

Our Experience of Hosting a Harvey's Gang Tour for Two Oncology Patients

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New Beginnings for Harvey's Gang Tours at SYNLAB/SPS

Charlie had seen photos from Harvey's Gang tours at lots of labs around the country over the years but had never had the chance to be involved. When Charlie started working for SPS, Matt Barnett told me how he had organised several tours at Musgrove Park Hospital,

but how unfortunately they had to stop during the COVID pandemic. Jane Horn, who is the play specialist for the Trust, approached the Blood Sciences team last year to see if we would be able to start these tours again and we thought this would be an excellent idea.

The IBMS has recently taken over the administration of the Harvey's Gang charity, so it took a while to organise and update all the paperwork and get lab coats and goody bags ready. Our first children were booked in and we publicised the event to all, and were pleased that we had volunteers from all staff groups who wished to be involved. After a planning meeting we were ready to go!

There was a real buzz at Musgrove ESL on the morning of 6th March as we awaited our young visitors. The official photographer was on site an hour before the arrival of our guests, checking the lighting and making sure that everything was ready. Staff members also 'planted' some penguins (Labcold penguins) at child-friendly heights around the laboratory so they had something to 'spot'.

On this occasion Charlie was to host the visit and undertake the 'meet and greet', Dan Power was in attendance to 'direct' the photographer and make sure the paperwork was in place, and Emma, Gretchen, Silvi and Sandra had volunteered to show their areas of work.

Charlie Neville-Rutherford Welcomes Bodhi and Niamh to the MPH ESL



The children were welcomed to the laboratory by Charlie. The children, **Bodhi (aged 6)** and **Niamh (aged 4)**, were accompanied by their **Dads** and also **Jane, the Play Specialist from Children's Unit**. She had been involved with previous Harvey's Gang visits, and was very pleased that they were commencing again. She has a very special relationship with the children and is a very big part of them having a positive experience.

The children were presented with a personalised Harvey's Gang Name Badge and helped into Harvey's Gang lab coats (so cute!).

The dads were also pleasantly surprised to find that we also had special Harvey's Gang lab coats big enough for them, and Bodhi and Niamh were thrilled that Dads also got to participate fully in the visit. The first thing that Bodhi wanted to do was check to see if his badge 'worked'. The badge did have a chip in it so the door locks flashed red and did not open, but even this was exciting for our young guest.

The Tour Begins with Emma Gribble in Specimen Reception



Excitement yes, but nervous anticipation too, on my part anyway. The aim by us all to explain what is done to their blood samples and why. Do it in a light, fun way because after all, our work place looks and feels very clinical and serious, with scientists in white coats tending to machines that chunter and beep, occasionally alarming and flashing! Add into this mix a photographer with a seriously large lensed camera, crouched ready for his winning shot of our important guests... I was breaking out in a cold sweat for them...

NO NEED EMMA – THESE GUYS ARE PROFESSIONALS!

No hint of unease from Bodhi, but Niamh was a little more hesitant, which was completely understandable.

When Bodhi came into specimen reception, he seemed familiar with what he was seeing and recognized the connection to things he already knew about his samples. He was completely at ease, engaging comfortably with us all. A lift up by his Dad made it possible for him to reach the bench top centrifuge and pop in a balance tube to go with the blood sample we were spinning for 3 minutes..... 3 minutes.....3 minutes to spin a sample seems an incredibly long time when an expectant crowd are all focused on it.



Think Emma....think! How can I fill the time?

Airpod system! Good idea!

We all moved towards the corner of reception, Jane the play specialist was chatting to the Dads....and then immediately I felt at ease because Bodhi was eager to send pods on their way to A&E, feeding the pneumatic monster. Niamh, encouraged by her Dad, also sent back a pod and then she was content to observe.



To add a bit more interest we turned around to our older system which needs a pod destination, a 3 digit number typed in on the key pad to direct it on its merry way. Bodhi could do this with an assisted lift up to the right level, unfortunately his touch was very light on the key pad so he needed some heavy-handed assistance. Undeterred – the full pods crashing into the basket below needed his attention, contents needed emptying, ...Bodhi became POD MASTER, lifting out pods while I took out the contents, watched by Niamh.

Moving back to the centrifuged blood sample seemed a bit of an anticlimax after juggling the pods.

Both children were lifted by their Dads to see the spun blood tube and both took a tube out of the centrifuge and we all looked at the different layers the blood had divided into, not a lot to say really, so quickly moved on up the lab and took it to Scientist Gretchen to explain the next stage.

Gretchen crouched down to their level, and introduced herself, brilliant Gretchen, darn it! Why didn't I do that?

