

## *From the Chair*

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Next week we will be on our way to the beautiful city of Verona for the 23<sup>rd</sup> Annual Spring PSAD meeting. Following last year's discussions, the meeting will now start on Thursday evening and finish on Saturday at noon. This way, the meeting will not encroach on your entire weekend.

In an attempt to promote discussion and exchange of ideas at the meeting, we have also made a number of changes to the format of the sessions. All work will be presented in themed sessions including a mixture of completed work and work in progress. The presentations will be short (10min for completed work and 5min for work in progress) and discussions will take place after the presentations with the aim to place the work in the larger perspective of the underlying theme. The session Chairs, therefore, will play a much more active role than in previous years. In this context, we felt it important to give increased visibility to our young researchers and I am pleased that Andreas Schmitt, Dominic Ehrmann and Dan Grabowski have accepted to (co)chair sessions.



Instead of a debate, we have planned a round table session on how to stimulate dissemination of effective psychosocial interventions and assessment methods in diabetes care within the EASD. While we are comfortably discussing psychosocial issues amongst ourselves, our measure of success should be whether clinical practice and other disciplines take notice. With our proposal for a PSAD symposium apparently not accepted, we need to think of further strategies.

The meeting will also see the first session of a new PSAD working group on diabetes in children, adolescents and emerging adults, an exciting initiative by Ingrid Willaing and Maartje de Wit. This group will function along side the European Depression in Diabetes research (EDID) group.

In all, with promise of excellent research presentations, I look forward seeing you in Verona for an interactive and exciting meeting.

Finally, I am pleased to announce that Sanofi has agreed to sponsor the PSAD through two travel grants to attend the PSAD meeting and a PSAD-Sanofi Fellowship (€8k). The latter is to allow a promising PhD student to travel and stay at a research institution in Europe or North America for a maximum of three months in order to learn a specific scientific technique related to their psychosocial diabetes research. Details regarding applications will follow in due course.

**Arie Nouwen**

## Highlighted Publication



### Assessing quality of life in diabetes: II – Deconstructing measures into a simple framework

“In the context of diabetes care, health-related quality of life (HRQOL) is, arguably, one of the most frequently measured patient-reported outcomes.” With that sentence Tang, Fardowsa, Yusuf, Polonsky & Fisher start their very useful paper: *Assessing quality of life in diabetes: Deconstructing measures into a simple framework*. The paper is a systematic review and assessment of diabetes-specific HRQOL measures and provides a way to compare and contrast the different measures. Through a deconstruction of 20 measures that are assessed by e.g. target population, number and type of HRQOL dimensions measured, type of score and calculation algorithm, number of items, time length to complete etc., this paper effectively supports you in identifying the appropriate scale to use. To get an overview of scales used during the last 10 years in research into diabetes-specific quality of life this paper is highly recommended!

Tricia S. Tang, Fardowsa L.A. Yusuf, William H. Polonsky, Lawrence Fisher. **Assessing quality of life in diabetes: II – Deconstructing measures into a simple framework** \_ Diabetes Research and Clinical Practice, 2017-04-01, Volume 126, Pages 286-302, Copyright © 2016 Elsevier Ireland Ltd

Ingrid Willaing



## *New Members*

We would like to welcome our new members who recently joined our group:

**Rita Forde** - Research Fellow, Faculty of Nursing, Midwifery & Palliative Care, King's College London

**Anouk Geraets**—PhD Student School of Mental Health and Neuroscience, Cardiovascular Research Institute Maastricht , Maastricht University, The Netherlands

**Michelle Hadjiconstantinou**— Post-Doc Research Assistant, Diabetes Research Centre, College of Life Sciences, University of Leicester, UK

**Nanna Lindekilde**— PhD Student, Department of Psychology, University of Southern Denmark

**Linda Muijs**— Research Assistant, VUmc, Amsterdam, The Netherlands

**Lilli-Sophie Priesterroth**— MSc Student, Health Psychology Lab, Department of Psychology, Johannes Gutenberg University Mainz, Germany

**Cati Racca**— PhD candidate, VUmc, Amsterdam, The Netherlands

**Soren Skovlund** —Senior Research Scientist, People Centered Diabetes Care, Lead Patient Reported Outcomes, Aalborg University, Denmark.



