



Status of *Diabetes Care*: New Challenges, New Concepts, New Measures—Focusing on the Future!

Diabetes Care 2015;38:1177–1180 | DOI: 10.2337/dc15-0875

With the release of this issue, our editorial team is now at the 3.5-year mark in our tenure of overseeing the scientific aspects of *Diabetes Care*. During this time, we have done our best to keep you up to date on all changes, innovations, progress, and successes of the journal. We realize that with each issue we are responsible for providing new information to help health care professionals care for people with diabetes and to stimulate the research community in its quest for new discoveries and new treatment paradigms. At this time last year, our editorial on the status of *Diabetes Care* was titled “It Just Doesn’t Get Any Better . . . or Does It?” (1). We also questioned whether in another 12 months we would “still be asking, ‘Can it possibly get any better than this?’” With this report, we feel that question has clearly been answered in the affirmative. A new norm for excellence has been established at *Diabetes Care*.

Over the last year, the number of new submissions reached record levels and the quality of the published articles (our primary metric) has never been higher. Moreover, the range of topics our journal covers is unlike that of any other. In the last year, we presented reports on new medications, new combinations of medications, critical reviews of safety of commercially available agents, extended outcomes of bariatric surgery, new data on the microbiome, latest developments in the artificial pancreas, staggering data on economic costs and analysis, emerging ideas on the pathogenesis of type 2 diabetes, functional imaging studies, cognitive outcomes, and corneal nerve morphology, just to name a few—the list goes on and on!

The journal also disseminates Scientific Statements, Consensus Reports, and Position Statements carefully prepared by the American Diabetes Association (ADA) (see Table 1 for highlighted articles). This past year, we were honored to publish the Position Statements “Type 1 Diabetes Through the Life Span,” “Care of Young Children With Diabetes in the Child Care Setting,” and “BMI Cut Points to Identify At-Risk Asian Americans for Type 2 Diabetes Screening” (2–4), as well as the joint Position Statement of the ADA and the European Association for the Study of Diabetes on the management of hyperglycemia in type 2 diabetes (5). Accompanying the update from the ADA/European Association for the Study of Diabetes was a report that examined the ADA *Standards of Medical Care in Diabetes* recommendations and trends in the quality of evidence supporting the recommendations (6). Over the 9-year period spanning from 2005 to 2014, the proportion of recommendations per year that were based on higher-level evidence increased from 39 to 51% (6). As we stated in the January 2015 update, the process for review from the ADA is working to the benefit of clinicians (7). In addition to the position statements, in October 2014, the journal published a Scientific Statement from the American Heart Association and ADA “Type 1 Diabetes Mellitus and Cardiovascular Disease” (8), and in April 2015, we published an incredibly comprehensive statement on insulin pump risks and benefits (9). A report from an ADA Consensus Conference on diabetic kidney disease was published in October 2014 (10). In addition to contributions from the ADA, we are privileged to feature noteworthy lectures from recent Scientific Sessions, and this year we published Dr. Seaquist’s 2014 Presidential Address and Dr. Krolewski’s Kelly West Award Lecture on the new paradigm of diabetic nephropathy in type 1 diabetes (11,12).

William T. Cefalu,¹ Andrew J.M. Boulton,² William V. Tamborlane,³ Robert G. Moses,⁴ Derek LeRoith,⁵ Eddie L. Greene,⁶ Frank B. Hu,⁷ George Bakris,⁸ Judith Wylie-Rosett,⁹ Julio Rosenstock,¹⁰ Katie Weinger,¹¹ Lawrence Blonde,¹² Mary de Groot,¹³ Matthew C. Riddle,¹⁴ Robert Henry,¹⁵ Sherita Hill Golden,¹⁶ Stephen Rich,¹⁷ and Lyn Reynolds¹⁸

¹Pennington Biomedical Research Center, Louisiana State University, Baton Rouge, LA

²Manchester Diabetes Centre, University of Manchester, Manchester, U.K.

