



## **General Practitioner Autism Training and Mandatory Medical Training: A Cross-Sectional Study of GPs' Knowledge, Attitudes and Practices**

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### **Abstract**

Numerous physical conditions appear with increased frequency in autistic individuals in comparison to their non-autistic peers. These co-existing conditions are known to lead to higher morbidity, lower quality of life, and lower life expectancy in autistic adults. There is substantial evidence in the literature that many, if not most, General Practitioners (GPs) in the United Kingdom do not have the necessary understanding of autism to enable them to offer the same standard of service to their autistic patients that their non-autistic patients receive. This research project was set up, inter alia, to explore the attitudes of GPs to the introduction of autism training and the contentious issue of making GP training on any subject mandatory rather than voluntary. We wanted to better understand how autism training for GPs might be developed to maximise "take-up" and "buy-in" given that the demands on their time, including training demands, are such that autism is only one of many conditions vying for training time and mandatory training is anathema to many GPs. Key findings were that nearly three quarters of our respondents strongly agreed that training in autism is important for GPs, the same percentage of our participants had received little or no formal autism training, and there was a general dislike of any training being made mandatory. Training should be focused on barriers faced by autistic people in accessing healthcare as well as on autism as a medical condition. No respondent had received a significant level of training in autism although 40% of participants who had received training had been trained by an autistic individual.

Keywords: Autism Training, General Practitioners (GPs), Healthcare Barriers, Mandatory Medical Training

### **Background**

The health of autistic people is worse than that of their non-autistic peers and

outcomes are poorer than with those who are not autistic both in terms of morbidity and mortality (Casanova et al., 2020; Hirvikoski et al., 2016; Sala et al., 2020). Lack of understanding of autism by GPs has been highlighted as a key issue in study after study (Bradshaw et al., 2021; Coughlan et al., 2019; Unigwe et al., 2017). Doherty et al. (2022) identified lack of understanding of autism as a barrier to healthcare and adverse outcomes in the autistic population. The greater health risks associated with autism require measures to improve autistic healthcare. Lack of understanding of autism by GPs clearly has adverse effects on the outcomes for their autistic patients. Although it would be wrong to frame the problem of poor autistic healthcare as solely due to lack of training (Coughlan et al., 2019), because other factors are in play, delivery of measures to improve autistic healthcare requires improving overall levels of understanding of autism amongst GPs through training initiatives. Training should also be focused on barriers faced by autistic people in accessing healthcare if autistic people are to be able to access primary healthcare on a par with their non-autistic peers.

So, what is the current situation regarding GP knowledge of autism? A worldwide systematic review undertaken by McCormack et al. (2019) into primary care physician (PCP) knowledge of autism concluded that PCPs in the majority of the reviewed studies had inadequate knowledge of autism. The following quotation exposes the complexity of the task of improving GP knowledge of autism which is more than 'just' a training issue.

At one end of the continuum [of GP knowledge of autism], there were GPs who had not heard of autism or endorsed outmoded aetiological theories. Others, however, demonstrated a sound knowledge of the conditions but had limited confidence in their ability to identify the condition. Many GPs and researchers alike called for more training and this might be effective. However, framing the problem as one of a lack of training risks silences the array of organisational factors that impact on a GP's ability to provide care for these patients (Coughlan et al., 2020, p. 1928).

A survey of over 300 UK GPs carried out by Unigwe et al. (2017) ascertained that 63.5% had not received autism training during their medical degree or specialist training and that 65.8% had not received autism training since qualifying. These researchers reported that GP self-efficacy scores were related to the extent of autism training (as well as to personal experience of autism). A number of other variables were associated with the extent of PCP knowledge of autism. These included having personal experience of autism, involvement in continuing medical education, and years of clinical experience (which had an inverse relationship with knowledge i.e., in general terms the less experienced PCPs had greater understanding of autism than their more experienced colleagues) (ibid.). One reviewed study reported low attendance rates for autism training where it was provided and not made mandatory. Few studies have focused on what autism training for health

professionals should focus on. For example, Bradshaw et al. (2019) concluded that ensuring that training covers coping with communicative differences, making surgeries more “autism friendly”, and approaching physical examinations mindful of sensory sensitivities, can improve both access to and engagement with healthcare services for autistic adults. The report of the Michael Inquiry (2008, p. 47) stated that ‘The research and witnesses giving evidence to the Inquiry suggests that GPs who lack training in learning disability are unlikely to deliver health checks to a good standard without support.’ There is no reason to suppose that training in autism would be any less important for GPs undertaking health checks for autistic people.

