British Society of Gastroenterology Workforce Report
May 2021 (written in retrospect for October 2020)
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Key points:

- On 30th September 2019 there were 1607 substantive consultant gastroenterologists and hepatologists in the UK, a 2.4% expansion from 2018
- 22% of consultants were female and 14% of all consultants worked flexibly
- The consultant workforce has expanded by 57% over the last ten years; mean yearly expansion is between 4.5% and 5%
- Mean intended retirement age was reported as 61.9 years with 43% of consultants reaching this age over the next decade; on average, there will be 66 retirements per year
- Mean WTE PAs contracted per week were 11.55 and flexible PAs 7.03; average consultants reported working an additional 1PA a week
- 45% of advertised consultant gastroenterology and hepatology posts in 2019 were unfilled indicating expansion was less than it could be
- With the current shortfall in workforce, predicted retirements and population growth, we will need between 7 – 9% yearly expansion
- Gastroenterology is the major physician specialty at highest risk of burnout with lower (worse) mean mental wellbeing scores
- On 30th September 2019 there were 728 gastroenterology and hepatology Higher Specialty Trainees in the UK
- Recruitment in 2020 to ST3 was 100%
- It would be appropriate to double the number of ST3 NTNs recruited each year to address the deficit and need for greater expansion

Introduction:

The BSG Workforce Report collates data from the Royal College of Physicians (RCP) Census of consultant physicians and higher specialty trainees 2019, the British Society of Gastroenterology Clinical Services and Standards Committee (BSG CSSC) & Workforce Census 2020 and the Medical Register of the General Medical Council (GMC). The data reported reflects the Workforce prior to the COVID-19 pandemic.

Consultant Gastroenterologists and Hepatologists:

On 30th September 2019 there were 1607 substantive gastroenterology and hepatology consultants in the UK[1,2], a 2.4% expansion from 30th September 2018 (Tables 1 and 2). 22% of consultants were female compared with 38% across all medical specialties. 14% of all consultants worked flexibly. There were 2,013 doctors holding a licence on the GMC Medical Register who listed Gastroenterology as their main specialty[3].

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	926 (900)	957 (932)	996 (968)	1054 (1082)	1107 (1095)	1182 (1170)	1222 (1258)	(1290)	(1355)	(1388)
Scotland	108 (91)	108 (91)	107 (93)	111 (99)	122 (105)	128 (109)	127 (113)	(106)	(106)	(108)
Wales	48 (51)	52 (51)	5 (51)	55 (54)	59 (56)	64 (59)	66 (58)	(59)	(65)	(68)
Northern Ireland	31 (32)	35 (33)	36 (33)	35 (33)	39 (34)	40 (38)	40 (38)	(39)	(44)	(43)
Total	**1113 (1074)**	**1152 (1107)**	**1191 (1145)**	**1255 (1268)**	**1326 (1290)**	**1414 (1376)**	**1455 (1467)**	**(1494)**	**(1570)**	**(1607)**

Table 1: Number of substantive UK consultant gastroenterologists and hepatologists by year
*Numbers in brackets from RCP Census 2019. Numbers not in brackets from previous BSG Workforce Reports.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
England	6.9	3.5	4.1	5.8	5.0	6.8	3.4	(2.2)	(5.0)	(2.4)
Scotland	12.5	0	-0.9	3.7	9.9	4.9	-0.8	(-6.2)	(0)	(1.9)
Wales	-2	8.3	0	5.8	7.3	8.5	3.1	(1.7)	(10.2)	(4.6)
Northern Ireland	3.3	12.9	2.9	-2.8	11.4	2.6	0	(2.6)	(12.8)	(-2.3)
Total	6.9 (5.0)	3.5 (3.1)	3.4 (3.4)	5.4 (10.7)	5.7 (1.7)	6.6 (6.7)	2.9 (6.6)	(1.8)	(5.1)	(2.4)

Table 2: Annual expansion (%) of UK consultant gastroenterologists and hepatologists by year
*Numbers in brackets from RCP Census 2019. Numbers not in brackets from previous BSG Workforce Reports.

Mean annual consultant expansion between 2009 and 2019 was 4.6% and remains static (4.5 to 5%). The RCP census showed a peak expansion of 10.7% in 2013 followed by a drop to 1.7% in 2014 before returning to over 6% the following year. This trend was repeated in 2017 (Table 2 and Figure 1). The substantive gastroenterology and hepatology consultant workforce has expanded by 57% over the last ten years.

