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Results from Two Linguistically and Culturally Appropriate Health Education Interventions for Deaf Adults

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Outline

- Background
- Intervention
- Results
- Lessons Learned & Challenges
- Limitations
- Conclusions



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Background

- Deaf culture
- Deaf are at increased risk for deficits in health knowledge and healthy living
- Anecdotal evidence based on:
 - Low general English proficiency
 - Low socioeconomic brackets
 - Empirical knowledge from health care providers of the Deaf





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Background

- First Step: Conduct a comprehensive health survey with Deaf adults
 - 203 Participants
 - Conducted in ASL
- Results: Level of knowledge about health and healthy behaviors generally low across most topic areas
 - 40% of respondents could not identify a single warning sign of heart attack
 - 60% of respondents could not identify a single warning sign of stroke
- Results: Forty percent of our respondents endorsed having depressive symptoms
 - 75% from mental healthcare settings
 - 16% from primary healthcare settings



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Intervention

- 3-year demonstration project
 - 8-week class format
 - Pre-/Post-test design; 3-month follow-up
 - Lead by Deaf health educators/conducted in ASL
 - Classes held throughout Chicagoland area
- Goal: Evaluate the effectiveness of two health education interventions on:
 - Health knowledge
 - Self-efficacy
 - Self-management



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Intervention

Major Topics

Self-Management of Depression

Prevention of Cardiovascular Disease (CVD)



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Intervention Eligibility

- ❖ ≥ 18 years
- ❖ Deaf
- ❖ Proficient in ASL



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Intervention: Eligibility

Self Management of Depression :

- ❖ Score positive for depression using the Beck Depression Inventory-II. A score of ≥ 20 was considered positive for depression; **OR**
- ❖ Referred by a mental health worker with a diagnosis of depression

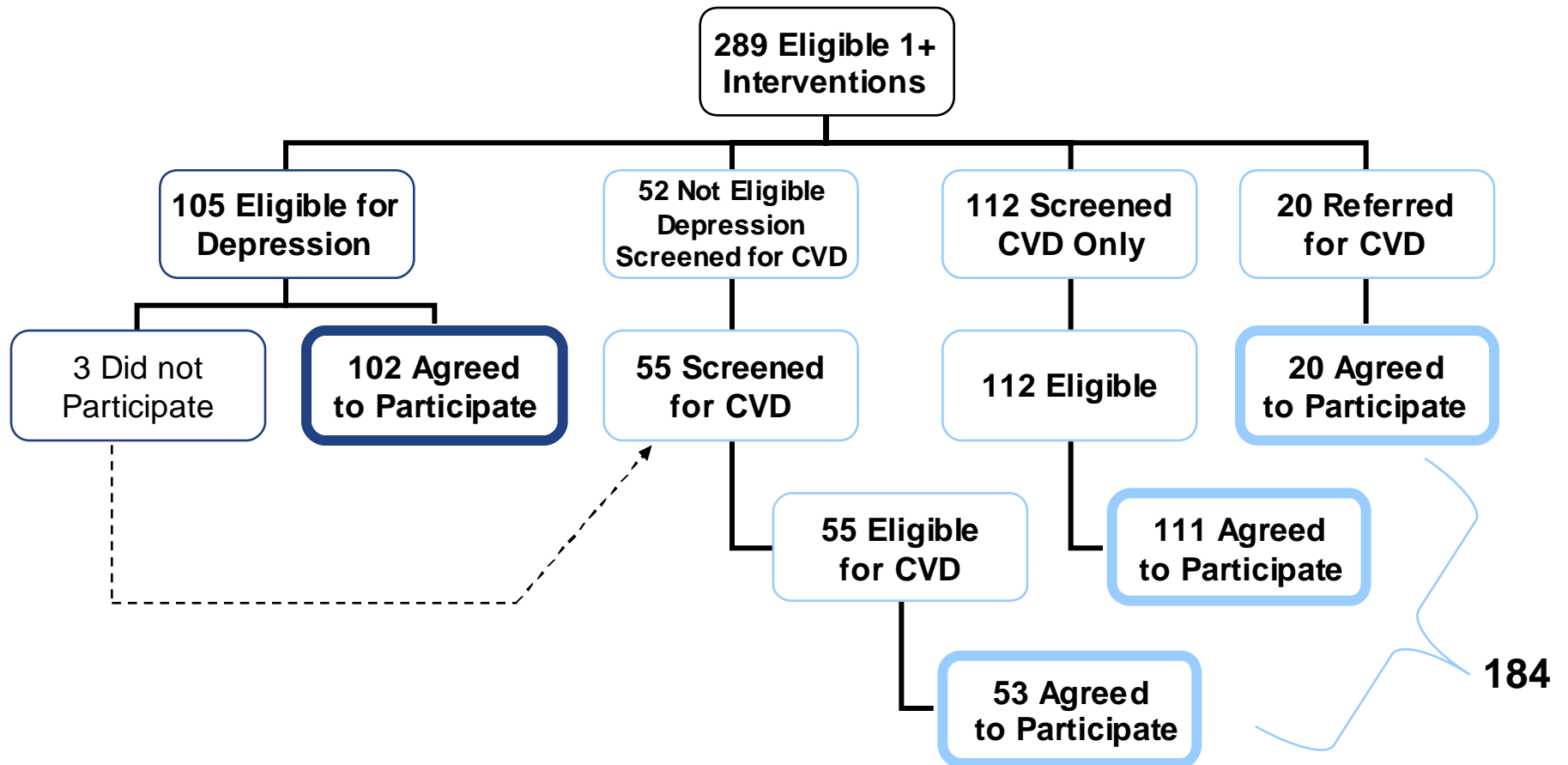
Prevention of Cardiovascular Disease :

