the H FACTOR

Haemophilia Foundation Queensland

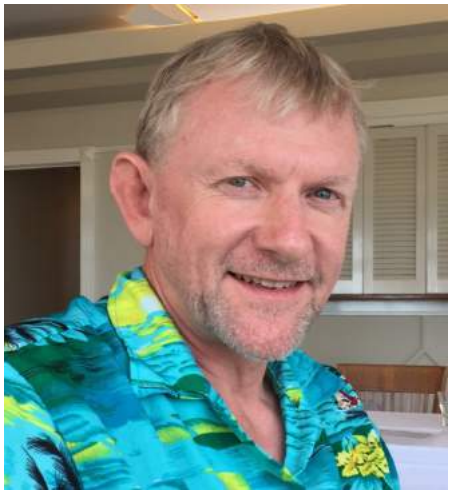
AUTUMN EDITION

Issue 70

MARCH 2022

HFQ MEMBER MAGAZINE

FROM THE **PRESIDENT**



Hello everyone,

What a terrible time many have, and are having with floods on the east coast. Beyond the various government supports HFQ is here to assist where we can.

Science continues to investigate new treatments for bleeding conditions, and it's still gene therapy that appears more regularly in publications. Did you know that over 10,000 people have now been involved with a whole range of different gene therapy products for different incurable diseases.

About 50 years ago the first gene therapy was tried on humans - it was trialled on two young west German sisters suffering from hyperargininemia which is a rare disease where they don't produce a certain enzyme. Yes it's such a long time ago but it's a difficult job to find an effective solution. There have been many animal trials along the way, but it wasn't until September of 1990 that first widely accepted success happened for treating an immune system problem.

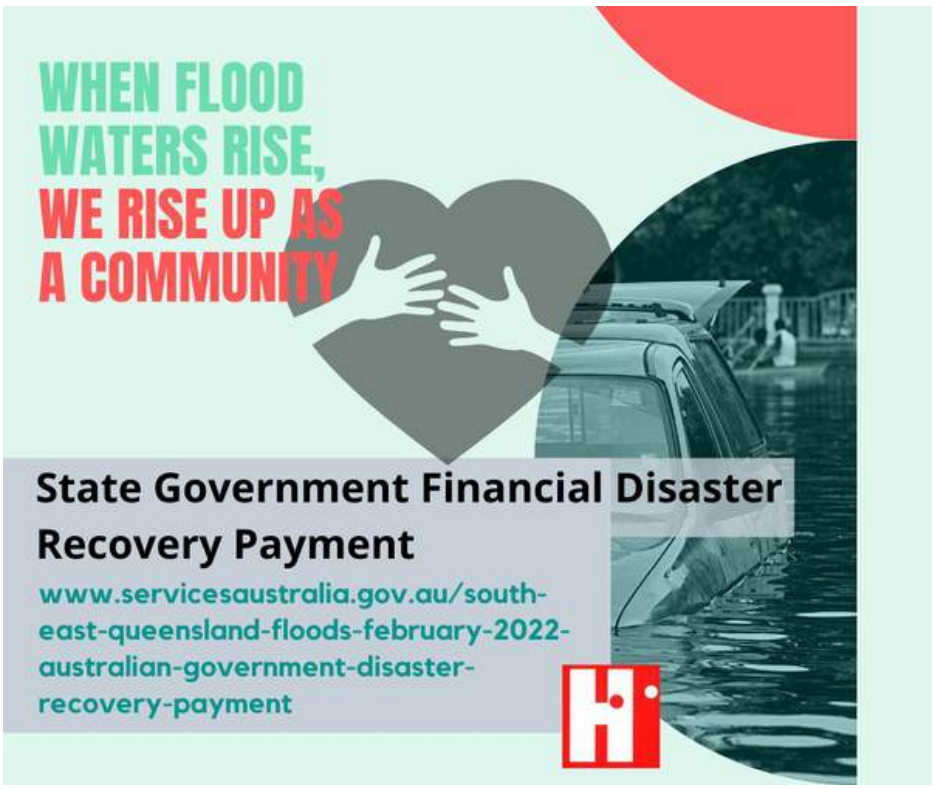
To give you an idea of how much research has happened- between 1989 & 2018 there were in the order of 2900 clinical trials for various diseases. There are still many questions today that need answers, like why does factor decline over time in some people and why do factor levels vary between treated people. Interesting isn't it, but just remember it's a curative possibility - not a cure.

Until next time, stay safe.

Dave

David Stephenson
President HFQ
president@hfq.org.au

If you've been affected by the recent bad weather in South East Qld there is Government Financial Support available at *https://bit.ly/3uCDTEg* However, if you don't qualify for the payment or if there are any special issues impacting on you, then you can apply to HFQ in writing via info@hfq.org.au with your particular circumstances (no form required). Each application will be considered by the HFQ board on merit and a speedy response is guaranteed.



