# (free) CME/CPE/CEUs-certified Program

# **Systems** series **Sensors**

Role of BGM and CGM in Reducing Burden, Improving Outcomes in Diabetes: Accuracy • Confidence • Long-term Convenience



## Satish K. Garg, MD, MBBS, DM

Editor-in-chief Diabetes Technology & Therapeutics Professor of Medicine and Pediatrics Director Adult Program Barbara Davis Center for Diabetes University of Colorado Denver, Colorado



## Grazia Aleppo, MD, FACE, FACP

Associate Editor Diabetes Technology & Therapeutics **Professor of Medicine** Director, Diabetes Education Program Associate Chief for Clinical Affairs Division of Endocrinology Metabolism and Molecular Medicine Feinberg School of Medicine Northwestern University Chicago, Illinois

# **Thursday** April 14, 2022

7pm ET | 6pm CT | 5pm MT | 4pm PT



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## David T. Ahn. MD

**Program Director** Hoag Medical Center Mary & Dick Allen Diabetes Center Newport Beach, California

As an expert in diabetes technology, Dr Ahn is serving to address questions about same. including CGM insertions.







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#### **INTENDED AUDIENCE**

Diabetologists, Endocrinologists, Primary Care Physicians, Physician Assistants, Nurse Practitioners, Pharmacists, Certified Diabetes Care and Education Specialists, and other Health Care Professionals interested in the management of diabetes.

### **EDUCATIONAL OBJECTIVES**

After participating in this program, learners will be better able to:

- 1. Recognize CGM and its clinical benefits as standard of care for all insulin-requiring regimens, regardless of mode of administration.
- Identify CGM functionality, accuracy, efficacy and patient experience as well as novel data on next-generation systems and improved shared decision making.
- Employ clinical and patient considerations in selecting BGMs/CGMs for informed diabetes management, optimizing patient outcomes.

### **ACCREDITATION AND DESIGNATION**

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Evolve Medical Education LLC and CogniMed Inc. Evolve Medical Education LLC is accredited by the ACCME to provide continuing medical education for physicians.

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Provider approved by the California Board of Registered Nursing, Provider Number 17004 for 1.0 contact hours.

### **Accreditation Statement**

The University of South Carolina College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

This knowledge-based activity is accredited for 1.0 home study contact hours (0.10 CEU) for pharmacists, ACPE UAN 0062-9999-22-097-H01-P (release date: April 14, 2022; expiration date: April, 2023). To claim credit, participants must sign-in/register and participate in the entire activity, engaging in all active learning activities and completing all required learning assessments. No partial credit will be issued. Participants must complete an online evaluation at http://copsc. learningexpressce.com within 30 days (providing their correct NABP e-Profile ID and month/day of birth) in order to ensure credit is reported to the NABP CPE Monitor. Detailed instructions will be provided after participating in the activity. The CPE Monitor will automatically reject all credit claimed and reported greater than 60 days from the date of participation. Visit our website to contact us with any questions.

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The following faculty/staff members have the following financial relationships with commercial interests:

#### Chair:

**Satish K. Garg, MD, MBBS, DM** has had a financial agreement or affiliation during the past year with the following commercial interests in the form of Advisory Boards for: Medtronic, Novo-Nordisk, Bayer, Zealand, Lifescan Diabetes Institute and Eli Lilly. He has also received Research grants from Eli-Lilly, Novo-Nordisk, Merck, Lexicon, Medtronic, Dario, NCI, T1D Exchange, NIDDK, JDRF, Dexcom and Sanofi.

### Faculty:

**Grazia Aleppo, MD, FACE, FACP** has had a financial agreement or affiliation during the past year with the following commercial interests in the form of Consultant for: Bayer, Dexcom, and Insulet. She has also received research support from Dexcom, Eli-Lilly, Fractyl Health and Insulet.

**David T. Ahn, MD** has had a financial agreement or affiliation during the past year with the following commercial interests in the form of Grant/Research Support Consultant for: Ascensia Diabetes Care, Senseonics, Lilly Diabetes, Novo, Mannkind and Roche Diagnostics. He is on the speaker's list for Lilly Diabetes, Novo Nordisk, Xeris Pharmaceutical and Zealand Pharma.

#### **EDITORIAL**

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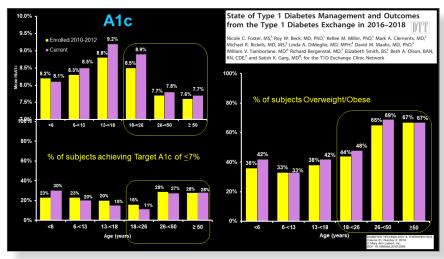




### Novel Data on Next-Generation Continuous Glucose Monitoring (CGM) Systems: Accuracy, Efficacy, Patient Experience

## Satish K. Garg, MD, MBBS, DM

Editor-in-chief Diabetes Technology & Therapeutics Professor of Medicine and Pediatrics Director Adult Program Barbara Davis Center for Diabetes University of Colorado Denver, Colorado



Satish K. Garg, MBBS, MD, DM is Professor of Medicine and Pediatrics at the Adult Clinic of the Barbara Davis Center for Diabetes of the University of Colorado School of Medicine in Denver, Colorado. He joined the faculty of the Barbara Davis Center in 1992 and became the founder and director of the Adult Clinic. He established and holds two Garg Endowed Chairs (clinical and clinical research) at the University of Colorado Denver. His team is one of the top teams world-wide in clinical trials involving insulin analogues and novel methods of insulin delivery (pens, pumps, oral, buccal and inhaled) and non-insulin adjunctive treatment options for Type 1 Diabetes. Other areas of interest include: continuous glucose monitors, evaluating the accuracy of meters at high altitude, and artificial pancreas systems.