- ❖ ≥ 1 risk factor for CVD (elevated blood pressure, elevated cholesterol, family history, diabetes, smoking, $BMI \geq 25$, age greater than 40); **OR**
- ❖ Currently receiving treatment for CVD risk factor or CVD itself



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Intervention Recruitment





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Intervention Retention

- **Self-Management of Depression**
 - 102 agreed to participate
 - 78 (76%) were enrolled
 - 56 (72% of enrolled) completed the intervention
- **Prevention of Cardiovascular Disease**
 - 184 agreed to participate
 - 166 (90%) were enrolled
 - 150 (90% of enrolled) completed the intervention



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Self-Management of Depression



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Depression Participant Characteristics

- Characteristics of those enrolled (n=72)
 - 85% female
 - 77% from suburbs
 - Median age: 40 years
 - 57% NHW, 18% NHB, 19% Hispanic
 - 60% with greater than HS education
 - 65% \leq \$20,000 annual household income
 - 40% work full or part-time
 - 49% public health insurance; 33% private health insurance



Depression Intervention Goals and Evaluation Measures

- Increase knowledge of depression
- Increase self-efficacy to manage depressive symptoms more effectively
- Increase the likelihood that participants will adopt one or more positive self-management behaviors
- Decrease levels of depression among participants

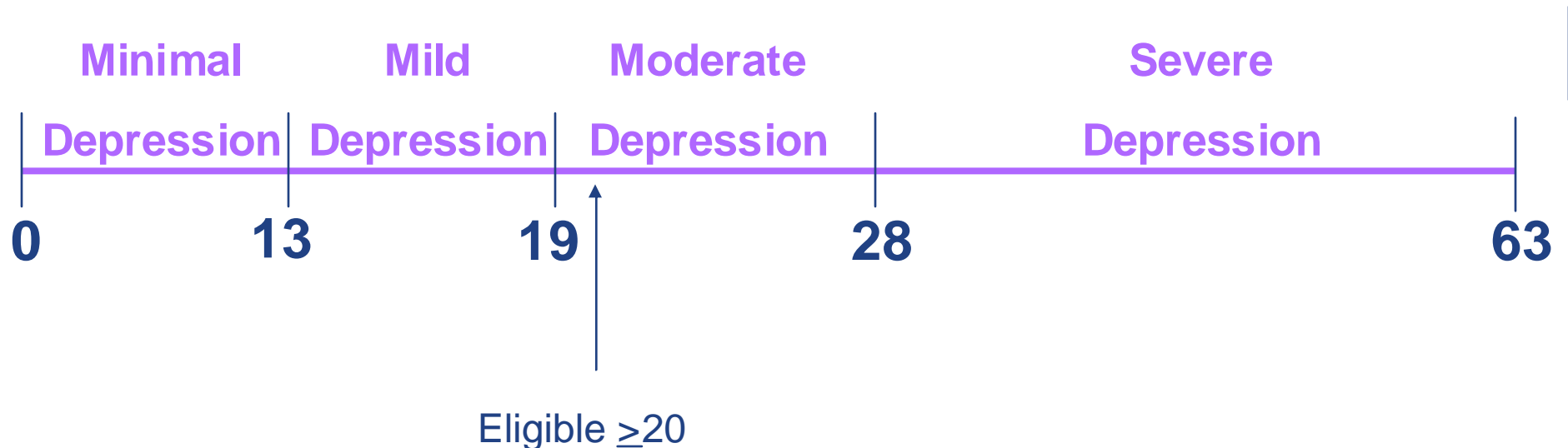


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Depression Intervention Results

Beck Depression Inventory II

- 21 statements designed to measure the severity of depression



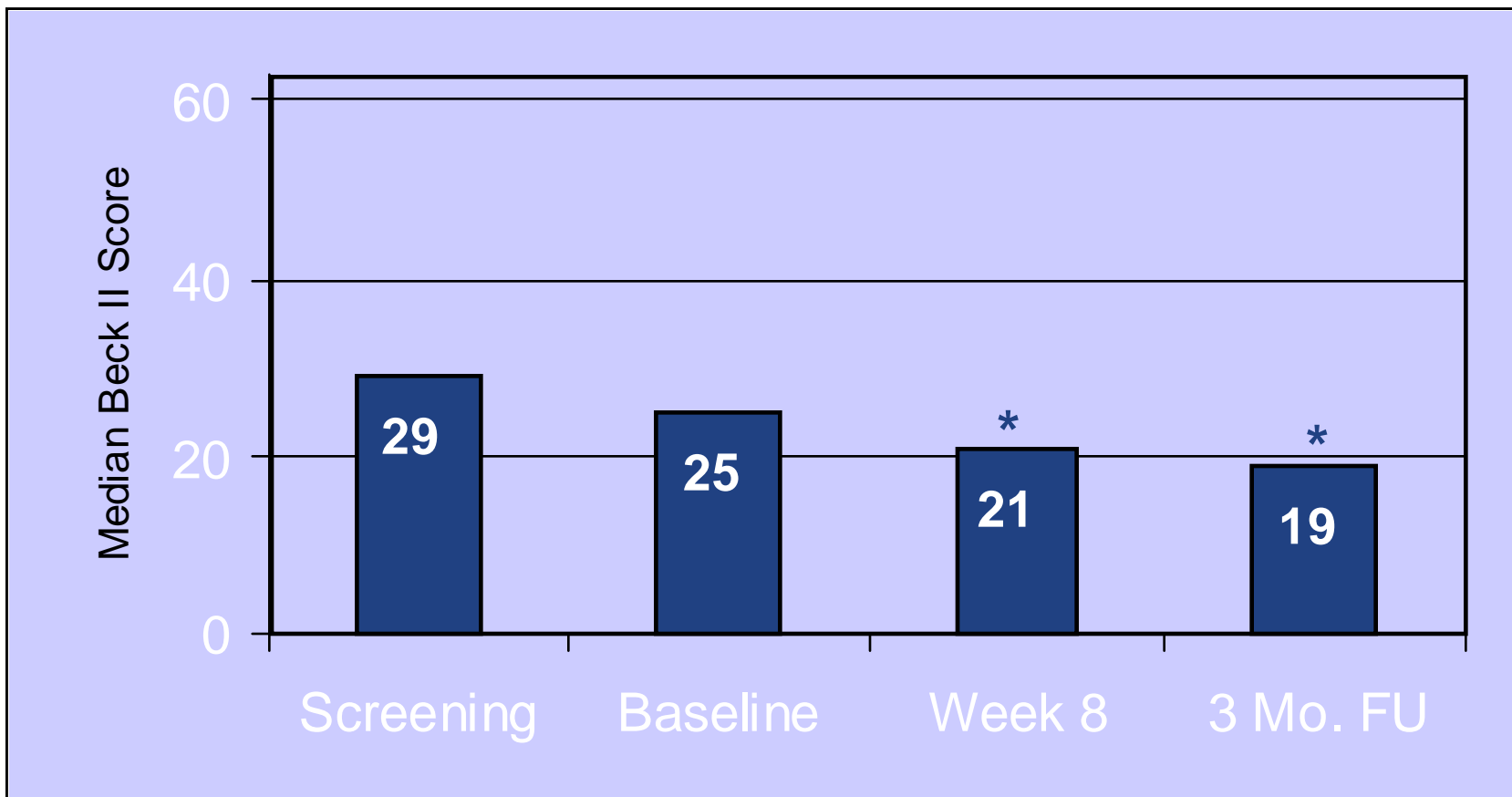
Beck AT, Steer RA, Brown GK (1996). BDI-II: Beck Depression Inventory Manual (2nd Ed.). San Antonio, TX: The Psychological Corporation.



