Welcome!
Program ACTIVE II: A Comparative Effectiveness Trial to Treat Major Depression in T2DM

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Disclosures

- Mary de Groot, PhD—Faculty, Johnson & Johnson Diabetes Institute, Inc.
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- Yegan Pillay, PhD—N/A
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Background: Depression in Diabetes

- Depression is 2 times more likely in people with diabetes than the general population (Anderson, et al., *Psychosomatic Med.*, 2001)
- 1 in 4 people with diabetes will have depression in their lifetime (Anderson, et al., Psychosomatic Med, 2001; Nefs et al., 2012)
- Women have 60% increased risk of depression (Anderson et al, *Psychosom Med.*, 2001)
- Impact is significant:
  - Worsened Blood Sugar Control (Lustman, et al., Diabetes Care, 2000)
  - Worsened Diabetes Complications (de Groot, et al., Psychosomatic Medicine, 2001)
  - Worsened Adherence and Increased Medical Costs (Egede, et al., Diabetes Care, 2002; Ciechanowski, et al., Arch Intern Med, 2000)
  - Increased Functional Disability (Egede, Gen Hosp Psychiatry, 2007)
  - Premature Mortality (Katon, et al., JGIM, 2008; Zhang, Am J. Epidemiology, 2005)
Purpose/Methods

• Purpose—To assess the comparative effectiveness of counseling (cognitive behavioral therapy) and exercise individually and in combination, compared to usual care (UC) on glycemic control (A1c) and depression from baseline to post-intervention

• Three intervention sites:
  – Indiana University (Indianapolis)
  – Ohio University (southeastern Ohio/western West Virginia)
  – West Virginia University (North-central West Virginia)

• 140 participants were randomized to 4 Study Arms:
  – Counseling (CBT; N=36)
  – Exercise (N=34)
  – Counseling + Exercise (N=34; 12 weeks concurrent)
  – Usual Care (N=36)
Results

• Sample Characteristics
  – Average age: 56 years (± 10 years)
  – 74% Female
  – 62% White, 19% African-American/Black
  – 52% Married or Partnered
  – Evenly distributed across the full range of education and income levels
    • 23% High school education or less
    • Modal annual household income: $21,000-$40,000
  – 74% Health insurance (yes)
  – Mean duration of diabetes: 11 years (SD 8 years)
Results, cont.

- **Effects on depression**
  - Counseling, Exercise and Counseling + Exercise were 5-6 times more likely to be depression-free at the end of the intervention compared to Usual Care.

- **Effects on blood glucose**
  - Counseling + Exercise showed significant improvements in A1c (0.7%) compared to Usual Care in those whose baseline A1c was 7.0% or above.

- **Effects on well-being**
  - Counseling, Exercise and Counseling + Exercise improved diabetes-related distress.
  - Counseling + Exercise and Exercise improved overall quality of life and diabetes-specific quality of life.
  - Exercise improved participant confidence in their ability to exercise.

- **Effects on heart health**
  - Counseling and Exercise improved total cholesterol.
Conclusion

- Counseling (CBT), Exercise and Combination interventions *significantly improved* depression diagnosis and depressive symptoms

- Combination Counseling+Exercise intervention *significantly improved* A1c values by 0.7% (for those with elevated baseline values)

- Improvements also seen in:
  - Diabetes-related distress
  - Quality of life

- Program ACTIVE is effective
  - The first community-based study to show improvements in both depression and blood sugar control
  - Demonstrates the capacity to extend access to depression care in both rural and urban areas
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