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Alternative Care Models for Management of Diabetes

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Alternative Care Models for Management of Diabetes

PES Meeting

Meet the Professor

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DISCLOSURES

- Dr.'s Tsai, Tonyushkina and Raymond have no disclosures.

Struggling with Adherence

- Individuals with diabetes can have a tremendous impact on their own health behaviors
- Disconnect between what clinicians recommend and what happens in real-life situations.

Slide 3

TSL3

There are many possible things to focus on. I chose interventions aimed at improving adherence/glycemic control as this is frequent target of alternate care interventions

Tsai, Sarah, L, 2/27/2019

T1D Exchange

- Average A1C is **8.8%** in 6229 teens (age 13-18) and **8.4%** in 6862 pre-teens (age 6-13)¹
 - **588** participants with excellent control (A1C <7%), 2684 participants with poor control (A1C ≥ 9%)
- Very important to understand underlying factors
 - First step in optimizing treatment outcomes
- There is an urgent need to develop better ways to help children and adolescents achieve A1C targets

Motivational Interviewing

- Adherence-promoting intervention that is **patient-centered** and **directive**.
- **Addresses ambivalence** and **identifies barriers** to achieving patient-defined goals
- **Enhances a patient's own motivation** & feelings about change by exploring ambivalence about making changes

The Spirit of Motivational Interviewing

Partnership

- Active collaboration between experts
- Positive

Acceptance

- Inherent worth and potential of every human being
- Letting go of the burden that you have/can make people change

Compassion

- Actively promote the other's welfare

Evocation

- People already have much of what is needed to change, and our task is to evoke it

General Strategies

- Open questions
- Affirmations
- Reflections
- Summaries

OARS

Previous RCT's using Motivational Interviewing

- **Channon et al (2007)** – significant and sustained reduction in A1C over 24 months.
 - well-being & quality of life
- **Wang et al (2010)**
 - No effect on A1C or secondary outcomes

MI: Teens With Diabetes

- Compare MI intervention to traditional patient/provider interaction in real-world clinic setting
- Primary outcome: A1C
- RCT

Secondary Outcomes:

Quality of life, self-efficacy, diabetes self care, diabetes knowledge, coping skills, patient satisfaction

Methods

- Participants randomized to MI group or control
- Age 12-17
- T1D >1 year
- A1C $\geq 8.5\%$

Methods cont.

- MI group
 - MI session and booster session
 - 2 standard visits
- Control group
 - 4 standard visits
- All patients filled out questionnaires at every visit
- Diabetes management per standard of care

Training

- Total of 24 hours of training
 - Didactics, live and video demonstration, structured practiced, read 40 page manual
- Interventionists: pediatric endocrinologists, nurse practitioners, CDE's

Quality Control

- Study sessions audio recorded and were coded
- Individual feedback was provided as required
- A total of 17 supervision sessions were held over the course of 12 months during the active study period.

Intervention – First Session (25-40 mins)