### **United Kingdom National Strategy**

The UK national autism strategy Think Autism (Department of Health, 2014) built on an earlier strategy which required that basic autism training should be available to all staff working in health and social care. The statutory guidance linked with Think Autism requires NHS England to go beyond the provision of basic training and ‘Ensure that GPs, as the gatekeepers to diagnostic services, have adequate training specifically in autism beyond general awareness training’ (Parkin et al., 2016, p. 15). The Department of Health is considering the inclusion of autism in an additional year of GP training<sup>1</sup> although the extra year itself is still just a proposal. Although it is not a training tool per se, the RCGP has produced an Autistic Spectrum Disorders Toolkit<sup>2</sup> which aims to be a user-friendly guide on autism for primary care practitioners and others. This toolkit provides links to free eLearning autism training material such as its own eLearning package (the hyperlink to the RCGP’s own eLearning tool was broken when we attempted to access it and we were left wondering how long it had been broken). The excellent NHS Education Scotland eLearning module remained available online.

The United Kingdom Government’s national strategy for autistic people for 2021 to 2026 includes six themes one of which is “tackling health and care inequalities for autistic people”. This theme states that ‘Improving health and care staff’s understanding of autism is crucial in enabling us to make progress on reducing health inequalities for autistic people. In 2021 to 2022, we will continue to trial and develop the Oliver McGowan Mandatory Training (OMMT)<sup>3</sup> in learning disability and autism for all health and adult

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<sup>1</sup> <https://www.longtermplan.nhs.uk/>

<sup>2</sup> <https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/asd-toolkit.aspx>

<sup>3</sup> The national strategy adds that the Oliver McGowan Mandatory Training (OMMT) ‘can be adapted to other public servants, including the police or housing officers’. The author of this

social care staff across England'. However, the strategy also states that work in some areas – including OMMT – is still ongoing and that findings are awaited before further action is taken so the position on OMMT is not entirely clear.

Researchers have drawn attention to the many competing training demands on GP time and that concentrating on training can obscure other avenues for improving healthcare access for autistic adults (Coughlan et al., 2020). Coughlan and his colleagues (2020, p. 1929) write that 'It is unclear how GPs' wishes for autism training compare to desires for training in other areas'. These authors point out that the issue of 'lack of training' is found throughout the literature on primary care. Autism is just one of many topics on which it has been argued that training is inadequate. For these researchers, this 'raises questions of practicality in terms of rolling out a suite of GP training programmes to tackle a myriad of clinical issues' (ibid., p. 1938). Coughlan et al. (2020) ask whether a better approach might be general training in child development rather than specific training for individual conditions such as autism. They also suggest that treating the problem as a lack of training risks taking attention away from other approaches such as embedding toolkits or screening tools and ignoring socio-cultural factors and organisational constraints on GPs (ibid.).

There is substantial evidence in the literature that many, if not most, General Practitioners (GPs) in the United Kingdom do not have the necessary understanding of autism to enable them to offer the same standard of service to their autistic patients that their non-autistic patients receive (Coughlan et al., 2020; Nicolaidis et al., 2021; Unigwe et al., 2017). General training in child development as suggested by Coughlan et al. (2020) might well be a better approach than training in the identification of individual conditions such as autism. In one very important respect though autism is an exception to all other conditions that a GP may come across during a consultation. Whilst diabetes, epilepsy, or kidney disease will not affect a neurotypical adult patient's likelihood of consulting their GP, there are various barriers that may cause an autistic adult patient to actively avoid seeking a medical opinion (Doherty et al., 2022). Milton (2012) has argued that communication difficulties associated with autism are bi-directional and not the 'fault' of the autistic person. He calls this the "double empathy" problem. There is increasing evidence in support of the double empathy problem in relation to communication between GPs and their autistic patients (Arnold, Higgins & Trollor, 2020; Doherty et al., 2022; Haydon, Doherty & Davidson, 2021) with Arnold and his colleagues stating that the double empathy problem 'leads to incongruence and biases in the interpretation of an autistic person's communications and behaviours' (p. 195). In a primary care context, the only way to overcome these problems is for GPs to receive training in how to remove access barriers faced by their autistic patients and adjust their communication with these patients.