Inside this Issue:

ABOUT HFQ

Haemophilia Foundation Queensland Inc. (HFQ) provides representation, health promotion, education and support for people in Queensland affected by inherited bleeding disorders. The Foundation receives a grant from Qld Health and employs a part time manager and an administration assistant. It is guided by a Board of Directors which meets monthly.

We can be contacted on mobile 0419 706 056; or via email (info@hfq.org.au) or post at PO Box 122 Fortitude Valley, Qld 4006

HFQ provides financial members with support and benefits, including subsidies on:

- **Medic Alert bracelets (50% discount)**
- **Electric Shavers (up to $75 off)**
- **Supportive footwear (75% off)**

HFQ Management Committee

President	... ...	Mr David Stephenson
Vice President	...	Mr Robert Weatherall
Secretary	... ...	Mr Tony Ciottariello
Treasurer	... ...	Mr Adam Lish
Members	... ...	Mrs Belinda Waddell
		Mr Charles Eddy
		Dr Jodie Caris
		Mrs Leanne Stephenson
		Ms Shannon Gracey
		Mr Shannon Wandmaker

HFQ Delegate to HFA

Mr Adam Lish

Acknowledgements

HFQ is grateful for the support of our patron: Her Excellency the Honourable Dr Jeannette Young PSM Governor of Queensland,

HFQ programs and services are funded by the Queensland Government.

HFQ is also grateful for the support it has received

Internet

Find us on the web at *www.hfq.org.au* or at our Facebook page at *www.facebook.com/HFQLD*

QLD HAEMOPHILIA STATE CENTRES

CHILDREN'S CLINIC

PAEDIATRIC CLINIC STAFF (QCH)

Switch: 07-3068 1111 Haemophilia Mobile 0438 792 063

Dr Simon Brown – Haematologist
Haemophilia Fellow — Dr Jordan Staunton
Haemophilia Registrar – Dr Fiona Molloy
Joanna McCosker – Nurse Practitioner
Amy Finlayson / Salena Griffln – Clinical Nurse
Crystle Gambetta (Mon, Tues) - Physiotherapist
Elise Mosey (Wed, Thur, Fri) – Physiotherapist
Vacant - Psychosocial / Allied Health

Contacting the Clinic - Please call the Haemophilia mobile for urgent enquiries on 0438 792 063 (office hours 8 – 4pm).
For all non-clinical/non-urgent enquires please email QCH-Haemophilia@health.qld.gov.au

After hours — call switch and ask to speak with on-call haematology consultant or present to the emergency department

Appointments — Outpatient Bookings Office on 1300 762 831 or email QCH-Outpatients@health.qld.gov.au

Your health care team does not make these bookings or any changes to your appointments. Referrals can be sent to the Referral Centre Fax Number 1300 407 281

Haemophilia Outpatient Clinic — Dr Simon Brown — held in 3c outpatients Level 3, Thursday afternoons 1.00 – 3.30pm

Haemophilia Carrier Clinic – as needed Thursdays 1pm – 3.30pm

ADULT CLINIC

ADULT CLINIC STAFF (RBWH)

Switch: 07-3646 8111

Dr Jane Mason - Haematologist	*On Maternity Leave*
Dr Sally Campbell - Haematologist	3646-8111
	(Page Dr's through switch)
Haemophilia Registrar	3646-8111
	(ask to page Haemophilia Registrar on 42177)
Beryl Zeissink - Clinical Nurse Consultant	3646-5727
Alex Connolly - Clinical Nurse (Part time)	3646-5727
After Hours - Page Haematologist	3646-8111
Liam Ball - Physiotherapist	3646-8135
Vacant - Senior Social Worker	

Contacting the Clinic Please telephone in the first instance. Appointments 3646-7752 or 3646-7751
For all non-clinical/non-urgent enquires please email RBWH-Haemophilia@health.qld.gov.au

Haemophilia and Genetic Clinic — Dr Jane Mason — Wednesdays 1.30pm New Patients Thursdays 8 - 9.30am

Haemophilia/Orthopaedic Clinic — Dr Jane Mason and Dr Brett Halliday — 9am every four weeks

OUTREACH CLINICS

Gold Coast Hospital, Toowoomba General Hospital, Nambour Hospital, Cairns Base Hospital & Townsville Hospitals: For queries email *CHQ-Haemaphilia@health.qld.gov.au* at QCH or *RBWH-Haemophilia@health.qld.gov.au* at RBWH.

What's On?

