



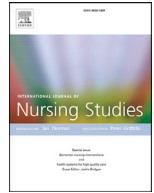
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Contents lists available at ScienceDirect

International Journal of Nursing Studies

journal homepage: www.elsevier.com/ijns

The changing role of Advanced Clinical Practitioners working with older people during the COVID-19 pandemic: A qualitative research study

Dawn A. Morley^{a,*}, Cliff Kilgore^b, Mary Edwards^b, Pippa Collins^b, Janet ME Scammell^a, Kelsie Fletcher^a, Michele Board^a

^a Department of Nursing Science, Faculty of Health and Social Science (FHSS), Bournemouth University, Bournemouth Gateway Building, St Pauls Lane, Bournemouth BH8 8AJ, United Kingdom

^b Dorset Healthcare Universities NHS Foundation Trust, United Kingdom

ARTICLE INFO

Article history:

Received 28 July 2021

Received in revised form 11 March 2022

Accepted 12 March 2022

Keywords:

Advanced clinical practice

COVID-19

Capability

Older people

Frailty

Leadership

Management

ABSTRACT

Background: COVID-19 was identified as a pandemic by the World Health Organisation (WHO) in December 2020. Advanced Clinical Practitioners (ACPs) in England working with older people with frailty, experienced their clinical role changing in response to the emergency health needs of this complex population group. In contrast to other countries, in England Advanced Clinical Practitioners are drawn from both nursing and allied health professions. Whilst much of the literature emphasises the importance of ensuring the sustainability of the Advanced Clinical Practitioners' role, the pandemic threw further light on its potential and challenges. However, an initial review of the literature highlighted a lack of research of Advanced Clinical Practitioners' capabilities working with uncertainty in disaster response situations. **Aim:** To capture the lived experience of how English Advanced Clinical Practitioners working with older people adapted their roles in response to the COVID-19 pandemic (October 2020–January 2021). **Design, setting and participants:** A qualitative research design was used. Following ethical approval, 23 Advanced Clinical Practitioner volunteer participants from across England with varied health professional backgrounds were recruited from Advanced Clinical Practitioners' professional and social media networks on Twitter using a snowballing technique.

Methods: Depending on preference or availability, 23 participants (nurses (18), physiotherapists (2), paramedics (2) and a pharmacist (1)) were interviewed singularly ($n = 9$) or as part of 3 focus groups ($n = 14$) using Zoom video communication. Audio recordings were transcribed and using qualitative data analysis software, NVivo 12 pro, coded for an essentialist thematic analysis of Advanced Clinical Practitioners' responses using an inductive approach. 27 codes were identified and collated into five themes. For the purposes of this paper, four themes are discussed: experiencing different work, developing attributes, negotiating barriers and changing future provision.

Findings: Advanced Clinical Practitioners successfully transferred their advanced practice skills into areas of clinical need during the pandemic. Their autonomous and generic, high level of expertise equipped them for management and leadership positions where speed of change, and the dissolution of traditional professional boundaries, were prioritised. Barriers to progress included a lack of knowledge of the Advanced Clinical Practitioner role and friction between Advanced Clinical Practitioners and physicians.

Discussion and conclusion: The study demonstrated the successful adaptation of the Advanced Clinical Practitioner role to enable more creative, personalised and sustainable solutions in the care of older people living with frailty during the pandemic. The potential of Advanced Clinical Practitioner development is in a juxtaposition to the threat of pandemic services being dismantled once the emergency nature of care has passed. Healthcare organisations have a vital part to play in considering the enablers and barriers of Advanced Clinical Practitioner capability-based practice when responding to uncertainty.

© 2022 Elsevier Ltd. All rights reserved.

* Corresponding author.

E-mail address: morleyd@bournemouth.ac.uk (D.A. Morley).

What is already known

- Advanced Clinical Practitioners in England are uniquely drawn from a multi professional health and social care workforce and are guided by four pillars of advanced clinical practice.
- Advanced Clinical Practitioners play a significant role in the management of frailty and the older person through their ability to make complex and holistic decisions with a high level of autonomy, yet this ‘capability’ is under investigated.
- Early evidence suggests the potential of the Advanced Clinical Practitioner role to be interchangeable in some instances with physicians.

What this paper adds

- In the context of a pandemic, Advanced Clinical Practitioners’ ability to apply their advanced clinical skills to autonomous, generalist practice allowed them to fulfil a breadth of management and leadership roles.
- Advanced Clinical Practitioners’ implementation of creative solutions to alternative care provision for the older person, strongly positions them as lead practitioners in future service delivery for this population.
- The study revealed that working in a pandemic, advanced the development of a positive, interdependent relationship between Advanced Clinical Practitioners and physicians.

1. Introduction

COVID-19 was identified as a pandemic by the World Health Organisation (WHO) in March 2020 and remains a major health disaster (World Health Organisation, 2020). Significantly people living with long term conditions, and those of an older age, were identified as particularly at risk from COVID-19 of higher morbidity and mortality (NHS England, 2020).

During the early stages of the pandemic, anecdotal evidence shared in online professional networks on Twitter commented on the adaption of advanced clinical practice roles to cope with demands. This adaption was particularly evident in England and by May 2020, a conversation via the social media site, Twitter, identified an interest by Advanced Clinical Practitioners (ACPs) to share their experiences of the expansion of their role. Perceiving a need, Health Education England (HEE) funded research to consider the role of Advanced Clinical Practitioners in the care of older people during the COVID-19 pandemic. The subsequent research was delivered through a co-partnership between local health service provider organisations and one university.

The study captured the lived experience of how English Advanced Clinical Practitioners working with older people adapted their roles in response to the COVID-19 pandemic (October 2020–January 2021).

Prior to the study, the concept of Advanced Clinical Practitioners dealing with uncertainty was under explored and this provided the impetus for research into this crucial area during the COVID-19 pandemic. Currently, there is a lack of guidance on the specific role responsibility for Advanced Clinical Practitioners in situations that are unpredictable with a strong suggestion that many are ill-prepared in the management of disasters (Fil et al., 2020).