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literature review, who has worked in the police service at a senior level, considers this to be naïve as far as the police is concerned.

Peer-to-peer training is considered to improve interaction between the trainer and their trainees, to harness the strong influence of peers through role modelling, (Christensen et al., 2021; Stigmar, 2016). A peer-delivered Acute Care Skills Training (ACST) course as part of an internship programme for newly qualified doctors in Sri Lanka was said to be able to improve the knowledge, skills and confidence in managing medical and surgical emergencies of newly qualified medical graduates (Beane et al., 2017). In their study of a UK national peer-to-peer physical activity advice training programme for healthcare professionals, Whelan et al. (2021, p. 21) reported that ‘Most attendees thought it was important for the trainer to be working in their area of clinical practice’. This all reflects evidence that peer-to-peer training is an effective approach for many different fields including diabetes mellitus (Baksi, 2010), developmental disabilities (Finn & Sturmey, 2009), mental health (Flegg, Gordon-Walker & Maguire, 2015), and service learning (Davis & Shinhiwa, 2019).

The London South Bank University (LSBU) GPs healthcare research project was set up to investigate barriers faced by autistic adults when accessing primary healthcare, annual health checks (AHCs) for autistic adults, autism training for GPs, and the contentious issue of mandatory medical training. Our findings relating to strand of the project dealing with access barriers and AHCs have been reported elsewhere. Here, we report data concerning the strand focused on autism training and mandatory medical training. We wanted to better understand how autism training for GPs might be developed to maximise "take-up" and "buy-in" given that the demands on their time, including training demands, are such that autism is only one of many conditions vying for training time and mandatory training is anathema to many GPs. Following receipt of confirmation from the Health Research Authority that we were not required to seek ethical approval from that body, we sought and were granted approval from the LSBU ethics committee (reference number ETH2122-0023).

## **Methods**

We undertook a structured literature review using the Preferred reporting items for systematic review and meta-analysis (PRISMA) literature search process and hope to report the results of this in detail later. The PRISMA search was followed by an online survey study to understand individual GP perspectives on autism training and on making any of their training mandatory rather than voluntary. The online questionnaire-based survey results are reported here. The questionnaire development was undertaken iteratively using the expert knowledge of the medical doctors and researchers in the project team. The questionnaire emerging from this process was piloted successfully with the pilot version used in the survey ‘roll out’.

Our participants were a mix of non-autistic and autistic medical professionals. The topics covered by our survey – autism training and mandatory medical training – were

considered highly unlikely to give rise to potentially upsetting content. Nevertheless, as our survey was not subject to institutional review, all questions were reviewed and approved by the project steering group most members of which have lived experience of autism.

GPs were recruited from Autistic Doctors International, from the personal and professional networks of the medical doctor members of the project's Steering Group, and via Twitter.

All data was analysed by the first and fifth co-authors (with contributions from the other co-authors) to ensure inter-rater reliability. No significant differences emerged from the analysis by the two project team members so no discussion to achieve consensus was required on this occasion. We now report our findings relating to autism training and mandatory training.

## **Results**

Of the 28 responses to our survey of UK-based GPs, 19 (68%) were either a GP partner or salaried GP and 21 (75%) had been a GP for more than five years. Over 90% of respondents to the question about participation in the current voluntary AHC programme had participated. Thirteen of 21 respondents (62%) have a particular interest in or knowledge of autism. Four respondents disclosed either being autistic or having an autistic child. We now report our findings under the headings: Autism training for GPs and Mandatory training for GPs.

