

Bridging the Gap: Transition and Care of Adolescents with Type 1 Diabetes

**Dr. Christina Grant, Assistant Professor, Department of Pediatrics,
McMaster Children's Hospital, McMaster University**

**Dr. Zubin Punthakee, Assistant Professor, Departments of Internal
Medicine and Pediatrics, McMaster University**

**Dr. Sherry Van Blyderveen, Psychologist, McMaster Children's
Hospital**

Caitlin Fitzpatrick, Health Science Student, McMaster University



Background



- Providing care for chronically ill adolescents can be a challenging task
- Offering successful care to these patients requires an understanding of:
 - ✓ the unique characteristics of their disease
 - ✓ the normal/abnormal developmental processes of adolescence
- Over 85% of children with congenital or chronic illnesses now survive into adolescence and beyond

Diabetes In Adolescents

- Goals of Management
 - ✓ Prevent long-term complications
 - ✓ Avoid acute complications
 - ✓ Promote normalcy
- Management tools
 - ✓ Blood sugar testing
 - ✓ Insulin
 - ✓ Medical Nutritional Therapy and Exercise





Physiologic Insulin Resistance of Puberty

- Diabetic pubertal children have 25-30% reduction in insulin sensitivity compared to diabetic prepubertal children or adults
- They have higher insulin requirements
- They have higher HbA1C

(Amiel NEJM 1986 315:215)



Adherence

Complex

- ✓ Insulin, testing, food, exercise
- ✓ Adherence to medication in pediatric chronic diseases is ~ 50%

(Osterberg NEJM 2005 353:487)





Eating Disorders and Type I Diabetes

- 2X at risk for Bulimia Nervosa and Eating Disorder –NOS (10% vs. 4%)
- Almost 2X for sub threshold Eating Disorders (14% vs. 8%)

(Rodin et al., J of Psychosom Res, 2002)





Deliberate Insulin Omission

- 1% of pre-teens
- 11-14% by midteen years
- 34% older adolescent & young adults

(Rydall AC, et al., NEJM, 1997)





Depression and Diabetes

- Depression the most common overlooked disorder in these youth
- Point prevalence is 20% vs. 7%
(Grey, M. et al, J Psychosom Res, 2002)
- By 20 years of age, 28% have experienced at least 1 episode of MDE
(Kovacs, M et al, Diabetes Care, 1997)

