INTRODUCTION

- Motivational Interviewing (MI) is a “patient-centered, directive method for negotiating behavior change by exploring and resolving ambivalence.”

- Behavior Change Counseling (BCC) is an adaptation of MI for medical settings developed to be used in brief consultations.

- Interventions utilizing adaptations of MI and BCC have found improved outcomes for
  - substance misuse
  - smoking cessation
  - increasing exercise
  - improving diet and decreasing weight.

- BCC appears to be a useful method of patient-centered care and might be applicable for medical education.

METHODS

- This was a prospective, randomized study of 36 2nd year medical students.
- Both groups received informational material on diabetes lifestyle modification guidelines (LMG).
- The intervention group (Group B) received a 2-hour workshop on BCC theory and methods including both didactic and role-play elements.
- Both groups received pre- and post-assessment of knowledge, skills, and attitudes related to BCC.
- Knowledge was assessed with a 6-item multiple choice quiz on BCC principles and practice, with total scores ranging from 0-5.
- Skills were assessed with a standardized patient examination with BCC measured using the Behavior Change Counseling Index (BECCI), an 11 item scale with total scores ranging from 0-44.
- Attitudes were assessed using 2 sets of videos, each with a BCC vignette and a “usual care” (UC) vignette.
  - Students were asked to rate which style they thought would be most effective, which they would use, and which they preferred and why.
- All data were analyzed using analysis of covariance (ANCOVA) with pretest scores as a covariate.

PURPOSE

To examine whether a workshop in Behavioral Change Counseling led to measurable changes in medical students’ knowledge, skills, and attitudes.

RESULTS

- Knowledge: Mean scores at pretest were 2.4 (SD=.92) for the control group and 2.6 (SD=.96) for the intervention group. At posttest they were 3.2 (SD=.86) for the control group and 4.9 (SD=1.4) for the intervention group. An ANCOVA for posttest knowledge scores, controlling for pretest knowledge scores showed a significant intervention effect $F(1,33)=17.76, p<.0001$, (effect size=.34).
- Skills: Mean scores at pretest were 11.1 (SD=5.2) for the control group and 13.0 (SD=5.7) for the intervention group. At posttest they were 13.9 (SD=4.8) for the control group and 20.0 (SD=3.8) for the intervention group. An ANCOVA for posttest BECCI scores, controlling for pretest BECCI scores showed a significant intervention effect $F(1,33)=9.35, p<.001$, (effect size=.36).
- Attitudes: Most students preferred BCC over UC at pretest and at posttest (72.94% for control group, 88.5% for intervention group at posttest). There were no significant changes in attitude scores from pretest to posttest.

DISCUSSION

- The intervention was effective in improving both knowledge and skills related to Behavior Change Counseling.
- Attitudes were not significantly changed, most likely because of a ceiling effect. The vast majority of students preferred Behavior Change Counseling to Usual Care in the vignettes at baseline.
- Use of video vignettes demonstrating BCC methods prior to the skills assessments inadvertently exposed the control group to BCC principles and may have attenuated effect sizes.

CONCLUSIONS

- Brief interventions can be used to teach medical students about Behavior Change Counseling and improve their knowledge and skills in this method.
- Medical students appear to prefer BCC, a patient-centered style, over usual care when exposed to both approaches.
- Future Directions:
  - Incorporate the use of video vignettes during educational interventions.
  - Define a minimum score on the BECCI that would indicate competence, allowing for more detailed analyses such as the “Number Needed to Teach” metric.
  - Assess the efficacy of BCC interventions in other learner populations, including medical residents.
  - Determine whether short-term improvements in BCC knowledge and skills are retained over time.