³Department of Pediatrics, Yale University School of Medicine, New Haven, CT

⁴ISLHD, Wollongong, New South Wales, Australia

⁵Division of Endocrinology, Diabetes and Bone Disease, Icahn School of Medicine at Mount Sinai, New York, NY

⁶Division of Nephrology and Hypertension, Mayo Clinic, Rochester, MN

⁷Departments of Nutrition and Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA

⁸ASH Comprehensive Hypertension Center, Department of Medicine, Division of Endocrinology, Diabetes and Metabolism, The University of Chicago Medicine, Chicago, IL

⁹Department of Epidemiology and Social Medicine, Albert Einstein College of Medicine, Bronx, NY

¹⁰Dallas Diabetes and Endocrine Center at Medical City, Dallas, TX

¹¹Joslin Diabetes Center, Harvard Medical School, Boston, MA

¹²Ochsner Diabetes Clinical Research Unit, Frank Riddick Diabetes Institute, Department of Endocrinology, Ochsner Medical Center, New Orleans, LA

¹³Indiana University School of Medicine, Indianapolis, IN

¹⁴Division of Endocrinology, Diabetes and Clinical Nutrition, Oregon Health & Science University, Portland, OR

¹⁵VA San Diego Healthcare System, San Diego, CA

¹⁶Division of Endocrinology and Metabolism, Johns Hopkins University School of Medicine, Baltimore, MD

¹⁷Department of Public Health Sciences, University of Virginia, Charlottesville, VA

¹⁸American Diabetes Association, Indianapolis, IN

Corresponding author: William T. Cefalu, cefaluwt@pbrc.edu.

© 2015 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered.

Table 1—Highlighted articles and month of publication

Month of publication/author	Title	Article type
April 2015/Heinemann et al.	Insulin Pump Risks and Benefits: A Clinical Appraisal of Pump Safety Standards, Adverse Event Reporting, and Research Needs: A Joint Statement of the European Association for the Study of Diabetes and the American Diabetes Association Diabetes Technology Working Group	Joint Statement
July 2014/Chiang et al.	Type 1 Diabetes Through the Life Span: A Position Statement of the American Diabetes Association	Position Statement
October 2014/Siminerio et al.	Care of Young Children With Diabetes in the Child Care Setting: A Position Statement of the American Diabetes Association	Position Statement
October 2014/Tuttle et al.	Diabetic Kidney Disease: A Report From an ADA Consensus Conference	Consensus Report
January 2015/Hsu et al.	BMI Cut Points to Identify At-Risk Asian Americans for Type 2 Diabetes Screening	Position Statement
October 2014/de Ferranti et al.	Type 1 Diabetes Mellitus and Cardiovascular Disease: A Scientific Statement From the American Heart Association and American Diabetes Association	Joint Scientific Statement
January 2015/Inzucchi et al.	Management of Hyperglycemia in Type 2 Diabetes, 2015: A Patient-Centered Approach: Update to a Position Statement of the American Diabetes Association and the European Association for the Study of Diabetes	Joint Position Statement
January 2015/Grant and Kirkman	Trends in the Evidence Level for the American Diabetes Association's "Standards of Medical Care in Diabetes" From 2005 to 2014	Commentary
May 2015/Seaquist	2014 Presidential Address: Stop Diabetes—It Is Up to Us	Presidential Address
June 2015/Krolewski	Progressive Renal Decline: The New Paradigm of Diabetic Nephropathy in Type 1 Diabetes	Kelly West Award Lecture

Our editorial team's signature event is now established as our own *Diabetes Care* Symposium at the ADA Scientific Sessions with the 4th Annual *Diabetes Care* Symposium being presented at the 75th Scientific Sessions in June 2015 (in Boston, MA). Each year, we attempt to refine the format and content of this event. In June 2014, we revised the format by dividing it into two 1-h sessions and selecting overarching themes. The first segment was designed to introduce a novel twist with a presentation entitled "Best of *Diabetes Care*." Its purpose was to provide brief overviews of several articles felt by the Associate Editors to be some of the most noteworthy original research reports published in *Diabetes Care* during the past year. That segment of the program received rave reviews, so we continued the format in the 2015 symposium. The topics for this year's "Best of *Diabetes Care*" included updates on clinical phenotypes and epidemiology, depression in diabetes, and hypertension/nephrology.

