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JCF Year in Review

It is impossible to review this past year without acknowledging the novel coronavirus (SARS-CoV-2) and the COVID-19 pandemic that ensued. So little was known and so much was feared at the start, but the global CF community united rapidly to share information and learn together. Representative of this united effort was the initial [1] and subsequent [2,3] reports providing information from many countries and their experience with COVID-19 in their CF patients, including children. While it was clear that COVID-19 could be a serious condition for some people with CF, infection with SARS-CoV-2 for most people with CF is less severe than originally feared. We have also learned that there can be asymptomatic infection, with evidence coming from serologic assessment of a CF cohort [4], although the prevalence was low, perhaps lower than the general population. One hypothesis for this observation is that CF patients and families are more attuned to the need for infection control measures and are therefore better at shielding themselves to minimize the risks of infection.

Clinic teams adapted to new methods of delivering care for persons with CF [9]. In-person clinic visits switched to conversations over the internet and rapidly developing models of CF telemedicine. Home spirometers, pulse oximeters, and scales have become the norm. Centers have looked for novel methods of performing laboratory measurements including respiratory cultures and blood tests. Multidisciplinary teams conduct meetings using group conference platforms and now must work to maintain the communication so vital to such interactions. Key questions remain such as whether telemedicine can be an effective and durable approach to providing multidisciplinary CF care? The COVID-19 pandemic could also adversely affect support for the multidisciplinary teams as hospitals faced reduced clinical income and an urgent need to redeploy key position (e.g. physicians, respiratory therapists) for the direct care of patients infected with SARS-CoV-2. Other support may have come from charitable foundations many of

Table 1
Top Recent Manuscripts Cited in 2020.

Title	Type
*ECFS best practice guidelines: the 2018 revision [12]	Review
*Up-to-date and projected estimates of survival for people with cystic fibrosis using baseline characteristics: a longitudinal study using UK patient registry data [13]	Original article
*CFTR modulator therotyping: Current status, gaps and future directions [14]	Review
*Lumacaftor/ivacaftor in patients with cystic fibrosis and advanced lung disease homozygous for F508del-CFTR [15]	Original article
*Lung transplant referral for individuals with cystic fibrosis: Cystic Fibrosis Foundation consensus guidelines [16]	Review
*An open-label extension study of ivacaftor in children with CF and a CFTR gating mutation initiating treatment at age 2–5?years (KLIMB) [17]	Original article
Dietary intake of energy-dense, nutrient-poor and nutrient-dense food sources in children with cystic fibrosis [18]	Original article
Predictive factors for lumacaftor/ivacaftor clinical response [19]	Original article
*Antimicrobial susceptibility testing (AST) and associated clinical outcomes in individuals with cystic fibrosis: A systematic review [20]	Original article
Audiometric assessment of pediatric patients with cystic fibrosis [21]	Original article

* Open Access

Such protective measures are not without consequences, however. Social distancing is not psychologically healthy for anyone, but especially those who may already feel isolated by a chronic health condition. Surveys of adults with CF and parents of children with CF found greater stress with more sadness and a sense of helplessness [5,6], not unlike what has been reported in the general population [7]. Concerns for how such stress might impact the performance of routine therapies were allayed by reports of adherence levels at least similar to those pre-COVID-19 pandemic [5] with the exception of reduced physical activity [8]. What impact this will play in overall health remains to be seen.

whom have realized a reduction in donations, thus adversely impacting their ability to provide usual funding, whether to the care team or even families affected by CF.

Clinical research has also been affected, having to adapt to novel methods that adhere to societal restriction such as remote consenting and study visits and use of devices (e.g. spirometers) in the home setting, as well as reduced access to clinical samples [10]. We will need to determine the reliability of such remote measures and design clinical trials to effectively collect critical endpoints while maintaining safety.

Table 2Individuals who performed ≥ 5 reviews during 2020.