### **Autism Training for GPs**

Our questionnaire sought the attitudes of GPs to the introduction of training in autism and to the making of any GP training mandatory rather than voluntary. We first report our findings on the subject of autism training for GPs and then move on to the issue of mandatory training.

How important is training in autism for GPs?

All respondents either strongly agreed (70%) or agreed (30%) that autism training is important for GPs.

What training in autism have you received?

Eighteen of 24 respondents (75%) had received little or no formal (as opposed to self-directed) training in autism. Those who had received some training referred to things like 'General training' and 'Only CPD'. Three doctors alluded to an understanding of autism gained from lived experience either through being autistic or the parent of an autistic child. Other respondents wrote 'Learning from patients as individuals mainly' and 'Self-directed only.' Training received varied from 'four months of CAMHS. Various GP teaching sessions to a parent of an autistic child who reported attending courses run by the National

Autistic Society and undertaking extensive reading about autism.

If you have received autism training was it delivered by an autistic person?

Twenty-three of 31 respondents (74%) responded to this question which implied that they had received some autism training however minimal it may have been (almost half of respondents to the previous question had received little or no training in autism). The training received by the majority of respondents (15 / 65%) who had received at least some training was not delivered by an autistic person.

Would you like to have additional training in autism?

21 of 29 respondents (72%) would like to have additional autism training.

What would you like additional autism training to focus on?

Five of 18 respondents (28%) referred to communication issues, with one saying this applied especially to women who are underdiagnosed. Three respondents (25%) wanted to be able to improve their autistic patients' experiences of healthcare/the patient journey. Others referred to training in how 'the autistic experience differs from the neurotypical', how to support carers dealing with behavioural issues, how to 'consider autism in any patient', how to achieve a better understanding of 'autism in women', and information about reasonable adjustments, and medication/prescribing.

How would additional autism training requirements best be delivered?

Ten of 17 respondents (59%) asked for online training with one adding that it should be live and another explaining that they preferred online training as it can be accessed in their own time. One respondent preferred a combination of online and live training, and another wanted in person training. A further person wanted training to be delivered via discussion groups, and another requested 'Case studies looking at pt [patient] journey and potential things I can do to help make things easier - from access thro to appt [appointment].'

The four respondents who commented on who should deliver training all asked for training by autistic people. One doctor wrote 'In person, by expert patients' (which we interpret as referring to autistic patients), a second that training should be delivered 'By autistic trainers', whilst the other two respondents both mentioned autistic doctors, writing as follows:

1. 'Experienced (autistic) GPs and autistic Pts [patients].
2. By autistic colleagues, preferably fellow GPs, preferably the ones in their own practice or CCG+++ [clinical commission groups etc.]. By any good-willing teacher as long as the material has been validated first by local autistic GPs.

We heard from one respondent that training 'Needs to be concise and relevant to GP. We have so much to learn and so much that we need to know and everyone and every charity etc wants us to know more about their particular interest that any education and training needs to be concise, focused and practical/useful for primary care.' Another

respondent wrote: ‘Please come up with some fun, interactive online sessions. I would love to come. And I will do my bit on the international guidance and legislation front. We are in this together.’

What are your views on mandatory autism training for GPs?

Only four of 18 respondents (22%) were unequivocally in favour of mandatory autism training for GPs whilst another three (17%) strongly disagreed. Eight of those responding (44%) referred in some way to the demands on GP training time, or that it would seem like a ‘chore’, without necessarily specifically stating that they were for or against autism training being mandatory. Especially interesting responses were:

- ‘making any training mandatory is a slight killer for interest. So I’d keep it voluntary but offer slots at convenient times for maybe 1.5 hrs, or a series that people can drop into’
- ‘Too much mandatory training about single interests results in regular, superficial, meaningless, "box ticking" training (this respondent was one of the two who strongly disagreed with mandatory training in autism)
- ‘Absolutely yes, especially focusing on updating them: explaining the changes of the past years, adult and female autism, high mortality including in "high-functioning" adults, that there are autistic GPs.’ [This respondent did not disclose being autistic but may be.]
- ‘Good to include in training new GPs’.
- Not needed it’s covered in general training.<sup>4</sup>

What, in your view, are the main barriers to receipt of autism training by GPs?

