

11<sup>th</sup>  
A. MENARINI DIAGNOSTICS  
INTERNATIONAL DIABETES  
NURSES CONFERENCE



Patient education and compliance  
Budapest - October 8<sup>th</sup> - 2015

8<sup>th</sup> October 2015, Budapest  
Budapest Congress Center  
Pátria Hall

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**A. Menarini Diagnostics** welcomed more than 400 nurses from several countries in Europe to Budapest, Hungary, on 8<sup>th</sup> October 2015 on the occasion of the **11<sup>th</sup> International Diabetes Nurses Conference “Patient Education and Compliance”**. The company’s sponsorship of this important annual meeting held since 2004 gives an excellent example of their commitment to fighting diabetes and improving the quality of life of patients with diabetes by bringing together, in the last decade, more than 6,000 nurses working in the field of diabetes.



The participating scientists and the A. Menarini Diagnostics staff



**Anchorman:** *Giovanni Sartore*

*Department of Medical and Surgical Sciences, University of Padua, Padua, Italy*

As in the past, this year a faculty of top experts in the fields of diabetes care, new technologies involving self-monitoring systems and communication strategies contributed with their knowledge and expertise to the success of this international conference. Nurses from Italy, Germany, Switzerland, the Netherlands, Belgium, the United Kingdom, Spain, France, Austria and Portugal attended the conference. A translation staff provided simultaneous linguistic assistance for all participants and speakers, which contributed significantly to the success of this international meeting. The audience was actively involved through the use of voting charts on various topics discussed and participated actively in the question and answer sessions.



**Speaker:** *John Kölker*

*Child Nursing Consultant, Zuyderland Medical Center, Heerlen, the Netherlands*

Giovanni Sartore (Assistant Professor of Endocrinology, University of Padua; Padua, Italy), as anchorman, introduced the international panel of speakers and guided the day's work.



**Speaker:** *Ivana Rabbone*

*Department of Endocrinology and Diabetology, Children's Hospital Regina Margherita, Turin, Italy*

The panel of speakers, consisted of John Kölker (Child Nursing Consultant, Zuyderland Medical Center, Heerlen, the Netherlands), Ivana Rabbone (Paediatric Diabetologist, Department of Endocrinology and Diabetology, Children's Hospital Regina Margherita, Turin, Italy), Giorgio Grassi (Senior Physician and Diabetologist, Division of Endocrinology, San Giovanni Battista, University Hospital; Turin, Italy), Guido Freckmann (General Manager and Medical Director, Diabetes Technology Research and Development Center, University of Ulm, Germany; main expert in the evaluation of self-monitoring blood glucose [SMBG] systems), Gary Scheiner (Diabetes Educator, Clinical Director of Integrated Diabetes Services, Philadelphia, US; named 2014 Diabetes Educator of the Year by the ADA Educators and author of the best-seller "Think Like A Pancreas - A Practical Guide to Managing Diabetes With Insulin").



**Speaker:** *Giorgio Grassi*

*Division of Endocrinology and Metabolism, Department of Internal Medicine, Az. Ospedaliero-Universitaria San Giovanni Battista of Turin, Turin, Italy*

The conference was divided into three sessions. The first focused on the importance of management and prevention of diabetic ketoacidosis (DKA) with a particular focus on sick day management in childhood and adolescence as well as the challenges of DKA management and prevention in children. The second session was dedicated to the future of



**Speaker:** *Guido Freckmann*

*Institut für Diabetes-Technologie Forschungs- und Entwicklungsgesellschaft mbH, University of Ulm, Ulm, Germany*



**Speaker:** *Anna Ercoli*

*Consultant and Trainer in Psychology-based Human Resource Development, Udine, Italy*



**Speaker:** *Gary Scheiner*

*Diabetes Educator, Integrated Diabetes Services, Philadelphia, US*



**The conference room**

diabetes management, and in particular to wireless data acquisition and device connectivity in addition to enhanced performance requirements in SMBG systems according to current and future ISO 15197 criteria. Finally, the third session was centred on assessment strategies and development of educational plans for patients with insulin-dependent diabetes mellitus. Importantly, psychological implications and patient empowerment in diabetes were also discussed.