Pierre-Régis Burgel
 Andre Cantin
 Lindsay Caverly
 Christopher Hooper Goss
 Ed McKone
 Chee Yee Ooi
 Lito Papnicolas
 Lucy Perrem
 Clement Ren
 Gregory S. Sawicki
 Ranjani Somayaji
 Kevin Southern
 Mirjam Stahl
 Sanja Stanojevic
 Cliff Taggart
 Jennifer Taylor-Cousar
 Claire Elizabeth Wainwright
 Edith Zemanick

And we cannot forget the impacts on education, training, and the dissemination of knowledge. While there are ways in which teaching on-line has an advantage in that it is perhaps more accessible and equitable, there are downsides as well: reduced face-to-face time, the loss of ad hoc teaching from experienced clinician educators, and increased focus on crisis management rather than protected educational time. Changing annual conferences from an in-person model to a digital one, while technologically feasible (and kudos to those who made them work well), still suffers from the loss of being together to share our knowledge and experiences.

Despite the disruption that COVID-19 has had on our lives, there is a bright future. Vaccines are becoming available, and novel therapies for those with COVID-19 are being tested, some even specifically for patients with CF [11]. There remain many unanswered questions and we anticipate that COVID-19 research will remain a priority for 2021.

Irrespective of COVID, there remain important questions regarding CF and its consequences, and the Journal of Cystic Fibrosis (*JCF*) has continued to receive submitted manuscripts. *JCF* continued to grow in stature and activity with an 11% increase in the number of submissions to *JCF* this year compared to 2019, when we had a record year of submissions. Despite the pandemic, the quality of manuscripts has been very high, perhaps related to the rise in impact factor the last several years. *JCF* is clearly a journal with an international relevance as we receive manuscripts from all over the world. Here we highlight some recent accomplishments in showing recently published papers with the greatest number of citations in 2020 (Table 1). It is notable that most of these papers are available as Open Access, freely available to all readers. We do not assess our success by citations alone; our readership includes not only scientists but all members of the multidisciplinary team and those we serve (patients and families), who may access *JCF* through downloads and social media citations.

We are extremely grateful to the Editorial Board and reviewers who contribute to the important processes so vital to *JCF*. They help us identify and improve the manuscripts that advance our knowledge in cystic fibrosis. We know that the editorial review process, if done in a timely manner, places great burden on the editors and reviewers. As we changed our editorial platform, our editors and reviewers adapted rapidly, even as we discovered hidden glitches that come with change. We go to our reviewers often; a complete list of all who performed at least one review for *JCF* is provided in this issue [page number]. Those individuals who performed at least five reviews are listed in Table 2, but we especially want to recognize Pierre-Regis Burgel (11), Lindsay Caverly (8), and Mirjam Stahl (8) as our top three reviewers of 2020.