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Depression Intervention Results

Beck II Depression Scores among All Depression Intervention Participants: Baseline vs. Week 8 and 3-Month Follow-up (n=50)



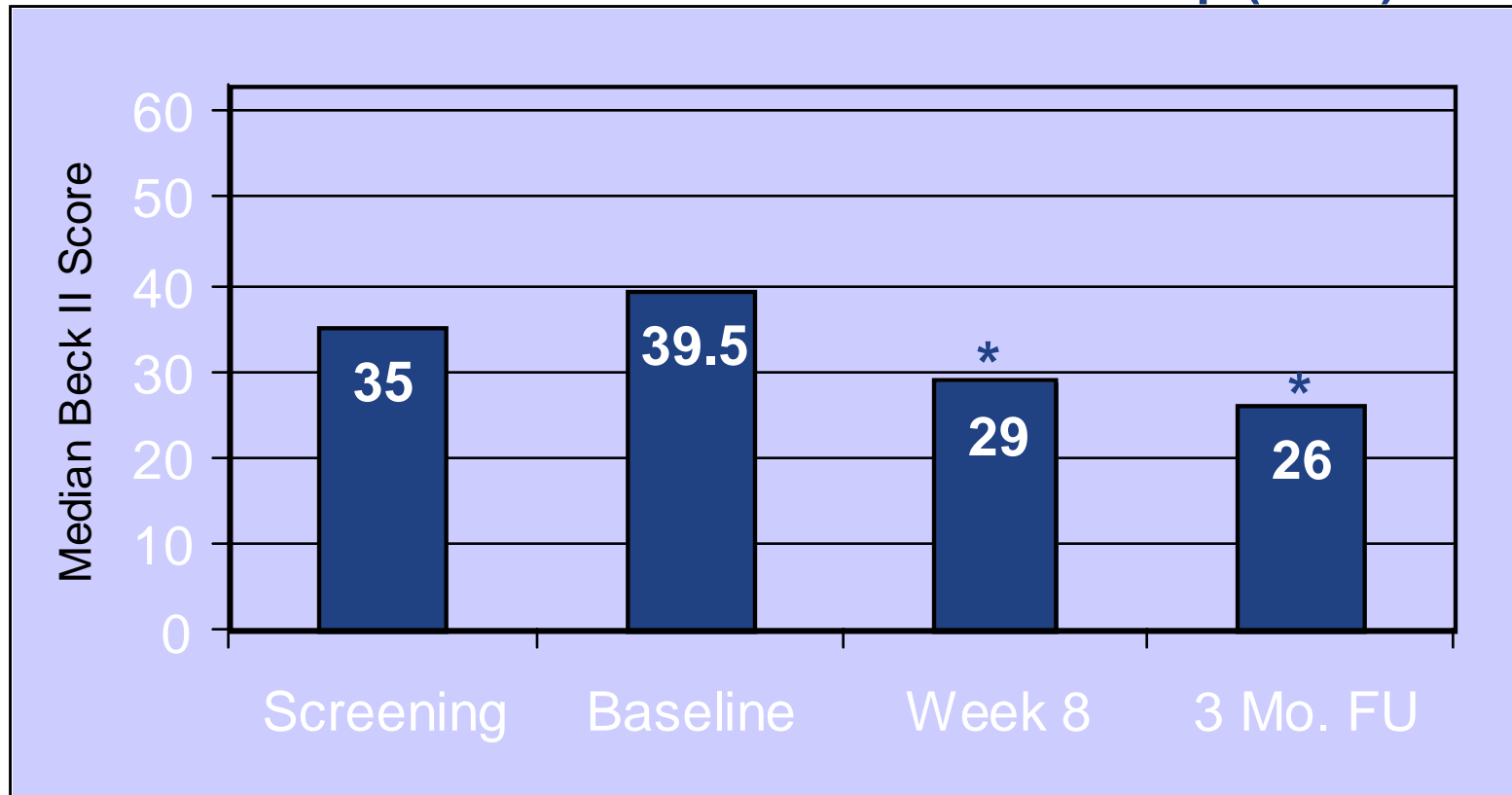
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*Statistically significant per the Wilcoxon signed rank sum test ($p < 0.05$)