2. Background

Advanced Clinical Practitioners (ACPs) can, and do, play a significant role in the management of the older person due to their holistic care approach (Ferinde and Hebdon, 2019) and their in-depth understanding of the fundamental differences between normal ageing and illness in older people. There is a strong emphasis within United Kingdom health policy to ensure that clinical

staff are developed to match the requirements of a modern healthcare system for patients that have complex needs (NHS, 2019). Internationally, the expansion of the scope of nursing practice has been in response to workforce challenges often arising from the perceived need to manage areas under-resourced by physicians (Torrens et al., 2020). Lawler et al. (2020) argue that the advanced practice role in the UK was also developed as a reaction to workforce gaps.

One of the major global challenges to the healthcare workforce has been seen in the context of an ageing patient demographic and the associated complexity for this patient group (Torrens et al., 2020). Thompson et al. (2014) suggest that the rise in complex healthcare needs of older people internationally have led to a stronger focus on this population group. As healthcare has evolved, and more is understood regarding the diagnosis of frailty in older people, there has been a need to adapt and manage the physiological decline and associated reduction of physiological reserve within this condition.

Within the literature, the term Advanced Clinical Practitioner (ACP) has developed in differing ways internationally (Evans et al., 2020). For example, although there is a history to advanced roles dating back to the 1960s, it was not until the early 2000s that the United Kingdom started to develop this concept into what is now understood to be advanced clinical practice (Department of Health, 2006, 2010). However, where countries such as Canada, USA and Australia have regulated practice, the United Kingdom has allowed roles to evolve (Lawler et al., 2020). In response, Health Education England (HEE), an executive non-departmental public body, sponsored by the Department of Health and Social Care in England, introduced the National Multi-Professional Framework for Advanced Clinical Practice (Health Education England, 2017).

This framework attempts to provide national consistency and a clear definition of the level of practice expected of an Advanced Clinical Practitioner (ACP) (Lawler et al., 2020).

‘Advanced clinical practice is delivered by experienced, registered health and care practitioners. It is a level of practice characterised by a high degree of autonomy and complex decision making. This is underpinned by a master’s level award or equivalent that encompasses the four pillars of clinical practice, leadership and management, education and research, with demonstration of core capabilities and area specific clinical competence.

Advanced clinical practice embodies the ability to manage clinical care in partnership with individuals, families and carers. It includes the analysis and synthesis of complex problems across a range of settings, enabling innovative solutions to enhance people’s experience and improve outcomes.’ (Health Education England, 2017).

Although this is a level of practice that would be recognised internationally as advanced nursing practice, England and Wales extended the role of Advanced Clinical Practitioners to include any healthcare professional that met the requirements of the multi-professional framework regardless of professional background (Lawler et al., 2020). The Advanced Clinical Practitioner multi-professional framework (Health Education England, 2017) has now enabled any registered nurse or allied healthcare professional to develop into advanced clinical practitioners. Lawler et al. (2020) study highlights the scope of Advanced Clinical Practitioner practice with a table of 24 clinical specialisms that benefit from this role (Table 1)

The nature of advanced practice can be seen to define the standards of excellence in patient care for health communities and subsequently many health care organisations have embraced the use of this professional group (Metzger and Rivers, 2014). In Eng-

Table 1
Range of ACP specialisms (Lawler et al., 2020).

ACP Speciality	Respondents (% of total)
Acute gerontology	10 (2)
Acute medical (adult)	92 (17)
Acute medical (paediatric)	6 (1)
Acute mental health	8 (2)
Acute paediatric	19 (4)
Acute surgical/theatres	23 (4)
CAMHS	4 (1)
Community care	25 (5)
Community long term condition (e.g. respiratory)	11 (2)
Community mental health	16 (3)
Community paediatric	3 (1)
Critical care	28 (5)
Emergency Department (adult)	89 (17)
Emergency Department (adults and paediatrics)	7 (1)
Emergency Department (paediatrics)	9 (2)
Learning disability	2 (1)
Long term condition (e.g. cancer)	18 (3)
Midwifery	3 (1)
Neonatal	7 (1)
Other	19 (4)
Pre-hospital care	10 (2)
Primary care	104 (20)
Radiology	11 (2)
Radiotherapy	4 (1)
Total	528

land the work seen in papers such as Allied Health Professionals into Action (NHS England, 2017), and the position statement on advanced level nursing (2010), have culminated in the development of a single pathway for advanced clinical practice which is currently not replicated internationally. Although there is little in the way of evaluation of this single pathway, Haidar (2014) suggests that there is credible evidence to describe advanced practice as a level rather than a role which in turn supports a multi-professional approach to advanced clinical practice. As advanced clinical practice is synonymous with a high level of autonomy, the language used in the UK is one of 'capability' as this indicates a scope of practice across a broad range of clinical practice (Health Education England, 2017). Traditionally, the role of Advanced Clinical Practitioner has been undertaken by clinical professionals such as physiotherapists, nurses, pharmacists and occupational therapists but, in reality, the advanced clinical practice multi-professional framework (Health Education England, 2017) can provide the framework for any healthcare professional to develop advanced practice.

Exploring the concept of capability in the literature has produced few results except in the area of leadership capability (McGowan et al., 2019). McGowan et al. (2019) considered the leadership capabilities of physiotherapists working as Advanced Clinical Practitioners and indicated that they use a broad mix of leadership frameworks to ensure a high level of capability within clinical practice. Leaders that incorporate multiple frameworks within leadership are seen to be more effective and this improves their ability to manage variation and new challenges (McGowan et al., 2019). Leadership capabilities are particularly pertinent to natural disasters which often present major disruptions to healthcare provision and operation capability. The increasing demand on senior clinicians that are responsible for making initial assessments and diagnoses can be significant (Tichy et al., 2008).

3. Methodology

This interpretative qualitative study captured the lived experience of how English Advanced Clinical Practitioners working with older people adapted their roles in response to the COVID-19 pandemic (October 2020–January 2021).

Table 2
Gender and profession of origin of interview and focus group participants.

Male	Female	Nurse	Physiotherapist	Paramedic	Pharmacist
3	20	18	2	2	1

The inclusion criteria were that the Advanced Clinical Practitioner participants had to 1. Meet the criteria defined by the HEE Advanced Clinical Practice framework <https://www.hee.nhs.uk/our-work/advanced-clinical-practice/what-advanced-clinical-practice> and 2. Worked as an Advanced Clinical Practitioner in the care of older people in England during the COVID-19 pandemic (October 2020–January 2021).

