# Bristol STP Open Event - Q&A breakout sessions

* These transcripts have been collated from all 4 break out rooms from the event:
  + Genomics
  + Cancer Genomics
  + Genomic Counselling
  + Clinical Bioinformatics
* The responses have not been checked for accuracy against the 2021 recruitment process, they are based in individuals’ personal experiences and advice. Please familiarise yourself with guidance on NSHCS website.
* Some of the questions raised were general and applicable to all the specialisms - so please scan through all the pages in the document.

We wish you all the best in your endeavours.

Best wishes the Bristol Genomics Team.

# STP Open Day 2021 – Genomics Breakout Room Chat Box FAQs

**I have very small amounts of lab and clinical experience, but I have managed to further my understanding in other ways, such as courses. Will this be sufficient? I am really worried about lack of lab experience and healthcare. I have tried to get placements but COVID has caused cancellations.**

That experience sounds good. On your application, make the best of the experiences you have managed to get, and make sure to talk about your experiences in terms of the person specification. Things you have already done (even if they do not seem relevant) may be worth writing about if you can relate them to the job role/person specification i.e. experiences other than lab/clinical experience may be helpful in your application.

Hopefully the COVID situation is improving – so it may be easier to get more placements in the future (if you’re not successful for STP this year!). You don’t necessarily need genetics lab experience, for example there may be opportunities in use COVID testing laboratories at the moment. It’s important to remember that lots of applicants will be in the same position.

**I think it was Cath who said she was a genetic technologist, did you apply in service after working as a genetic technologist (GT)? Can genetic technologists apply in service or is their application still direct entry?**

Cath (2nd year) – I applied via the direct entry route whilst I was a GT. GTs can apply in service if the lab they are working in is providing an in service place(s). If you are working in a genetics lab, it should be something your lab will advertise internally if they are any available.

**I have worked in a commercial lab before an NHS lab for 4 years, as an MLA and subsequently as a Biomedical scientist. My education was a degree in forensic science back in 2010, I have completed a grad cert in biomedical science and a genetic module on top before becoming a registered biomedical scientist is there anything else I can do to strengthen my application?**

That experience sounds good – having any sort of NHS experience is good, and it sounds like you have sufficient academic genetics knowledge. Elements short-listers like to see include a strong academic side, and having practical and NHS experience is good where possible. The best thing to do is to brush up on your genetics knowledge before the application and interview as they may ask some technical questions, for example make sure you have a solid understanding of the genetics ‘basics’. FutureLearn courses are good for brushing up on things, there are genetics specific ones, some run by the University of Manchester which is useful as they do the Genomics STP MSc. They can be found at <https://www.futurelearn.com/courses>.

**I think it was mentioned earlier working alongside genetic technologists as part of the training. How much time do you spend in the lab during the STP or is it completely office based?**

We typically spend a couple of days in the lab at the beginning. This involves observing sample reception and DNA extraction. Normally, every time we learn about a new process we would then observe it in the laboratory, for example MLPA, Sanger, specialised PCR or NGS. However due to COVID we have not been able to get into the lab. However, it is not hands-on when in the lab, you are just standing and observing the GT as they carry out the process.

Rosie (1st year) – Due to COVID I had 1 day at the beginning, and a few hours observing another process, but I haven’t been in the laboratory much recently

**I have been working in the molecular department at BRI for a while, and met some clinical scientist that did some lab work as they had more samples they could manage. Everybody said that the future of STP is being computer and office based, there is any chance to have lab work as well?**

This question is answered above. In general, a bit of time is spent in the lab as part of training, but this is mainly observing.

**Can you give an example of a question? trying to figure out the level**

We are unable to give specific examples of interview Qs, sorry. However, the level of knowledge required that is required is undergraduate genetics level, make sure that you know the “basics” well.

Cath (2nd year) – When I prepared for interview, I looked at my notes from a molecular/clinical genetics module I did while at Uni and revised from them as if I was revising for an exam.

Emily (2nd year) – Remember it is okay not to know everything, when I was at interview, I remember answering a question with “I’m sorry I don’t know the answer but that would be interesting to go away and look up”.