Almost all respondents mentioned “time” or its equivalent (one wrote ‘Time, time, and time!’). The time issue was well-expressed by the doctor who wrote ‘Every interest group wants GPs to have more training. You are in a long queue Parkinson’s, sarcoidosis, cancer, diabetes, cancer, eczema, Alzheimer’s, cancer, hypertension, asthma, etcetera.’ Other barriers were competing priorities, cost, stigma<sup>5</sup>, outdated ideas about autism, and a failure to understand the importance of autism. Comments included ‘Expectation that GPs must be all things to all people’ and ‘We end up doing [most] CPD/ learning in our own time. I like learning but there is so much to cover and everyone wants us to be better/know more

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<sup>4</sup> Autism is not covered in GP training. We comment on this in a later section of this article.

<sup>5</sup> This is presumably a reference to the societal stigma associated with autism. The implication appears to be that the respondent who mentioned this considers that some GPs may stigmatise autism.



about their interest area.’ The following detailed comments from one respondent are quoted in full as they raise important points not mentioned by other respondents.

1. the general lassitude towards any additional training, whatever the topic (tiredness, feeling that trainings take away time from clinical practice).
2. the legitimate suspicion when it comes to trainings vaguely related to mental health (we have all had empty, sappy courses, full of good intentions but either political or without hard data).
3. the current feeling that autism is fashionable.
4. the suspicion some GPs have that there is overdiagnosis at the moment, especially of adults.
5. the feeling that even if GPs improve care to autistics, secondary care will still let them down somehow (for instance, by offering often CBT as first-line psychotherapy even though it works poorly in many autistics).

### **Mandatory Training for GPs**

What is your view on making some training for GPs mandatory?

Seven of 18 respondents (39%) referred to the amount of existing mandatory training. The responses varied from ‘definitely do it’ and ‘Absolutely must be. Can you imagine not including diabetes in our curriculum??’ to ‘Nightmare. We are already groaning under the burden of mandatory training for fire extinguishers, lifting, radicalisation, safeguarding, resus and a hundred others’ and ‘Pointless. There are so many similarly valid training needs.’ with many holding a position somewhere in between. One respondent wrote ‘Mandatory training should be limited to adult and child safeguarding, BLS and AED, data protection/information governance.’ A respondent who stated that there is already too much training added that online training is often delivered poorly. The one-word response ‘Difficult’ acknowledges the dilemma around balancing understanding of autism with the training burden. Another doctor wrote ‘If time is allocated that is fine’. The response ‘you could argue our training as med students was nonexistent so now we have to do it, a bit like covid training’ points to embedding autism in undergraduate/postgraduate training as a longer-term solution.

Do you have anything further that you would like us to consider?

- That Clinicians/staff can be autistic too!
- Every interest group wants GPS to have more training. You are in a long queue Parkinson’s, sarcoidosis, cancer, diabetes, cancer, eczema, Alzheimer’s, cancer, hypertension, asthma, etcetera

- Autism among colleagues in GP [general practice] is a significant benefit to promoting understanding across the clinical team.
- Thank you for doing this valuable work.
- E-consult<sup>6</sup> has been amazing for our autistic patients
- I would like a network of openly autistic GPs<sup>7</sup> to be identified so that they can deliver training to their fellow GPs and other practice staff. This should be getting easier as we might be moving from a medical model of autism to a neurodiversity/social one. (2) I find that the RCGP and other GP organisation are behind other specialties, and behind society in general, when it comes to inclusion and visibility of autistics. I am appalled that they so often put all autism within the learning disability category. How will patients trust autistic GPs as professionals? How will autistic children contemplate a career as a GP if we perpetuate these kind of lazy, false views?