## *EVENTS*

### *Members' Events*



PSAD members **Mette Due-Christensen** (Steno Diabetes Centre, Denmark & King's College London) and **Jackie Sturt** (King's College London) say farewell to **Rossella Messina** ( University of Bologna) (centre in photo) over a game of 10 pin bowling in Feb 2018. Rossella, diabetes psychology research student in Bologna, has spent 6 months as Visiting Doctoral Student in the Clinical Diabetes Research team, Faculty of Nursing Midwifery and Palliative Care at King's. The collaboration has resulted in a manuscript in preparation and a study designed to support couples living with type 1.

Rossella has learnt qualitative research methods skills during her visit and her fluency in English has increased enormously. The King's team have gained a new friend and collaborator.

## Grants and Funding



In November 2017, we were delighted to find out that **our project grant submitted** to the Australian Diabetes Educators Association (ADEA) Diabetes Research Foundation was successful:

**Ventura AD, Hendrieckx C, Halliday J, Hagger V, Morris A, Sturt J, Speight J.** *Supporting people with diabetes distress: Development and pilot randomised controlled trial of an online training module for health professionals.* ADEA Diabetes Research Foundation. \$60,000. 1-year project.

Here is a link to more information about the project:

<https://adeadiabetesresearchfoundation.org.au/funding/recipients/first-online-training-program-address-emotional-health-issues-adults-diabetes/>



In February 2018 the Lancet Diabetes & Endocrinology recognised Prof Jane Speight's expertise in behavioural and emotional diabetes research. In focus: tackling diabetes and its stigma Down Under. Vol 6 page 94



**Agnieszka Butwicka** - Assistant Professor at Department of Medical Epidemiology and Biostatistics, Karolinska Institutet has been **awarded a grant by The Swedish Research Council** for the study "Risk factors and outcomes of neurodevelopmental disorders in childhood-onset type 1 diabetes".

This a nationwide population-based study with use of data from Swedish administrative and quality registers. We aim to investigate (1) the role of diabetes-related factors in neurodevelopment disorder, (2) social and health consequences of this comorbidity, and (3) the effect of ADHD medication for diabetes care, specifically the effect on metabolic control, height, weight and BMI in patients with diabetes and ADHD.

Ass Prof Butwicka seeks to recruit a PhD student for the project. This vacancy will open for applications in May on website: <https://ki.se/en/about/jobs-at-karolinska-institutet-0>. Informal enquiries concerning this position: [agnieszka.butwicka@ki.se](mailto:agnieszka.butwicka@ki.se)





## *New Publications*

Araia E, Hendrieckx C, Skinner TC, Pouwer F, Speight J, King R. **Gender differences in disordered eating behaviours and body dissatisfaction among adolescents with type 1 diabetes: Results from Diabetes MILES Youth – Australia.** *International Journal Eating Disorders*, 2017; 50:10 1189-1193.

Bo A, Thomsen R W, Nielsen J S, Nicolaisen S K, Beck-Nielsen H, Rungby J, Sørensen H T, Hansen T K, Søndergaard J, Friberg S, Lauritzen T, Maindal H T. **Early-onset type 2 diabetes: Age gradient in clinical and behavioural risk factors in 5115 persons with newly diagnosed type 2 diabetes—Results from the DD2 study.** *Diabetes Metab Res Rev.* 2017;e2968. <https://doi.org/10.1002/dmrr.2968>

Brinkhues S, Dukers-Muijers N H T M, Hoebe C J P A, van der Kallen C J H, Dagnelie P C, Koster A, Henry R M A, Sep S J S, Schaper N C, Stehouwer C D A, Bosma H, Savelkoul P H M, Schram M T. (2017). **Socially isolated individuals are more prone to have newly diagnosed and prevalent type 2 diabetes mellitus - the Maastricht study.** *BMC Public Health.* 17:955 DOI 10.1186/s12889-017-4948-6