23 Advanced Clinical Practitioner volunteer participants from across England, with varied health professional backgrounds, were recruited via Advanced Clinical Practitioner professional and social media networks on Twitter using a snowballing technique (Table 2). The higher proportion of Advanced Clinical Practitioners with a nursing background within the study was also common to Lawler et al. (2020).

Ethical approval was successfully gained from the ethical review committee at the participating university. A participant information sheet, which outlined the aim of the study and the participant's role, was sent to volunteers prior to the study commencing and potential participants had the opportunity to contact a member of the research team with any questions via email. Informed consent was gained prior to data collection via a participant agreement form. Participants were able to withdraw from the study at any time up to the point of data analysis.

Depending on preference or availability, volunteer participants were organised into three focus groups (FG) (7, 4, and 3 participants, respectively) and nine one to one interviews (Int). Interviews were organised with participants who were unable to attend focus groups. Focus groups were facilitated by two members of the research team and with one member of the research team for the interviews. All interactions were recorded via the Zoom video conferencing platform.

Recordings were transcribed and using qualitative data analysis software NVivo 12 pro, coded for an essentialist thematic analysis of Advanced Clinical Practitioners' responses using an inductive approach (Braun and Clarke, 2006). Overall, 27 codes and 5 themes were identified for analysis (see Table 3). For the purposes of this paper, four themes are described: experiencing different work, developing attributes, negotiating barriers and changing future provision. The fifth theme, accessing support, was excluded as it did not directly inform the subject of this paper.

4. Findings

COVID-19 brought immediate change to the provision of health and social care needs for the public. Specifically, for older people, the increased risk of infection led to a rapid decrease in the number of patients accessing traditional routes to care as hospital and clinic attendance ceased except for the very acutely ill. As the pandemic continued, older people became increasingly vulnerable to the effects of isolation and the delay of medical treatment. Advanced Clinical Practitioners were swiftly redeployed to areas of greater clinical need. The advent of the pandemic necessitated a rapid reassessment of patients' access and use of service across all sectors to reduce the risk of COVID-19.

'Experiencing different work' - extending flexibility and adaptability in advanced practice

The theme of 'experiencing different work' presents the areas that Advanced Clinical Practitioners were redeployed to. A major priority for Advanced Clinical Practitioners was reducing the

Table 3
Themes and codes of the study.

Themes (5)	Codes (28)	No of references in the interviews and focus groups
Changing future provision	Changing infrastructure and processes	8
	Changing the role of the ACP	10
	Preparing for the second pandemic wave	3
Developing attributes	Building confidence and autonomy	5
	Building credibility	6
	Feeling appreciated	6
	Having anxiety	5
	Maintaining well being	3
	Showing leadership	6
Moving to different roles	Assessment and risk assessment	5
	Care planning	2
	Discharge planning	1
	Managing care homes	7
	Managing escalation plans	1
	Managing palliative care	1
	Multidisciplinary team working	4
	Running consultations at a distance	9
	Training	3
	Triaging	5
	Working with medical staff	7
	Negotiating barriers	Finding barriers in processes
Finding barriers with colleagues		7
Lacking infrastructure		5
Accessing support	Inclusion in national networks	5
	Peer support at work	24
	Peer support online	6
	Wider support systems	16

older person's physical trips to health care services and assessing whether an older person could be managed through an alternative care package at home. Some community areas prioritised special provision for older people with 'hospital at home' models and the redeployment of staff to support these initiatives:

'We created a new service, so the frailty home treatment service, where we would be looking after almost like a virtual ward of poorly people in the community ... it's been a massive change for our team.' (Int7, physiotherapist)

Consequently, staff work patterns rapidly changed, and Advanced Clinical Practitioners had *'to start fighting COVID until late at night when we did not have to before. We started working weekends. We started doing a lot more in-patient work. And for a short period of time, I was redeployed to acute medicine.'* (Int, nurse). Redeployment was sometimes delayed due to a lack of understanding of the Advanced Clinical Practitioner role: *'There's a lot of specialist nurses [ACPs] had been basically taken off their clinics and were twiddling their thumbs.'* (Int8, nurse)

The broad knowledge base and training of Advanced Clinical Practitioners meant that many successfully adapted to new triage roles within secondary, primary and community care:

'I also have quite a lot of therapy skills, a lot of medical skills. I change and flex that according to who I speak to. And so I think that really helps when you're talking to people to get them to understand why [flexibility] is important and a medic cannot do that but an ACP can with the unique skill set, we potentially have.' (FG2, physiotherapist)

For older people who need to be admitted to hospital, Advanced Clinical Practitioners described new triaging systems which were quickly put in place to streamline and prioritise patients' access to acute services. Emergency admissions were often requested to go straight to hospital wards. Novel solutions, and the order of work was altered, to improve the efficiency and safety of seeing patients:

'... we were able to clerk the patients in, [we] were able to do the treatment escalation plans, diagnose, come up with treatment plans, send patients to their correct places. So it took a while for the team to realise that we could actually help a lot more than just be another pair of hands.' (FG3, nurse)

The complexity of the older person was recognised by other staff as advance care planning had to be completed rapidly and to scale. Advanced Clinical Practitioners were accessible to these staff with their unique skills being drawn upon as essential to support the rapidly changing service:

'... those real complex, frail patients who ... they know where the discharge planning is but then it goes wrong, or if someone's taking a deterioration or if they even just needing something prescribed ... they'll come and find me rather than one of the doctors because they'll know I do it without a winge.' (FG2, physiotherapist)

The need to learn new skills, or assist with sharing knowledge to support others, was prevalent in the Advanced Clinical Practitioner interviews and focus groups.

As care developed at a distance, or away from the acute services, Advanced Clinical Practitioners noted a significant development in the use of technology with the older person.

'It means they do not have to come out of the house; they do not have to, you know get to the surgery because they struggle with that ... they absolutely love it.' (FG3, nurse)

Telephone triage moved to the use of video. Communication over new routes often broke cycles of isolation: *'they quite often say, oh this is really nice that you're phoning me, it's nice to have someone to talk to. It's nice not to feel hurried, and I can talk to you from my own home.'* (Int4, nurse)

Advanced Clinical Practitioners recognised the renewed importance of their ability to use their knowledge over a new communication medium as well as realising the efficiency of reaching patients in greatest need. *'I think definitely it's the skills of being able*

to consult over the phone and over video. I think it's quite a unique skill that you do not realise until you're actually doing it.' (FG1, nurse)

Reduced cognition, hearing difficulties, accessibility and sight impairments proved barriers to successfully triaging the older person and often the Advanced Clinical Practitioner had to find new and collaborative ways of working with care staff to ensure the effectiveness of a video consultation.