Depression Intervention Results

Beck II Depression Scores among Depression Intervention Participants Most Severely Depressed at Baseline (≥ 28): Baseline vs. Week 8 and 3-Month Follow-up (n=20)



*Statistically significant per the Wilcoxon signed rank sum test ($p < 0.05$)



Depression Intervention Key Findings

- Increase in depression knowledge
- Improvement in emergency response knowledge
- Increase in self-efficacy
- Increase in specific positive behaviors



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Prevention of Cardiovascular Disease



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CVD Participant Characteristics

- Characteristics of those enrolled (n=164)
 - 55% female
 - 76% from suburbs
 - Mean age: 60 years
 - 80% NHW, 9% NHB, 7% Hispanic
 - 43% with greater than HS education
 - 39% \leq \$20,000 annual household income
 - 46% retired, 29% work full or part-time
 - 46% public health insurance; 48% private health insurance



CVD Intervention Goals and Evaluation Measures

- Increase participants' knowledge of CVD
- Increase perceived self-efficacy to change CVD risk factors
- Increase the likelihood that participants will change one or more CVD risk behaviors



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CVD Intervention Results

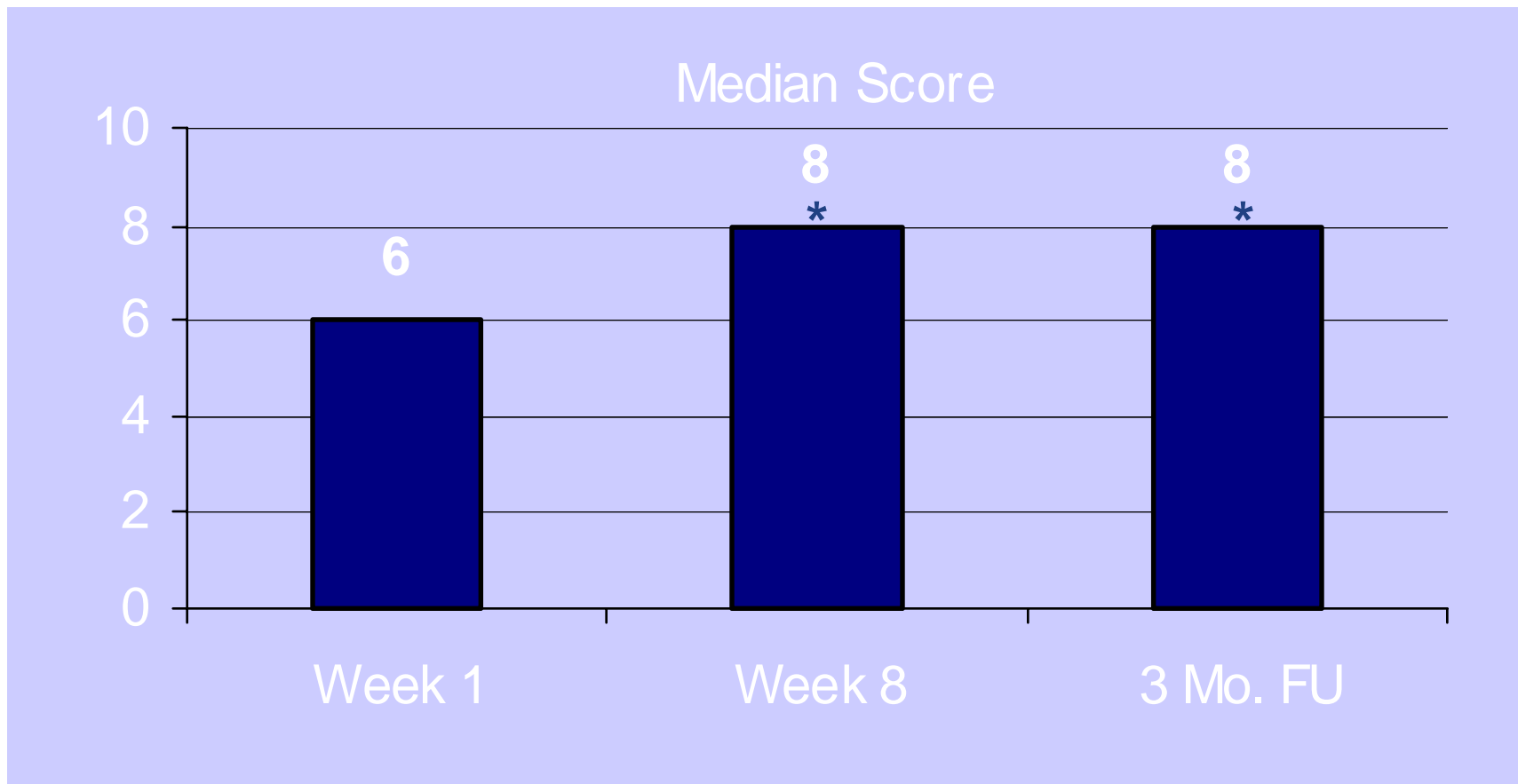
- CVD Knowledge
 - 10 questions
 - Score range 0-10
 - Questions measure knowledge of:
 - Heart attack and stroke warning signs
 - Risk factors
 - Emergency response
 - Behaviors to decrease one's risk



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CVD Intervention Results

CVD Knowledge (n=148)



*Statistically significant per the Wilcoxon signed rank sum test ($p < 0.05$)



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CVD Intervention Results

