Concise report

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A UK-wide survey looking at teaching and trainee confidence in teledermatology: a vital gap in a COVID-19-induced era of rapid digital transformation?

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Summary

Teledermatology has had an explosive impact on the provision of dermatology services in recent times, and even more so with the unprecedented situation created by the COVID-19 pandemic. Although teledermatology is not presently a feature of the Joint Royal Colleges of Physicians Training Board (JRCPTB) curriculum for dermatology training, this is due to change imminently. Specialty trainees need training in this area to be able to confidently and competently meet the demands of the changing face of dermatology services. We surveyed dermatology registrars in training across the UK, prior to the outbreak of COVID-19, to ascertain the teledermatology teaching available and trainee confidence in this area. Our survey found that only 15% of respondents felt slightly confident in their ability to deal with teledermatology referrals and almost all (96%) felt more teaching was needed.

The COVID-19 pandemic is placing increased demands on the use of digital technologies that are not universally familiar to physicians or patients. Teledermatology has already transformed the practice of dermatology in the UK. Most centres offer a dedicated service of varying nature and complexity; dermatologists can expect their job plan to reflect this. Delivery of local teledermatology services has ranged primarily from triaging referrals to providing advice to referring clinicians, but this has undergone rapid and forced evolution in recent times. By December 2019, 26% of dermatology departments offered teledermatology appointments,[1] and owing to the pandemic, this has been pushed to 100% [COVID-19 new update alert, 18 June 2020; communication to British Association of Dermatologists (BAD) members] in recent months. Teledermatology does not currently feature in the Joint Royal Colleges of Physicians Training Board (JRCPTB) dermatology curriculum,[2] but as dermatology training reflects clinical practice, the new August 2021 curriculum is already being updated to reflect this. Exposure during specialty training is variable across deaneries, and data on trainee experience are lacking. We carried out a survey to ascertain the teledermatology teaching available and trainee confidence in this area.

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Report

We conducted a national UK-wide survey of dermatology specialty trainees at all levels, in January 2020, just prior to the outbreak of the COVID-19 pandemic. Our aim was to ascertain what teledermatology teaching was available to dermatology registrars in training and look at trainee confidence in this area. Of the 26 respondents (response rate 12.3%), 58% had a teledermatology service in their workplace. Individual training programmes offered teledermatology teaching to just under half of the respondents (46%) and this was highly variable in both content and frequency. For those with access to teaching, this was delivered at local departmental level in 50% of cases and at deanery level in 43%, while the remaining 7% had attended a national course. For the first group, 92% of teaching took the form of formal teaching sessions, admixed with

ad hoc reviews using clinical photography for inpatient and GP referrals in 67%.

We found, as expected, that the frequency of training sessions was highly variable across the UK; 46% had no teaching in this area at all, whereas 11% had only ever had a one-off session at a national level, such as the BAD teledermatology skills course. Another 15% accessed teaching on a yearly basis and 11% had 2–3-monthly sessions, while 4%, 4% and 8%, respectively, had monthly, fortnightly and weekly sessions.

Only 21% of respondents were taught teledermatology as a triage tool, while another 21% were taught the use of teledermatology for giving advice and the remaining 58% were taught a combination of both. All trainees received teaching for skin lesion management, but only 83% for inflammatory dermatoses and 42% for paediatric dermatology. Medical photographs used for teaching included dermoscopy images in 53% of cases. An overwhelming majority (96%) of trainees felt that teledermatology was useful for their training and the same proportion felt that more teaching was needed.