The second segment of this year's program had presentations from the four selected original articles from our competition focusing on "Novel Clinical Interventions in Therapy That Impact the Management of Diabetes." These articles are featured in this issue. The presentations included a study evaluating a novel approach to glycemic

control with use of an antianginal drug (i.e., ranolazine) in subjects with type 2 diabetes and a study evaluating a novel sodium-glucose cotransporter (SGLT) 1 and 2 inhibitor as adjunctive treatment for type 1 diabetes (13,14). We also presented two studies that provided updates on the development of the artificial pancreas, the first evaluating the safety and efficacy of the fully integrated Medtronic hybrid closed-loop system in a type 1 diabetes camp and the second offering insights on predictive low-glucose suspension and nocturnal hypoglycemia in children (15,16). The success of the symposium at the ADA Scientific Sessions has also fostered interest for such a symposium at the upcoming International Diabetes Federation's World Diabetes Congress, 30 November–4 December 2015, in Vancouver, Canada. Those articles will be published in a special symposium section in the January 2016 issue of *Diabetes Care*.

The most innovative feature of this year's ADA's symposium, however, was the recognition of those individuals who have recently been featured in our Profiles in Progress initiative. Several times a year *Diabetes Care* publishes an article honoring a researcher or health care professional who has made notable contributions in the field of diabetes and served as a role model and mentor for many of our readers. In a

brief ceremony this year, we recognized Drs. Samuel Rahbar, Christopher Dyer Saudek, George S. Eisenbarth, Gerald M. Reaven, Frederick C. Goetz, Oscar B. Crofford, Saul Genuth, and James R. Gavin III (17–24). Finally, at each annual ADA Scientific Sessions, we also hold our *Diabetes Care* Editors' Expert Forum and publish its proceedings.

Another innovative strategy for our journal has been to devote a portion of selected issues to a specific focus, either as multiple reports from landmark studies (e.g., the TODAY Study [25] and DCCT/EDIC [26]) or to highlight a specific clinical and research focus (e.g., artificial pancreas [27] and diabetes prevention [28]) (Table 2). The past 6 months have seen incredibly important special issues. Specifically, our February 2015 issue was devoted to understanding and addressing disparities in access to diabetes care and the focus of research (29). The topics covered ranged from the impact of community health worker-led interventions, to a possible role of language barriers in diabetes complications, to cerebral structural changes associated with diabetic kidney disease in African Americans, and to racial differences in underlying pathophysiologic mechanisms (29). Our March 2015 issue described research related to novel combinations of SGLT1 blockers with insulin, dipeptidyl peptidase-4 inhibitors, or other therapies; favorable effects of

Table 2—Special focus and grouped articles

Description	No. of articles included	Issue
TODAY Study: The Changing “Face” of the Type 2 Diabetes Epidemic	9	June 2013
DCCT/EDIC 30th Anniversary Summary Findings	8	January 2014
Current Concepts of Type 2 Diabetes Prevention	8	April 2014
Advances in Artificial Pancreas Development	8	May 2014
3rd Annual <i>Diabetes Care</i> Symposium: New Drug Therapies, Innovative Management Strategies, and Novel Drug Targets	4	July 2014
Understanding and Addressing Health Disparities in Diabetes Care and Research	7	February 2015
Evolving Tactics With Inhibition of Sodium–Glucose Cotransporters	12	March 2015
Type 1 Diabetes at a Crossroads	9	June 2015
4th Annual <i>Diabetes Care</i> Symposium: Novel Clinical Interventions in Therapy That Impact the Management of Diabetes	4	July 2015