Browne JL, Ventura AD, Mosely K, Speight J. **Measuring Type 1 diabetes stigma: development and validation of the Type 1 Diabetes Stigma Assessment Scale (DSAS-1).** *Diabetic Medicine*, 2017; 34(12): 1173-1783



Byrne M, O'Connell A, Egan AM, Dinneen SF, Hynes L, O'Hara MC, Holt RIG, Willaing I, Vallis M, Hendrieckx C, Coyne I. **A core outcomes set for clinical trials of interventions for young adults with type 1 diabetes: an international, multi-perspective Delphi consensus study.** *Trials*, 2017; Dec 19; 18(1): 602

Hagger V, Hendrieckx C, Cameron F, Pouwer F, Skinner TC, Speight J. **Cut-points for identifying clinically significant diabetes distress in adolescents with type 1 diabetes using the PAID-Teen: results from Diabetes MILES Youth – Australia.** *Diabetes Care*, 2017; 40(11): 1462-1468.

Heinemann L, Freckmann G, Ehrmann D, Faber-Heinemann G, Guerra S, Waldenmaier D, Hermanns N. (2018). **Real-time continuous glucose monitoring in adults with type 1 diabetes and impaired hypoglycaemia awareness or severe hypoglycaemia treated with multiple daily insulin injections (HypoDE): a multicentre, randomised controlled trial.** *The Lancet.* [https://doi.org/10.1016/S0140-6736\(18\)30297-6](https://doi.org/10.1016/S0140-6736(18)30297-6)  
<http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2818%2930297-6/fulltext>

Herder C, Schmitt A, Budden F, Reimer A, Kulzer B, Roden M, Haak T, Hermanns N. **Association between pro- and anti-inflammatory cytokines and depressive symptoms in patients with diabetes – potential differences by diabetes type and depression scores.** *Transl Psychiatry* 2017; in press.

Herder C, Schmitt A, Budden F, Reimer A, Kulzer B, Roden M, Haak T, Hermanns N. **Longitudinal associations between biomarkers of inflammation and changes in depressive symptoms in patients with type 1 and type 2 diabetes.** *Psychoneuroendocrinology* 2018; in press.

## *New Publications cont.*

Holt RIG and Speight J. **The language of diabetes: the good, the bad and the ugly.** *Diabetic Medicine*, 34, 1495–1497

Lake AJ, Browne JL, Rees G, Speight J. **What are the unique factors influencing uptake of retinal screening among younger adults with type 2 diabetes? A theoretically informed qualitative study.** *Journal of Diabetes and its Complications*, 2017; 31(6): 997-1006.

Messina R, Rucci P, Sturt J, Mancini T, Fantini M P, **Assessing self-efficacy in type 2 diabetes management: validation of the Italian version of the Diabetes Management Self-Efficacy Scale (IT-DMSES) Health and Quality of Life Outcomes** 201816https://doi.org/10.1186/s12955-018-0901-3

Newton-John T, Ventura AD, Mosely K, Browne JL, Speight J. **Are you sure you are going to have another one of those?": a qualitative analysis of the social control and social support model in Type 2 diabetes.** *Journal of Health Psychology* Dec; 22(14): 1819-1829.

Pols AD, Schipper K, Overkamp D, van Dijk SE, Bosmans JE, van Marwijk HW, Adriaanse MC, van Tulder MW. **Process evaluation of a stepped-care program to prevent depression in primary care: patients' and practice nurses' experiences.** *BMC Fam Pract*, Feb 23;18(1):26, 2017

Schmitt A, Reimer A, Ehrmann D, Kulzer B, Haak T, Hermanns N. **Reduction of depressive symptoms predicts improved glycaemic control: Secondary results from the DIAMOS study.** *J Diabetes Complications* 2017;31:1608-1613.

Schmitt A, Reimer A, Kulzer B, Icks A, Paust R, Roelver KM, Kalthener A, Ehrmann D, Krichbaum M, Haak T, Hermanns N. **Measurement of psychological adjustment to diabetes with the Diabetes Acceptance Scale.** *J Diabetes Complications* 2018; in press. DOI: 10.1016/j.jdiacomp.2018.01.005

Speight J. **Measuring quality of life: the importance of thinking in more than two dimensions.** *BMJ*, 17 June, rapid response: <http://www.bmj.com/content/354/bmj.i3816/rr-0>.