Next Stop – Biochemistry with Gretchen Bada



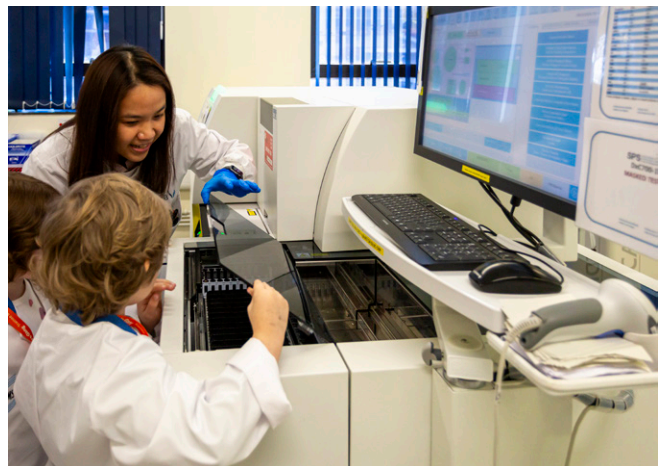
fascinated by the different colours and pointed out that the red tube (EDTA) is the one that they normally use to collect their blood samples. They had a brief explanation of the additives used and the test/assays we do in each coloured tube. This was as much for information for the parents and Jane, as it is also good for them to learn some things whilst with us as well.

Gretchen was excited to see Bodhi and Niamh walking into Biochemistry as both looked so adorable in their lab coats and shy. Our guests were shown around Biochemistry and were told how the samples were processed. Gretchen spent time showing them the different coloured tubes that are received for paediatric and adult patients. They were really





Bodhi and Niamh then loaded a sample onto the analyser and watched how the rack moves in the analyser as it reads the barcode. They were shown on the PC screen how to tell where the sample was and what tests were 'in process', and they watched how the rack moved from loading to the unloading area. As each test takes approximately 8.5 minutes, Gretchen showed them what was happening inside the analyser. The children helped to open the lid of the analyser where they could see the moving parts (sample and reagent probes as well as mix bars). After showing the analyser and how it works, they were shown the walk-in fridge, which is where we keep our reagents, QCs and store our patient samples for seven days. This large room must have seemed very large and cold to our young visitors.





Lastly, Gretchen did a demonstration of colorimetric, or a colour change test, e.g. for calcium. Gretchen provided them with three mini sample cups and got the children to pipette the reagent in to display the different concentrations from lightest to darkest colour. This was a very cool 'science experiment' that I'm sure they enjoyed.

Silvi Murataj Introduces Bodhi and Niamh to Haematology



The children then moved to Haematology, where Silvi was responsible for showing them around. Emma recalls that she heard the cutest giggle from Niamh as Silvi was explaining a process to them.

Silvi showed Bodhi and Niamh how to load full blood count samples onto the big white analyser (Sysmex XN's) and let them observe how they were pulled in

and moved around! The new AI microscope was then used to scan a blood film so we could look at it on the computer. Bodhi and Niamh were both excellent at loading the slides and we were all very impressed! Bodhi then took his seat at the desk and performed the blood film examination himself! Niamh and Bodhi made a great team as they looked around the slide, discussing the 'flowers' they found in the film!



The next task, as little Biomedical Scientists, was to load the blue top samples into the big noisy analysers (ACL-Tops). Niamh and Bodhi both seemed to enjoy the beeping of the barcodes as the samples were scanned. We then needed to perform diagnostic work

on the analyser so we opened it up to check inside. Bodhi and Niamh looked so interested, looking at all the moving parts inside the analyser! Thanks to Bodhi and Niamh’s great diagnostic work, the analyser was back up and running as soon as possible. Great job to them both :)!



The highlight of the day had to be seeing Bodhi and Niamh on the double headed microscope. They quickly got a hang of the microscope adjustments and started to examine the blood film manually! Bodhi was very quick to understand exactly what he was looking at, even differentiating the different blood cell types - very, very impressive Bodhi! Niamh then took the leading seat of the microscope and performed her examination. I was very impressed with the clear and polite communication between them both as they discussed what they were seeing! They made an excellent team and will make excellent Scientists in the future - should they wish to pursue that career :).

Final Stop of the Tour – Blood Transfusion with Sandra Harlow



In Transfusion, Sandra asked the children if they had ever had a transfusion. Bodhi was an incredibly mature and knowledgeable chap and he said he had had a red cell transfusion, and even knew his own blood group! Niamh’s Dad thought she had had a platelet transfusion in the past. The children were then shown the contents of the blood fridge. Bodhi spotted blood of his group and was excited to handle it. Niamh was a little more shy, until I said it was just like red squishy jelly and wasn’t scary at all. We also looked at the platelets on the agitator and enjoyed watching them ‘wobble about’.

Bodhi at this point was thrilled to find his badge seemed to work on the access for the blood bank door (it was flashing green), and insisted on him and Niamh being shut in the room so they could 'escape'. I didn't have the heart to tell him that this door was not locked during routine working hours and his badge was actually having no effect! They were then shown the contents of the plasma freezer. On that day it had been cold

and frosty in the morning, so the children knew that 0°C was 'freezing'. They were amazed that this freezer runs at -35°C and is incredibly cold. But, children being children, their attention was soon drawn away by the fact that the plasma is stored in bubble wrap. Bodhi showed Niamh how best to make a noise popping the bubble wrap. They briefly had a look at the Transfusion analyser and enjoyed spotting the penguins on top.