All collections are available at <http://care.diabetesjournals.org/site/misc/onlinecollections.xhtml>.

these agents on blood pressure and weight as well as glycemic control; and new members of this class that inhibit both SGLT1 and SGLT2 (30). Finally, perhaps our most innovative issue to date appeared just last month. We devoted the June 2015 issue to type 1 diabetes under the title “Type 1 Diabetes at a Crossroads” (31). This issue had contributions from leaders in the field and described research related to the present status of treatment methods and clinical outcomes in type 1 diabetes in the U.S.; discussed current concepts on pathogenesis, prediction, and prevention of the disease; reviewed the successes and ongoing challenges of islet transplantation; and described a pathway for the translation of advances in diabetes technology into an artificial pancreas suitable for home use by large numbers of patients (31). We will continue to present special topics in our monthly issues, based on the positive responses from our readers.

We are also very pleased with responses to our state-of-the-art Reviews, Bench to Clinic Symposia, and Perspectives in Care. Topics of these feature articles have in the past year included patient preferences for noninsulin diabetes medications (32), the association between diabetes and depression (33), the challenges for people with diabetes at high altitude (34), natriuretic peptides (35), hyperosmolar hyperglycemic states (36), and dipeptidyl peptidase-4

inhibitors and microvascular complications (37). A comprehensive review on the SEARCH for Diabetes in Youth study, for which major findings were highlighted and future directions identified for this important cohort was published in December 2014 (38). We recently added to this list a fascinating discussion of the role of the gut microbiome (39) and provided what is felt to be the most up-to-date review on the evaluation and treatment of obesity in type 2 diabetes (40).

We also continue to feature debates in a Point-Counterpoint format. In an elegant debate this past year, Dr. Abrahamson provided his argument suggesting that avoiding use of sulfonylureas as a class of medication as an add-on to metformin is not appropriate as there are many patients whose glycemic control would improve with use of these drugs with minimal risk of adverse events (41). In the counterpoint narrative, Dr. Genuth suggested there is no longer a need for sulfonylureas to remain a first-line addition to metformin for those patients whose clinical characteristics are appropriate and whose health insurance and/or financial resources make an alternative drug affordable (42).

In closing, to our editorial team, *Diabetes Care* is a living thing, alive and growing, and is also getting better over time. We take pride in every issue, pay attention to every submission, and continue to strive for improvement. The bar

for acceptance of manuscripts has steadily risen and, to the chagrin of many authors, our rejection rate continues to climb.

So, in getting back to the original question asked in July 2014—Can it possibly get any better than this?—we think we know the answer and will continue to focus on the future through new challenges, new concepts, and new measures.

Acknowledgments. The editorial committee recognizes that the work of the journal and progress made to date would not be possible without the dedicated work and continued support provided by additional staff in the ADA editorial office: Shannon Potts, Jane Castner, Joan Garrett, and Raquel Castillo. In addition, the editorial committee recognizes Chris Kohler and his team at the ADA publications office for their incredible ideas on new formatting, support for the symposium and expert forums, and work on promoting the journal through dissemination of information. The authors recognize Anne Gooch at Pennington Biomedical Research Center (Baton Rouge, LA) and Debbie Kendall at Kendall Editorial (Richmond, VA) for their assistance and support of the editorial team and special projects. Finally, the authors thank Dr. Robert E. Ratner, Chief Scientific and Medical Officer of the ADA, for his complete support of the journal and promotion of the importance of editorial independence.

