Integrating Mental Health and Diabetes Management

A Collaborative Care Model

Collaborative Mental Health Care Conference:
Toronto, Ontario

June 2, 2018

Primary Presenters

Dr. Ian Zenlea
Sheryl Parks

Presenters

Dr. Judith Versloot
Dr. Elizabeth Mansfield
Gaya Amirthavasar

Disclosures

- No relationships with commercial interests
- No commercial support
- No grants or honorarium from a commercial organization
- No consulting fees
- Mitigating Potential Bias: There will not be any mention of off-label use of any commercial medications or treatments

Objectives of Presentation

- To describe the relationship between type 1 diabetes (T1D) and mental health disorders
- To appreciate the current gaps in care for adolescents with T1D
- To discuss the value of an integrated collaborative care model for the treatment of T1D and co-occurring mental health disorders

MEDICAL PSYCHIATRY ALLIANCE

6 YEAR

project that aims to better integrate care for patients with co-occurring physical and mental health illness.

4 PARTNERS

Centre for Addiction & Mental Health, Hospital for Sick Children, Trillium Health Partners, University of Toronto

1....2....3

Funding Sources

Anonymous Donor, Ministry of Health and Long-Term Care, Partners

$60 MILLION

Patient Population & Problem

Diabetes Mellitus

2nd

Most Common Chronic Disease in Child and Youth

Depression

3X Greater than in the general population

Trillium Health Partners

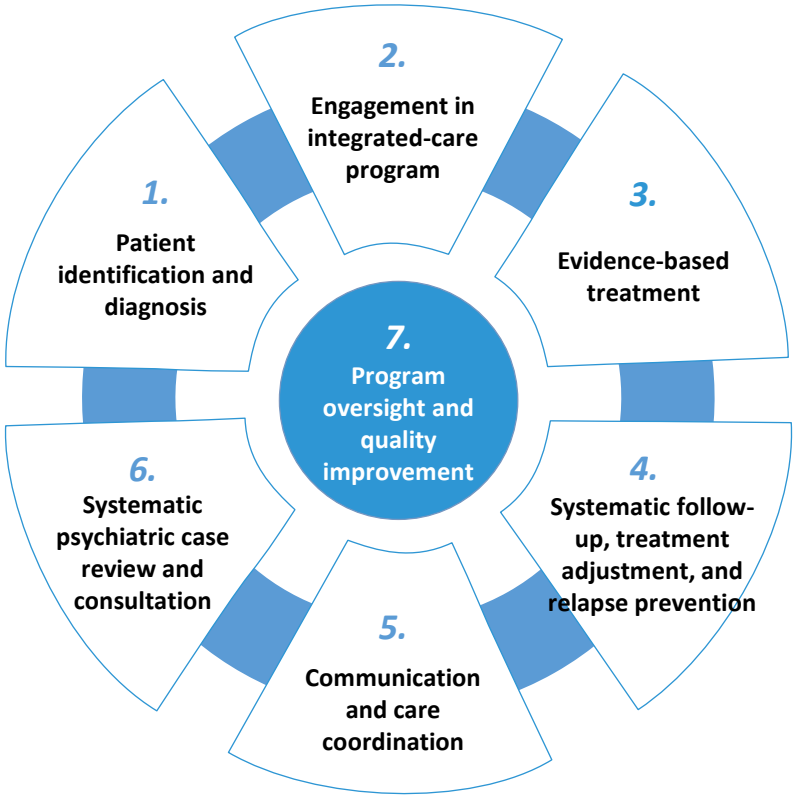
- Over 600 pediatric diabetes patients/ year
- No systematic mental health screening

Elements of Collaborative Care

Principles

1. Patient-Centered Care
2. Population-Based Care
3. Measurement-Based Treatment to Target
4. Evidence-Based Care
5. Accountable Care