A Memorable Tour with Bodhi and Niamh



Our guests were with us nearly 2 hours in total and did not want to leave. Bodhi's Dad is definitely considering buying a microscope for his Scientist of the future. As they were leaving they were presented with certificates, goody bags, and even an extra special Easter chocolate gift (thank you Silvi for doing this). The children were allowed to keep their lab coats on and Jane informed us that they proudly wore these for the rest of the day, and to school the next day. I am sure the children will have lasting positive memories of their visit to our laboratory. We all enjoyed meeting Bodhi and Niamh, and it was a pleasure for us all to watch the staff in each area sharing their knowledge and enthusiasm for science. We would like to thank Jane for arranging the visit, and also a special thank you to Emma, Gretchen, Sylvi and Sandra, who engaged so well with our young visitors and made the science of the lab come to life. Although I think we would all say that the smiles and giggles from Bodhi and Niamh was all the thanks any of us needed!

We hope we can continue to offer these tours and get further engagement from our staff who want to be involved.



Quotes from staff involved

“Our special visitors were true professionals”.

“I admire both children, they coped so well being in our work environment, a lab is not the cosiest place, especially if you compare it to a children’s ward with bright, colourful pictures on the wall and staff in tabards with cartoon characters printed on them. I guess that perhaps they have had lots of adults in their young lives through hospital visits and treatment so they dealt with this situation so well.”

Sandra said that she really enjoyed watching the enjoyment of the staff as they interacted with our guests. I know from doing this in the past that it really makes a difference to how you view patient samples when you know what timely results mean to the patient (and their waiting, anxious parents).

“It was a special occasion and a very good reminder of why we care so much about the job we do and helping all our patients”.

Silvi said “It was such an honour to meet little Bodhi and Niamh and have them as my helpers in Haematology. I am so very grateful for the opportunity to be a part of Harvey’s Gang, it was an amazing experience to see our younger patients and to put faces to names. I hope both Niamh and Bodhi have enjoyed their time in the lab as much as we enjoyed having them :D ! Thank you again, Silvi :)”.

Jane said of the visit “After a very long gap we were finally able to begin our visits to the laboratory again. It was with great excitement that my friends Bodhi and Niamh, two of our Oncology patients, put on their lab coats and enjoyed a tour of the hospital lab.

With both children having to endure plenty of difficulties on the ward it was wonderful to see them making some sense of all these experiences.

Definite highlights for them both were using the microscopes and even being able to identify slides of blood. Both wore their lab coats to school the next day and were happy to tell their classmates all about their adventures.

Staff on the ward are all very excited to hear about the possibility of future visits to come, to develop our own understanding of what happens in your laboratory!”

Quote from Niamh

As she was leaving, she said “You’re lovely”! I think this was mostly directed at Silvi as they really bonded, but I also think it was meant for all of us. When she arrived at 10:30 she stayed close to dad, and was quite shy, particularly compared to Bohdi, but by the time she left it was nearly 12:30, and she was confident and having a great time, and didn’t want to leave.

Below is a poem which Harvey's Gang founder Malcolm Robinson shared as part of an on-line talk, this was written by a BMS following a visit to her Blood Transfusion Lab.

Harvey's Gang

Helping children understand their healthcare

by Fern Meagre
Specialist Biomedical Scientist

Hello, we're part of Harvey's Gang
And we're here to tell you why
When someone comes to take your blood
There is no need to cry

You see blood tests are important
And give us lots of information
So, lets go take a look around
The blood testing station

That little test tube of your blood
Will be taken by a porter
Straight to Lab Reception
To be sorted by a sorter

A sorter has a special name
A Medical Laboratory Assistant
They label and scan all the samples
And keep everything consistent

Next, a Biomedical Scientist takes it
To do blood typing tests
This makes sure the blood you get
Is nothing but the best

There are different types of blood
Type O or A or B
And their antigens and antibodies
Work like lock and key

An antigen is a little shape
On the outside of a cell
Only the right shaped antibody
Will fit into it well

This test happens on a big machine
Called an analyser
It finds out important facts
And the test is called ELISA

You can also do this test by hand
To see if the machine has done its job
You look down a microscope
Where the blood looks like little blobs

The same tests are carried out
On the blood of a willing donor
They need to make sure the blood matches yours
Before they make you its new owner

Blood donors are people who donate their blood
To give to those who need it
They fill up a bag to be passed along
And then receive a biscuit

If the cross-matching test
Says that everything's OK
A bag of healthy blood or plasma
Gets sent out on its way

The matching blood can now be taken
All the way to you
The scientists have done their job
And they love what they do

You see, you are the most important person
In every single way
Helping you to feel better
Brightens everybody's day



for more information

visit harveysgang.com