References

- Cefalu WT, Boulton AJ, Tamborlane WV, et al. Status of *Diabetes Care*: “it just doesn’t get any better . . . or does it?” *Diabetes Care* 2014;37:1782–1785
- Chiang JL, Kirkman MS, Laffel LMB, Peters AL; Type 1 Diabetes Sourcebook Authors. Type 1 diabetes through the life span: a Position Statement of the American Diabetes Association. *Diabetes Care* 2014;37:2034–2054
- Siminerio LM, Albanese-O’Neill A, Chiang JL, et al. Care of young children with diabetes in the child care setting: a Position Statement of the American Diabetes Association. *Diabetes Care* 2014;37:2834–2842
- Hsu WC, Araneta MRG, Kanaya AM, Chiang JL, Fujimoto W. BMI cut points to identify at-risk Asian Americans for type 2 diabetes screening. *Diabetes Care* 2015;38:150–158
- Inzucchi SE, Bergenstal RM, Buse JB, et al. Management of hyperglycemia in type 2 diabetes, 2015: a patient-centered approach: update to a Position Statement of the American Diabetes Association and the European Association for the Study of Diabetes. *Diabetes Care* 2015;38:140–149
- Grant RW, Kirkman MS. Trends in the evidence level for the American Diabetes Association’s “Standards of Medical Care in Diabetes” from 2005 to 2014. *Diabetes Care* 2015;38:6–8
- Cefalu WT. The “evidence” is in! It does get better! *Diabetes Care* 2015;38:3–5
- de Ferranti SD, de Boer IH, Fonseca V, et al. Type 1 diabetes mellitus and cardiovascular

