Taking OAB seriously: A qualitative evaluation of primary care education on overactive bladder syndrome management

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Funding information
Astellas funded the education program and its evaluation via an independent grant but were not involved in data collection, analysis, interpretation or in manuscript development.

Abstract

Background: Overactive bladder (OAB) syndrome has a diverse etiology that disrupts quality of life domains in affected patients. OAB is significantly under-recognised and undertreated, especially in the primary care setting. In order to educate primary care providers about OAB recognition, evaluation and management, we created a virtual live-streamed and enduring education program.

Methods: We evaluated the impact of education on provider knowledge and self-efficacy via qualitative interviews with a sample of education participants. We analysed participant responses via constant comparative method, an iterative approach that allows for exploration of a priori issues and identification of emergent themes.

Results: We identified four key themes: (a) taking OAB seriously; (b) variations in therapy; (c) patient motivation; and (d) education value. Participants were proactive about screening for and managing OAB and recognised urgency as a key symptom; some participants used diagnostic tests that are not are not considered necessary in the workup of uncomplicated OAB patients. Participants varied in their descriptions of initial approaches to treatment and most participants described a longer-than-recommended follow-up window to monitor patients. Some participants characterised patients as looking for a "quick fix" in ways that could lead to provider inaction in relation to behavioural/lifestyle interventions. Overall, participants felt that the education validated their current practice and provided new knowledge about evaluation, initiating behavioural treatment, and combination therapy.

Conclusions: Participant responses were congruent with education messages, which likely reflect their "readiness to learn". The rationale for diagnostic tests and evidence on the effectiveness of behavioural regimens represent ongoing areas of unmet educational need.
1 | BACKGROUND

Overactive bladder (OAB) syndrome is a symptom complex that disrupts quality of life (QoL) domains in affected patients, including mental health, interpersonal and social relationships, and occupational life. OAB syndrome has a diverse etiology and is estimated to affect 17%-33% of people in the United States (US)—mostly, but not exclusively, women. Urgency—a sudden and compelling need to void that is difficult to ignore—is the hallmark symptom of OAB syndrome, and is often accompanied by frequency and nocturia, with or without incontinence. OAB syndrome is also significantly associated with a variety of comorbidities including depression, urinary tract infections (UTI), weight gain, diabetes and falls, especially among older people.

Although treatment can be very effective, OAB syndrome is significantly under-recognised and undertreated. Behavioural and lifestyle modifications such as bladder training, bladder control strategies, pelvic floor muscle training, fluid management and weight loss are considered first-line therapies for OAB syndrome, and many medications are available to treat OAB symptoms, including multiple antimuscarinic agents and beta-3 adrenergic receptor agonists. However, barriers such as diagnostic delay, low patient adherence to treatment and poor communication contribute to suboptimal recognition and management of OAB syndrome. Moreover, while patients prefer providers to initiate discussions about OAB syndrome, studies suggest that providers rarely initiate such conversations.

As the US population ages, the societal and economic burden is expected to increase, with economic costs of OAB syndrome projected to be $82.6 billion in 2020. Therefore, it is incumbent on providers to screen patients and initiate discussion about symptoms redolent of OAB syndrome. Since OAB syndrome is often managed in the primary care setting, PlatformQ Health Education and the Postgraduate institute for Medical Education created a virtual program to educate primary care providers (PCPs) about OAB recognition, evaluation and management. We evaluated the impact of education on provider knowledge and self-efficacy via qualitative interviews that create an environment for reflection and allow for a degree of “summative judgement” about the experience of education participation and clinical practice.

2 | METHODS

2.1 | Education program design and delivery

Managing Overactive Bladder in the Primary Care Setting was designed to provide an overview of best practices for patient management in OAB syndrome, including recent clinical safety and efficacy data for therapeutic agents. The target audience included physicians, nurse practitioners, physician assistants and other healthcare providers in primary care who manage patients with OAB syndrome. The learning objectives were to enable participants to: (a) differentiate OAB symptoms from other lower urinary tract (LUT) symptoms; (b) utilise current practice guidelines and discuss the benefits and challenges regarding the current treatment landscape of OAB syndrome; and (c) employ strategies to mitigate treatment-related side effects, and improve patient adherence and QoL. Accordingly, program content focused on best practices to screen for and accurately diagnose OAB syndrome, implement effective treatment strategies and improve treatment adherence. The education program included two live-virtual sessions by three OAB syndrome experts (two of whom are co-authors) and provided time for participants to ask questions. The online program was broadcast live from a production studio on www.UroCareLive.com on November 15, 2018 and made available on demand on the same site through May 15, 2019. It was also promoted on the Large Urology Group Practice Association website, www.lugpa.org. The program drew a total of 1,341 unique learners.

