Improving Outcomes for Young Adults with Type 1 Diabetes in Ireland

Sean F. Dinneen, MD
Head of School of Medicine
NUI Galway
Overview of Talk

- A primer on type 1 diabetes
- What are outcomes like for Young Adults?
- What have we told the HRB we will do?
- How are we doing?
- What do you think?
Why treat diabetes?

- To prevent ketoacidosis, coma and death
- To prevent polydipsia, polyuria, blurred vision, tiredness
- To prevent the long-term complications of diabetes
Diabetes Control and Complications Trial

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Bob Anderson’s Take on it all

Choices

Decisions

Consequences
What is Diabetes Education?

- “DSME and DSMS are the on-going processes of facilitating the knowledge, skill, and ability necessary for diabetes self-care..... The overall objectives of DSME and DSMS are to support informed decision-making, self-care behaviors, problem-solving, and active collaboration with the health care team to improve clinical outcomes, health status, and quality of life in a cost-effective manner”

Standards of Medical Care in Diabetes, *Diabetes Care*, January 2012
Diagnosis in Childhood

CHILDHOOD

ADOLESCENCE

YOUNG ADULT

Child

Family

Adolescent

Family

Young Adult
The Emerging Adult

- **Emerging adulthood** is a phase of the life span between adolescence and full-fledged adulthood, proposed by Jeffrey Arnett in a 2000 article in the *American Psychologist*. Emerging adulthood also encompasses late adolescence and early adulthood. It primarily applies to young adults in developed countries who do not have children, do not live in their own home, or do not have sufficient income to become fully independent in their early to late 20s. Jeffrey Arnett says emerging adulthood is the period between 18 and 25 years of age where adolescents become more independent and explore various life possibilities.
Overview of Talk

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National Diabetes Mortality Audit Data (England)

Case Profile plot of Longitudinal Change in HbA1c over 24 Months
(Sample mean included as reference line)

n = 137
Young Adult Outcomes in Scotland

Casey R, et al. QJM 2014 (Epub ahead of print)
Case Study: John

- Age: 20 years
- Living with Type 1 Diabetes since 2006
- Treatment: NovoRapid insulin (6 units with meals) & once daily Lantus insulin (22 units at night)
- HbA$_{1c}$: 55mmol/mol (7.2%)
- University student; lives with other college students
- Activities: Gaelic football
Case Study: John

- Played football match Friday evening
- Celebratory drinks after after winning
- Next day: Breakfast at 2pm followed by 10 pints of Bulmers
- 7pm: Fast food and took insulin
- 11pm: Episode of severe hypoglycaemia
- Friend called an ambulance and administered insulin!
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**PHASE 1: Explore Evidence Base**
- Approaches to Self Management Support
  - Young-adult specific
  - Other age groups
- Psychological theories
  - Implementing evidence-based practice
  - Supporting behaviour change

**PHASE DELIVERABLE: Theoretical framework for intervention**

**PHASE 2: Pilot Intervention Package**
- Behaviour
  - Attendance enhancement
  - Alcohol management training
  - Exploring attitudes
- Knowledge & Skills
  - CHO counting & insulin adjustment
  - Hypoglycaemia management
  - Goal setting and problem solving
- Self-management Support
  - Group vs. Individual
  - Community vs. Clinical
  - Technology-enabled (social networking)

**PHASE DELIVERABLE: Final agreed complex intervention**

**PHASE 3: Evaluate Complex Intervention**
- Population
  - Young adults
  - Attending participating centres
- Intervention
  - Package agreed in phase 2
  - Multidimensional
- Comparator
  - Usual Care
  - Participating centres
- Outcomes
  - Glycaemic control (HbA1C and hypoglycaemia)
  - Psychosocial measures
  - Health economic assessment
Developing a Complex Intervention

Systematic Review: Clinic Attendance

- **Facilitators**
  - Good Transition
  - Continuity of Care
  - Clear Appointment Making Process

- **Barriers**
  - Poor relationship development
  - Time constraints
  - Conflicting schedules

Lisa Hynes, PhD Student, Health Psychology, NUI Galway
Young Adult Panel Formation

- Jigsaw Galway aims to provide tailored community-based help for young people's mental health needs.
- Jigsaw works with, and for, young people. As well as supporting young people, Jigsaw involves them right from the start.
- Young people have a real say in changing how services and supports can work better for them and their community.
Are You a Young Adult Living with Type 1 Diabetes?

Are you between 18-25 years old?
If so, we invite you to an exciting and important evening where you will meet other young people with type 1 diabetes. This is the first step in starting a Youth Panel who will work with a research team to improve the health and wellbeing of young people living with type 1 diabetes.

Get Involved & be a voice for Young Adults with Diabetes!

Wednesday 19th February 2014
6:30pm-8pm
Jigsaw, Fairgreen Road, Galway
(across of the new Coach Station)
Contact: Mary Clare O’Hara 091 542 840
MaryClare.OHara@hse.ie
You will receive a text reminder prior to the 19th Feb
Supports for Young Adults
Supports for Young Adults

Technology and Devices

• Monitoring Devices: iGBStar, Continuous Glucose Monitor, Dexcom
• Insulin Delivery Devices: InsulCheck, HumaPen MEMOIR and CSII, OmniPod
• Online Support and Apps: Carbs & Cals App and DAFNE App
T1D Young Adult Study Day – 6th October

• “Education for Adolescents - The WICKED Experience!” - Barbara Johnson, Dept of Psychology, The University of Sheffield
• Meet members of our study’s Young Adult Panel
• “Patient and Public Involvement in Research: Values, Mechanisms and Outcomes” - Prof Nicky Britten, Peninsula Medical School, University of Exeter (tbc)
• Study Steering Group Meeting
• Irish DAFNE Educator Network Meeting led by Sally Woolgar (Chair of the Education Committee)
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Acknowledgements

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• Ciara Duffy
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• Michelle Long
• Ciara Keighron
• Antony Caulfield
• Lorraine Hegarty
• Madeleine Mallon
• Gary Allen

Principal Investigator
• Dr Sean Dinneen

Co-applicants
• Dr Molly Byrne
• Mary Clare O’Hara (PM)
• Prof Simon Heller
• Prof Kathy Murphy
• Dr John Newell

Collaborators
• John Fitzmaurice
• Dr Máire O’Donnell
• Liam McMorrow
• Dr Dympna Casey
• Dr Paddy Gillespie
• Dr Hamish Courtney
• Prof Donal O’Shea
• Dr Christine Domegan
• Dr Patrick Hayes
• Dr Mary O’Reilly-deBrún

Institutional Collaborators
• WHWHG
• Diabetes Ireland
• Diabetes UK Northern Ireland
• DAFNE Collaborative
• NIHR DAFNE Research Group
• Science Without Borders
• Irish DAFNE Educator Network
• HSE Director of Public Health
• Enterprise Ireland IV

Other Key Contributors
• Lisa Hynes
• Sarah Simkin
• Áine Cunningham
• Helen Burke
• Mary O’ Scannáil
• Cathy Breen
• Dr Diarmuid Smith
• Dr Colm McGurk
• Dr Shu Hoashi
• Natalia Nery