



DIABETES IS PRIMARY

TIMELY NEWS AND NOTES FOR PRIMARY CARE PROVIDERS
from the American Diabetes Association

By Max Bingham, PhD

FROM THE JOURNALS.....

COVID-19 and Diabetes: When Two Pandemics Collide

The last time we put this column together, we did have half an eye on events unfolding in China. Human-to-human transmission of the novel coronavirus known as SARS-CoV-2 had only just been confirmed, and COVID-19 was still a few days away from getting an official name. It was not, at that time, a global pandemic. How things change.

At the time of writing, it seems that individuals with diabetes have about the same risk of catching the virus as the general population, but if they do catch it, the outcomes can be much more serious. Numerous publications are emerging on this topic, and we are confident there will be many more. Some of the earliest case series reports from China elude to diabetes, obesity, and cardiorenal issues as being important comorbidities. There are similar reports from other regions, including some suggesting high percentages of individuals with COVID-19 in hospital intensive care units having comorbidities, chief among them obesity and diabetes.

For now, we highlight a review by Bornstein et al. (*Lancet Diabetes & Endocrinology*, doi.org/dttb), which describes the current situation with diabetes and COVID-19 and provides practical clinical recommendations for their co-management. The review is authored by a panel of international experts on diabetes and endocrinology and combines a focused literature review and their own clinical experience.

The authors describe two mechanisms that may be involved. The first centers on the role of angiotensin-converting enzyme 2 as a receptor for the coronavirus spike protein and its cell entry; the second focuses on the dipeptidyl peptidase 4 enzyme as another potential receptor for the virus. The authors review the potential disease outcomes with each mechanism, including the prospect that the virus might induce new-onset diabetes,

which would explain the high insulin requirements found in patients with a severe course of the illness.

While the putative mechanisms clearly need more elucidation, there are already implications for the care of individuals with diabetes, according to the authors. Broadly, they recommend that individuals with diabetes who have not been infected with the virus optimize their metabolic control. They also advocate the use of telemedicine as much as possible to maximize care and also self-containment. For those with an infection, they recommend that all patients without preexisting diabetes be monitored for new-onset diabetes. They suggest therapeutic aims, particularly for patients with both diseases, and also recommendations regarding which therapeutics to continue or stop. These include stopping sodium–glucose cotransporter 2 inhibitors and continuing ACE inhibitors, angiotensin II receptor blockers, and statins, in line with other published recommendations. They also provide specific recommendations for a number of subgroups with diabetes.

“We do realize that all our recommendations and reflections are based on our expert opinion, awaiting the outcome of randomized clinical trials,” the authors note. “Executing clinical trials under challenging circumstances has been proven feasible during the COVID-19 pandemic, and trial networks to provide evidence-based therapies are arising. Investigating subgroups with diabetes and how these relate to COVID-19 outcomes will be important, in particular, investigating if some of the various management approaches would be particularly effective in managing diabetes in a COVID-19 context.”

Obesity: A Risk Factor for COVID-19 Severity

It is becoming clear that obesity is an independent risk factor for COVID-19 severity. Three studies covering the period from early March to early April 2020 all suggest that obesity is associated with hospitalization and the need for mechanical ventilation after infection with SARS-CoV-2. In a France-based study of 124 patients admitted to intensive care (*Obesity*, doi.org/ggr2fc), Simonnet et al. found that obesity (BMI >30 kg/m²) was present in nearly half and that, of those, nearly 70%

Max Bingham, PhD, is a science writer and editor in Rotterdam, Netherlands. He can be reached on Twitter at @maxbingham.

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required mechanical ventilation. They also found that the proportion requiring ventilation rose with increased BMI category, to reach ~86% in patients with a BMI >35 kg/m².

Meanwhile, in a study from New York City, Petrilli et al. (medRxiv, doi.org/ggsjbw) found that greater age and severe obesity (BMI >40 kg/m²) were the strongest risk factors for hospitalization due to COVID-19. Compared with the French study, a similar rate (68%) of individuals with critical illness required ventilation.

In line with these studies, Lighter et al. (*Clinical Infectious Diseases*, doi.org/ggr2mk) reported that individuals <60 years of age who were positive for COVID-19 and had a BMI >30 kg/m² were 1.8–3.6 times more likely to be admitted to acute or critical care in a New York City facility. As the authors pointed out, 40% of adults in the United States are obese, so these findings might have “important and practical implications.” An understatement, we suggest.