2.2 | Evaluation of knowledge, competence and practice change

We evaluated the impact of education on provider knowledge and self-efficacy via qualitative interviews with a sample of education participants. The interview discussion guide (Figure S1) was designed to explore contextual factors that potentially contribute to knowledge uptake and further explore the impact of the education
activity on the barriers and challenges that PCPs face in the management of OAB syndrome. One of the authors (AH) conducted confidential 30-45-minute telephone interviews with participants that were audio-recorded via cloud-based, web-conferencing software (www.uberconference.com). We transcribed interviews verbatim and imported them into NVivo for Mac 11 (QSR International), a software package designed to support systematic analysis of unstructured textual, visual and audio data.

2.3 Participants, inclusion/exclusion criteria and recruitment

We recruited providers to participate in the education via a digital marketing campaign. The program was promoted across Facebook and Twitter, and emails were sent to approximately 247,000 healthcare professionals. We recruited potential interviewees from the sample of learners who participated in the UroCareLive program. When interview recruitment commenced the education was still in the on-demand phase, and only 247 learners had completed the education to-date. We invited these 247 learners to participate in voluntary interviews 6-10 weeks following education participation. Participants were eligible for interview if they managed patients with OAB syndrome, resided in the US, and recalled participating in the program. We verified eligibility via an e-mail that included a brief description of the study and a URL link to a screener survey. The survey contained 10 questions (age, race, gender, medical degree, specialty, state of practice, practice setting, patients with OAB seen/year, “do you recall viewing [the CME program]”, and a question about their interest/availability for the telephone interview). When screening for potential interviewees began, 274 learners had completed the education activity, 50 responded to interview invitations and 44 provided contact information. When selecting who to interview, we sought to balance racial, geographic and age demographics. We also first invited individuals who identified as PCPs, since this was a target audience of the education we were evaluating. As a result, we recruited the final 20 interviewees represented in this evaluation study. A moderate honorarium was offered on interview completion ($175 American Express gift cards). Western Institutional Review Board approved the study and we obtained informed consent from all participants prior to interview. None of the participants were personally known to the authors.

3 QUALITATIVE INTERVIEWS AND ANALYSIS

Participant responses to interview questions were analysed via constant comparative method, an iterative coding approach that allows for exploration of a priori issues and identification of emergent ideas (or themes) in the data within and across cases. One of the authors (AH) coded transcript content using descriptive codes that followed the structure and focus of the interview guide. Additional coding identified themes across the data grounded in participants’ reflections about both the education and its relation to their current clinical practice. Discussion among two of the authors (AH and WT) provided analytic authentication of codes and four key themes: (a) taking OAB syndrome seriously; (b) variations in therapy; (c) patient motivation; and (d) education value. Qualitative findings were also examined for differences among subgroups (ie practice setting, specialty) and are reported where relevant.

4 RESULTS

4.1 Interview participants

We interviewed 20 learners drawn from the larger population of education program learners (Table 1).

Most interview participants worked in a range of primary care or family/internal medicine settings. Despite initial screening responses that indicated primary care as the practicing specialty, at interview, six participants described themselves as working in a urology setting (4 NPs) or being a urologist (2 MDs). We included this group in the final analysis and differentiated between their responses and primary care participants where relevant. More than

| Variable                        | N  | %   |
|---------------------------------|----|-----|
| Gender                          |    |     |
| Female                          | 12 | 60  |
| Male                            |  8 | 40  |
| Designation                     |    |     |
| MD                              |  7 | 35  |
| Advanced practice providers     | 13 | 65  |
| Specialty                       |    |     |
| Primary care                    |  8 | 30  |
| Internal medicine               |  6 | 30  |
| Urology practice                |  6 | 40  |
| Practice setting                |    |     |
| Solo private                    |  5 | 25  |
| Single group practice           |  4 | 20  |
| Multi-group practice            |  8 | 40  |
| Community clinic                |  3 | 15  |
| Number of OAB patients/y        |    |     |
| ≤30                             |  5 | 25  |
| 31-50                           |  2 | 10  |
| ≥51                             | 13 | 65  |

Abbreviation: OAB, overactive bladder.