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References

- [1] Cosgriff R, Ahern S, Bell SC, et al. A multinational report to characterise SARS-CoV-2 infection in people with cystic fibrosis. *J Cyst Fibros* 2020;19:355–8.
- [2] McClenaghan E, Cosgriff R, Brownlee K, et al. The global impact of SARS-CoV-2 in 181 people with cystic fibrosis. *J Cyst Fibros* 2020;19:868–71.
- [3] Bain R, Cosgriff R, Zampoli M, Elbert A, Burgel PR, Carr SB, et al. Clinical characteristics of SARS-CoV-2 infection in children with cystic fibrosis: an international observational study. *J Cyst Fibros* 2021;20:25–30.
- [4] Berardis S, Verrokenc A, Vetillart A, et al. SARS-CoV-2 seroprevalence in a Belgian cohort of patients with cystic fibrosis. *J Cyst Fibros* 2020;19:872–4.
- [5] Havermans T, Houbena J, Vermeulen F, et al. The impact of the COVID-19 pandemic on the emotional well-being and home treatment of Belgian patients with cystic fibrosis, including transplanted patients and paediatric patients. *J Cyst Fibros* 2020;19:880–7.
- [6] Ciprandi R, Bonati M, Campi R, Pescini R, Castellani C. Psychological distress in adults with and without cystic fibrosis during the COVID-19 lockdown. *J Cyst Fibros* 2021. doi:10.1016/j.jcf.2020.12.016.
- [7] Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet [Internet]* 2020;395(10227):912–20 Mar 14, cited 2020 Apr 27.
- [8] Radtke T, Haile SR, Dressel H, Benden C. Recommended shielding against COVID-19 impacts physical activity levels in adults with cystic fibrosis. *J Cyst Fibros* 2020;19:875–9.
- [9] Garcia B, Christon L, Gray S. In the south, if you give us lemons, we will make you lemonade. *J Cyst Fibros* 2020;19:842–3.
- [10] van Koningsbruggen-Rietschel S, Dunlevy F, Bulteel V, et al. SARS-CoV2 disrupts clinical research - the role of a rare disease-specific trial network. *Eur Respir J* 2020. doi:10.1183/13993003.02114-2020.
- [11] McElvaney O, O'Connor E, McEvoy N, et al. Alpha-1 Antitrypsin for Cystic Fibrosis Complicated by Severe Cytokinemic COVID-19. *J Cyst Fibros* 2021;20. doi:10.1016/j.jcf.2020.11.012.
- [12] Castellani C, Duff AJA, Bell SC, Heijerman HGM, Munck A, Ratjen F, et al. ECFS best practice guidelines: the 2018 revision. *J Cyst Fibros* 2018;17:153–78.
- [13] Keogh RH, Szczesniak R, Taylor-Robinson D, Bilton D. Up-to-date and projected estimates of survival for people with cystic fibrosis using baseline characteristics: a longitudinal study using UK patient registry data. *J Cyst Fibros* 2018;17:218–27.
- [14] Clancy JP, Cotton CU, Donaldson SH, Solomon GM, VanDevanter DR, Boyle MP, et al. CFTR modulator therapy: Current status, gaps and future directions. *J Cyst Fibros* 2019;18:22–34.
- [15] Taylor-Cousar JL, Jain M, Barto TL, Haddad T, Atkinson J, Tian S, et al. Lumacaftor/ivacaftor in patients with cystic fibrosis and advanced lung disease homozygous for F508del-CFTR. *J Cyst Fibros* 2018;17:228–35.
- [16] Ramos KJ, Smith PJ, McKone EF, Pilewski JM, Lucy A, Hempstead SE, et al. Lung transplant referral for individuals with cystic fibrosis: Cystic Fibrosis Foundation consensus guidelines. *J Cyst Fibros* 2019;18:321–33.
- [17] Rosenfeld M, Cunningham S, Harris WT, Lapey A, Regelman WE, Sawicki GS, et al. An open-label extension study of ivacaftor in children with CF and a CFTR gating mutation initiating treatment at age 2–5 years (KLIMB). *J Cyst Fibros* 2019;18:838–43.
- [18] Sutherland R, Katz T, Liu V, Quintano J, Brunner R, Tong CW, et al. Dietary intake of energy-dense, nutrient-poor and nutrient-dense food sources in children with cystic fibrosis. *J Cyst Fibros* 2018;17:804–10.
- [19] Masson A, Schneider-Futschik EK, Baatallah N, Nguyen-Khoa T, Girodon E, Hatton A, et al. Predictive factors for lumacaftor/ivacaftor clinical response. *J Cyst Fibros* 2019;18:368–74.
- [20] Somayaji R, Parkins MD, Shah A, Martiniano SL, Tunney MM, Kahle JS, et al. Antimicrobial susceptibility testing (AST) and associated clinical outcomes in individuals with cystic fibrosis: A systematic review. *J Cyst Fibros* 2019;18:236–43.
- [21] Kreicher KL, Bauschard MJ, Clemmens CS, Riva CM, Meyer TA. Audiometric assessment of pediatric patients with cystic fibrosis. *J Cyst Fibros* 2018;17:383–90.