April 2022 to Jul 2022

Some of the HFQ programs and activities already planned

Please call the office for other events, more information or to RSVP

APR

- **OBE's Monthly meeting** Wednesday 6 April Lovewell Café
- **World Haemophilia Day** 17 April
- **HFQ Board Meeting** 19 April 298 Gilchrist Ave,
- **Autumn Social Event** 23 April Blue Room Paddington & play in the park after

MAY

- **OBE's Monthly meeting** Wednesday 4 May Easts Leagues Club
- **National Volunteer Week** 16– 22 May
- **HFQ Board Meeting** 17 May 298 Gilchrist Ave, Herston
- **Women's Lunch** 15 May Tingalpa Hotel

JUNE

- **OBE's Monthly meeting** Sunday 5 June Fox & Hounds Country Inn
- **Men's Health Week** 13 - 19 June
- **World Blood Donor Day** 14 June
- **HFQ Board Meeting** 21 June 298 Gilchrist Ave, Herston

JULY

- **OBE's Monthly meeting** Wednesday 6 July Old Fernvale Bakery
- **HFQ Board Meeting** 19 July 298 Gilchrist Avenue
- **National Pain Week** 26 to 31 July
- **World Hepatitis Day** 28 July

Write 4 the H Factor or Volunteer 4 Us

We are always eager to have member's contribute to our publications and activities. Maybe you would like to share a story about you or your experiences with bleeding disorders, or perhaps your experience at one of our events, fundraising, volunteering or something else entirely! If you would like to contribute and write an article for HFQ contact info@hfq.org.au

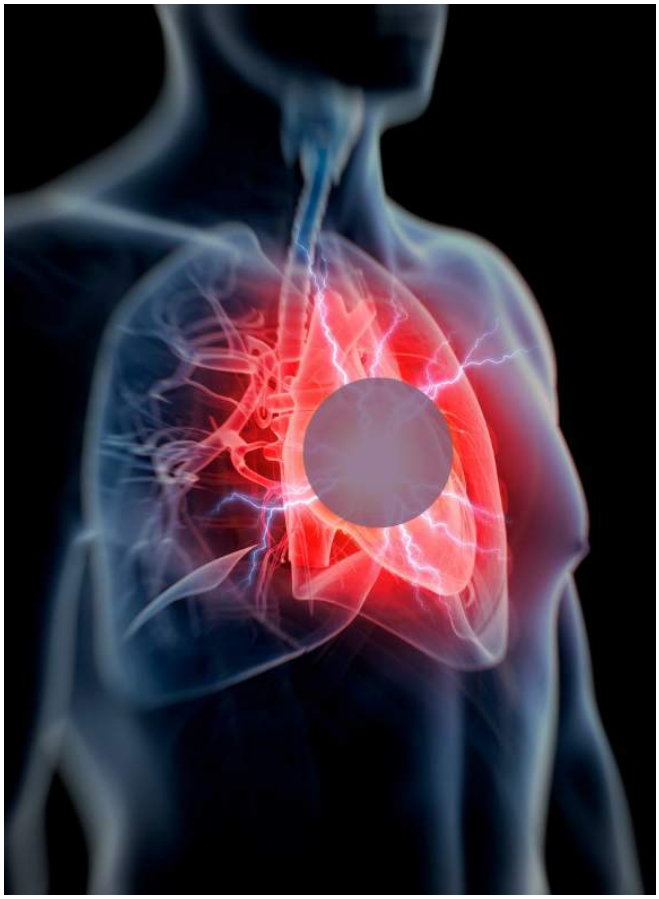
Right now we are also looking for fundraising volunteers. HFQ is Queensland's only organisation advocating for and supporting people affected by haemophilia and other bleeding disorders in this state. The organisation is run entirely by family members and friends of people living with a bleeding disorder. If you are active in our community (or want to be) and are willing to be an ambassador and advocate for the values and mission of HFQ, then consider becoming a volunteer. Volunteering for fundraisers can be fun.

With your help we can accomplish good things for the Queensland bleeding disorders community. Please talk to Graham at HFQ (0419 706 056 or email us at info@hfq.org.au) for more information.

good news & **bad** news on **Heart Disease**

Two recent articles in Haemophilia News Today seemed to present conflicting evidence on the risk of heart disease for people with Haemophilia.

One was titled "Haemophilia Patients May Face Lower Risk of Heart Disease: 5-year Study" (https://bit.ly/36ENWk1) and the other was called "Heart Disease, an Increasing Problem for Those With Hemophilia" (https://bit.ly/3wKBdXG).



We asked Dr Sally Campbell how we should interpret the apparent conflict in these articles. She says that the first article describes lower rates of cardiovascular disease/ morbidity in persons with haemophilia and has some interesting points, but it has confounders.