Nurse practitioners, physician assistants, and advanced nurse practitioners.
half of the interview participants were over 55 years old and the median age was 49 years. The key themes are presented below.

4.2 | Taking OAB seriously: screening, diagnosis and evaluation

Participants took OAB syndrome seriously. They all expressed a specific interest in OAB syndrome; viewed OAB syndrome as common among their patient populations; and described themselves as proactive about screening for and managing patients with OAB symptoms. They described the symptoms of OAB syndrome in ways that were consistent with clinical definitions offered in the education program and recognised urgency as a key symptom. Participants also acknowledged the considerable impact of OAB syndrome on their patients and identified several scenarios that were consistent with published data on patient experience, such as using incontinence or other pads to absorb urine, bathroom mapping, restricting fluid intake, and social and occupational disruption. They were aware that OAB syndromes prevalent in both women and men but generally reported that in their own practice settings OAB syndrome was especially common among women “who have had children”, “in the 40-60-year range,” “the elderly,” or perimenopausal patients. Most participants reported that they routinely ask about bladder or voiding issues for “older” patients, “all patients”, or patients having a Pap smear, and offered examples of specific questions they ask patients to differentiate OAB syndrome from other LUT symptoms that were consistent with key education messages and focused on volume, flow and strength (Table 2).

Overactive bladder syndrome can be diagnosed whenever symptoms are self-reported by a patient as bothersome and occur in the absence of other pathologies. Specific diagnostic measures are comprehensively described in the American Urological Association (AUA) guidelines for the diagnosis and treatment of OAB syndrome, and include a focused physical examination and urinalysis, post-residual volume and a voiding diary to record frequency, volume and incontinence severity. Half of the participants (all primary care) relied principally on urinalysis as standard initial evaluation to exclude UTI, while the other half also emphasised the importance of physical exam as the cornerstone of OAB syndrome evaluation, as per AUA guidelines. Approximately one-third of participants reported that they also typically order or perform urodynamics, cystoscopy or bladder ultrasound at baseline, although these tests are not are not considered necessary in the workup of uncomplicated OAB syndrome patients (Table 2). This group included both participants working in urology settings (n = 4) and in primary care (n = 3).

4.3 | Variation in initial therapy

Participants varied in their descriptions of initial approaches to treatment. Two NPs (one in primary care, one in urology) described using a 4-6-week trial of behavioural/lifestyle modifications (ie caffeine reduction, scheduled voiding, Kegel’s exercises or referral to physical therapists for pelvic floor retraining) as their initial approach; 25% of participants, all in primary care, described using medication only; and 65% of participants in both primary care and urology settings described using a combination of nonpharmacologic interventions and pharmacologic therapies. Participants were aware of the availability and relative equivalence of a wide range of therapies for first-line treatment and collectively described 10 currently available first-line therapies. Their responses, which emphasised cost and tolerability as the key factors influencing agent selection, were consistent with education content (Table 3).

Nonetheless, participants varied in their ability to explain differences in the mechanisms of action among OAB syndrome medications. Explanations focused on different targets (ie bladder muscle vs receptor sites [45%]); different side effects vs mechanisms of action as the main differences between agents [20%]; 35%, all in primary care, were unable to describe any mechanisms of action (Table 3).

