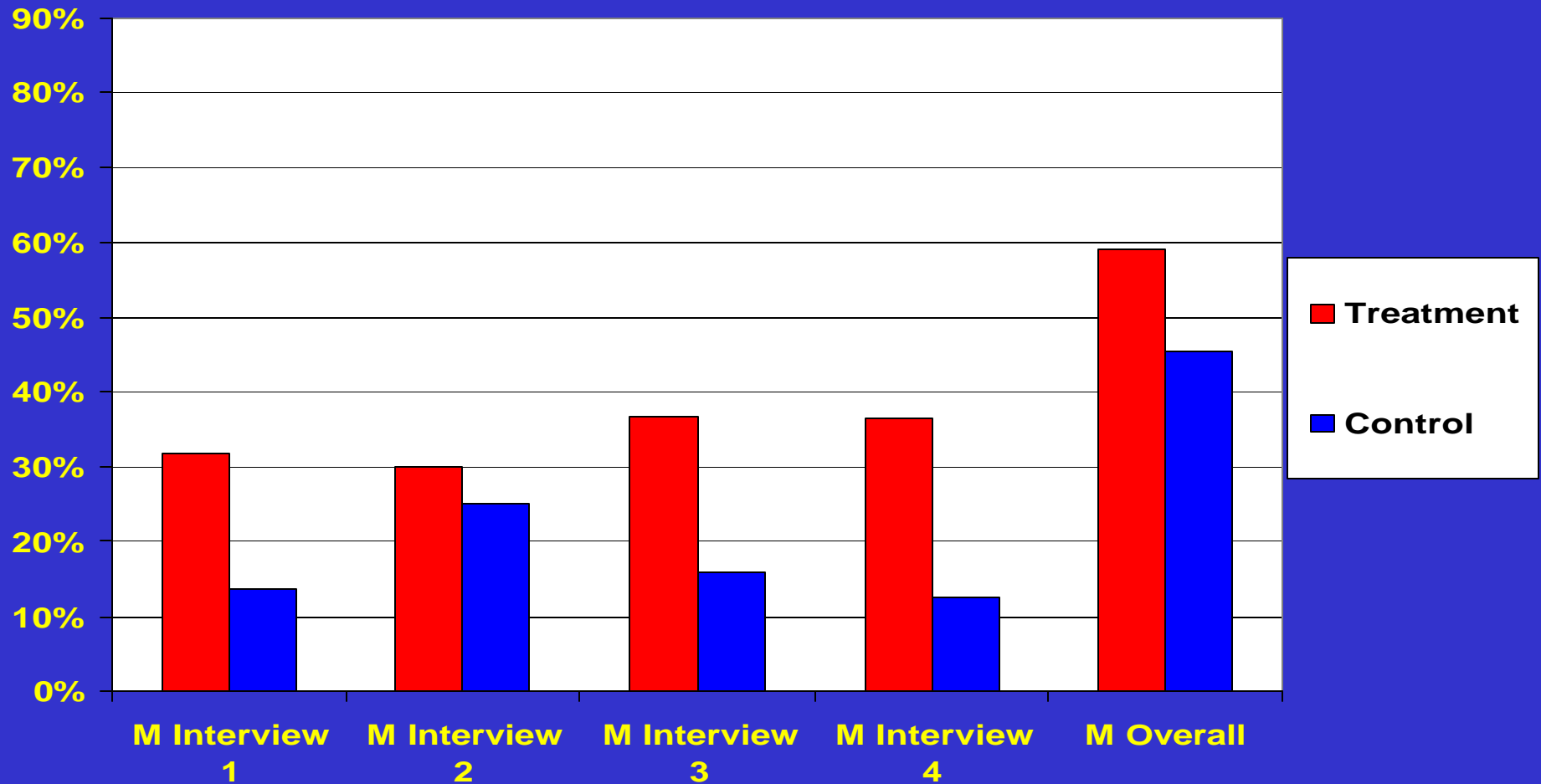
# Question: Experienced Mentor Reports



# Problem Solving: Novice Mentor Reports



# Problem Solving: Experienced Mentor Reports



# Conclusions

- Experienced mentors are more likely to use reflective questioning and problem solving
- Training seemed to increase reflective questioning by novice mentors

# Conclusions

- Training seemed to increase use of problem solving by experienced mentors
- Story telling aids mentors' reflection and practice