Dr Garg received a medical degree in medicine at Punjab University in Ludhiana, India, where he also completed a residency in internal medicine at Christian Medical College and Hospital. He completed fellowships in adult endocrinology and diabetes at the Post Graduate Institute of Medical Education and Research (PGIMER) in Chandigarh, India, and in pediatric endocrinology and diabetes at the University of Colorado at Denver and Health Sciences Center. He is board certified in internal medicine and endocrinology and diabetes.

Dr Garg is the Editor in chief of Diabetes Technology and Therapeutics journal since 2006 and Chair of the planning committee for Clinical Therapeutics and New Technology area for 2007 and 2008

Accuracy by Glucose Range: Primary Sensor					Evaluation of Accuracy and Safety of the Next-Generation Up to 180-Day Long-Term Implantable Eversense Continuous Glucose Monitoring System: The PROMISE Study Sant K. Gene, Mich Ored Upperlant, MD/ Broce Boles, MD/ Mark F. Christiansen, MD/ Strong MD/ Broce Boles, MD/ Mark F. Christiansen, MD/ Strong MD/ Broce Boles, MD/ Mark F. Christiansen, MD/ Strong S. Chan, MD/ Silks San Adult, MD/ Ardere Debenen, PD/
YSI Glucose Range mg/dL (mmol/L)	Number of Paired CGM and YSI Reference Points	Mean Percent 20/20% of Reference	Mean Absolute Relative Difference, MARD (%)	Median Absolute Relative Difference (%)	Catherine S Tweeten, Pach <sup>ton</sup> and Francise & Kaufman, MO <sup>2</sup> 181 subjects comparing CGM and YSI 2300 glucose analyzer
Overall	49,613	92.9	9.1	6.7	
40-60* (2.2-3.3)	2281	89.4	9.4	7.0	Mean duration of diabetes 22.0 years, Percent with T1D 69.6%, Mean A1c 7.6%
61-80* (3.4-4.4)	5270	92.2	8.8	7.0	
81-180 (4.5-10)	19001	90.9	9.0	6.7	Approved by the FDA on Feb. 11, 2022
181-300 (10.1-16.6)	14578	94.7	7.7	5.9	
301-350 (16.7-19.4)	6862	96.5	7.1	5.9	
351-400 (19.5-22.2)	1510	93.9	8.0	6.3	Eversense 6 months-Senseonics
*The absolute difference from the YSI reading is measured in mg/dL if the YSI reading is ≤80 mg/dL					Gark SK et al: Diabetes Technol Ther: 2022, 24; 84-92.

Annual American Diabetes Associations meetings. He is the director of ATDC Diabetes Conference, in Keystone, since 2005. He is a member of the many Endocrine and Diabetes Societies such as: International Diabetes Federation, the American Diabetes Association, the Endocrine Society of India, and the European Association of Study for Diabetes, the Regional Pediatric Endocrine Society of Colorado, the Research Society for Study of Diabetes Mellitus, and numerous other professional societies in both the United States and India. He is an international lecturer and speaker-he received several international oration awards-and has published many chapters in the books, on the editorial boards for many of the diabetes journals globally and has published more than 298 original manuscripts in peer-review journals.

# Comparison between Primary Sensors and SBA\* Sensors

SBA Sensors\* **Primary Sensors** Paired Points - 49,613 Paired Points - 12,034 Percent with 20/20% 92.9% 93.9% Overall MARD 9.1% 8.5% Day 1 MARD 11.0% 11.2% Day 180 MARD 10.4% 7.4% MAD between 40-60 mg/dl 9.4% 7.5% (2.2-3.3 mmol/L) MAD between 61-80 mg/dL 8.8% 7.7% (3.4-4.4 mmol/L) Confirmed alert detection rate 94% 93% Confirmed alert detection rate 99% 180 mg/dL (10 mmol/L) Survival to 180 days 65% 90% 98% day 90 96% day 90 90% day 120 96% day 120 74% day 150 94% day 150

\*sacrificial boronic acid (SBA)

Evaluation of Accuracy and Safety of the Next-Generation
Up to 180-Day Long-Term Implantable Eversense
Continuous Glucose Monitoring System:

The PROMISE Study

atish K. Garg, MD, David Lillenquist, MD, Bruce Bode, MD, Mark P. Christiansen, N