Tasks

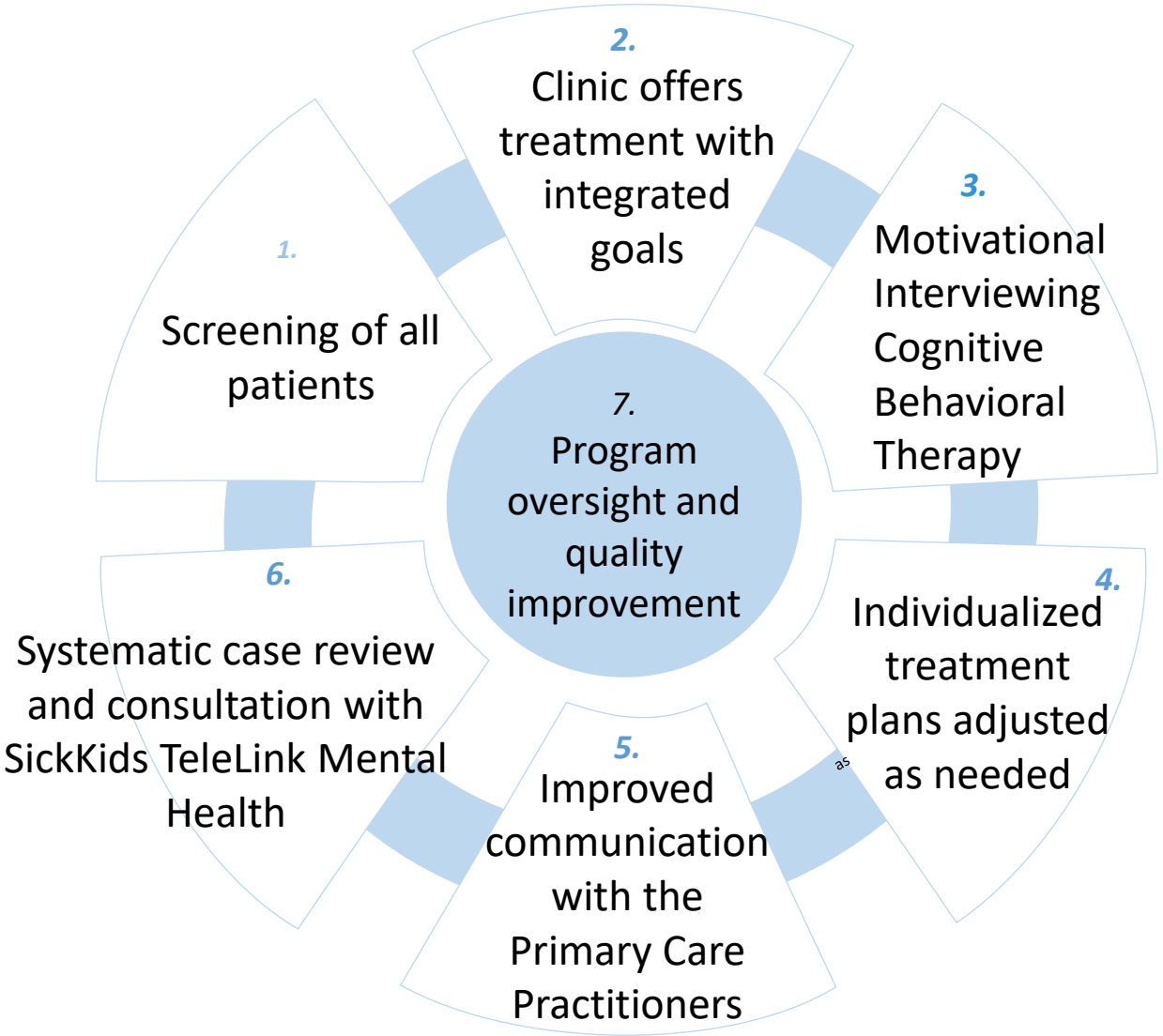


Source: Adapted from the AIMS Centre (Advanced Integrated Mental Health Solutions, University of Washington)

Principles of our model

1. Holistic and individualized care plan developed with providers, patients, and families
2. Adolescents with Type 1 diabetes ages 13 – 18 years old
3. Glycemic control (Hemoglobin A1c)
   WHO-5 Emotional Well-being Index
   PHQ for Adolescents depression screener
4. Providing recommended psychosocial and mental health screening and support
5. Quality outcomes are continuously evaluated

Tasks in out Model



The MIND Youth Questionnaire (MY-Q)

- Actionable (clear scoring algorithm, assessing clinically relevant/modifiable factors)
- Comprehensive (topic should cover areas of life affected and majority of patients should feel assessment is not lacking a critical area)
- Acceptable (high face validity, patient/clinical acceptability)
- Brief (maximum administration time of 15 min)
- Psychometrically reliable (with minimal item redundancy)

(de Wit, 2012)