**Also, I have seen that you are likely to specialised in paediatric, antenatal or adult genetics or is more a general work where you do all of them?**

When training you carry out specialist modules (in 2nd and 3rd year) in adult, paediatric, prenatal and cancer genomics. When doing the job, scientists work within a specific team/on a particular service and focus on that. As we want to deliver an efficient and effective service scientist need to be highly competent, but of course they can’t be highly competent in absolutely everything. Within those services you will see a range in age of patients referred. For example, in the Cystic Fibrosis (CF) service the lab will receive referrals for adult patients requesting carrier testing, paediatric patients for diagnosis of CF and newborn bloodspots as part of newborn screening. At BGL there is separate prenatal team who coordinate prenatal testing and samples. Job vacancies may allow for movement between different service areas.

**Are there any advances or changes that you have noticed that are occurring within the genetics lab that have intrigued you?**

Emily (2nd year) – My MSc project is using the Oxford Nanopore MinION which isn’t something that we currently use here at BGL. Hopefully the nanopore will be the future of some diagnostic techniques, the technology uses long read sequencing which has some benefits over the short read, Illumina, sequencing used in the laboratory at the moment.

Cath (2nd year) – With the increased use of Whole Genome Sequencing I’m intrigued to see how this is going to improve the service and how our knowledge is going to increase. It’s really exciting to see.

**Will a clinical scientist get involved in developing new diagnostics methods?**

Emily – Yes, my MSc project is a good example of that as I’m investigating potential applications of the Oxford Nanopore MinION within our services.

**Did you get involved with the COVID-19 sequencing effort at all?**

We were invited to support them and although some members of the laboratory were interested our help wasn’t needed in the end. It’s been really important that we’ve been able to maintain our services throughout, especially those such as Prenatal and Cancer services, so we’ve been able to focus our efforts on that which is great.

**How do you manage your master's study along with your training? Does it usually get very busy for you?**

We usually have one day a week that is dedicated to our MSc work, although this can be flexible with when we need it most.

Rosie (1st year) – Due to COVID a lot of deadlines have been pushed back so I expect it to get a lot busier in the later half of the year. I think it’s really important to manage your deadlines and give yourself a plan. I’ve only just started but it feels manageable! Not having to travel this year (due to COVID) has perhaps given me a bit more time.

Emily (2nd year) – We’ve had a particularly busy week this week, for example, with a MSc deadline and our Midterm Review of Progression coming up that we are trying to finish off some competencies for. So it can definitely get busy, and you need to be quite organised!

Cath (2nd year) – Our first year was the opposite to Rosie’s and was quite front-loaded. We were only at BGL for a few weeks before going to Manchester for two weeks, then back to Bristol for a week, then in Manchester again for another two weeks. We also had three exams in the January of first year, and a couple of assignments due in November, so it all depends on when your teaching falls. As long as you’re aware of deadlines coming up and you manage your time it will be busy but you can manage!

**What are your favourite and least liked aspects of the programme and training?**

Rosie (1st year) – I’ve really enjoyed looking at some real patient cases and getting the opportunity to write some reports. My least liked aspect would be some of the competencies, some of them are a bit of a tick box exercise and not as interesting as some of the other aspects of the programme.

Cath (2nd year) – I agree with Rosie, some of the professional practice competencies that all STPs do, for example Clinical Coding, aren’t so applicable to the Genomics specialism. It can sometimes be difficult to know what kind of evidence needs to be included. The South West regional trainee network is really useful and puts on seminars to help tick off some of the more difficult competencies. My favourite is definitely looking at real patient cases, I remember being really excited when I first got my name on a report. I also really enjoyed the rotations, it was good to see how our role fits in with Genomic Counselling, for example.

Emily (2nd year) – On a similar note I found the Genetic Counselling competencies quite difficult so perhaps these are my least liked aspect! You have to think in a very different way for those type of competencies compared to the lab based competencies. However I really enjoyed the rotations as a whole, it was a really good experience. My favourite aspect is learning the clinical background of the disease we are studying and how that links up to the type of testing we implement in the laboratory.

**Do you find it difficult to vary the evidence you use for competencies?**

Cath (2nd year) – Yes, in Genomics I find it quite difficult to vary them. I tend to do a written summary of the disease and the technology used, some example case studies and mock reports. But as each disease/technology is different, it feels different when writing them up.