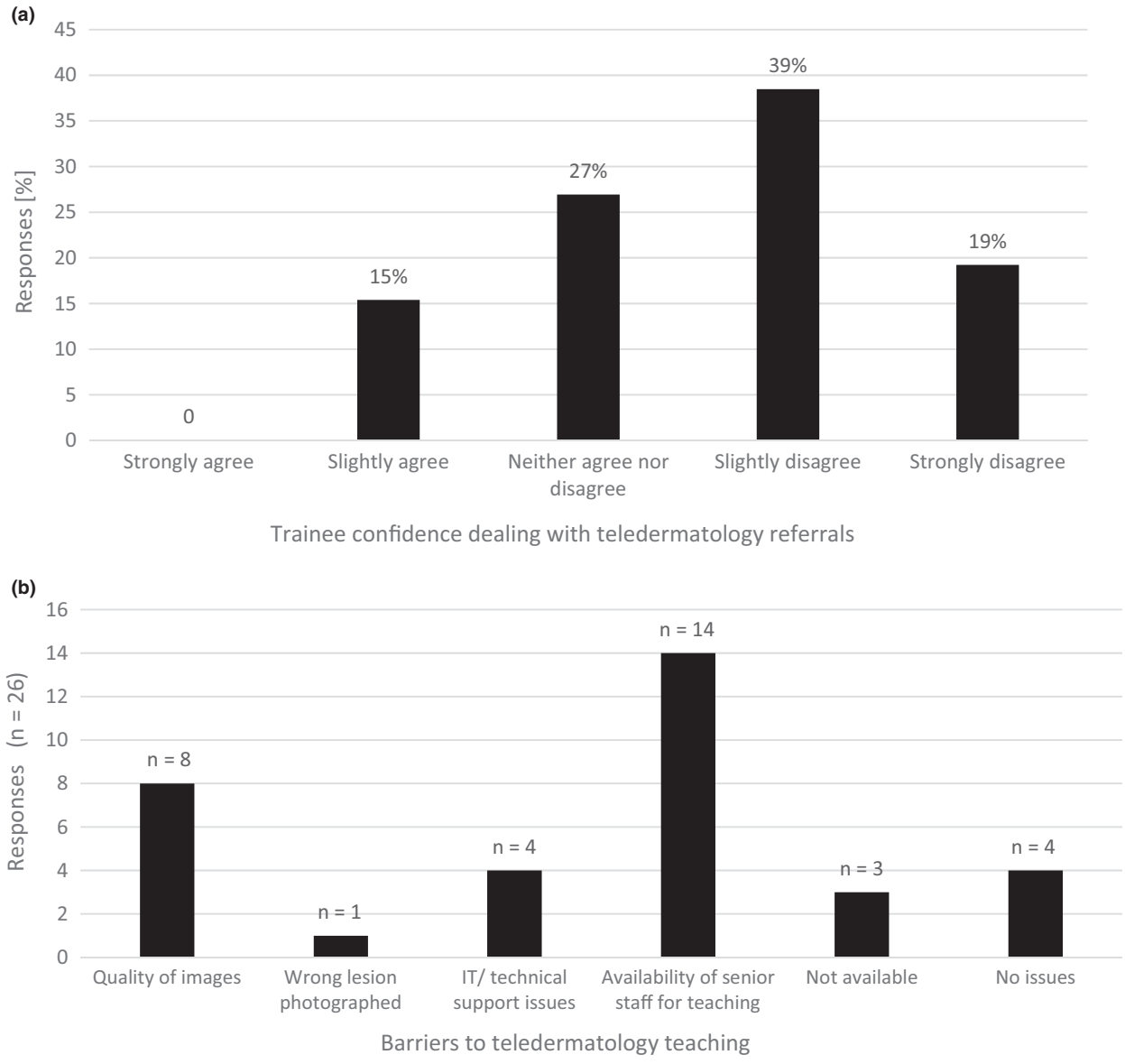

Figure 1 (a) Trainee confidence in dealing with teledermatology referrals. (b) Barriers to teledermatology training as identified by trainees.

Table 1 Selected quotations from trainees suggesting ways of improving teledermatology training.