**Diabetic ketoacidosis** (DKA) is an acute, major, life-threatening complication of diabetes and consists in severe metabolic consequences resulting from insulin deficiency and concomitant fluid and electrolyte imbalance. According to international guidelines (ISPAD), DKA deserves special attention in children and adolescents where signs and symptoms are often misdiagnosed and underestimated. Greater awareness should help minimise the severity of DKA through earlier diagnosis and focusing on appropriate treatment as well as close, ongoing monitoring to minimise the potentially lethal complications of DKA such as cerebral oedema. Educating healthcare professionals about the pathophysiology of DKA helps them to provide better patient instruction and treatment for DKA. Prevention programs for DKA in diabetic children focusing on scholastic institutions, parents and paediatricians (e.g. Parma Campaign) were committed to increase awareness and reduce morbidity and mortality of DKA; nevertheless, the rate of DKA in children and adolescents remains high. The therapeutic goal for DKA is not to return glucose levels to normal, but, rather, reversal of the underlying ketoacidosis. Insulin therapy, fluid and electrolyte monitoring and treatment are critical aspects of management. In this context, a new software, Glucolog DKA Expert, has been developed in order to help physicians and nurses to manage DKA. Managing diabetes in a child during a concomitant illness is challenging and a crucial aspect of diabetes care. Home blood capillary beta-hydroxybutyric acid (ketones) testing provides information that allows for early and aggressive management of metabolic decompensation, such as DKA. This novel technology may provide the opportunity to improve the treatment of uncontrolled diabetes and sick days in an attempt to reduce the human burden of DKA.

**Self-monitoring of blood glucose** (SMBG) is considered an essential component of diabetes self-management, especially for patients who require insulin treatment. SMBG can help to identify factors associated with hyper- and hypoglycaemia, adequately adjust insulin doses and empower patients to make changes to improve glycaemic control. The international

standard ISO 15197 established various requirements for SMBG systems concerning safety and reliability, analytical performance (e.g. measurement precision, system accuracy) and user-friendliness. The accuracy of SMBG measurement is imperative for reliability of results and medical outcomes in diabetes therapy. Recently, the current ISO 15197:2003 version has been revised and should be replaced in 2016 by the ISO 15197:2013. This later includes tighter criteria for the minimum accuracy of BG systems stating that (criterion A)  $\geq 95\%$  of the system measurement results shall fall within  $\pm 15$  mg/dl of the comparison measurement results at glucose concentrations  $< 100$  mg/dl and within  $\pm 15\%$  at glucose concentrations  $\geq 100$  mg/dl, and that (criterion B) 99% of results should be within the Consensus Error Grid zones A and B. Further aspects of the new ISO 15197:2013 include user performance evaluation using the same accuracy criteria and evaluation of influence quantities and interfering substances. Training for healthcare providers and patients is a central aspect in accomplishing these new standard requirements.

**Telemedicine systems** based on Internet and mobile phones represent new promising tools that can complement conventional outpatient clinical visits. This applies mostly to chronic diseases, such as diabetes, where frequent medical controls and transmission and elaboration of a large amount data is needed. Dedicated applications for various devices (e.g. smart phones, personal computers) have been recently developed that allow for direct transmission of clinical information to the medical team. The use of telemedicine can also aid diabetic patients in self-management of their disease and is most effective when combined with education and individualised information.

To maximise the benefit offered by these innovative technologies, patients should also be supported from a **psychological point of view**. Diabetes can lead to depression and anxiety as well as mood and eating disorders that can hinder adequate self-management of the disease. Patient empowerment can help healthcare operators and patients to improve management of diabetes and prevent disease-related complications. The achievement of greater self-esteem in persons with diabetes is essential since empowerment can become a valid tool for change. Effective **patient assessment** is essential for developing individualised care plans for diabetes and implementing appropriate education for **self-management**. The aims of individualised assessment consist in establishing a rapport with the patient, discover the patient's preferred learning style and explore the patient's goals/interests in order to establish an efficacious personalised teaching plan. In this context, potential assessment topics were discussed (diabetes science/physiology, hypoglycaemia, self-monitoring, insulin and medication, use of pump technology, nutrition, physical activity, mental health, social/lifestyle choices, special population needs) by presenting effective teaching tools and strategies for achieving successful education for self-management to the audience. In this regard, the assessment of self-monitoring skills in the following areas merit further exploration: fingerstick technique and equipment, choice of meter, meter procedure, monitoring schedule, record-keeping system, continuous glucose monitoring option, downloading procedure and data self-analysis. Importantly, teaching topics should be elaborated by the diabetes team (nurse/educator, physician), and primary and secondary priorities should be agreed together with patient.

The 11<sup>th</sup> edition of this important meeting, sponsored by **A. Menarini Diagnostics**, was once again an excellent forum for exchanging knowledge, promoting enthusiasm in new diabetes management strategies and sharing experiences by bringing together hundreds of nurses from many European countries and international experts in the field of diabetes care.



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