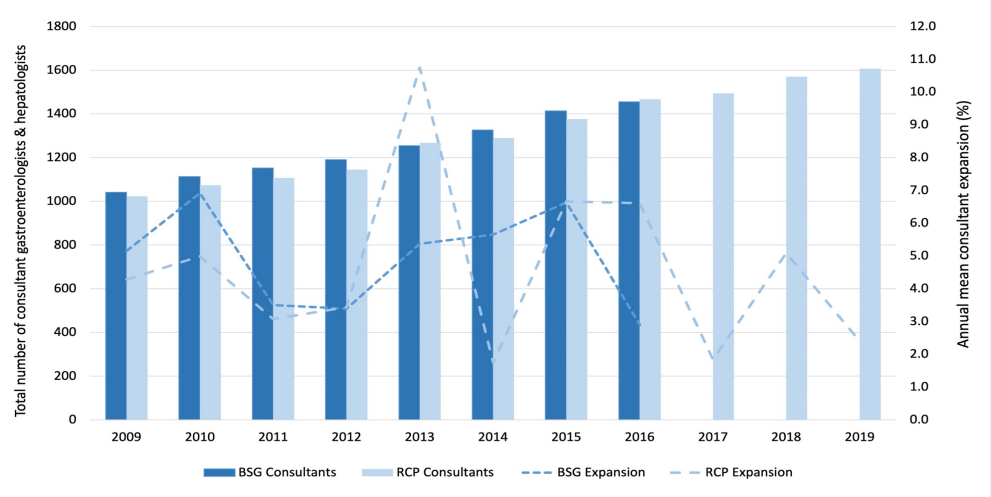

Figure 1: Trends in the number of substantive gastroenterology and hepatology consultants and annual mean expansion

The 2013 RCP document *Consultant Physicians Working for Patients* estimated that we need approximately 6 whole-time-equivalent (WTE) consultant gastroenterologists (with GIM) per 250,000 population[4]. For the 2019 ONS population of 66,796,800 this equates to 1,603 WTE substantive consultants providing 18,515PAs. Of the current workforce (1,607) there are 225 flexible consultants contracted to provide a mean of 7.03PAs and 1382 WTE consultants contracted to provide a mean of 11.55PAs. Together, the substantive consultant workforce provides a total of 17,544PAs so there is a shortfall of 971PAs due to the above estimates relying on WTE consultants. Additional workload pressures are reported by consultants delivering on average 1PA over and above their contracted job plan. Incorporating this additional workload equates to a total shortfall of 2,578PAs.

This shortfall could be provided by an additional 243 WTE consultants or, if the proportion of flexible consultants remains static at 22%, by 174 WTE and 81 flexible consultants. This requires a 16% consultant expansion (255 in total) and will only provide the substantive consultant workforce needed to meet current demand. It will not contribute towards the expected annual expansion required for population growth or replacement posts for predicted retirements. It should be noted that it is more likely that the proportion of the consultant workforce on flexible contracts will increase over time rather than remaining static, putting further emphasis on the need workforce expansion.

Age and ethnicity:
The largest proportion of consultant gastroenterologists and hepatologists were aged between 40 and 50y; 9% were aged 60 years or older (Figure 5). At the time of writing data on ethnicity and country of graduation was unavailable for the census date.

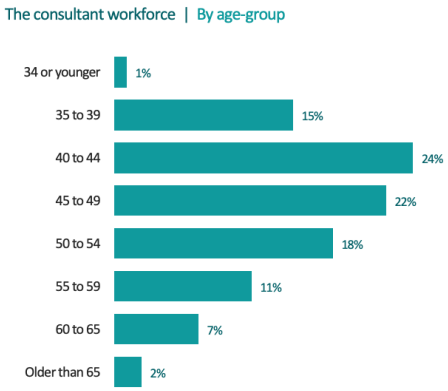

Figure 5: The consultant gastroenterology and hepatology workforce: by age-group

Retirements:
The 2018 RCP census reported mean intended retirement age for consultant gastroenterologists and hepatologists as 61.9 years (61y for females and 62.2y for males) with 43% reaching this age over the next decade. This suggests between 421 and 764 consultants will retire over the next 10 years (Figure 2). Thirty two consultants reached intended retirement age in 2019 and this is predicted to rise to another peak of 68 in 2025. In the next decade 666 consultants will reach mean intended retirement age, on average 66 intended retirements per year. 5% of consultants had "retired and returned"; they have predominantly undertaken outpatient and elective work. The

2020 CSSC and Workforce census reported that 40% of Trusts expect at least one to two retirements in the next 12 months[6].