Through their increased use of technology, Advanced Clinical Practitioners recognised the instances where technology seemed inappropriate:

'But having to actually break bad news... their cancer had progressed ... and having to do all of that over the telephone, was pretty awful.' (FG1, nurse)

Many participants predicted that a shift to technology would continue post pandemic by 'giving staff the autonomy to decide if they feel that this person needs seeing face to face, or whether or not it was something they could do over virtual technology' (Int9, nurse). With this greater choice Advanced Clinical Practitioners were aware that better use could be made of the instances where older people physically accessed services: 'You just have to work a bit cleverer to catch the patient when they're in (Int1, nurse).

Due to their prior experience, verification of death often fell to Advanced Clinical Practitioners to deliver and implement - including the upskilling of others and delivering this remotely, 'particularly if it's a nursing home, where there's a nurse that could support video confirmation.' (Int2, nurse). The high mortality rates during the pandemic necessitated timely training in appropriate skills such as verification of death and Advanced Clinical Practitioners who showcased their ability to take leadership in educational roles within clinical teams and at a National Health Service (NHS) Trust organisational level.

Redeployment of specialist palliative care Advanced Clinical Practitioners led to an upskilling of senior physicians in good quality, advanced care planning in acute care:

'Listening to some of our doctors talking to some of our relatives, their communication skills have improved tenfold... So now DNACPR [Do Not Attempt Cardio-Pulmonary Resuscitation] conversations are now more normal in everyday life.' (FG3, nurse)

Developing attributes' - building autonomy and leadership in advanced practice

The theme of 'Developing attributes' presents the knowledge, skills and behaviours that Advanced Clinical Practitioners felt they developed through the pandemic. In an environment that was both stimulating and anxiety producing, Advanced Clinical Practitioners took leadership roles through the confidence of recognising their own expertise and skill set. A leader was often needed by other staff and Advanced Clinical Practitioners filled that void: 'There were not any doctors involved. There were not any geriatricians involved. The buck stopped with me.' (FG1, nurse).

Advanced Clinical Practitioners involved themselves in care work but found that their knowledge, and their ability to bring together many aspects, was particularly helpful to colleagues and patients: 'I think ACPs have a much more holistic view on health-care, but I think that's the biggest thing really, getting us out there, and getting it known.' (Int4, nurse). Many Advanced Clinical Practitioners believed that their skill set made them a more appropriate clinician of choice than other health professionals:

'You work autonomously. You make your own decisions, and it's a level of clinical practice that you're quite independent ... that means that the patient gets all of that, right at that time, and

there's no delay. I have not got to go and get somebody else to do the next bit.' (Int2, nurse)

Their expertise engendered credibility and trust with other professional groups who, in their turn, were curious about the Advanced Clinical Practitioners role. Some participants noted how consultant physicians, previously suspicious of the Advanced Clinical Practitioners' role, recognised the significant contribution to the clinical setting that these professionals made:

'I think it's [the pandemic] all established our role in some ways.' (FG2, nurse)

'I think it highlighted to [the consultants] exactly what we were capable of and how we could help them. So suddenly these people that were quite dubious of ACPs, absolutely loved us and would help us and take us under their wing.' (FG3, nurse)

Advanced Clinical Practitioners endeavoured to build their own knowledge and credibility by auditing what they themselves had prescribed. Many Advanced Clinical Practitioners recognised the escalation in their knowledge and skills expertise as a result: 'I felt really empowered and my learning curve had really sky-rocketed. So they're experiences I would not have got otherwise.' (FG3, nurse)

As previous lines of accountability were found to be missing, Advanced Clinical Practitioners had to make definite decisions (sometimes without support) about the parameters of their role related both to the frequency of admissions and to the unavailability of physicians:

'I got braver. But I think it was only because I did have that support network behind me that I felt that I could be more autonomous, that I could make decisions.' (FG1, nurse)

Negotiating barriers' - bargaining and diplomacy in advanced practice

The theme 'Negotiating barriers' highlights the areas of difficulty that Advanced Clinical Practitioners experienced during the pandemic. Advanced Clinical Practitioners found that previous areas of responsibility and training were sometimes inadequate to cope with their new areas of work. The inability to order advanced tests, such as X-rays without further training, caused frustration. One participant, with a professional background in physiotherapy, found that her Advanced Clinical Practitioner colleague, from an occupational therapy background, was unable to prescribe medicines thus limiting her advanced clinical skills in certain circumstances.

The pandemic highlighted time lags in the development of the Advanced Clinical Practitioner role revealed by the emergency nature of the care. Time lags were further accentuated by the under resourcing of areas peculiar to the pandemic; outdated IT equipment, initially lack of commensurate pay and the scarcity of personal protective equipment.

Advanced Clinical Practitioners became more visible to the public and other professions during the pandemic who 'do not realise the extent of your experience and training, clinical practice, and what you can offer...' (Int4, nurse). They also experienced barriers from nursing and physician colleagues due to ignorance about their role:

'...it was a chief executive decision that these doctors all came over and there was no say about that and again because they did not really understand frailty. They did not really understand what an ACP was. You did feel quite... I did feel quite out on a limb.' (FG2, physiotherapist)

Examples of both positive and negative relationships between Advanced Clinical Practitioners and senior physicians emerged from the study. Sometimes Advanced Clinical Practitioners felt un-

supported, isolated and their professional knowledge disrespected. As experienced practitioners for older people, Advanced Clinical Practitioners often found their established ethos of care challenged and had to tolerate being side-lined as less experienced doctors were transferred into their clinical areas:

'We were getting to the stage where we're almost getting [like a] nurse led unit, [then] all of a sudden have these huge amount medics come in and deskilled my team.' (FG2, nurse)

Changing future provision' - transformation of advanced clinical practice

The theme 'Changing future provision' presents Advanced Clinical Practitioners' views on the future development of their role. As a result of the pandemic, it was apparent to Advanced Clinical Practitioners that there was an inadequate understanding about their role amongst other professionals and the general public. Formalised systems of standardisation of the role and registration were recommended to aid clarity in the future.