| TABLE 2  Taking OAB seriously |
|-----------------------------|
| **Subtheme**               | **Data extracts**                                                                 |
|-----------------------------|----------------------------------------------------------------------------------|
| Appropriate screening      | I’m just so concerned with it that I just have a form for my nurses, and they’ll do the questionnaire right then and there, even though I’m not a urologist. And I have that and another one for PHQ-9 for depression that I like to screen, just generally find out what’s going on with folks. And that’s my starting point. [Provider 20, MD, internal medicine] When we are talking about OAB vs urinary tract infection, do you have a fever? Are you burning? A lot of times my postmenopausal women will have burning, but it’s because of vaginal atrophy, or decreased estrogenisation of the tissue. I also ask how many times do you feel the need to void? Do you have the sensation that you’re losing urine when you cough, sneeze, stand up? So, I do go through a process trying to categorise it. [Provider 2, NP, primary care clinic] |
| Unnecessary diagnostic     | I have a little bladder scanner in the office. We have a couple of them that the nurses wheel in, and check, and make sure everybody’s emptying, and that they’re not in retention. [Provider 3, MD, group multi-practice, urology] Even if they have the urgency and frequency along with it, they’re not emptying the bladder probably. So, we may do a bladder scan there. [Provider 4, NP, group single-specialty, urology] We do post-void urine with bladder scanning in the clinic to see how much residual urine after voiding. I’ll do a CT urogram or bladder ultrasound, make sure there’s no tumour, or a catalyst, or something else in the bladder that may be responsible for that continuing to be the symptoms. [Provider 6, MD, group multi-practice, internal medicine] |
| tests                      |                                                                                  |

Abbreviation: OAB, overactive bladder.
**TABLE 3** Variations in initial therapy

| Subtheme | Data extracts |
|----------|---------------|
| β3-Adrenoceptor agonists | I personally like Myrbetriq just because it doesn’t have all the side effects when it comes to older patients. But sometimes insurance plays a part in what I get to choose. [Provider 13, NP, primary care] I’ve had very good success with Myrbetriq. That’s kind of my go-to. I start off very low and explain to the patient how the medicine works and kind of the side effects of it. [Provider 14, APN, primary care] |
| Antimuscarinics | Ditropan because it’s the cheapest. I give them the ER, 5 mgs a day of the ER dose. [Provider 5, NP, primary care] Usually, the usual antimuscarinic agent, Oxybutynin, Oxybutynin SA, Tolterodine. In elderly patients I try to use Trospium first line, because it doesn’t cross the blood-brain barrier. [Provider 6, MD, internal medicine] |
| Different targets | They work with clearly different receptors. The beta 3 work on a, I guess, beta 3 receptors, which they claim are on the bladder, and they act to relax it. The other ones were anticholinergics, and I think it works on different receptors. [Provider 1, MD, internal medicine] The original ones are more like antimuscarinic which helps relax the bladder muscle. And Myrbetriq has I think additional beta effects. And so I believe it has a little bit different mechanism of action and therefore works in a different manner. [Provider 10, MD, internal medicine] |
| Different side effects | The antimuscarinics are more similar than different. And the beta 3 doesn’t have the antimuscarinic side effect. [Provider 3, MD, urology] Oxybutynin, like I was saying earlier, has more of the anticholinergic effect to them, and so they kind of like dry everything up. [Provider 13, NP, primary care] |
| Unsure | My understanding is limited, I will tell you that. I would say that one can—I don’t know if I can answer that question. I’m going to be honest. I don’t want to make something up. [Provider 16, NP, primary care] On the way they work with the receptor in the bladder? Well, I don’t know, it’s a complex thing. [Provider 20, MD, internal medicine] |

### 4.4 | Follow-up and side effect management

Side effects are a challenge with antimuscarinic medications and include dry mouth, dry eyes, constipation, heart palpitations and cognitive impairment. Unsurprisingly, discontinuation rates within the first month of treatment range from 43% to 83% and rise further at later time points. Although education content recommended 10-14 days as an optimal follow-up window for monitoring side effects and efficacy after therapy initiation, most participants followed up with patients 4-6 weeks after initiating therapy. Participants who said they followed up with patients in 10-14 days were all in primary care.

I usually give them a good six weeks or so at least see how they’re—whether it’s working or how effective it is. [Provider 10, MD, internal medicine]

Voiding diaries can be reliably used as part of monitoring as well as initial evaluation to differentiate between polyuria (normal or large volume voids) and OAB syndrome (frequent small voids) and to identify behavioural habits that might be contributing to OAB syndrome. Only half of participants (including five of those in urology settings) reported that they would recommend a voiding diary to patients. Participants with high volume OAB syndrome patients (≥51 per year) expressed scepticism about the reliability and utility of voiding diaries on the grounds that a diary places undue burden on patient time and commitment.