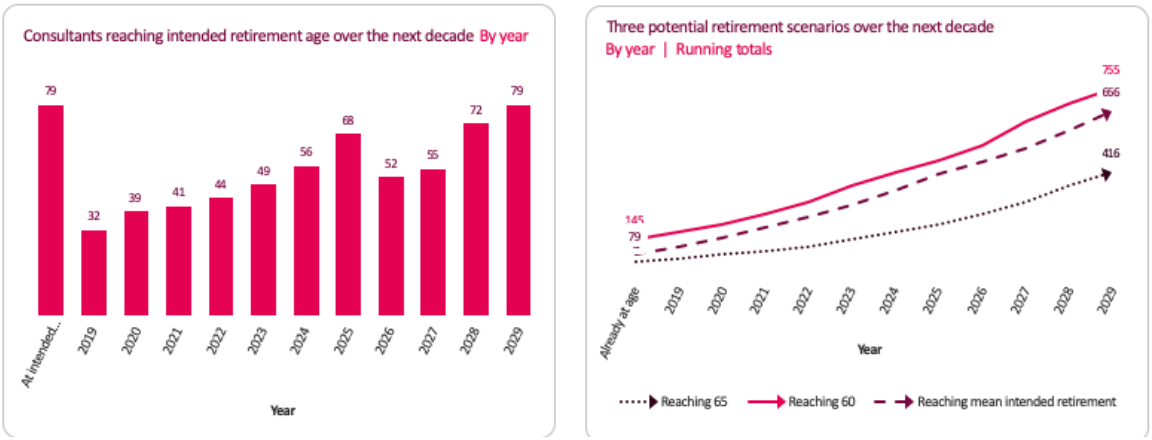

Figure 2: Potential retirement scenarios over the next decade

The impact of changes in pension tax rules was evaluated by a CSSC survey of BSG members in 2019[7]. 66% of consultants planned early retirement with 40% dropping at least one endoscopy list or clinic and 4% dropping more than three. 74% declined waiting list initiative work. 74% saw a rise in 2 week waits for endoscopy and in 22% the increase was by more than 4 weeks. If this trend continues, higher than predicted early retirements adds further pressure on an understaffed workforce impacting on clinic activity and cancer waits. This is in addition to service pressures as a consequence of the COVID-19 pandemic.

Required expansion:
Mean yearly consultant expansion over the last 10 years was between 4.5% to 5% (Figure 3). At this rate, shortfall and predicted requirements can be overcome by 2023 (309 WTE). With the addition of population expansion we are more likely to need between 7% and 9% yearly expansion, in a sustained manner, to provide an adequate consultant workforce.

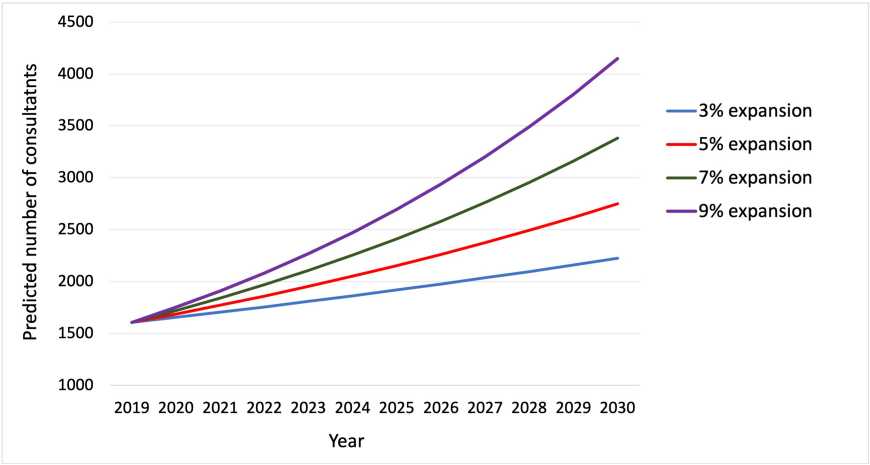

Figure 3: Graph showing consultant expansion at 3%, 5%, 7% and 9%

Regional variation of consultants:
Figure 4 shows the regional variation of substantive consultant gastroenterologists and hepatologists throughout the UK and population per WTE. The average WTE consultant in the UK

serves a population of 44,155 which does not meet the RCP estimate of 1 WTE per 41,667 population. There remains considerable geographical variation with some populations much more poorly served such as the Thames Valley, the North and West of Scotland and North Wales.