Many Advanced Clinical Practitioners focused on the underlying four pillars (Lawler et al., 2020) of advanced clinical practice:

'I hope the recommendation will not just be about creating roles. It's about all of those pillars in terms of research, leadership, clinical expertise, and education, to grow what we need for people, rather than the roles'. (Int6, nurse)

This was viewed as the bed rock of future development against the potential greater flexibility of a higher-level degree, clinical expertise and areas of specialism.

Advanced Clinical Practitioners recognised the potential of this relatively new career route: '*they've actually managed to create an academic approach to advanced clinical practice on the back of this*' (FG1, nurse) and were confident that '*the[ir] skillset is so unique, very few people could provide that. And so, I think that's been almost the art versus the science of the role.*' (Int6, nurse).

The ability of Advanced Clinical Practitioners to work across traditional boundaries and utilise a range of skill sets had seen tangible results: '*The readmission rate has gone right down because those real complex frail people are getting more of a comprehensive geriatric assessment.*' (FG2). Good care for older people involved a wide skill set which was not present in any one profession:

'[Physicians] have a medical lens, and that advanced practice, holistic, wider lens is important for those complex people.' (FG1, physiotherapist)

The pandemic had put new expectations and pressures upon Advanced Clinical Practitioners to help to manage older people who are often not well understood or managed by other specific professional groups. Advanced Clinical Practitioners found that these new expectations accelerated the rate of development of themselves individually, and their role as a whole:

'We are much better at saying... there's a real rationale for us to have all those skills, because ultimately, this has helped us all to develop and gain lots of areas that we would not have done before. And we're all willing to do it, whereas before, we'd have been a bit scared to do it.' (Int9, nurse)

By having clinical experts working with them at a time of great pressure, other staff had benefitted from the leadership, support and knowledge that the Advanced Clinical Practitioners contributed. Long term, the potential for continued operational change was evident in many areas of the Advanced Clinical Practitioner's work, '*working with that camaraderie, that culture, I've never, ever experienced that in the NHS before and do not think I will again.*' (Int1, nurse). However, this was balanced by frustration that some

of the positive changes that had been made were due to be reversed after the second wave of the pandemic.

'I feel that the door keeps being firmly shut in my face and then somebody else says they want another report and more data, so I was initially really enthused post-COVID that there was definitely going to be some change. I cannot see that now. I'm quite negative about the whole experience.' (FG1, nurse)

5. Discussion

During the pandemic, the Advanced Clinical Practitioners who participated in this study, presented with common capabilities; knowledge, skills and attributes, whilst working with the older person. Their success lay in demonstrating advanced practice as a higher level of expertise that could adapt well to the uncertainty that was brought about by COVID-19. The ability of Advanced Clinical Practitioners to manage uncertainty in a rapidly changing environment, escalating complex clinical presentations and changing medical advice was evident and a powerful testimony to the positive part that Advanced Clinical Practitioners played in the pandemic healthcare workforce. The findings highlight the vital role of Advanced Clinical Practitioners within disaster management, drawing on their clinical skills, leadership and highly autonomous practice which are all developed through a capability model of learning (Gardner et al., 2016). Spoelstrar and Robbins (2010) demonstrated that seeing Advanced Clinical Practitioners in practice, competently delivering high levels of clinical intervention, altered the perception of other professions of the Advanced Clinical Practitioners' role and its potential going forward. Currie et al. (2010) found that this applied particularly to physician colleagues who were conflicted when role transition challenged established professional identities.

Managing older peoples' healthcare during the pandemic, and improving wellbeing in care homes and at home, were prevalent within the research. Crouch and Brown (2018) identified the importance of advanced clinical practice as key to developing new models of care. Reduced clinical placement opportunities for physician trainees has resulted in a reduced clinical experience and it is often Advanced Clinical Practitioners that are required to ensure that the high levels of complex patients receive the care they need (Crouch and Brown, 2018).

Much of the United Kingdom literature for advanced clinical practice emphasises the importance of ensuring the sustainability of the role. Healthcare organisations have a vital part to play both in considering the enablers and barriers that prevent Advanced Clinical Practitioners fulfilling their full potential in capability-based practice when responding to uncertainty (Elliott et al., 2016). In particular, the findings revealed the need to manage older people remotely in disaster situations and, through a greater use of technology; the evidence highlights Advanced Clinical Practitioners' adaptability. Often, Advanced Clinical Practitioners were leading and developing new ways of working in their areas, including hospital at home and care home ward rounds.

The ability of Advanced Clinical Practitioners to use their capabilities to triage, research, educate others and cross professional boundaries defined their professional response during the pandemic. Under emergency situations, Advanced Clinical Practitioners commented on the speed of the change to their roles and how the need for their advanced clinical skills in management and leadership positions transcended previous work boundaries. As clinical demand grew, Advanced Clinical Practitioners were quick to identify where their training and previous skills needed to be updated to keep pace with their new roles.

Despite differences in the professional background of the Advanced Clinical Practitioners within the study, the only discrepancy raised as the result of these differences was that of prescribing

ing rights. It was commented upon in the study that not all Advanced Clinical Practitioners from an allied health profession (AHP) background were able to become non-medical prescribers (NMP). Non prescribing was considered problematic to efficiency in patient care and concurs with Hardy (2021) who highlights that the lack of prescribing rights reduces employment opportunities and flexibility within multiple roles. Although it is expected that extension of prescribing responsibilities to other professional groups, such as Advanced Clinical Practitioners with an allied health professional background, is likely to continue (Royal Pharmaceutical Society, 2021) the change to the prescribing rights of a profession has to be agreed through parliament legislation bill (Medicines and Devices Bill MMDBO9, 2020). Continuity of care, and the ability to diagnose and treat without onward referral, is important in the care of older people; especially in acute frailty and pandemic situations to ensure timely and efficient response to need.

As found by McGowan et al. (2019), Advanced Clinical Practitioners' leadership capabilities; encompassing clinical practice, seemed to surpass the other two pillars of education and research due to the emergency nature of the work. Elliott et al. (2016) identifies potential barriers in Advanced Clinical Practitioners leadership, and they divided these into four distinct areas: healthcare systems, organisational levels, team level and advanced clinical practitioner level. Organisational level barriers were identified as the largest category in the scoping review and included large clinical caseloads, a lack of support from operational managers and physicians, a lack of administration support, and a misunderstanding of the Advanced Clinical Practitioner role.