Cardiovascular Disease Answer (n=148)	Week 1 % Correct	Week 8 % Correct	Week 8 p-value*	3-Mo. FU % Correct	3-Mo. FU p-value*
Chest pain that goes to left arm is a warning sign for a heart attack	88	93	NS	94	NS
Leg won't move is a warning sign for a stroke	51	74	<0.0001	67	<0.05
Call 911 and take aspirin if you think you are having a heart attack	61	86	<0.0001	86	<0.0001
If you stop smoking you will decrease the risk of heart attack and stroke	54	85	<0.0001	85	<0.0001
A heart attack is when some of the heart dies from not enough oxygen	30	76	<0.0001	78	<0.0001

*McNemar test for proportions used to assess significance between Baseline and the 8 week or 3 month follow-up.



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Prevention of CVD Key Findings

- Improved knowledge
- Improved self-efficacy
- Improved specific behaviors



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Lessons Learned & Challenges

- Overall
- Recruitment/Retention
- Scheduling classes
- Evaluation



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Recommendations

- Recruitment
- Course Length
- Course Marketing/Content



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Limitations

- Self-selection bias
- No control group
- Questionnaire validity



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Conclusions

- Main goals of intervention were met:
 - Increased knowledge
 - Improved self-efficacy
 - Positive behavior change
- Sustainability
- Other interventions have proven effective as well

Full report can be found online at www.SUHlchicago.org



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Acknowledgements

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Thank You!

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