Locations of consultants and full time equiavelnt vs population | By nation and region

Nation	NHS region	Sub-region	Female	Male	Total headcount	Total FTEs	Population	Population per FTE
England	London	London - Central and North East	34	86	120	116	3,539,903	30,408
		London - North West	17	47	64	60	2,103,719	34,931
		London - South	21	78	99	90	3,324,081	37,018
	Midlands and East	East Midlands	20	90	110	106	4,835,928	45,683
		East of England	30	102	132	124	6,210,000	50,276
		West Midlands	32	120	152	145	5,933,118	40,998
	North	North West	29	152	181	171	7,013,321	41,103
		Northern	15	72	87	84	2,746,066	32,748
		Yorkshire and the Humber	32	92	124	117	5,781,097	49,274
	South	Kent, Surrey and Sussex	18	72	90	86	4,508,475	52,180
		South West	25	93	118	111	4,902,479	44,090
		Thames Valley	17	31	48	46	2,647,470	57,229
		Wessex	16	47	63	61	2,865,517	47,284
Northern Ireland		Northern Ireland	6	37	43	40	1,893,667	47,706
Scotland	Scotland	Scotland - East	2	10	12	10	417,470	41,747
		Scotland - North	4	14	18	17	999,533	58,235
		Scotland - South	9	35	44	41	1,464,179	35,637
		Scotland - West	5	29	34	32	2,669,880	82,574
Wales	Wales	Wales - North	1	12	13	11	699,559	64,964
		Wales - South	13	42	55	50	2,453,320	49,324

Figure 4: Location of substantive consultant gastroenterologists and hepatologists in the UK with population per WTE consultant

20% of consultants work at more than one location and 23% of consultants reported their primary work was in a majority-rural or hub-town area.

Consultant Hepatologists:

Of the 1,607 substantive consultants there were 152 consultants who identified hepatology as their main specialty[1,2]. 26% were female, the majority aged between 40 to 44y and 9% worked flexibly. Over the last 5 years there has been a 20% expansion in consultant hepatologists. The 2019 BSG Workforce Report[8] identified the average UK hepatologist serves a population of 525,734. There was a 20% rise in 2020 from alcohol-specific deaths compared to 2019 in England and Wales; 80% of those deaths were due to alcoholic liver disease[9]. The growing alcohol-harm crisis accelerated by the COVID-19 pandemic, alongside the increasing burden of liver disease generally requires clinicians and allied healthcare professionals trained in hepatology. The Lancet Commission in 2014 reported 0.35WTE hepatologists per 100,000 population but that the UK needs 0.8WTE consultant hepatologists per 100,000 population[10]. This equates to a total of 534 WTE consultants, or 3.5 times more hepatologists than those currently identifying hepatology as their main specialty. To address this the BSG and the British Association for the Study of the Liver (BASL) recently proposed 25% of trainees are hepatology trained however, due to the additional deficit in gastroenterologists this will require an increase in the total number of Gastroenterology NTNs, thus increasing the number of Certificate of Completion of Training (CCT)s awarded annually.

Consultant gastroenterologist and hepatologist appointments:

At the time of writing more detailed data on the RCP Appointments Advisory Committees (AAC) for 2019 was not available. On 1st September 2020, 50% of advertised posts were unfilled with 8% of posts filled by locums suggesting demand continues to significantly outstrip supply[1]. The BSG CSSC and Workforce Census 2020 of regional representatives asked for the number of vacant substantive

consultant posts in Trusts within their region[6]. On 1st September 2020 over 50% of Trusts reported at least one Gastroenterology consultant vacancy and 12% a Hepatology consultant vacancy. There were 14% more vacant District General Hospital (DGH) Gastroenterology posts compared to University Teaching Hospitals (UTH). There were 10% more vacant DGH Hepatology posts compared to UTH. Over 25% of both DGH and UTH had advertised for a Gastroenterologist with the post remaining unfilled over the previous 12 months. There were no unfilled UTH Hepatology advertised but 14% were unfilled following advertisement by a DGH. UTH clearly identified this was due to no applicants however DGH reported a split between no applicants and no appointable applicants.

Consultant gastroenterologist and hepatologist workload and impact on wellbeing:
At the time of writing detailed job planning data on consultant workload was unavailable but the RCP census reported that 14% of all consultant gastroenterologists and hepatologists worked flexibly and 22% were female. The 2019 BSG Workforce Report reported that WTE consultants were contracted to 11.55PAs and flexible consultants to 7.03PAs, with consultants working on average 1PA more than their contracted hours. 66% of consultants reported contributing to Acute Medicine/GIM.