Most Advanced Clinical Practitioner participants in this study felt their skills were utilised positively during the pandemic. This finding concurs with the Health Education England, (2021). Conversely, both studies reported frustrations in the lack of knowledge of the capability of Advanced Clinical Practitioner which led to poor utilisation of Advanced Clinical Practitioners. In the first instance, Advanced Clinical Practitioners were regularly transferred to traditional nursing roles or less skilled roles. Our research confirmed other literature (Hooks and Walker, 2020; Elliott et al., 2016; Lawler et al., 2021) of a lack of understanding by professionals and public alike around the capabilities of Advanced Clinical Practitioners.

Professional identity is significant for practitioner confidence (Lawler et al., 2020). Public and professional opinion, and a misunderstanding of the role, can lead to an undermining of Advanced Clinical Practitioner confidence and their role not being maximised. The lack of recognition of the Advanced Clinical Practitioner role, clearly demonstrated in this research, impacted the confidence of Advanced Clinical Practitioners and others' perceptions of Advanced Clinical Practitioners. Lawler et al. (2021) also found that, prior to the pandemic, misunderstanding of the Advanced Clinical Practitioner role, particularly when compared with physicians, was prevalent. When the role was given its full recognition, Advanced Clinical Practitioners were skilled at identifying where they were needed and, with reduced bureaucracy and a level of recognition from colleagues on their clinical credibility, Advanced Clinical Practitioners flourished. There is good evidence that advanced practice can not only be equivalent to but can sometimes be better than physician-led care (Boman et al., 2021) and this was articulated by the Advanced Clinical Practitioners in this study. Boman et al. (2021) highlight further that Advanced Clinical Practitioners deal well with uncertainty and often develop wider skills as a result of previous knowledge gained prior to their Advanced Clinical Practitioner training.

Internationally, McGilton et al. (2021) also highlighted the significant role expansion by Advanced Clinical Practitioners in the nursing home sector in Canada during the COVID-19 pandemic as essential to workforce planning regarding older peoples' care. The

need for a highly skilled, adaptive and flexible non-medical workforce was revealed world-wide. There were dramatic changes made to healthcare law in the USA to allow advanced practitioners to treat patients (Zolat, 2020). Kleipenell et al. (2021) later found that despite these new laws, advanced practitioners in the USA found it difficult to be autonomous, change their scope of practice and widen their prescribing practices. Often, physicians did not trust their knowledge and medical insurance companies did not support these new laws.

Similar frictions between Advanced Clinical Practitioners and physicians were also apparent in our research where Advanced Clinical Practitioners commented on their need to prove their credibility before feeling accepted on the same professional level as their physician colleagues. In particular, the interdependence between doctors and Advanced Clinical Practitioners was demonstrated. As Advanced Clinical Practitioners built their credibility and enjoyed recognition by medical colleagues, Advanced Clinical Practitioners were able to contribute to medics' need for a higher standard of advanced planning while Advanced Clinical Practitioners verified and checked their skills with senior physicians. Wood et al. (2021) also reported positive accounts of Advanced Clinical Practitioners being put on rotas with junior doctors and physicians showing that their skills were considered commensurate in the need to manage the challenges of the pandemic. These results demonstrate a potential shift in the attitudes of physician colleagues to Advanced Clinical Practitioners and the growing credibility of their unique profession on a national level.

Many Advanced Clinical Practitioners in this study expressed that, like Boman et al. (2021), they were sometimes more appropriate to the older person's care than physician colleagues. The risks of over-treatment and hospitalisation of older people living with frailty are well known (Keeble et al., 2019). Advanced Clinical Practitioners' experience in managing frail populations was key to holistic management reducing intrusive investigations, treatments, hospital admissions and side effects. Unfortunately, this study highlighted issues for even very experienced Advanced Clinical Practitioners in the care of older people. Accounts of being sidelined by management in preference for physicians from departments not experienced in older people care were common. Frequently Advanced Clinical Practitioners' capabilities in managing this patient population were not recognised and respected.

Halliday et al. (2018) found that Advanced Clinical Practitioners directly influenced organisational effectiveness within acute ward settings often directly improving patient flow. As the first wave of the pandemic subsided, Advanced Clinical Practitioners in this study were anxious that their advancement might be curtailed as innovations in response to the pandemic were discarded even though cost and staff efficiencies were proven.

6. Limitations

Although the English Advanced Clinical Practitioner participants uniquely came from different professions, it was not within the scope of this study to explore the influence of these alternative perspectives. Our research alludes to possible differences in the scope of Advanced Clinical Practitioner practice due to these differences and a further study is recommended to ascertain the influence of multi professional membership on the emerging professional identity of Advanced Clinical Practitioners as a whole.

The purpose of this study was explorative and therefore the use of qualitative methodology was to reveal some rich data of Advanced Clinical Practitioners' experience. Clearly this is not generalisable but, given the findings, a further wider scale survey that builds on these aspects might prove insightful.

7. Conclusion

This study revealed that Advanced Clinical Practitioners were an integral part of the healthcare workforce during the exceptional, uncertain times of the pandemic; able to work across professional boundaries, provide leadership and manage the clinical complexity and uncertainty that arose in an older population. A synthesis of the four pillars of advanced practice – clinical practice, education, leadership and research (Health Education England, 2017) was evident throughout the findings and arguably key to the success of the Advanced Clinical Practitioner role. Our study provides evidence for the potential benefits of a capability model of advanced clinical practice to enable advanced clinical practitioners to deal with a high level of unpredictability and uncertainty as presented during the COVID-19 pandemic. In particular, the capability of leadership came to the fore and provides a potential emphasis for Advanced Clinical Practitioner training and role creation in the future.

The pandemic enabled practitioners to work outside of their traditional disciplinary boundaries implementing more efficient and personalised services. Part of this was the increased use of technology to conduct consultations at a distance. In times of heightened expectations, Advanced Clinical Practitioners were given the authority to work in ways that improved patient pathways and experiences, often by enabling a more holistic approach to the older person's care previously dominated by the traditional biomedical model of care. Several examples were provided in the research of how new services were designed, managed and fulfilled by Advanced Clinical Practitioners in areas of care of older people and frailty. This development has led locally to permanent funding and further development of Advanced Clinical Practitioner trainee posts to enhance their role in the care of older person.