ADA NEWS

Podcast Series Aims to Disrupt Therapeutic Inertia in Diabetes Management

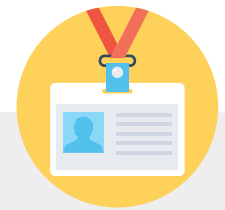
The American Diabetes Association (ADA) has released a three-episode series of *Diabetes Core Update*—ADA’s podcast for primary care and point-of-care providers—devoted to the topic of therapeutic inertia. Co-hosts Neil Skolnik, MD, and John Russell, MD, of Abington Jefferson Health explore the causes and consequences of therapeutic inertia in diabetes management, as well as the roles that clinicians and point-of-care providers can play in addressing and reducing therapeutic inertia. Episodes are available at <https://bit.ly/2z9LmRU>. This series is supported by an independent educational grant from Sanofi.



Systematic Reviews Examine Cost-Effectiveness of Interventions to Prevent and Manage Diabetes

The ADA and the Centers for Disease Control and Prevention have collaborated on two systemic reviews of the economic value of interventions to prevent and manage diabetes. The first examines clinical interventions targeting people at high risk of developing type 2 diabetes and then treating them with either lifestyle changes or metformin. The second reviews studies from high-income countries evaluating the cost-effectiveness of diabetes management interventions recommended by the ADA. The reviews include the latest evidence available and are intended to guide clinicians and policymakers toward the best use of their prescriptions and health care dollars. Both were published in the July 2020 issue of *Diabetes Care* and are available online through care.diabetesjournals.org.

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CONFERENCE SPOTLIGHT

It was perhaps inevitable that medical and scientific conferences would be a tall order in the face of a global viral pandemic. The following is a status report on some of the key diabetes-related meetings for 2020.

ENDO 2020 — San Francisco, CA

The annual Endocrine Society meeting was originally scheduled for 28–31 March but was cancelled and replaced with a virtual conference held on 8–22 June. At the time of writing, there was no word on how long content from the meeting will be kept online. Details were posted online at bit.ly/3c718Nt.

ADA 80th Scientific Sessions — Chicago, IL

The American Diabetes Association cancelled its live Scientific Sessions in early April and moved to a virtual conference, which was held on the original dates (12–16 June) with the sessions following the original timetable. All sessions were pre-recorded, and participants had the opportunity to chat live with the speakers during their presentations. Presentations will remain online in an on-demand format after their original release for attendees to view at their convenience. All registered attendees received unlimited access to all virtual content for 90 days after the meeting. Details were posted online at professional.diabetes.org/scientific-sessions.

ACC 2020 Scientific Sessions/World Congress of Cardiology — Chicago, IL

Originally scheduled for 28–30 March, the American College of Cardiology conference was cancelled in early March and transitioned to a virtual experience (virtual.acc.org), with content slated to remain online for free until the end of June

2020. Information was posted online at accscientificsession.acc.org.

AACE 29th Annual Scientific & Clinical Congress — Washington, D.C.

This American Association of Clinical Endocrinologists meeting, originally scheduled for 6–10 May, was canceled completely, and no virtual conference was organized to replace it.

EASD 2020 — Vienna, Austria

In April, the European Association for the Study of Diabetes recommended that individuals planning to attend the 56th EASD annual meeting “freeze their upcoming travel arrangements” to the conference, scheduled for 21–25 September (bit.ly/2zfnzjv). It later announced that it would transform the meeting into a virtual event to be held during the same timeframe. More information is available at bit.ly/31cazY8.

Obesity Week 2020 — Atlanta, GA

At the time of writing, there was no sign that this meeting, put on by the American Society for Metabolic & Bariatric Surgery and the Obesity Society would be canceled or delayed. The conference is scheduled for 2–6 November. Information is available online at obesityweek.com.

IDF Diabetes Complications Congress 2020 — Lisbon, Portugal

This meeting of the International Diabetes Federation is scheduled for 3–5 December and, at the time of writing, organizers seemed confident that it would be held. Details are available at bit.ly/3foSr1G. The general IDF Congress is scheduled for 6–9 December 2021 (bit.ly/2Wx1Rzt).



TREATMENTS + THERAPIES

Dapagliflozin Tested in Patients With COVID-19

AstraZeneca is moving forward with a clinical trial of the sodium–glucose cotransporter 2 (SGLT2) inhibitor dapagliflozin in patients with COVID-19 who also have cardiovascular, metabolic, or kidney disease risk factors, including diabetes. The trial will assess whether the drug reduces the risk of disease progression, clinical complications, and deaths due to COVID-19.