Responding to the RCP Consultant Wellbeing Survey (January 2020) gastroenterologists said they always, or most of the time in 59% worked excessive hours and in 49% had an excessive workload (37% response rate). Gastroenterology is the major specialty at highest risk of burnout with lower (worse) mean mental wellbeing scores. Consequently, 51% of gastroenterologists reported that work affected their relationship with their partner and 53% with their children over the previous year. 52% described their morale in 2019 as being worse than in 2018. Concerningly, 18% of gastroenterologists reported bullying and harassment over the past year by managers or fellow consultants. Despite these issues, 87% of gastroenterologists reported they were always or often satisfied with specialty work, but only 21% with general internal medicine work[11].

The increasing number of female HSTs gaining CCT will contribute to an increasing number of female substantive consultants, some of whom may wish to work flexibly in the future. Flexible working for consultants at all stages of their careers should be available, irrespective of gender. Greater flexibility in working patterns will be needed to accommodate this, as well as enabling retention of the workforce in more desirable roles in later years.

Consultant Physicians in the UK:
The RCP census reported 16,715 consultant physicians in the UK with gastroenterology and hepatology being the 3rd largest specialty (9.6%), now ahead of respiratory medicine (8.9%). Cardiology (10.4%) remains the largest medical specialty followed by geriatric medicine (10%).

Higher Specialty Trainees (HSTs) in gastroenterology and hepatology:
On 30th September 2019 there were 7,413 medical HSTs in the UK, of which 728 were training in gastroenterology and hepatology[3]. Of those who began training in 2012, 24% remain in training, 65% have gained CCT and 5% have left the training programme. At the time of writing more detailed data on Gastroenterology and Hepatology HSTs and CCTs awarded for 2019 were not available. Data for previous years is available in the BSG Workforce Report 2019[8].

The 2018 BSG Trainees Section survey indicated that 58.9% of trainees were keen to pursue a consultant post in the geographical area in which they have trained[13,14]. The RCP HST census demonstrated that only 23% of CCT holders reported applying for a consultant post outside their deanery. It is crucial that the future geographical distribution of HSTs in the UK better matches the geographical and population demand for consultant physicians.

The RCP HST census reported that gastroenterology and hepatology HSTs ranked 5th most at risk of burnout amongst medical specialties, with rates of moderate and high burnout risk of 39% and 12% respectively[14]. 62% of HSTs said that work had impacted on their relationship with their partner and 58% with their children. 33% of trainees reported a deterioration in morale since the previous year and only 20% an improvement. 82% of HSTs said they found their specialty work satisfying always or often, but only 22% their general internal medicine work.

A smaller proportion of gastroenterology HSTs worked flexibly than in other medical specialities (11% versus 17%). When asked if they wished to train flexibly if given the opportunity, a surprising 46% of gastroenterology HSTs said they would.

71% of the class of 2018 CCT holders had gained a substantive post by November the following year[15]. 20% of respondents had trained flexibly at some point during their training. 75% of those who, at some point trained flexibly, were appointed into substantive consultant posts, compared with 72% of those who trained full time throughout. It was concluded that flexible training was not a barrier to attaining a substantive consultant post. These figures were for all medical specialties not specifically gastroenterology and hepatology.

Recruitment:
The number of NTNs in gastroenterology and hepatology available in Round 1 of recruitment in 2020 was 72 with 6 LATs and a 96% fill rate. 14 NTN posts were filled in Round 2[16]. The average number of new ST3 NTNs has remained static over the last five years contributing to the lack of supply of new consultants. The BSG Trainees Section 2018 survey reported that 76.1% of trainees would consider post CCT-fellowships to further their skills before applying for consultant posts. The majority of trainees felt the implementation of Shape of Training will be detrimental due to the reduction in specialty training time to 4 years[12,13].

Whilst there has been an agreement to increase medical school places this will not impact on the workforce for another 10 - 15 years and the numbers calculated do not account for attrition seen during medical student and training years (~25%). The RCP “Double or quits” document estimated a need for an additional 7,500 medical students per year at the very least[9] and 2021 figures suggest this should be increased to 15,000[17,18].