The COVID-19 pandemic accelerated the extension of the Advanced Clinical Practitioner role as clinicians were asked to work in new ways and often in clinical areas unfamiliar to them. In some cases, a better understanding of the core capabilities at the heart of advanced practice and promotion of the Advanced Clinical Practitioner role resulted. The sometimes, fractious relationship between physicians and Advanced Clinical Practitioners was bridged through necessity; with the emergence of a common understanding as to how these two roles could be mutually supportive to the benefit of both patients and the professions themselves. Lawler et al. (2021) description of the pre pandemic Advanced Clinical Practitioner role, where role identity and mentorship were loose and evolving, proved an opportune foundational base in a time of significant clinical change.

As a result of working practices during the pandemic, new operational systems were embedded, but equally Advanced Clinical Practitioners expressed disappointment when the potential afforded by the pandemic were abandoned, and clinicians and services went back to their old ways. The lack of understanding of the level of complexity that Advanced Clinical Practitioners deal with in practice can lead to the expectation that Advanced Clinical Practitioners should carry large clinical caseloads due to their perceived expense. Large caseloads can reduce the time Advanced Clinical Practitioners have to deal with complexity and can have implications when dealing with unpredictable situations.

The UK Core Capability Frameworks for Advanced Clinical Practice regardless of setting Health Education England (2020a, 2020b) states the ability to manage complexity alongside uncertainty is a key capability for advanced practice. They emphasise the difference between highly specialist practitioners and advanced clinical practice. Our study shows, that in the uncertain times of COVID-19, Advanced Clinical Practitioners' response was often appropriate and responsive to the constant changing environment and stressors. Renegotiation of professional boundaries and traditional ways

of working were part of the pandemic response. The pre COVID-19 strategy to create a multi-professional non-medical Advanced Clinical Practice workforce in the UK to sustain and transform all sectors of the NHS, has contributed to the ability to manage the uncertainty and complexity of older peoples' health in a pandemic.

In conclusion, Advanced Clinical Practitioners articulated more investment was needed to define and promote the Advanced Clinical Practitioner role; to allow other professionals to recognise and value the role and to provide support and learning across professional boundaries. There remains debate amongst practitioners as to whether Advanced Clinical Practice is a level of practice or a qualification. The Centre of Advancing Practice (HEE) is now tasked with setting national training standards and accrediting courses as the number of Advanced Clinical Practitioner apprenticeships increase in order to reduce disparity in capability, set apart Advanced Clinical Practitioners as a distinct role and demonstrate that the NHS value Advanced Clinical Practitioner in the workforce.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRedit author contribution statement

Dawn A. Morley: Conceptualization, Methodology, Formal analysis, Investigation, Writing original draft, Visualization, Supervision, Project administration, Funding acquisition. **Cliff Kilgore:** Conceptualization, Writing original draft, Funding acquisition. **Mary Edwards:** Investigation, Writing original draft. **Pippa Collins:** Investigation, Writing review & editing. **Janet ME Scammell:** Conceptualization, Writing review & editing, Funding acquisition. **Kelsie Fletcher:** Conceptualization, Resources. **Michele Board:** Conceptualization, Methodology, Investigation, Writing review & editing, Supervision, Project administration, Funding acquisition.

Acknowledgments

This research was funded by a grant from Health Education England (HEE) (Project No. 202108)

References

- Boman, E., Duvaland, E., Gaarde, K., Leary, A., Rauhala, A., Fagerstrom, L., 2021. Implementation of advanced practice nursing for minor orthopedic injuries in the emergency care context: a non-inferiority study. *Int. J. Nurs. Stud.* doi:[10.1016/j.ijnurstu.2021.103910](https://doi.org/10.1016/j.ijnurstu.2021.103910).
- Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3 (2), 77–101. doi:[10.1191/1478088706qp0630a](https://doi.org/10.1191/1478088706qp0630a).
- Crouch, R., Brown, R., 2018. Advanced Clinical Practitioners in emergency care: past, present and future. *Br. J. Hosp. Med.* 79 (9), 511–515. doi:[10.12968/hmed.2018.79.9.511](https://doi.org/10.12968/hmed.2018.79.9.511), (London).
- Currie, G., Finn, R., Martin, G., 2010. Role transition and the interaction of relational and social identity: new nursing roles in the English NHS. *Org. Stud.* 31 (7), 941–961. doi:[10.1177/0170840610373199](https://doi.org/10.1177/0170840610373199).
- Department of Health (2006). Modernising nursing careers: setting the direction. <http://www.nursingleadership.org.uk/publications/settingthedirection.pdf>.
- Department of Health (2010). Advanced level nursing: a position statement. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/215935/db_121738.pdf.
- Elliott, N., Begley, C., Sheaf, G., Higgins, A., 2016. Barriers and enablers to advanced practitioners' ability to enact their leadership role: a scoping review. *Int. J. Nurs. Stud.* (60) 24–45. doi:[10.1016/j.ijnurstu.2016.03.001](https://doi.org/10.1016/j.ijnurstu.2016.03.001).
- Evans, C., Poku, B., Pearce, R., Eldridge, J., Hendrick, P., Knmags, R., McLuskey, J., Tomczak, P., Thow, R., Harris, P., Conway, J., Collier, R., 2020. Characterising the evidence base for advanced clinical practice in the UK: a scoping review protocol. *BMJ Open* 10, e036192. doi:[10.1136/bmjopen-2019-036192](https://doi.org/10.1136/bmjopen-2019-036192).
- Farinde, A., Hebdon, M., 2019. *Physiological Changes that Occur in Geriatric Patients: Pharmacological Considerations in Gerontology*. Springer Publishing.
- Fil, S.L., Champion, J.D., Christiansen, B., 2020. Perceptions of disaster management knowledge and skills among advanced practice registered nurses. *J. Am. Assoc. Nurse Pract.* 33 (7), 514–520. doi:[10.1097/jjnx.0000000000000382](https://doi.org/10.1097/jjnx.0000000000000382).