Todd PT, Edwards F, Patel N, Amiel S, Sturt J, Choudhary P. **Evaluating the relationships of hypoglycaemia and HbA1c with screening-detected diabetes distress in type 1 diabetes.** *Endocrinol Diab Metab.* 2017; 00:e00003. doi.org/10.1002/edm2.3

Vallejo Mora MR, Carreira M., Anarte M.T, Linares F., Oliveira G., González-Romero S. (2017). **Bolus calculator reduces hypoglycemia in the short term and fear of hypoglycemia in the long term in subjects with type 1 diabetes (CBMDI Study).** *Diabetes Technology & Therapeutics*, 19 (7), 402-409, 2017. DOI: 10.1089/dia.2017.0019

van Dijk SEM, Adriaanse MC, van der Zwaan L, Bosmans JE, van Marwijk HWJ, van Tulder MW, Terwee CB. **Measurement properties of questionnaires in patients with 2 diabetes: a systematic review.** *Qual Life Res.* 2018 Feb 2. doi: 10.1007/s11136-018-1782-y.[Epub ahead of print]



## *Collaboration*

### **Greetings,**

My name is Juan Albertorio and I am a statistician at the National Center for Health Statistics, Center for Disease Control and Prevention- <https://www.cdc.gov/nchs/index.htm>. The aim of this note is to make a call to seek the development of a collaborative work in where we can compare the aspect of diabetes, depression, and selected health covariates among the USA adult population and other countries.

My initial work on this area addressed the association between depressive states and diabetes status- DOI: 10.1016/j.diabres.2017.02.031. Now I have the vision to develop a research protocol to continue this work using the same database (the National Health and Nutrition Examination Survey, NHANES- <https://www.cdc.gov/nchs/nhanes/index.htm>), but addressing two selected topics- suicide ideation or short sleep duration - associated to diabetes status and depression severity among the adult non-institutionalized population. As an extension of this work, I would like to see which other countries collect similar data and are willing to do a comparative study with me. For the NHANES data, I have available self-report and clinical data to identify diabetes. For depression severity, we collected data using the PHQ-9 as a proxy of depressive states.

We are anticipating to perform a weighted prevalence comparison. Then depending on the data we can pursue to develop a statistical model approach in where multiple imputations and calculation of adjusted predictions would play a central role in this secondary data analysis.

If you would like to receive more information about this initiative, please send me an email ([jna8@cdc.gov](mailto:jna8@cdc.gov)) or meet with me in the 2018 PSAD meeting in Verona at the 2018 PSAD meeting. Thanks!!

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## Update...

### DAFNE<sup>plus</sup>

Dose Adjustment for Normal Eating ([DAFNE](#)) is 5-day group education offered as routine care within the UK's National Health Service (NHS). It is designed to train adults with type 1 diabetes (T1D) in the self-management skills needed for *flexible* intensive insulin therapy to improve both HbA1c and quality of life in adults with T1D, while minimising severe hypoglycaemia. DAFNE has a strong research history (presented at previous PSAD meetings and elsewhere), with trial and real-world data demonstrating on average that, post-DAFNE, people have better quality of life, better HbA1c, less severe hypoglycaemia, reduced diabetes distress, and are admitted to hospital less often for diabetes emergencies (1-4). However, qualitative research has shown that many find it difficult to implement and sustain the skills needed to maintain optimal glucose levels and find it hard to get appropriate follow-up support from healthcare professionals (4-5).

DAFNE<sup>plus</sup> is a five and a half-year research programme funded by the UK's National Institute of Health Research (NIHR). A large multi-disciplinary investigator group is led by Prof Simon Heller (University of Sheffield). The aim of DAFNE<sup>plus</sup> is to modify the existing DAFNE curriculum and follow-up support to: a) incorporate specific techniques for initiating and sustaining behaviour change (targeting improved HbA1c); b) develop structured, pro-active health professional follow-up support; and c) integrate digital information communication technologies to benefit both communication about

glucose levels between people with T1D and their healthcare professionals, as well as providing DAFNE resources online. This work is ongoing over the first 2.5 years of the programme grant, which began in March 2016.