Emily (2nd year) - Although the National School encourage us to use a variety of types of evidence for our competencies, I think you’ve got to focus on what works best for you. I tend to type up documents for each competency as this is what I think will be most useful for me when I start to look back and prepare for the exit exam. Some trainers may give you quizzes, worksheets or case studies which can be directly used to fulfil the requirements so these can be useful too.

Rosie (1st year) – All the competencies I’ve done so far have been in the same format so I can get my head around them to start off with. I’m hoping I might be able to think of some more original things to do as I go along.

**If an applicant is not successful, and does not want to do further study at University e.g. masters/PhD, do you think a lab based role would be a good year’s worth of experience before reapplying? Or is there another way you'd recommend to improve experience for the next year?**

A lab-based role would definitely be really valuable for your application. It will teach you lots about how a diagnostic laboratory works, such as internal and external quality control and the ISO standards that we must adhere to. You’ll also get experience of how all the parts of the laboratory work together which will be really useful. If you can’t get a lab-based role then any experience in the NHS, either as a job or volunteering would be really valuable.

**Is there anything about your training/ the role that you that you find especially challenging?**

Rosie (1st year) – It can be challenging to know exactly what is expected of you at times, and how you’re expected to organise your training.

Emily (2nd year) – I would agree with Rosie. Especially to start off with it can be difficult to know how much/what exactly is expected of you, particularly with regards to competency writing. Getting my head around some of the tests used and understanding the analysis has definitely been challenging, but I wasn’t expecting that to be easy!

Cath (2nd year) – Sometimes it’s a bit frustrating when you submit some work/competency to a trainer but they’re unable to get back to you about it for weeks (because they are busy doing patient work!), and then they come back with comments/suggestions. You have to try and get your head back into training you completed weeks ago to make the amendments, which can take up a lot of time!

# STP Open Day 2021 – Cancer Genomics Breakout Room Chat Box FAQs

**How do you find the transition from doing a PhD to going back to doing a Masters?**

In terms of the taught element, it is different – from being very much your own boss (in a research PhD), to then going back to teaching. But it is really quite nice being in lectures again and having the cohort around you - everyone’s really friendly. So it is absolutely fine. What I did find more of a change was the switch from an academic lab to an NHS lab, and how it is much more prescribed (as you are dealing with patient samples).

**Do you need qualifications specific to cancer genetics to be successful?**

So you are ranked on the relevance of your degree, but it’s more along the lines of whether it is a biological subject. There is base grading, and then an additional point if it is genetics specific. It doesn’t really need to be a cancer genetics specific qualification, but it would help and maybe get you another point. But the extra point doesn’t make a great difference in the overall application. For example, we know someone who got onto the STP straight from an undergrad in Marine Biology.

With the application, you have your fundamental requirements (e.g. getting a 2:2); you would receive a point for having an undergrad, another point for an MSc and another point for a PhD. But the majority of your points will come from how you answer the questions, so these are the most important part.

**Is the training provided in Bristol or nationwide?**

The Cancer Genomics STP is offered at labs all over the country. You can rank these in terms of preference. For the interviews this year, you will just be interviewed at the location that the algorithm has assigned you based on your application score and listed preferences.

**And if Bristol is your allocated trust, is your training just carried out in Bristol?**

For Cancer Genomics, you will stay entirely in Bristol. This is not the same for every specialism or trust e.g. microbiology trainees usually have to move around a lot more for their training. But Bristol Cancer Genomics trainees stay entirely at Bristol. The only times you leave is to go to Manchester a few times a year for masters teaching (when not in lockdown); but that’s only a couple of weeks maximum.

**Are there other routes you can take to become a scientist besides going through the STP, such as a Cancer Genomics MSc?**

I think Katie (our 3rd year Cancer Genomics STP trainee) did a Cancer Genomics MSc. In terms of getting into the NHS, to become a clinical scientist you would either have to go through the STP or apply for a training post. Now and again a band 6 training post will come up, but they’re not very frequent and they’re very much a new thing in Bristol. I would say your best shot is the STP. If you can get into a genetics lab, you might have more chance for those internal posts that come up. For example, we have three in-service trainee posts (as well as the three direct entry posts) for people who already work in our lab.