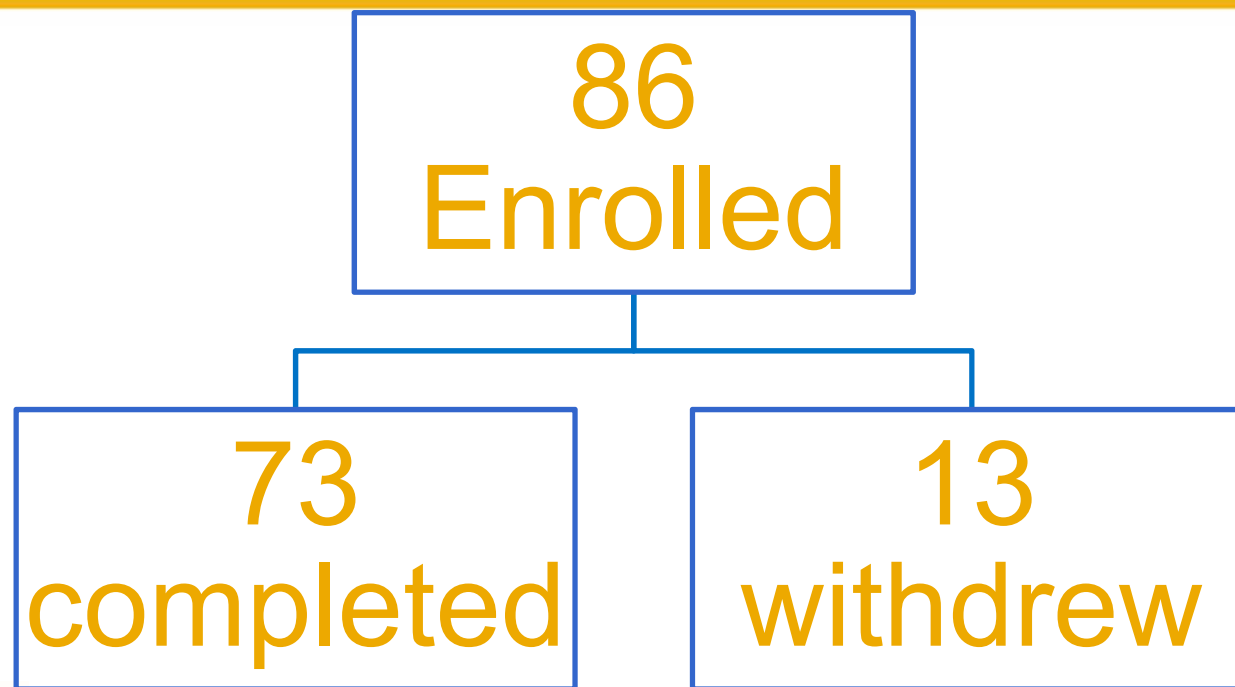
- Open with a structuring statement
- Typical day
- Discuss barriers
- Explore goals and values
- Use importance and confidence rulers
- Complete a change plan



Intervention - Booster Session (20-30 min):

- Introduction and purpose
- Review previous session
- Assess progress and motivation
- Review goals

Results



Motivational Interviewing (MI) Demographics Table

- More females in MI group
- More males in control
- Most patients white
- Most patients on the pump

		Overall (n=79)	MI (n=38)	Control (n=41)
		Frequency (%)	Frequency (%)	Frequency (%)
Gender				
	Male	40 (51%)	13 (34%)	27 (66%)
	Female	39 (49%)	25 (66%)	14 (34%)
Race				
	White	70 (89%)	35 (92%)	35 (85%)
	Black or African American	6 (8%)	2 (5%)	4 (10%)
	American Indian or Alaska Native	1 (1%)	1 (3%)	0 (0%)
	Multiracial	1 (1%)	0 (0%)	1 (2%)
	Other	1 (1%)	0 (0%)	1 (2%)
Ethnicity				
	Non-Hispanic/Non-Latino	77 (97%)	37 (97%)	40 (98%)
	Hispanic/Latino	2 (3%)	1 (3%)	1 (2%)
CGM Pump Type		(n=70)	(n=33)	(n=37)
	Medtronic	47 (67%)	21 (64%)	26 (70%)
	Omnipod	6 (9%)	4 (12%)	2 (5%)
	Animas	5 (7%)	1 (3%)	4 (11%)
	T-Slim	5 (7%)	2 (6%)	3 (8%)
	Other	4 (6%)	3 (9%)	1 (3%)
	Dexcom	3 (4%)	2 (6%)	1 (3%)

Results

- Self-efficacy improved significantly in the MI group
- Primary outcome: No change in A1C
- Secondary outcomes: No change in self-care habits, quality of life, diabetes knowledge, patient satisfaction
- Multiple regression analysis - sex, age, duration of

Interpretation of Results

- More support is needed to lead to significant change in glycemic control
- A significant number of patients seemed to already think that they were well controlled
- *Good things* – providers learned new things about participants, providers better at identifying “change talk”

Challenges of Incorporating Structured MI into Clinic

- Scheduling
 - Training interventionists
 - Feedback
 - Clinic schedules (need more time)

Future Directions

- Multi-component intervention
- More frequent follow-up
 - **meaningful**
- More support
 - Technology based (web-based, text-based, blogs)

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Suggested Resources

- **Motivational Interviewing: Helping People Change.** 3rd Edition. Miller and Rollnick. The Guilford Press. 2009.
- **Motivational Interviewing in Diabetes Care.** Steinberg and Miller. The Guilford Press, 2015.