During the latter half of the research programme, we will conduct a cluster randomised controlled trial (RCT) to determine whether DAFNE<sup>plus</sup> produces improved and sustainable diabetes self-management behaviours and HbA1c overall than currently achieved with standard DAFNE, without compromising known quality of life benefits. Alongside the RCT, a team of researchers are undertaking a mixed methods process evaluation to inform our understanding of the larger evaluation and decision making about implementation.

PSAD members, [Dr Debbie Cooke](#) (University of Surrey) and [Prof Jane Speight](#) (The Australian Centre for Behavioural Research in Diabetes) are leading the quantitative component of this process evaluation. Debbie and Jane have been working with the rest of the study team to support evolution of the logic model that underpins the development work and selection of appropriate questionnaire tools to assess processes and psychological outcomes. As part of this work, Jane is leading a large UK and Australian study, evaluating existing diabetes-specific quality of life tools ([YourSAY:QoL](#)) to compare their psychometric properties and their acceptability to people living with diabetes. The analysis from this study is underway. The development and piloting work for DAFNE<sup>plus</sup> is nearing completion and the cluster RCT will start in Sept 2018.

To learn more and follow our progress:  
 Blog: <https://dafneplusresearch.wordpress.com/>  
 Twitter: @dafneplus

1. DAFNE Study Group. Training in flexible, intensive, insulin management to enable dietary freedom in people with type 1 diabetes: dose adjustment for normal eating (DAFNE) randomised controlled trial. *BMJ* 325: 746-751, 2002.
2. Cooke D, Bond R, Lawton J, Rankin D, Heller S, Clark M, Speight J for the UK NIHR DAFNE Study Group. Structured type 1 diabetes education delivered within routine care: impact on glycaemic control and diabetes-specific quality of life. *Diabetes Care*, 36: 270-272, 2013.
3. Speight J, Amiel S, Bradley C, Heller S, Oliver L, Roberts S et al. Long-term biomedical and psychosocial outcomes following DAFNE (Dose Adjustment For Normal Eating) structured education to promote intensive insulin therapy in adults with sub-optimally controlled Type 1 diabetes. *Diabetes Research & Clinical Practice*, 89: 22-29, 2010.
4. Heller S, Lawton J, Amiel S, Cooke D, Mansell P, Brennan A et al. Improving management of type 1 diabetes in the UK: the Dose Adjustment for Normal Eating (DAFNE) programme as a research test bed. Southampton, NIHR Journals Library, 2014.
5. Rankin D, Barnard K, Elliott J, Cooke D, Heller S, Gianfrancesco C et al. Type 1 diabetes patients' experiences of, and need for, social support after attending a structured education programme: a qualitative longitudinal investigation. *Journal of Clinical Nursing*, 23: 2919-2927, 2014.