- disease: a Scientific Statement from the American Heart Association and American Diabetes Association. *Diabetes Care* 2014;37:2843–2863
9. Heinemann L, Fleming GA, Petrie JR, Holl RW, Bergenstal RM, Peters AL. Insulin pump risks and benefits: a clinical appraisal of pump safety standards, adverse event reporting, and research needs: a joint statement of the European Association for the Study of Diabetes and the American Diabetes Association Diabetes Technology Working Group. *Diabetes Care* 2015;38:716–722
 10. Tuttle KR, Bakris GL, Bilous RW, et al. Diabetic kidney disease: a report from an ADA Consensus Conference. *Diabetes Care* 2014;37:2864–2883
 11. Seaquist ER. 2014 Presidential Address: stop diabetes—it is up to us. *Diabetes Care* 2015;38:737–742
 12. Krolewski AS. Progressive renal decline: the new paradigm of diabetic nephropathy in type 1 diabetes. *Diabetes Care* 2015;38:954–962
 13. Eckel RH, Henry RR, Yue P, et al. Effect of ranolazine monotherapy on glycemic control in subjects with type 2 diabetes. *Diabetes Care* 2015;38:1189–1196
 14. Sands AT, Zambrowicz BP, Rosenstock J, et al. Sotagliflozin, a dual SGLT1 and SGLT2 inhibitor, as adjunct therapy to insulin in type 1 diabetes. *Diabetes Care* 2015;38:1181–1188
 15. Ly TT, Roy A, Grosman B, et al. Day and night closed-loop control using the integrated Medtronic hybrid closed-loop system in type 1 diabetes at diabetes camp. *Diabetes Care* 2015;38:1205–1211
 16. Buckingham BA, Raghinaru D, Cameron F, et al.; In Home Closed Loop Study Group. Predictive low-glucose insulin suspension reduces duration of nocturnal hypoglycemia in children without increasing ketosis. *Diabetes Care* 2015;38:1197–1204
 17. Gebel E. The start of something good: the discovery of HbA_{1c} and the American Diabetes Association Samuel Rahbar Outstanding Discovery Award. *Diabetes Care* 2012;35:2429–2431
 18. Hill Golden S, Kalyani RR, Donner T. Christopher Dyer Saudek, MD: diabetes expert and implantable insulin pump pioneer. *Diabetes Care* 2013;36:495–497
 19. Pugliese A, Skyler JS. George S. Eisenbarth: insulin and type 1 diabetes. *Diabetes Care* 2013;36:1437–1442
 20. Kraemer FB, Ginsberg HN. Gerald M. Reaven, MD: demonstration of the central role of insulin resistance in type 2 diabetes and cardiovascular disease. *Diabetes Care* 2014;37:1178–1181
 21. Hoogwerf BJ, Kendall DM, Seaquist ER. Frederick C. Goetz, MD: a profile of the intersection among science, the fine arts, and education. *Diabetes Care* 2014;37:2419–2423
 22. Zinman B. Oscar B. Crofford: clinician, scientist, educator, advocate for people with diabetes, and godfather of Diabetes Control and Complications Trial. *Diabetes Care* 2014;37:3139–3142
 23. Jacobson AM, Nathan DM. Saul Genuth, MD: clinical researcher and leader in developing modern diabetes treatment. *Diabetes Care* 2015;38:347–351
 24. Osei K, Hill Golden S. James R. Gavin III, MD, PhD—a humble and remarkable trailblazer, scientist, educator, mentor and educator for diabetes. *Diabetes Care* 2015;38:963–967
 25. Cefalu WT. “TODAY” reflects on the changing “faces” of type 2 diabetes. *Diabetes Care* 2013;36:1732–1734
 26. Cefalu WT, Ratner RE. The Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications study at 30 years: the “gift” that keeps on giving! *Diabetes Care* 2014;37:5–7
 27. Cefalu WT, Tamborlane WV. The artificial pancreas: are we there yet? *Diabetes Care* 2014;37:1182–1183
 28. Cefalu WTA. A “spoonful of sugar” and the realities of diabetes prevention! *Diabetes Care* 2014;37:906–908
 29. Cefalu WT, Golden SH. Innovative approaches to understanding and addressing health disparities in diabetes care and research. *Diabetes Care* 2015;38:186–188
 30. Cefalu WT, Riddle MC. SGLT2 inhibitors: the latest “new kids on the block”! *Diabetes Care* 2015;38:352–354
 31. Cefalu WT, Tamborlane WV, Skyler JS. Type 1 diabetes at a crossroads! *Diabetes Care* 2015;38:968–970
 32. Purnell TS, Joy S, Little E, Bridges JF, Maruthur N. Patient preferences for noninsulin diabetes medications: a systematic review. *Diabetes Care* 2014;37:2055–2062
 33. Holt RI, de Groot M, Lucki I, Hunter CM, Sartorius N, Golden SH. NIDDK international conference report on diabetes and depression: current understanding and future directions. *Diabetes Care* 2014;37:2067–2077
 34. de Mol P, de Vries ST, de Koning EJ, Gans RO, Bilo HJ, Tack CJ. Physical activity at altitude: challenges for people with diabetes: a review. *Diabetes Care* 2014;37:2404–2413
 35. Gruden G, Landi A, Bruno G. Natriuretic peptides, heart, and adipose tissue: new findings and future developments for diabetes research. *Diabetes Care* 2014;37:2899–2908
 36. Pasquel FJ, Umpierrez GE. Hyperosmolar hyperglycemic state: a historic review of the clinical presentation, diagnosis, and treatment. *Diabetes Care* 2014;37:3124–3131
 37. Avogaro A, Fadini GP. The effects of dipeptidyl peptidase-4 inhibition on microvascular diabetes complications. *Diabetes Care* 2014;37:2884–2894
 38. Hamman RF, Bell RA, Dabelea D, et al.; SEARCH for Diabetes in Youth Study Group. The SEARCH for Diabetes in Youth study: rationale, findings, and future directions. *Diabetes Care* 2014;37:3336–3344
 39. Hartstra AV, Bouter KE, Bäckhed F, Nieuwdorp M. Insights into the role of the microbiome in obesity and type 2 diabetes. *Diabetes Care* 2015;38:159–165
 40. Van Gaal L, Scheen A. Weight management in type 2 diabetes: current and emerging approaches to treatment. *Diabetes Care* 2015;38:1161–1172
 41. Abrahamson MJ. Should sulfonylureas remain an acceptable first-line add-on to metformin therapy in patients with type 2 diabetes? Yes, they continue to serve us well! *Diabetes Care* 2015;38:166–169
 42. Genuth S. Should sulfonylureas remain an acceptable first-line add-on to metformin therapy in patients with type 2 diabetes? No, it's time to move on! *Diabetes Care* 2015;38:170–175