CSSC and Workforce Census 2020:
The census asked UK units for information on their workforce. Responses were received from 101 units - 45% from UTH and 55% from DGH[6]. Over 60% of UTH had 10 or more consultants compared to 10% of DGH. Sub-specialty consultants were defined as those spending >70% of time in their chosen sub-specialty. Almost 50% of UTH reported between 4 and 6 consultant hepatologists where-as almost 50% of DGH had no hepatologists. 75% of UTH reported at least one Advanced Endoscopist compared to 50% of DGH. 85% of UTH reported at least one IBD consultant compared

to 58% of DGH. 70% of UTH reported at least one Nutrition consultant compared to only 38% of DGH.

It was noted 30% of UTH and DGHs employed one physician associate, 30% of DGH employed 1 Gastroenterology Advanced Nurse Practitioner (ANP) compared to 26% of UTH with two to three. 53% of DGH employed one to two Hepatology ANPs, similar to UTH though up to six Hepatology ANPs were employed in UTH. Most DGH employed between one and four nurse endoscopists compared with two to six in UTH; there were an equal number of non-medical endoscopists. Only 10% of Trusts employed Nurse Consultants.

Clinical nurse specialists (CNS) were employed across the range of sub-specialties. There was on average more Hepatology CNS in UTH than DGH, perhaps reflecting more advanced management of liver disease in tertiary centres. However, there were almost equal numbers of IBD and endoscopy CNS in both hospitals which may reflect the workload and investment already in these sub-specialty areas. Almost 30% of DGH and UTH employed 1 WTE Nutrition CNS. 30% of UTH employed 1WTE GI Physiology CNS compared with 9% of DGH.

The impact of COVID-19 on services and HST training:
COVID-19 has impacted significantly on gastroenterology and hepatology services and HST training[19]. 69% of consultants were redeployed to other duties including general medicine and COVID duties. Throughout the pandemic 97% continued to provide endoscopy for emergency or essential cases as per BSG guidance. There was a reduction in the volume of endoscopy, with 21% doing 2 week waits, 11% urgent cases and only 5% routine cases. Only 47% had access to trained endoscopy nursing staff for emergency/essential endoscopies. The majority continued to provide virtual clinics, including video consultations. 92% had members of the specialist nursing teams re-deployed to other duties putting significant pressures on the provision IBD flare-lines, nutrition support and transplant teams.

Of significant concern was the disruption to HST training. 53% of HSTs reported being unlikely to achieve their Annual Review of Competencies (ARCP) targets, 66% were not doing outpatient clinics, 29% were unable to continue their research and 31% reported interruption in sub-specialty training in hepatology, inflammatory bowel disease and nutrition.

Conclusions:
Despite consultant expansion of 57% over the last 10 years this has not yet met the provision of 6WTE consultants per 250,000 population. 45% of advertised consultant gastroenterology and hepatology vacancies in 2019 were unfilled. Unfilled posts, a move to more flexible working, increasing retirements as well as early retirements and the reduction in clinical activity as a consequence of the pension crisis are contributing factors. There is a geographical variation in the ability to appoint substantive consultants in some regions of the UK. There is a need to significantly increase the number of consultants with specialised hepatology training to manage the increasing burden of liver disease, particularly in DGH and non-liver transplant centres.

Shape of Training will reduce higher specialty training time to 4 years overall. Most trainees anticipate undertaking post CCT roles to further their skills before taking up consultant posts. This will impact on the flow of trainees into the consultant workforce and needs to be considered by Trusts in future service planning.

The poor levels of wellbeing and morale described before the COVID-19 pandemic by the gastroenterology and hepatology workforce are concerning. This was predominantly attributed to excessive workload in an already stretched workforce. This has only been exacerbated by the pandemic - workforce expansion is critical to future proof resilient and sustainable gastroenterology and hepatology services for the future. Demand for gastroenterology and hepatology consultants continues to exceed both supply and expansion. An immediate expansion of 16% would address this shortfall. It would be reasonable to suggest doubling the number of ST3 NTNs recruited each year in order to deliver the expansion required.

I encourage Trusts and Clinical Leads to engage now in appropriate job planning[20] and supporting flexible working throughout consultant careers, but in particular during later careers[21]. It will take time for newly appointed consultants to be trained and a short to medium term solution is to enable consultants who wish to "Retire & Return" to do so. This retains their skills and experience, provides service delivery and builds greater resilience in departments.

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- Dr Andy Douds, Simone Cort and Jane Munday - BSG CSSC and Workforce Census
- Dr Elizabeth Ratcliffe, Chair of the BSG Trainees Section

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