A lot of them don’t like to do the very specific stuff, like a voiding diary, things like that. They just don’t really seem to, it’s not very reliable. [Provider 7, MD, internal medicine]

### 4.5 | Patients with persistent symptoms: combination and other therapies

Patients who have persistent OAB syndrome symptoms despite behavioural and pharmacologic treatment may require specialist referral for third-line therapies such as peripheral tibial nerve stimulation, sacral neuromodulation and temporary chemical denervation of the bladder detrusor muscle with on a botulinum toxin A. Most participants (including not only in primary care but also NPs in urology settings who had their own case load) said they referred patients to urologists for persistent symptoms after failing 2-3 medications, persistent symptoms after one month of therapy, or “no success after six months” of treatment. These responses were all consistent with educational messages and current guideline recommendations. Combination therapy with antimuscarinics and mirabegron is also considered an effective option for patients who experience insufficient improvement with monotherapy. Half of the participants (six in primary care, four in urology) claimed that they would “typically” or “occasionally” combine an antimuscarinic with the β3-adrenoceptor agonist for patients whose symptoms persist following treatment with 2-3 agents. Although the remaining participants remembered some mention of combination therapies in the education program, they could not recall any specific information about, and did not use combination therapy as a treatment option for patients with persistent symptoms.

### 4.6 | Patient motivation

Two recurring narratives surfaced in interviews (Table 4). Providers alluded to patient embarrassment as a barrier to effective...
management and described lack of patient motivation to engage in behavioural interventions or lifestyle modifications. In this narrative, providers characterised patients as looking for a “quick fix” or “overnight cure.”

4.7 | Education value

The relatively consistent alignment of interview responses about screening, diagnosis and treatment with education content intimated a sense of self-efficacy among participants in OAB syndrome management. Many participants felt the education provided reassurance about and validated their current practice; and provided new knowledge that they could use concerning evaluation (eg using voiding diaries) and initiating behavioural treatment (eg scheduled voiding). One quarter of participants felt that they had learned something new and valuable through the education activity about using combination therapy for patients with persistent symptoms despite initial treatment and were keen to use this approach in their own practice (Table 5).

5 | DISCUSSION AND CONCLUSIONS

Conducting interviews 6-10 weeks post-education allowed us to explore participant reflections about the impact of education on knowledge and clinical practice. The participants described themselves as experienced in their management of patients with OAB syndrome and reported a relatively high volume of OAB syndrome patients per year. These characteristics may partially explain their motivation to participate in both the education and the post-activity interview and may also explain why so many of their post-education responses were concordant with key education messages. Our analysis of qualitative data suggests that the education was effective in reinforcing and encouraging consideration of change in the current practice of interview participants because it was relevant to the challenges that they face in managing patients with OAB syndrome. As a result of this relevance and of participant “readiness to learn,”14 participant recall of key education messages was strong and consistent with education content. Post-education, all participants prioritised urgency as a key symptom and most participants said that they screened for bladder or voiding issues in elderly patients as a matter of course. They were able to share examples of specific questions they ask patients to differentiate OAB syndrome from other LUT symptoms that focused on volume, flow and strength and said that they perform urinalysis as standard initial evaluation to exclude UTI. Participants described the education activity as providing reinforcement for existing best practices; felt reassured that their clinical approach was validated as appropriate; and welcomed the paramount message that PCPs need to take OAB syndrome seriously. Many participants felt that they had learned something new and valuable about combination therapy and voiding diaries and expressed enthusiasm about trying these approaches in their own practice.

Yet despite the self-reported management expertise of interviewees and their recent exposure to relevant information, many participants still described suboptimal management practices. Notably, a significant minority of participants (three in primary care, four in urology) endorsed tests that current guidelines consider unnecessary in the initial work-up of uncomplicated patients.4 Additionally, many participants were unaware of, or did