### Discussion

There is significant evidence of a lack of understanding of autism by GPs. A worldwide systematic review undertaken by McCormack et al. (2019) into PCP knowledge of autism concluded that PCPs in the majority of the reviewed studies had inadequate knowledge of autism. A survey of more than 300 GPs based in the UK carried out by Unigwe et al. (2017) ascertained that 63.5% had not received autism training during their medical degree or specialist training and that 65.8% had not received autism training since qualifying. There is clear evidence supporting the view that lack of autism training is contributing to the inequitable healthcare service generally received by autistic people (Coughlan et al., 2020; Nicolaidis et al., 2021; Unigwe et al., 2017). Although lack of training for GPs is not the only factor behind the poor healthcare service received by autistics, it is a major factor. Arguably, unless and until GPs understand the specific barriers facing autistic adults in accessing primary healthcare, other 'solutions' to the problem of higher morbidity and early mortality in autism are less likely to be as effective as they should be because the purpose of such solutions will not be fully appreciated. In a primary care context, the only way to overcome the twin problems of higher morbidity and early mortality in autism is for GPs to receive training in the nature of access barriers faced by

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<sup>6</sup> eConsult is a form-based online consultation & triage platform that collects a patient's details and sends them through to their GP practice to triage and decide on the right care for them.

<sup>7</sup> Autistic Doctors International is a secret Facebook group of autistic doctors. As with autistic people in every other profession, disclosure by autistic doctors carries the risk of damaging an individual's career. And we have anecdotal evidence that the NHS may regard disclosure of autism by their staff as a reputational risk.

their autistic patients, how to remove these barriers, including how to adjust their communication with these patients.

We received 31 responses to our online survey of which 10% were from autistic primary care physicians. Nearly three quarters of our respondents strongly agreed that training in autism is important for GPs with all the other respondents agreeing that it is important. Three quarters of our participants had received little or no formal (as opposed to self-directed) training in autism which was slightly higher than the percentage in the Unigwe et al. (2017) study. Most learning about autism involved learning from patients or self-directed learning undertaken in spare time (which GPs are not over-endowed with). No respondent had received a significant level of training in autism, although it was encouraging that 40% of those participants who had received some training had been trained by an autistic individual.

The major barrier to GPs being trained in autism is the time commitment involved if this is undertaken as part of continuous professional development. The demands on scarce GP training time are legion and very well expressed by the respondent who stated 'Every interest group wants GPs to have more training. You are in a long queue Parkinson's, sarcoidosis, cancer, diabetes, cancer, eczema, Alzheimer's, cancer, hypertension, asthma, etcetera.' Each interest group could no doubt make a case for their condition being treated as a training priority. However, lack of training in autism – not as a medical condition but focused on an understanding of the barriers faced by autistic people – is essential if they are to be able to access primary healthcare on a par with their non-autistic peers. Our participant who referred to the 'long queue' for training echoed Coughlan et al. (2020) who stated that autism is just one of many conditions vying for scarce consultation time. Whilst they are both correct in this regard, there is a fundamental difference between general medical conditions (Parkinson's, sarcoidosis, cancer, diabetes, cancer etc.) and autism. Many autistic adults, even those who otherwise are highly capable people, may not access primary healthcare at all because of the difficulties they face in navigating appointment systems (and even in making a telephone call to book an appointment). If an autistic adult does attend a consultation, issues relating to stigma and communication differences will often affect the outcomes (Doherty et al., 2022; Malik-Soni et al., 2021). In other words, barriers, stigma and communication issues affecting autism necessitate the provision of autism training for GPs because these barriers, stigma, and communication differences are unique to autism. To provide an equivalent service for an autistic patient with Parkinson's, sarcoidosis, cancer, diabetes, cancer, or any other condition, a GP must be conversant with both the condition the patient presents with and have a sufficient understanding of autism. Our 'key' point is, therefore, that the greater morbidity and mortality associated with autism cannot be tackled effectively if GPs do not understand the barriers facing autistic patients and the difficulty these patients experience in making themselves understood even when they have overcome the access barriers.