MY-Q

- **General QoL**
- **"MyLife"**
  - Social life
  - Friends
  - Family
  - School
- **"MyDiabetes"**
  - Diabetes management
  - Worries
  - Treatment barriers
  - Self-efficacy
  - Satisfaction
- **"MySelf"**
  - Problematic eating
  - Emotional well-being (WHO-5)
- Open-ended question about recent positive or negative events
- Open-ended question about any other issues

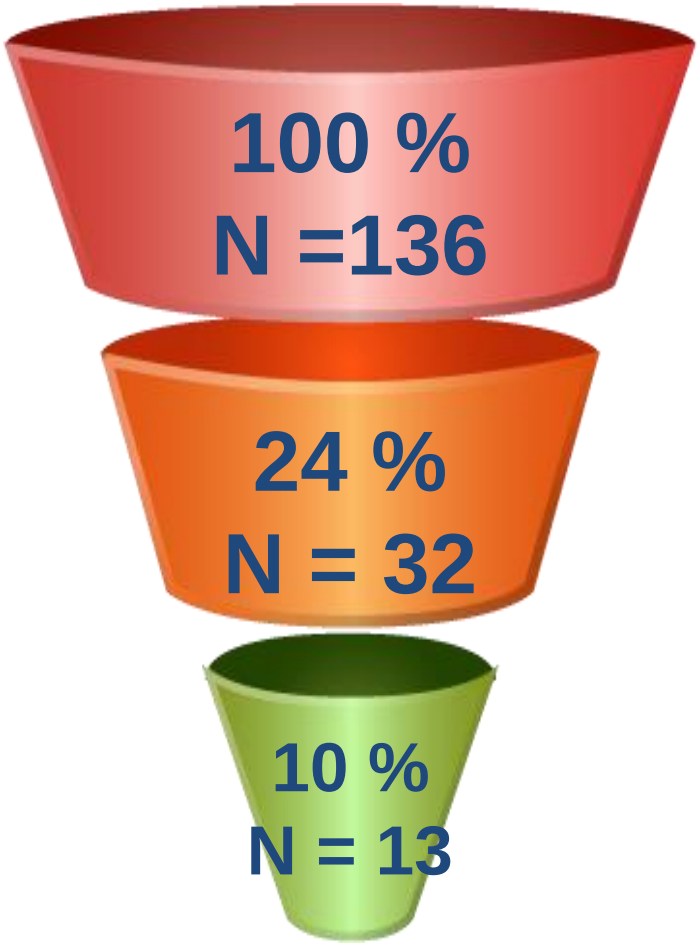
(de Wit, 2012)

Initial Project

Population

	Baseline	N
Age		198
Mean	15.8 (SD 1.7) years	
Range	12-19 years	
Gender		
Female	53.5%	106
Male	46.5%	92

Patient Identification



Screened and engaged in discussion of quality of life and mental health

Emotional Well-Being Concerns

Mental Health Diagnosis

MY-Q

- 89% of adolescents had one or more concerning response
- 43% had 4 or more concerning responses
  - 50% had one or more concerning response on social impact subscale (school/work, friends, free time)
  - 66% had one or more concerning response on parents subscale (parental support, involvement in treatment)
  - 54% had one or more concerning response on body image and eating behaviors

Responses to Family Questions MY-Q

	% of adolescent with concerning score 'all the time' or 'most of the time'
9. How often does your diabetes get in the way of family activities?	3
10. How often do you feel like your diabetes is a burden to members of your family?	14
How often do you feel that your parents...	
11. ...give you enough help and support taking care of your diabetes?	3
12. ...worry too much about your diabetes?	**46**
13. ...act like diabetes is their disease, not yours?	23
How often do you argue with your parents about...	
14. ...remembering to check your blood sugars / giving injections?	**31**
15. ...meals and snacks?	**25**
How often do you feel...	
16. ...you have too much responsibility for your diabetes care?	23
17. ...other people (like your parents or teachers) have too much responsibility for your diabetes care?	14

WHO-5 Emotional Well-being Index

Early Findings:

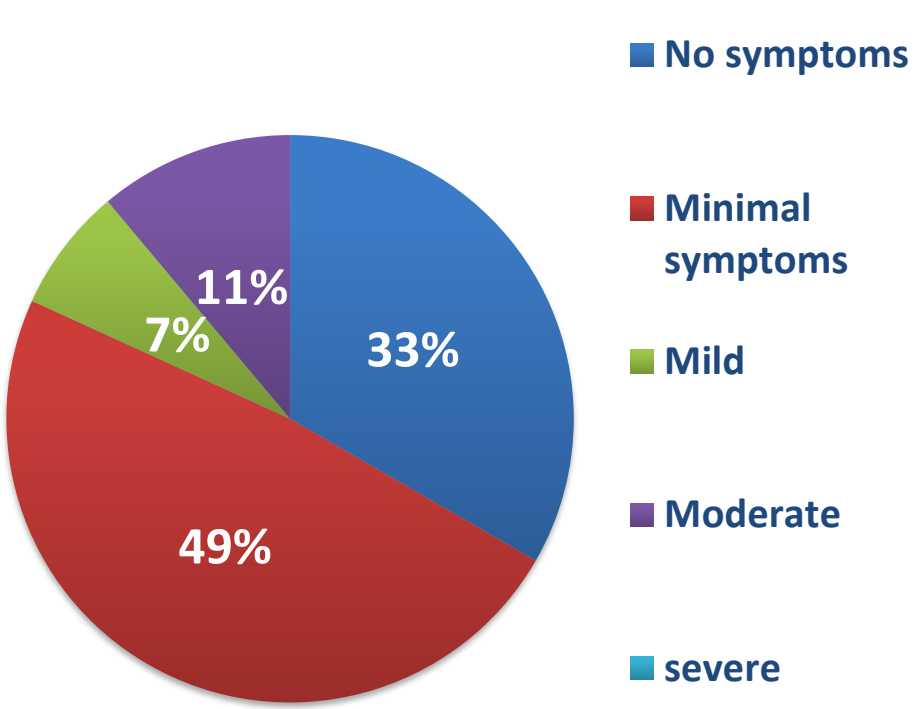
- Mean WHO-5 score 16 (SD 4.6)
- 24% (N=32) had score below 13
  - 78% female
  - 22% male
- WHO-5 and MY-Q Ladder moderate to strong relationship (r=0.59, p<0.01)

Scores of 0-13 = low mood

In the past two weeks…	% of adolescent who flagged
18. I have felt cheerful and in good spirit.	14
19. I have felt calm and relaxed.	29
20. I have felt active and vigorous.	**53**
21. I woke up feeling fresh and rested.	**49**
22. My daily life has been filled with things that interest me.	23

PHQ-9 A depression screener

PHQ-9 Symptom description	% of Patients N=27
No symptoms	33
Minimal symptoms	49
Mild	7
Moderate	11
Severe	0
MEAN total score	6.5 (4.8)



Psychiatric Diagnoses

Psychiatric Diagnoses	Occurrence N=9*
Anxiety Disorders	4
Depressive Disorders	4
Trauma and Stressor-Related Disorders	3
Somatic and Other Related Disorders	2
Substance Use Disorders	1