Timothy S, Balley, MD, Bonald L. Brazg, MD, Douglas S, Denham, DO,

Douglas S, Denham, DD, Study MD, Study MD, Study Dehopole, SDD, P

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\*\*The MD, Study MD, Study MD, Study MD, Study Dehopole, SDD, P

\*\*The MD, Study MD, Study MD, Study MD, Study Dehopole, SDD, P

\*\*The MD, Study M

Gark SK et al: Diabetes Technol Ther: 2022, 24; 84-92







# Clinical and Patient Considerations in Selecting BGM & CGM Systems for Diabetes: Factors in Shared Decision Making

### Grazia Aleppo, MD, FACE

Associate Editor
Diabetes Technology & Therapeutics
Professor of Medicine
Director, Diabetes Education Program
Associate Chief for Clinical Affairs
Division of Endocrinology
Metabolism and Molecular Medicine
Feinberg School of Medicine Northwestern University
Chicago, Illinois

### Importance of BGM Accuracy

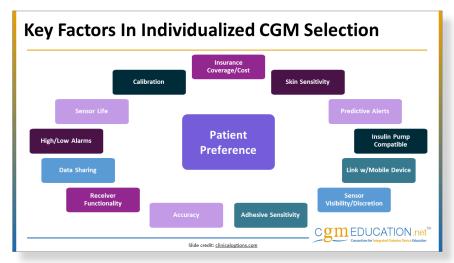
- History of severe hypoglycemia or hypoglycemia unawareness
- Use a CGM device that requires calibration
- Pregnancy
- Insulin therapy
- Increased risk for hypoglycemia (insulin or insulin secretagogue therapy)



Dr Grazia Aleppo graduated magna cum laude from the University of Catania School of Medicine, Catania, Italy; subesquently completed internship, residency and endocrinology fellowship at the University of Illinois at Chicago.

She is a Professor of Medicine in the Division of Endocrinology, Metabolism and Molecular Medicine at the Feinberg School of Medicine, Northwestern Uniersity, Chicago. She is also the Associate Chief for Clinical Affairs in the same Division and the Medical Director of the Northwestern Medicine Diabetes Training and Education Program.

Dr Aleppo's clinical interest and research interest is in Diabetes, particularly in the implementation of Diabetes Technology such as Insulin pump therapy and Continuous Glucose Monitoring (CGM) therapy in clinical practice. She has participated in the major clinical trials on the use of CGM in various populations and was the protocol chair for the Replace-BG clinical trial which lead to the approval of CGM therapy for Medicare beneficiaries in the USA.

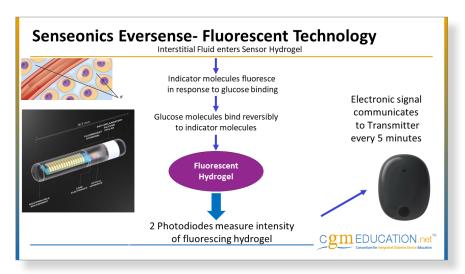


She has been very active in scholarly activities with over 50 publications and book chapters in peer reviewed journals.

She is the present Chair of the Endocrine Society Clinical Affair Core Committee. Dr Aleppo is also a fellow of the American College of Endocrinology and the American College of Physicians and a member of many professional societies, including the American Diabetes Association, the Endocrine Society, the American Association of Clinical Endocrinologists, and the American College of Physicians.

She serves on the editorial board of BMJ Open Diabetes and Research Care.

Dr Aleppo is considered a prominent national key opinion leader in the field of Diabetes Technology, including insulin pumps, CGM systems and automated insulin delivery.







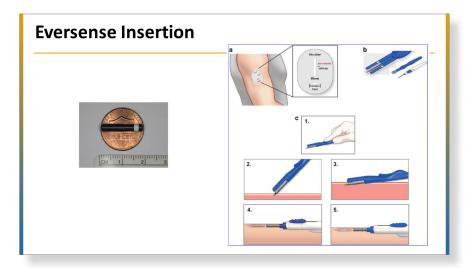


## David T. Ahn, MD

Program Director Hoag Medical Center Mary & Dick Allen Diabetes Center Newport Beach, California

Dr David Ahn is an Endocrinologist specializing in Diabetes and Metabolism and currently serves as the Program Director of the Mary & Dick Allen Diabetes Center. He previously was an Assistant Clinical Professor at UCLA. Born and raised in Southern California, Dr Ahn received his Medical Degree and completed a fellowship in Endocrinology at UC San Diego.

He is passionate about empowering people with Type 1 Diabetes, Type 2 Diabetes, Pre-Diabetes, and Gestational Diabetes to optimize their blood sugar control while minimizing the emotional burden of living with chronic disease. He is a national expert on diabetes technology, including continuous glucose monitors, insulin pumps, and smartphone apps.



In addition to being an expert in diabetes technology, including CGM monitors, insulin pumps and smartphone apps, Dr Ahn has trained in the insertion procedure for the novel, 180-days subcutaneous CGM sensor, and has gained extensive expertise in this practice. As an expert in diabetes technology, Dr Ahn is serving to address questions about same, including CGM insertions.





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