Over 90% of the respondents to the question about participation in the current voluntary AHC scheme had participated in this scheme which compared favourably to the NHS report in June 2021 that ‘Three quarters of people with a learning disability aged 14 and over have received an annual health check’<sup>8</sup> (our italics). This may have been due to almost three out of four of our respondents having a particular interest in or knowledge of autism. The number of respondents who disclosed either being autistic or having an autistic child probably explains the depth of understanding of autism displayed by so many of the respondents. Two thirds of our respondents asked for a short, sharp online autism training course primarily because they would be able to undertake the training whenever time permitted. Such a course could be developed by a small group of autistic doctors and the “expert patients” that various of our participants asked for autism training to be delivered by. We are in the process of developing a dedicated training course for GPs as a deliverable of our autistic-led project and propose to report further in this regard on completion of the development work.

There is anecdotal evidence that many GPs are resistant to proposals to make aspects of training mandatory. There are so many demands on GP time, and so many interest groups calling out for GPs to be trained on the condition they advocate for, that the mere mention of “mandatory training” is considered anathema to many GPs. Nevertheless, the NHS is trialling the Oliver McGowan Mandatory Training in learning disability and autism for all health and adult social care staff in England. Slightly less than twenty-five per cent of our respondents were unequivocally in favour of mandatory autism training for GPs whilst almost the same number strongly disagreed. Nearly half of those responding referred in some way to the demands on GP training time, or that it would seem like a ‘chore’, without necessarily specifically stating that they were for or against autism training being mandatory.

It is known that there is a significant drop off in skills / learning gains following any medical training (Butler & Raley, 2015). We hypothesise that this is steeper for training that is not undertaken voluntarily. We think that, except for certain essential training, it may be better to seek “buy-in” to training from GPs rather than force it on them. Whilst the voluntary take-up approach would take longer to take effect, it is possible that this approach would be more likely to lead to efficacious training rather than to a perfunctory, box-ticking process that would not benefit GPs or their patients. The fundamental question for any type of training is, therefore, whether it should be classed as “essential”. We think that the unique barriers facing autistic adults in accessing primary healthcare justify classing autism training as essential training. However, it may well be that the demands on the NHS at the current juncture are such that it would be more realistic to deploy autism

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<sup>8</sup> <https://www.england.nhs.uk/2021/06/three-in-four-people-with-a-learning-disability-receive-nhs-annual-health-check/>

training on a voluntary basis with an associated educational campaign to highlight the need for it and the potential benefits for all concerned.

Finally, we recommend that training in autism be embedded in undergraduate and post-graduate medical training. This will ensure that all newly qualified doctors will have developed the understanding of autism necessary for them to be able to support their autistic patients to the same standard as their non-autistic patients. Our training initiative should help to close the “training gap” between now and when all GPs have received training in autism during their entry-level medical education.

### **Strengths and Limitations**

The research team which undertook this study was autistic-led and included experienced medical doctors as well as experienced researchers. Only two members of the team were not neurodivergent, with the majority of the team being autistic. The steering group included members of Autistic Doctors International who combine lived experience of autism and a medical background. These autistic medical doctors guided the development of the study from start to finish. One of them designed the original version of the study and guided the changes to the design required as the study developed. The importance of administrative support for the neurodivergent team members was recognised at the design stage and our admin support made a significant contribution to successful completion. Our questionnaire emerged from a lengthy iterative course of development involving experienced qualitative researchers and medical doctors. We believe this to have been a robust process.

There are also limitations to our study. Despite extensive ‘advertising’ of the study our dataset is very small in relation to the number of GPs in the UK. Our survey was undertaken during the COVID-19 pandemic when GP surgeries were under great pressure which severely limited the time they could spend on non-essential matters. Our questionnaire was not subjected to a formal validation process by a psychometrician and principal components analysis was not undertaken. Our self-selecting participants – many of whom were either autistic or had an interest in autism – may have had significantly greater levels of understanding of autism than is the case with most GPs (Mazurek et al., 2021) which raises the possibility of bias. Although our conclusions are only indicative, the knowledge demonstrated by our participants justifies listening to what they have to say.

### **Author Contributions**

The second author designed the project methodology. The first author led the study and the drafting of this manuscript. The first and fifth authors undertook the data analysis. The other authors reviewed and commented on the data analysis and various drafts of the manuscript until all were satisfied that it reflected the project’s survey data.

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