Potential areas for improvement	Quotations
Development of a local teledermatology service	*Need to develop a local service and then have regular teaching sessions on how to assess the teledermatology referrals and triage appropriately. Currently, all our hospital does is triage GP referrals on lesions with photos to either clinic or minor operations*
	Current hospital is in the process of setting up this service
	We are about to implement our own teledermatology service, which hopefully the trainees can be involved in
	Teledermatology was introduced but withdrawn by the deanery and so trainees are not able to assess the impact/benefits/shortcomings of TD compared to conventional patient encounters
Establishment of formal teaching sessions	*Integrate it as a regular teaching requirement. Sit in in virtual clinics with consultants as part of our training*
	Dedicated weekly slots to review new teledermatology referrals
	Mandatory part of the trainee curriculum
	It could be incorporated officially into the training programme
	Any would be an improvement as to date I have received none
	Regional best practice teaching on teledermatology needs to have adoption first!
	Teaching on how to handle cases when not seeing the patient directly
Increased frequency of sessions where already in place	*More frequent teaching on teledermatology*
	More of it, direct clinical involvement
	More sessions available for registrars to learn from
	More teledermatology and dermoscopy teaching
Increased trainee involvement	*Involving registrars in vetting process*
	Shadowing a consultant triaging teledermatology referrals would be extremely useful training, but this is not possible in my deanery
	Allocated time for a trainee to go through teledermatology referrals one-to-one with the on-call consultant
Increased variety, e.g. inflammatory and paediatric dermatology	*Regular and structured, with varied conditions including inflammatory and paediatric. Currently, mostly lesions are seen!*
	Regular teaching sessions for both lesions and inflammatory dermatoses using high-quality images with dermatoscopic views

Trainee confidence in handling teledermatology referrals was extremely low: 58% did not feel confident in their ability to deal with teledermatology referrals and a further 27% were unsure about their skills in this regard. Only 15% felt they were slightly confident in this area (Fig. 1a). Common obstacles cited (Fig. 1b) were lack of availability of senior staff for teaching (38%), poor image quality (27%) and poor availability of local teledermatology services.

The utilization of telemedicine and digital technology in clinical dermatology is now likely to be in a state of high flux, reflecting the changing demands of the COVID-19 pandemic. At the time of writing, most dermatology centres are currently only offering face-to-face consultations for urgent referrals. The majority of follow-ups and routine new patient referrals are being managed remotely by telephone, e-mail or video consultation. Against the background of already low trainee confidence in this area, dermatology registrars across the UK are having to adapt to increased digital working. Trainees must be equipped with the skills to deliver digital patient care safely and effectively. The BAD Quality Standards on Teledermatology[3] advise that training in teledermatology should be standardized and encouraged, with agreed mechanisms for assessing clinical competence.

Our survey identifies a substantial deficit in and unmet need for teledermatology teaching at a trainee level. We recommend that deaneries develop formal teaching in this increasingly important area. Where there is already formal teaching in place, as evidenced by our survey and trainees' own suggestions (Table 1), this is rather infrequent and may need to be increased. Methods to enhance trainee teledermatology confidence may include formal supervision of trainees in triage of referrals as well as when providing diagnostic and management advice.

Experienced consultants can draw on expertise gained over many years of conventional face-to-face clinical working, but they also face new uncertainties around these new approaches. Anxieties about managing patients through remote digital technologies are also likely to be reflected among trainers, who will also have new skills to master.

The high-quality digital image properties of a professionally administered teledermatology service can greatly enhance virtual training and may improve access for trainees. We look forward to developing

more imaginative use of these technologies. However, we also need to empower our trainees to dismiss low-quality imaging systems that do not address the needs of a specialist dermatology service.

The changing demands of the COVID-19 pandemic continue to challenge how we provide care to people with skin disease. We recommend encompassing the full diversity of teledermatology for managing inflammatory and paediatric dermatology in addition to lesion recognition, as suggested by trainees themselves (Table 1).

Learning points

- There is a clear gap in training and exposure of dermatology registrars to teledermatology across the UK.
- Trainee confidence in this area is remarkably low, with only 15% being slightly confident in their ability to deal with teledermatology referrals.
- With the rapidly changing landscape of teledermatology and digital dermatology resulting from the COVID-19 pandemic, addressing this shortfall by the establishment of formal teaching sessions is rendered all the more urgent.

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