From my experience, vacancies outside of the STP weren’t that frequent, but you can work up through the lab side of the career path. However you can be competing with those who have worked in the lab for a while. For the training positions when they do come up, you go through an equivalence route where you build up a portfolio. Cardiff tend to have quite a lot of these positions.

**How similar is the interview process to the previous multi-station interview?**

For me, the 2020 interview process was quite strange – I had already been offered an interview in Birmingham, which was then cancelled, so we were then scored based on our application. Depending on how we ranked our preferences, we were then allocated a specific trust (in my case Bristol) who we then had an interview with. This interview had more of a confirmatory feel than what I would have expected from the multi-station event at Birmingham, with seemingly less intense questions.

I would expect that the interview will be similar this year. As an interviewer in 2020, if we decided not to take the applicant, we would have to give a good reason why. So the difficulty now is more getting to the point of having an interview i.e. you have to score highly with your application. There are so many applicants that even in previous years, that application process is half the battle (even more so now). You really do have to put a lot of effort in to stand out. The Birmingham interviews are normally very difficult, so at least with the process this year, once you get to the interview stage it should be nicer as you have less people to compete against. The competitiveness is essentially shifting to focus on the application.

The questions on the application kind of match the stations that would be at the previous Birmingham interview event. So you need to make sure that every single word in your application is helping your case. The questions can be quite open-ended so if you’re not careful you can easily end up waffling. So keep it at the forefront of your mind what you’re applying for and why you’re applying for it. ‘Always mention the patient’ would be my top tip.

On my application this year, I really tried to tie each answer into how it affects the patient’s treatment. My application was successful, and my two previous applications weren’t when I didn’t do this as much.

Also, unless you put your experience into those application answers, we won’t see it. We only background we receive is your qualification, and the discipline of your qualification; the rest is just your answers to the application questions. So another tip would be to make sure your experience shines through in those answers.

**As someone who has been out of education for 20+ years, how user friendly would you say the module work documentation is?**

OneFile is what is used, and it is ok! OneFile is quite neat because you can upload one bit of evidence and then select several competencies that it applies to so you don’t have to re-upload things.

**How much support do you get from university with your programme?**

Support from Manchester is minimal; this is just for your teaching. You do have an academic advisor at Manchester, but your training officer is the person to go to.

Cancer Genomics is definitely really good in terms of support. In the 1st year, you get to move between departments, with the work and training style being varied, which is good. And you get a lot of support along the way.

**How do you go about organising your elective? And do you have the option to split it?**

The electives are pretty flexible in terms of organising it. For mine, I was in a conference and saw someone’s work and thought ‘that looks really good, I’d like to see more of that’ and just dropped them an email and that was it sorted. Then I worked with them in Glasgow for a few weeks. Some people go on really fancy electives to distant countries, and that takes a lot more organising. So it depends on what you want to do.

I think you can split them in terms of time, and in terms of what they focus on. A common elective is genetics trainees spending time at clinical genetics for a few weeks, and then they might spend the rest of the time elsewhere e.g. prenatal testing. It is generally pretty flexible.

**Would NHS experience as a health worker increase your chances of getting shortlisted?**

Yes I think it would. I saw the biggest differences in my three STP applications once I started working for the NHS, not even necessarily in a lab. A lot of the questions are about the ethos, the ethics and the values of the NHS; that’s the same no matter what area of the NHS you’re working in. I would very much recommend that you put that kind of thing into your application.

Part of the application essentially wants you to show that you know about the NHS’ ethics and values. Reading the NHS Constitution is actually really helpful; it sounds like it might be really dry, but it’s actually very readable and so useful. You’re all here, you all want to work for the NHS, and so you probably have the beliefs that match the NHS. It can just be quite hard to put those beliefs into the right words. I think reading the NHS Constitution is really helpful in giving you the right phrases to get those across.

**Can shortlisting interviews be done virtually?**

Yes, they will be done virtually. The 2020 interview was carried out via Microsoft Teams.

**How can you make your application stand out?**

Tailoring all of your experiences to the person specification. Giving examples of everything. I don’t think there was anything that I have done in my life that made the assessors say ‘she has to do the STP’. But I did have research experience, and I had done proteomics as part of my PhD which provided a link to genomics. It is about wording your application in a way that matches the person specification.