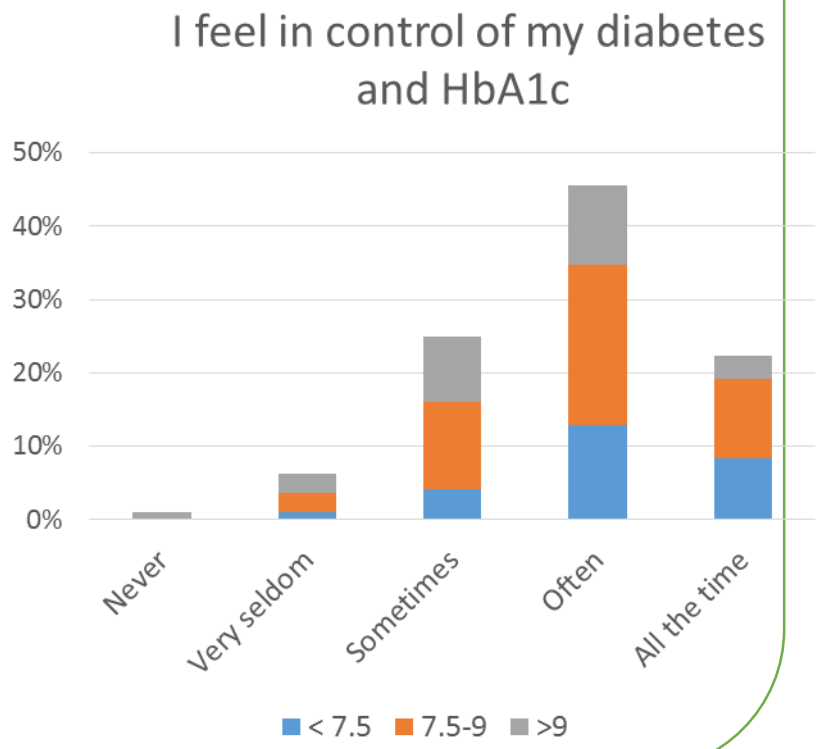
Glycemic control & emotional well-being

73% of patients had HbA1c outside of the target range

HbA1C		N= 193
In target (< 7.5%)	26%	51
Above target (7.5%-9%)	47%	91
Well above target (>9%)	26%	26

No relationship was found between WHO-5 scores and HbA1c levels

68% of patients felt in control of their diabetes “often” or “always



Diabetes team members appreciate benefits of a more integrated approach to patient care

"The biggest change was probably in the interaction between the nurse and the social work component. So while social work was always sort of honing in on social supports and those kinds of things and nursing always on the medical supports, there was always [needed to be] a reason for them to case consult based on their flags about a patient. ***But they were now starting to feel like they could be experts in mental health together or that they could co-learn and co-deliver strategies on how to manage diabetes*** *along with mood or sadness or those kinds of things. So I think that was really neat to see." Diabetes Team Participant 7*

Collaborative care project normalizes a more holistic approach to diabetes care

*"The tool being given in clinic may actually legitimize it for both parents and youth as part of routine care….**So the normalization, the discussion of quality of life as they relate to Type 1 diabetes seems to have a floodgate, an opening on some patients.** So, we're getting some immediate and emotional answers. **Some patients report feeling a sense of relief at being able to discuss certain issues even though they may have been asked in the past. It may be easier for you to speak openly in clinic versus in a separate social work appointment**." Diabetes Team participant 3*

Youth with diabetes like the holistic approach to diabetes management

"Yeah, so the other professionals that she saw, they were very supportive and they wanted to hear about it and they wanted to understand it. But they just didn't understand the same way impact that the illness was having on her mental health. They just couldn't connect with it. It took a lot of explaining. And we didn't get that when we were at [this] clinic because they were so informed and so in tuned to what she was going through… ***And the things that they talked about were actually pretty much the same conversations that she's been having with the other counseling people that she had seen. But being able to weave the diabetes into it and its impact here and there, it just seemed to make a – it just treated my daughter as a whole person instead of pieces of her.*** *And I think that's what the key was that she felt as though she was a whole person getting whatever treatment she needed." Family participant 1*

Youth with diabetes like the holistic approach to diabetes management

*"**I think it was nice just to be able to talk about your problems with them, that aren't just about your numbers, and your health.** And it was not just advice. It was like they listen, and they understand that it's difficult." Patient participant 2*

*"I think it's good because I don't always think of all those questions that they ask and then like once I'm answering them it makes me really think of them more, so I think it's good….**I think it's a lot better because before they just focused on the physical and now they kind of look at everything overall. So I think it's a lot better."** Patient participant 3*

Strengths

- Intervention that focuses on an integrated biopsychosocial model has had a positive impact on diabetes care for youth with diabetes, their families and the diabetes care team

- Diabetes team members appreciate sharing multidisciplinary diabetes physical and mental health management knowledge and skills

- Intervention was improved through the addition of project management and administrative support for research conducted in a busy clinical environment

Challenges

- Workflow and workload – collaborative care model brings an element of unpredictability into a busy clinical environment
- Intervention suggests need for improved supports systems for family members of youth with diabetes who may also face MH challenges
- Need for improved technology and resources for telepsychiatry

Next Steps

- Evaluation of between clinic differences
- Longitudinal data collection and analysis to examine changes over time
- Explore opportunities for peer, caregiver, and group mental health support
- Consideration of additional populations for implementation of systematic screening

This work is supported in part by the Medical Psychiatry Alliance, a collaborative health partnership of the University of Toronto, the Centre for Addiction and Mental Health, the Hospital for Sick Children, Trillium Health Partners, the Ontario Ministry of Health and Long-Term Care and an anonymous donor. We would like to thank Dr. M. Ravi, Dr. M de Wit, members of the project's working group, the MPA leadership team, and the staff and physicians from the Paediatric Diabetes Education Program at the Mississauga Hospital Site of THP.

Discussion