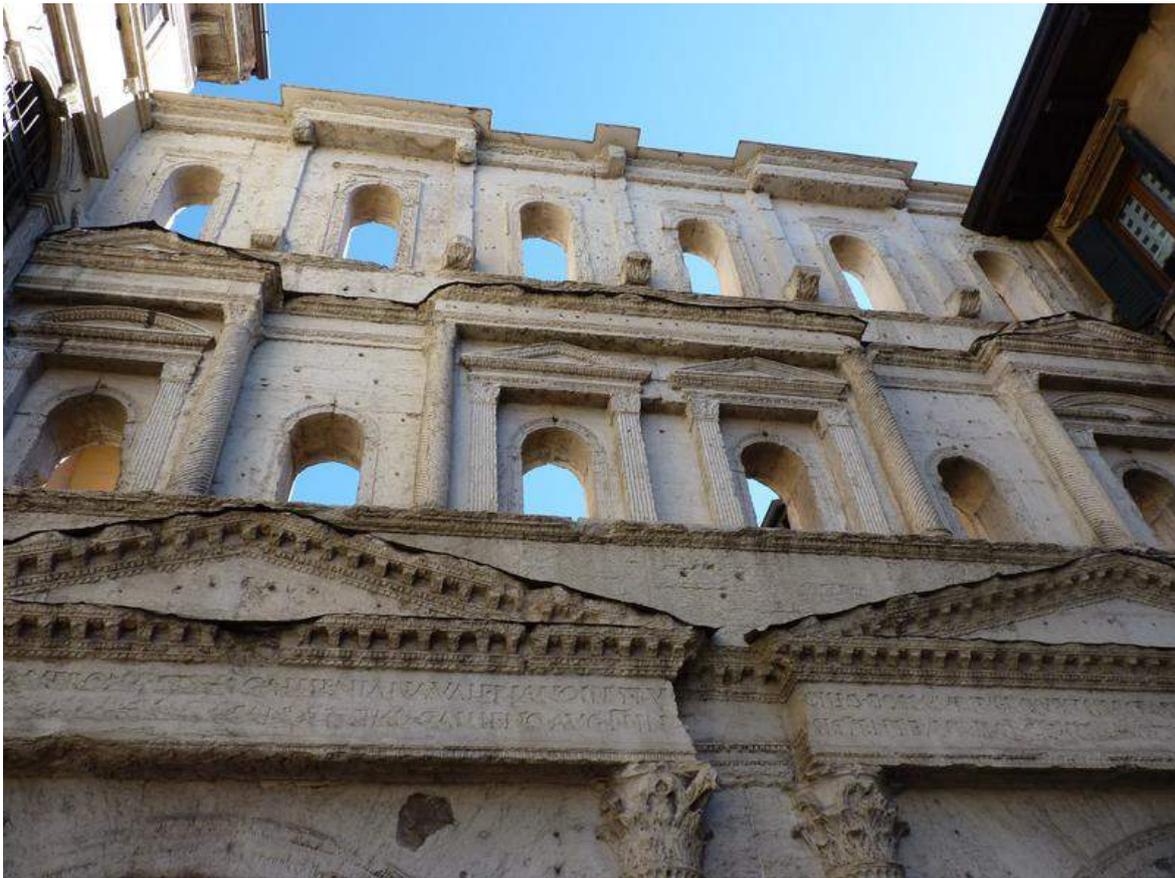
*Research...***Richmond Stress and Sugar Study aims to identify how stress reactivity relates to diabetes disparities**

Approximately 30 million people in the US have diabetes and another 84 million have pre-diabetes. Racial and ethnic minorities have a higher risk of diabetes and are disproportionately impacted by diabetes complications. The reasons for these disparities are not clear. The Richmond Stress and Sugar Study (RSASS), led by Dr. Briana Mezuk, is a 3-year longitudinal cohort study that aims to shed light on the sources of these inequalities. The overarching goal of RSASS is to examine the influence of stress exposure, stress reactivity and self-regulatory behaviors on the development of type 2 diabetes. RSASS uses a two-by-two sampling design in which non-Hispanic Whites and African Americans are each recruited from low and high poverty neighborhoods, which intentionally disentangles “race” from “place.” Another core innovation of this study is that data collection integrates measures of environmental factors using Geographic Information Systems methods, social factors via an extensive personal interview, and biological factors by measuring stress reactivity using the Trier Social Stress Test, a task-based assessment of HPA-axis activation. RSASS is currently in the field, and over 80 adults aged 40 and 70 years old at high risk of type 2 diabetes have completed the baseline visit. We hope that the findings from this study will inform a more integrative approach to reducing diabetes disparities in the US. RSASS is funded by a grant from the American Diabetes Association (1-16-ICTS-082, PI: Mezuk).



The research team based in Richmond, Virginia USA (L-R): Project coordinator Evanise Lexima, Research assistants Jacinda Fleming, Josh Montgomery, Wande Tuktur, and Jason Winston.

*PSAD Scientific Spring Meeting 2018*  
*3rd-5th May*  
*Verona , Italy*



*Porta Borsari, Verona*

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