You want to tailor your application for the specialism that you really want to do – although this isn’t really a concern this year as you can only apply for one specialism. But you should still have a focus to your answers of your specialism of choice. Focus on the area and the NHS constitution, would be my advice.

Some of you are saying that you’re struggling to get lab experience, but if you can, try and just speak to anyone who is in your field of interest and go to them with specific questions. Lots of people like talking about their job and everyone who works for the NHS is really helpful and so nice so if you go to them with some questions they will probably give you an insight into developments in the field, and how everything fits together within their department. I had some lab experience, but what helped me most was having conversations with scientists. This gave me a feel for what a scientist does day-to-day. They’re all really busy, so if you just say ‘can you help me’, they’re probably not going to. But if you go to them with specific questions they will be much more helpful. So any opportunity to speak to people in your field of interest is definitely worth taking.

**Do you have any idea what the application questions might be this year? Will they be any different?**

I think the application questions should be the same, although there is a new online situational judgement test replacing the previous numerical and logic reasoning tests. There are 4 questions along the lines of covering developments, NHS values, general knowledge about the STP and a question specific to your field.

**How much overlap is there between Cancer Genomics and Bioinformatics?**

There is not much overlap. However, as someone who trained in bioinformatics, I would very much recommend learning about bioinformatics at some point as it has served me well as a scientist. Because a lot of our testing is moving towards NGS, it all becomes more heavily bioinformatics-focussed. You don’t need to know the ins and outs of it, but I think you need a good understanding of bioinformatics as a scientist. As for when you’re an STP trainee, the bioinformatics content is more limited; you just have the one module in first year, but it is largely concerned with variant interpretation rather than being heavy on bioinformatics itself. I would encourage people to learn about bioinformatics though.

I have just completed that uni module and can confirm that it is not too heavy on bioinformatics.

**How are you assigned points when your application is ranked?**

I think there are about 30 points. You answers are graded based on how well the chosen assessor thinks you have answered them. The only ones that are cut and dry are your qualifications and how relevant the discipline is.

# STP Open Day 2021 – Genomic Counselling Breakout Room Chat Box FAQs

1. **What qualities of a genetic counsellor do assessors look for in an application?**

* Assessors will typically be looking for an applicant to have a reasonable understanding of genetics, the impact of a genetic diagnosis on patients and their families, the ability to empathise with the patient, good communication skills (such as active listening), and the ability to work under your own initiative. These qualities will typically be assessed both in the written application and the interview

1. **Are \_\_\_\_\_\_\_ accepting STP trainees this year?**

* Each trust will offer a different number of places and different specialism each year; no two years are the same. Once the trusts have decided which specialisms they are offering, this information will be published on the NSHCS website for applicants to view. This information is usually available prior to the opening of application submissions but COVID seems to have slowed it down this year

1. **What was the 2020 application process like? How did it differ from normal? How similar will 2021 be?**

* The application process for 2021 will be largely different from what it has been in previous years; the psychometric tests will be replaced with a situational judgement test relevant to your chosen specialism, and an algorithm will be used to shortlist candidates (where it had previously been done by hand). The interview process, however, will be the same as in 2020. Once you have been shortlisted, you will be asked to rank the available locations in order of preference. An algorithm will then match you to one of your locations based on your shortlisting score. In previous years you could hold out with the option to upgrade your location if someone above you dropped out; this will not be an option this year, **all applicants will receive one interview for one location only.** Once you have been allocated to a trust they will contact you to arrange an interview. The interview is typically around 40 minutes long, usually with a Training Officer and Head of Department (a representative of the NSHCS may sometimes sit in). The interviewers will ask a series of questions, which you are expected to spend around 2 minutes answering. The questions will be both specialism specific, and regarding the NHS Constitution values. The interviewers will also have been given prompts and follow-up questions which they may ask depending on your answer. Remember that genetic counselling is a patient-led experience, so always try and relate your answers to the patient experience

1. **How much (if any) of a Scientific background do you need to apply?**

* Successful genetic counselling applicants come from a variety of backgrounds and there is no universal template. Life sciences or psychology degrees are preferred, ideally with a genetics component. Although it is not a requirement to be an expert in genetics before applying, some genetics education is recommended as this will help with understanding at the beginning of the course. The teaching material for the first year attempts to bring everyone up to the same level of knowledge, as many people will be entering the programme through different routes and with different experiences