### Table 4: Narratives of patient motivation

| Subtheme | Data extracts |
|----------|---------------|
| “The Quick Fix” | They don’t want to do the work. Bladder diaries are not fun, and bladder training and time voiding. They’re like, just give me a pill. [Provider 11, NP, primary care] |
| | I know what everyone would like is to come in, take one pill, which I actually give them in the office, and be cured. [Provider 3, MD, urology] |
| | This didn’t happen overnight, but we’re supposed to fix it overnight. [Provider 15, NP, primary care] |
| | You always have those few patients that just want “a quick fix” and they want a pill, you know. And so, they say, ‘well, just give me the pill now and I won’t have to do that stuff.’ [Provider 16, NP, primary care] |
| Embarrassment | I think the challenge is, number one; some patients may be somewhat embarrassed to bring it up. Or just raising the issue. [Provider 10, MD, internal medicine] |
| | Probably getting them to discuss about it just because of the humility. That would be probably one of the big ones. [Provider 14, APN, primary care] |
| | I guess some of them just being upfront and honest and letting me know. If say for some reason I forget to ask them, they don’t think about it, you know, then just getting our patients to let me know what their problem is. [Provider 16, NP, primary care] |
| | I guess the big challenge is just getting them to admit it. [Provider 17, NP, urology] |
| | I would probably say, if I had to add another challenge to that, I would say the patient feeling comfortable to actually let us know that that’s what that is. [Provider 19, NP, primary care] |
not use, appropriate behavioural or lifestyle recommendations. This finding is not unusual. Studies of patient experience similarly note that less than one-third of patients report that their providers have offered non-pharmacologic symptom management. However, although current guidelines do not insist that patients progress through each line of therapy in successive fashion, they do recommend behavioural therapies as initial therapy to all OAB syndrome patients, with or without pharmacologic management. The rationale for diagnostic tests and evidence on the effectiveness of behavioural regimens represent ongoing areas of unmet educational need in primary care.

Two recurring narratives in the interviews should be considered for their potential power in influencing provider inaction in relation to behavioural/lifestyle interventions. First, a narrative about patient desire to secure a “quick fix” characterised patients as “unmotivated” to take time and invest effort on making behavioural and lifestyle changes. Such a narrative might reinforce reluctance among providers to consider behavioural regimens at all, especially since current guidelines, while endorsing behavioural/lifestyle interventions, also suggest that behavioural regimens are most likely to be of appeal for the “motivated” patient. This narrative places the onus on providers to make judgements about characteristics that define the “motivated” patient. Second, participants posited embarrassment as a belief that hinders patient action and prevents them from discussing their OAB syndrome symptoms with providers. While other studies similarly suggest that embarrassment is a common barrier for seeking treatment among patients with OAB syndrome, the role of embarrassment, whether actual or anticipated, deserves further study. Providers might assume that patients are embarrassed or unmotivated and, therefore, avoid discussing OAB syndrome symptoms or recommending behavioural/lifestyle therapies.

Qualitative evaluation of education impact allows participations to reflect on their education experience and its relevance to their current practice. This study found strong congruence overall between participant responses and education messages, which likely reflects the “readiness to learn” and motivation of participants, who described themselves as experienced in OAB syndrome management. The study also identified two key narratives that frame patients as embarrassed or unmotivated in ways that potentially close down the potential for discussion—an essential component of effectively managing patients with potentially chronic conditions such as OAB syndrome.

ACKNOWLEDGMENTS
The authors thank all education program participants who agreed to be interviewed for this study.

DISCLOSURE
Matt Rosenberg is a Consultant and speaker for Astellas Pharma and Ferring Pharmaceuticals. Scott MacDiarmid is a Consultant/speaker for Astellas Pharma and Allergan. Wendy Turell and Alexandra Howson have nothing to disclose.
AUTHORS’ CONTRIBUTIONS
WT designed the study, authenticated data interpretation and approved the manuscript; AH collected/analysed data and drafted the initial manuscript; SMcD created and delivered education content and approved the manuscript; MR created and delivered education content and approved the manuscript. All authors read and approved the final manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE
Western Institutional Review Board approved the study and we obtained informed consent from all participants prior to interview.

CONSENT FOR PUBLICATION
No identifying participant information has been used in the preparation of this manuscript.

DATA AVAILABILITY STATEMENT
Qualitative data are archived in a NVivo 12 software program. Data are not publicly available but are available from the corresponding author on reasonable request.

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SUPPORTING INFORMATION
Additional supporting information may be found online in the Supporting Information section.

How to cite this article: Turell W, Howson A, MacDiarmid SA, Rosenberg MT. Taking OAB seriously: A qualitative evaluation of primary care education on overactive bladder syndrome management. Int J Clin Pract. 2020;74:e13604. https://doi.org/10.1111/ijcp.13604