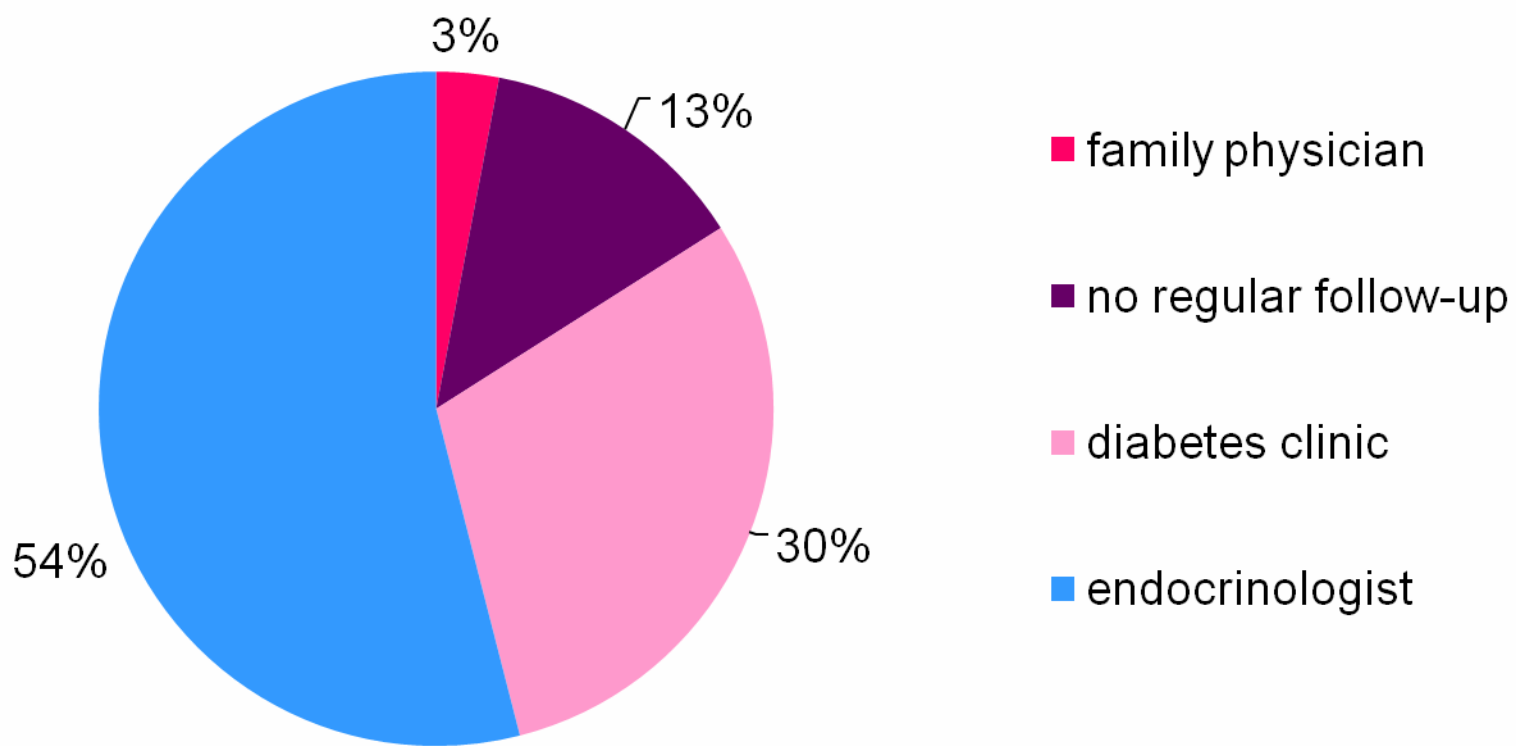




Preparing for Transition to Adult Care

- Historically, done poorly
 - ✓ Event vs. Process
- Barriers
 - ✓ Pediatric vs. Internist culture difference
 - ✓ Pediatric / Internist communication gap
 - ✓ Patient's attachment to pediatric care team and fear of the unknown

Transition to where?



(Pacaud Can J Diabetes Care 1996 20:14)





Welcome to the Diabetes Transition Clinic

Now that you're almost 18, it's time to plan your move from pediatric to adult care. We are here to help you through this change.



McMaster Diabetes Transition Clinic

- Meeting with adult physician 6-12 months prior to transition, in pediatric setting
 - ✓ Increased focus on control and complications
 - ✓ Change in locus of control
- Assessment with adolescent medicine specialist
 - ✓ Identify and address barriers to independence and self-care prior to transfer
 - ✓ Inform about harm reduction



McMaster Diabetes Transition Clinic

Research Component

- ✓ Describe the patients
- ✓ Consider treatment outcomes
- ✓ Determine factors related to prognosis



Conclusion

- Our hope that our clinical endeavor will provide a useful service to the young people with diabetes at McMaster Children's Hospital
- Our program evaluation research will inform decisions regarding program development and demonstrate program effectiveness
- Contribute to the existing evidence for transitional efforts for youth with chronic illness





Transition Goals

- Gradual preparation of youth
- Early introduction of concept of transition
- Promotion of independence
- Timing based on maturity and skill, not age
- Co-ordinate with other lifestyle transitions

(Fleming J Clinical Nursing 2002 11:560)



Successful Transition Programs

- Services appropriate for both chronological age and developmental stage
- Prepared to address common concerns of young people
 - ✓ Growth and development
 - ✓ Sexuality
 - ✓ Mood and other mental health disorders
 - ✓ Substance Use and other high risk behaviors
- Flexible to meet broad range of patients and needs
- Designated Professional who together with the patient and family take responsible for the transition

(Society of Adolescent Medicine, Position Statement 2003)

HSC

Good 2 Go Transition Program





The ON TRAC Model

To support and educate subspecialty teams in providing care to adolescents 10-18 by providing tools and resources in order to offer developmentally appropriate transition planning

- ✓ Self-advocacy and self-esteem
- ✓ Independent healthcare behaviors
- ✓ Sexual Health
- ✓ Social Supports
- ✓ Educational, vocational and financial planning
- ✓ Health and Lifestyle