1. **What can unsuccessful applicants do to improve their applications next time?**

* In general, improving your knowledge and experience is the best way to strengthen your application. This can be through a variety of means, both paid and voluntary experience; helplines, schools, healthcare assistants, support work. Completing online courses in counselling (the futurelearn genetic counselling course in particular), attending open days and genetics festivals, listening to genetics podcasts (DNA today, naked genetics) and reading around the subject. It is also important to mention that the STP person specification (found on the NSHCS website) is used by assessors when marking applications, so it is a good idea to familiarise yourself with this when writing.

1. **How do educate yourself around rare disorders before counselling a patient?**

* When starting the course, there may be many disorders or syndromes in clinics you observe that you have not heard of before (this also still happens for experienced genetic counsellors). GeneReviews and OMIM (Online Mendelian Inheritance in Man) are online resources collating helpful information about known genes (such as inheritance, prognosis etc) with literature links for further reading. The laboratory rotations in the first year of the programme also help you gain experience into the different databases and techniques used to identify rare gene variants. Finally, speaking to medical, laboratory and counselling colleagues can be a useful way of gaining insight

1. **Is the 6 months required caring experience continuous or cumulative?**

* The caring experience required does not have to be continuous experience from one place, and can be from multiple different places (in some ways this is actually preferable, as you will be able to demonstrate a greater understanding). More experience than the required is always ideal, as this will help your application stand out. Assessors only have access to the personal statement section of your application during marking, and cannot see your previous work/volunteering history, so make sure to mention your experience in the statement, and relate what you learnt from it

1. **How often do genetic counsellors diagnose independently? What are the differences between genetic counsellors and clinical geneticists?**

* Genetic counsellors do not often perform a diagnosis however, in cases where a clinical diagnosis has been confirmed, they may perform diagnostic genetic testing to attempt to confirm the underlying genetic basis for this diagnosis. If a patient is presenting with various symptoms that may indicate genetic syndrome but has not yet been diagnosed, they are likely to be seen by a clinical geneticist who will perform the diagnosis. Following this the genetic counsellor will meet with the patient to discuss the diagnosis, their thoughts and feelings around it, take a family and medical history where appropriate and talk through the next steps

1. **Is there any diversity focus for applications?**

* When marking applications the assessors do not have access to any information regarding the applicants, save for the personal statement. After requests from applicants last year the NSHCS published the diversity ratio for applicants on their website. This information is still available to view.

STP Open Day 2021 – Clinical Bioinformatics Breakout Room Chat Box FAQs

General:

* No objections to recording

Questions and Answers:

1. Question: do we store our own data?
   1. Much of our data is stored in-house although there is a continuing trend toward Cloud storage
2. Question: what do you find most rewarding and most challenging?
   1. Most rewarding: when a particularly difficult challenge is overcome, challenging is when workloads are high and a lot needs to be done at once
3. Question: what programming languages do you use.
   1. .mainly python, SQL
4. Question: what level of patient interaction is there?
   1. Very little, but there are opportunities to experience patient interactions
5. Question: is it difficult to get on the programme with no prior computing experience?
   1. Computing back is not essential, but would beneficial if you had it.
6. Question: what is the workload like?
   1. Work load is significant but not unmanageable, first year spends more time MSc
7. Question: what is the split between constitutional and cancer work?
   1. Approx 50:50
8. Is there much involvement in research?
   1. There can be some collaboration with research groups in academia where it supports clinical development. There is also a research project as part of the STP programme.
9. Question: what interpersonal skills are you looking for?
   1. Generally friendly and considerate personality, works well in small teams and communicate with a large number of people
10. Question: do you branch into other areas such as proteomics
    1. Not currently, but this may change in the future
11. Question: what career opportunities are available after completing the STp
    1. Mostly NHS, but some have gone to PHE, genomics England, illumina etc.
12. Question: Why did you apply the STP in bioinfx?
    1. Shared personal stories
13. Question: will there be an in service post of Bioinformatics (Genomics) this year?
    1. No