There is some logic to this move, as repeated clinical trials have shown benefits of dapagliflozin with regard to heart failure, chronic kidney disease, and type 2 diabetes, and these same conditions are among the comorbidities associated with poor outcomes with COVID-19. However, the trial has also raised some eyebrows as a number of groups (including the international panel featured in the “From the Journals” section on p. iv) have recommended that SGLT2 inhibitors be stopped in patients with COVID-19 because of the risk of diabetic ketoacidosis. Medscape’s look at the differing opinions on the risks

involved can be found at wb.md/2W6ALjL. The trial is called DARE-19, and its clinical trial registration can be found at bit.ly/2KZrYtG. At the time of writing, the trial was open for enrollment, and researchers aimed to include approximately 900 patients. The primary completion date for the trial is October 2020.

DAPA-CKD Trial Stopped Early Due to Finding of “Overwhelming Efficacy”

The DAPA-CKD (Dapagliflozin And Prevention of Adverse outcomes in Chronic Kidney Disease) trial that was designed to assess the effects of the SGLT2 inhibitor dapagliflozin on renal outcomes was recently stopped early on the advice of the trial’s independent data monitoring committee. According to a statement by the trial sponsor (bit.ly/3dgJMws), the drug showed “overwhelming efficacy” in reducing the composite primary end point of worsening renal function or death in patients with CKD, irrespective of the presence of type 2 diabetes. The full results of the trial will be submitted for presentation at a forthcoming conference, although there is no word yet on which conference it will be.

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New Consensus Reports Published

Precision Medicine in Diabetes

The ADA and the European Association for the Study of Diabetes have entered into a partnership to further our understanding of the application of precision medicine to diabetes. The two associations have jointly authored a consensus report on the current state of the field and its prospects for the future. The report includes expert opinion on precision diagnostics and therapeutics (including prevention and treatment) and identifies key barriers to and opportunities for implementing precision medicine. The report was published in the July 2020 issue of *Diabetes Care* and can be accessed through care.diabetesjournals.org.

Diabetes Self-Management Education and Support in Type 2 Diabetes

The ADA, in partnership with the Association of Diabetes Care and Education Specialists, the Academy of Nutrition and Dietetics, the American Academy of Family Physicians, the American Academy of Physicians Assistants, the American Association of Nurse Practitioners, and the American Pharmacists Association, has published a consensus report on diabetes self-management education and support (DSMES). The report is aimed at improving clinical care and education services, improving the health of individuals and populations, and reducing diabetes-associated health care costs. It outlines the benefits of DSMES, defines four critical times to provide and modify DSMES, offers resources, and discusses potential solutions to access and utilization barriers. The report appears in the July 2020 issue of *Diabetes Care* and can be accessed online through care.diabetesjournals.org.

MARKETPLACE

Diabetes Telehealth: Practical Advice for Implementation and a Massive Increase in Use

In the face of the COVID-19 pandemic, clinicians of all specialties ramped up implementation of telehealth into their practices to facilitate the safe continuation of care services for their patients. An interim report from one telehealth provider, Luma Health, set out the extraordinary acceleration of uptake of their services (bit.ly/3djZ9Ey). If the patterns they describe are repeated across the United States and indeed globally, it is fair to suggest the pandemic will change care provision fundamentally.

Meanwhile, in a possibly prophetic, pre-COVID-19 article, Crossen et al. (*Diabetes Technology & Therapeutics*, doi.org/dttc) provide a detailed guide to implementing telehealth for diabetes care. Describing diabetes as an ideal condition for telehealth use, they offer specific recommendations for its effective implementation and a vision for its future in diabetes care. While acknowledging there are still barriers, they point to the rapid emergence of new technologies that can be implemented now and describe a possible future for diabetes care that would be “transformative,” if implemented successfully.

With a focus on patient-to-clinic video encounters, the authors cover 10 areas of recommendation designed to facilitate successful implementation of telehealth as a diabetes care

modality. They also describe asynchronous review of patient-generated data and clinic-to-clinic communications. Tips include basic requirements for hardware and software, data-sharing from devices specific to diabetes, and scheduling and standardization of virtual visits. The authors discuss issues of electronic health record integration. They also look at aspects of patient behavior and expectations that might require careful handling.

Written before the pandemic took hold globally, this article does not cover two more recent emergency federal actions that affect reimbursement for telehealth in the United States. Effective 6 March 2020, the Centers for Medicare & Medicaid Services lifted Medicare restrictions on the use of telehealth services (go.cms.gov/2ysXa1G), allowing physicians to be paid for telehealth at the same rate as in-person visits for all diagnoses (not just those related to COVID-19). Additional measures from the U.S. Department of Health and Human Services (bit.ly/35wllbO) temporarily removed penalties for violating the Health Insurance Portability and Accountability Act, allowing health care providers to communicate with patients via technologies such as Skype and FaceTime.

To learn more about ADA’s continuing education opportunities, including Diabetes Is Primary events in your community, please visit professional.diabetes.org/ce.