- Gardner, A., Gardner, G., Coyer, F., Gosby, H., 2016. Educating for health service reform: clinical learning, governance and capability – a case study protocol. *BMC Nurs.* 15 (32). doi:10.1186/s12912-016-0152-8.
- Haidar, E., 2014. The reality of introducing advanced nurse practitioners into practice. *J. Clin. Nurs.* 28 (1), 68–71.
- Hardy, M. (2021) Advanced practice research report. Available from: <https://www.hcpc-uk.org/globalassets/resources/policy/independent-research-report-advanced-practice-27th-january-2021.pdf>.
- Halliday, S., Hunter, D.J., McMillan, L., 2018. Ward staff perceptions of the role of the advanced nurse practitioner in a 'hospital at day' setting. *Br. J. Nurs.* 27 (2), 92–97. doi:10.12968/bjon.2018.27.2.92.
- Health Education England (2017). Multi-professional framework for advanced clinical practice in England. <https://www.hee.nhs.uk/sites/default/files/documents/multi-professionalframeworkforadvancedclinicalpracticeinengland.pdf>.
- Health Education England (2020). Advanced practice mental health curriculum and capabilities framework. <https://www.hee.nhs.uk/sites/default/files/documents/AP-MH%20Curriculum%20and%20Capabilities%20Framework%201.2.pdf>.
- Health Education England (2020). Core Capabilities framework for advanced clinical practice (Nurses) working in general practice /primary care in England. <https://www.hee.nhs.uk/sites/default/files/documents/ACP%20Primary%20Care%20Nurse%20Fwk%202020.pdf>.
- Health Education England (2021). How did Advanced Clinical Practitioners respond to COVID-19 <https://www.hee.nhs.uk/coronavirus-covid-19/how-did-advanced-clinical-practitioners-respond-covid-19>.
- Hooks, C., Walker, S., 2020. An exploration of the role of Advanced Clinical Practitioners in the East of England. *Br. J. Nurs.* 29 (15). doi:10.12968/bjon.2020.29.15.864.
- Keeble, E., Roberts, H.C., Williams, C.D., Van Oppen, J., Conroy, S.P., 2019. Outcomes of hospital admissions among frail older people: a 2-year cohort study. *Br. J. Gen. Pract.* 69 (685), e555–e560. doi:10.3399/bjgp19X704621.
- Kleinpell, R., Myers, C.R., Schorn, M.N., Likes, W., 2021. Impact of COVID-19 pandemic on APRN practice: results from a national survey. *Nurs. Outlook* 69, 1–10.
- Lawler, J., Maclaine, K., Leary, A., 2020. Workforce experience of the implementation of an advanced clinical practice framework in England: a mixed methods evaluation. *Hum. Resour. Health* 18 (96). doi:10.1186/s12960-020-00539-y.
- Lawler, J., Maxwell, E., Radford, M., Leary, A., 2021. Advanced Clinical Practitioners' experience of establishing a workplace jurisdiction. *Int. J. Healthc. Manag.* doi:10.1080/20479700.2020.1870368.
- McGilton, K.S., Krassikova, A., Boscart, V., Sidani, S., Iaboni, A., Vellani, S., Escrig-Pinol, A., 2021. Nurse practitioners rising to the challenge during the coronavirus disease 2019 pandemic in long-term care homes. *Gerontologist* 61 (4), 615–623. doi:10.1093/geront/gnab030.
- McGowan, E., Elliott, N., Stokes, E., 2019. Leadership capabilities of physiotherapy leaders in Ireland: part 2. Clinical specialists and advanced physiotherapy practitioners. *Physiother. Theory Pract.* 35 (11), 1044–1060. doi:10.1080/09593985.2018.1469179.
- Medicines and Devices Bill MMDB09 (2020) Written evidence submitted by the British Dietetic Association, the Royal College of Occupational Therapists, the British and Irish Orthoptic Society, the Society of Radiographers and the Royal College of Speech and Language Therapists. <https://publications.parliament.uk/pa/cm5801/cmpublic/Medicinesandmedical/memo/MMDB09.htm>.
- Metzger, R., Rivers, C., 2014. Advanced practice nursing organisational leadership model. *J. Nurse Pract.* 10 (5), 337–343.
- NHS England 2017. Allied health professionals into action, using allied health professionals to transform health, care and wellbeing, accessed internet 20/12/2021
- NHS (2019). NHS long term plan. <https://www.longtermplan.nhs.uk/online-version/>.
- NHS England (2020). Caring for people at highest clinical risk during COVID-19. https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/20200403-Clinician-FAQs-v_FINAL.pdf.
- Royal Pharmaceutical Society (2021) A competency framework for all prescribers. Available from: <https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Prescribing%20Competency%20Framework/RPS%20English%20Competency%20Framework%203.pdf?ver=mctnrKo4YajDh2nA8N5G3A%3d%3d>.
- Spoelstra, S.L., Robbins, L.B., 2010. A Qualitative Study of Role Transition from RN to APN. Berkeley Electronic Press, pp. 1–14.
- Thompson, H.J., Belza, B., Baker, M., Christianson, P., Doorenbos, A., Nguyen, H., 2014. Identifying and evaluating electronic learning resources for use in adult-gerontology nurse practitioner education. *J. Prof. Nurs.* 30 (2), 155–161. doi:10.1016/j.profnurs.2013.08.004.
- Tichy, M., Bond, A.E., Beckstrand, R.L., Heise, B., 2008. NPs' perceptions of disaster preparedness education: quantitative survey research. *Am. J. Nurse Pract.* 13 (1), 10–22.
- Torrens, C., Campbell, P., Hoskins, G., Strachan, H., Wells, M., Cunningham, M., Maxwell, M., 2020. Barriers and facilitators to the implementation of the advanced nurse practitioner role in primary care settings: a scoping review. *Int. J. Nurs. Stud.* doi:10.1016/j.ijnurstu.2019.103443.
- Wood, E., King, R., Senek, M., Robertson, S., Taylor, B., Tod, A., Ryan, A., 2021. UK advanced practice nurses' experiences of the COVID-19 pandemic: a mixed-methods cross-sectional study. *BMJ Open* 11 (3). doi:10.1136/bmjopen-2020-044139.
- World Health Organisation (2020). COVID-19-global. In: <https://covid19.who.int/>.
- Zolat, J., 2020. COVID-19 brings changes to NP scope of practice. *Am. J. Nurs.* 120 (8), 4. doi:10.1097/01.NAJ.0000694516.02685.29.