- Persons who were found to have severe hypertension or severe dyslipidemia WERE TREATED for these conditions and life style education given, thus lowering their risk because the study intervened.

- Also the socioeconomic profile of these patients has them at normal or just below average, which will have also modified their risk (persons from low socioeconomic backgrounds have higher rates of cardiovascular disease).

- Persons with the lowest risk were men with severe haemophilia A who were on DEMAND therapy - this would be considered not gold standard therapy to be on demand with severe haemophilia A.

The second article references some other studies that have demonstrated increased risk factors (hypertension, dyslipidemia) in persons with haemophilia compared with controls, which is true.

So the take away message from these two articles is - persons with haemophilia are at a higher risk of developing risk factors that can lead to cardiac diseases - however with appropriate treatment and lifestyle modifications, they are actually in a better position than their counterparts WITHOUT haemophilia, as they have less death and disability from their cardiac disease.

The broader question Dr Sally posed to us was, what information are we trying to get across to you, the reader? And the answer from these articles and from Dr Campbell is that it is important that persons with haemophilia see their GP to review them for risk factors that might lead to heart disease, particularly as they become older.

Dr Sally tells us that she and the rest of the Queensland haemophilia Centre staff are keen for people with Haemophilia to be mindful of their cardiac health. Previously people living with Haemophilia were not expected to live into their 70's or onwards, but happily they now have (or should have) the same life expectancy as persons without haemophilia. And as such we all need to address cardiac risk factors.

Genetic Testing for Haemophilia

I recall many years ago attending a Haemophilia Day and listening to a young woman who was a carrier of haemophilia describe her experience of invitro fertilisation (IVF) to have a baby who was not a carrier nor affected by haemophilia. She was motived to do this by her own experience of being the daughter of a man with haemophilia and her experience of the burden of his disease both in him but also on his family. Her journey through IVF was complex and hard. I was struck by many aspects of her story, which I was very grateful that she shared, but one of the things that stayed me was how she never successfully achieved a pregnancy and she had to give her dream of being a mother away. There were several things that lead to this decision however one of the overwhelming issues she had to deal with was the cost of the technology.

On 24th October 2021, Greg Hunt, the Australian Health Minister announced a new funding package and was investing $95.9 million for pre-implantation genetic testing aimed at "improving long-term health outcomes for women and girls" across Australia. This funding came into effect on 1st November 2021 and is seen as beneficial to couples who are known to have an increased chance of having a child with a life-threatening genetic condition. Australia is now one of the first countries in the world to have this treatment broadly supported by the Government and the health system.

The Minister's announcement was given the name "Mackenzie's Gift" after Mackenzie Casella who died of spinal muscular atrophy (SMA), before her first birthday. Mackenzie's parents have ceaselessly campaigned to increase awareness of SMA and other genetic conditions and to improve access for better testing of parents prior to, or soon after conception.

The funding of pre-implantation genetic testing was in response to Mackenzie's Mission which is a research project currently underway and funded by the Australian Government's Medical Research Future Fund. Mackenzie's Mission is aimed at improving access to genetic screening for prospective parents.

Some couples face significant reproductive decision making if they are found to have an increased chance of having a child with a genetic condition. Preimplantation genetic testing is an important medical treatment that gives women the option of testing embryos for genetic conditions that they may carry, such as Fragile X syndrome or cystic fibrosis, or may personally be affected by, such as hereditary cancers.

In the past the IVF component of this treatment has previously been funded by the Medicare Benefits Schedule, however this funding did not include preimplantation genetic testing. This has meant that preimplantation genetic testing has been inaccessible to many and could often add over $3000-6000 to the cost of a regular IVF cycle.

In several genetic conditions such as haemophilia and SMA, we are witnessing incredible advances in treatment because of gene therapies. We are now moving into a health care future where a diagnosis of haemophilia does not carry the same health challenges that it did when I was born in the 60's. Whilst there is still much to learn about these new treatments, improvements in care are not yet available for most genetic conditions where the prognosis remains poor, and management of the condition remains burdensome. For those who need to avail themselves of genetic technology to provide them with the reproductive confidence to have children this announcement from the Australian Health Minister has been very welcomed.

Pauline McGrath,
Churchill Fellow, Senior Genetic Counsellor,
Genetic Health Queensland

Autumn **Social Movie & Meal Event**

Our Australia Day Event was cancelled due to COVID-19 and has now been rescheduled for 23 April. We are off to the Blue Room at Cinebar in Rosalie on Saturday 22nd January 2022 and after the movie we'll grab a coffee and take it across the road for a chance to chat while the kids can run off their excess energy.

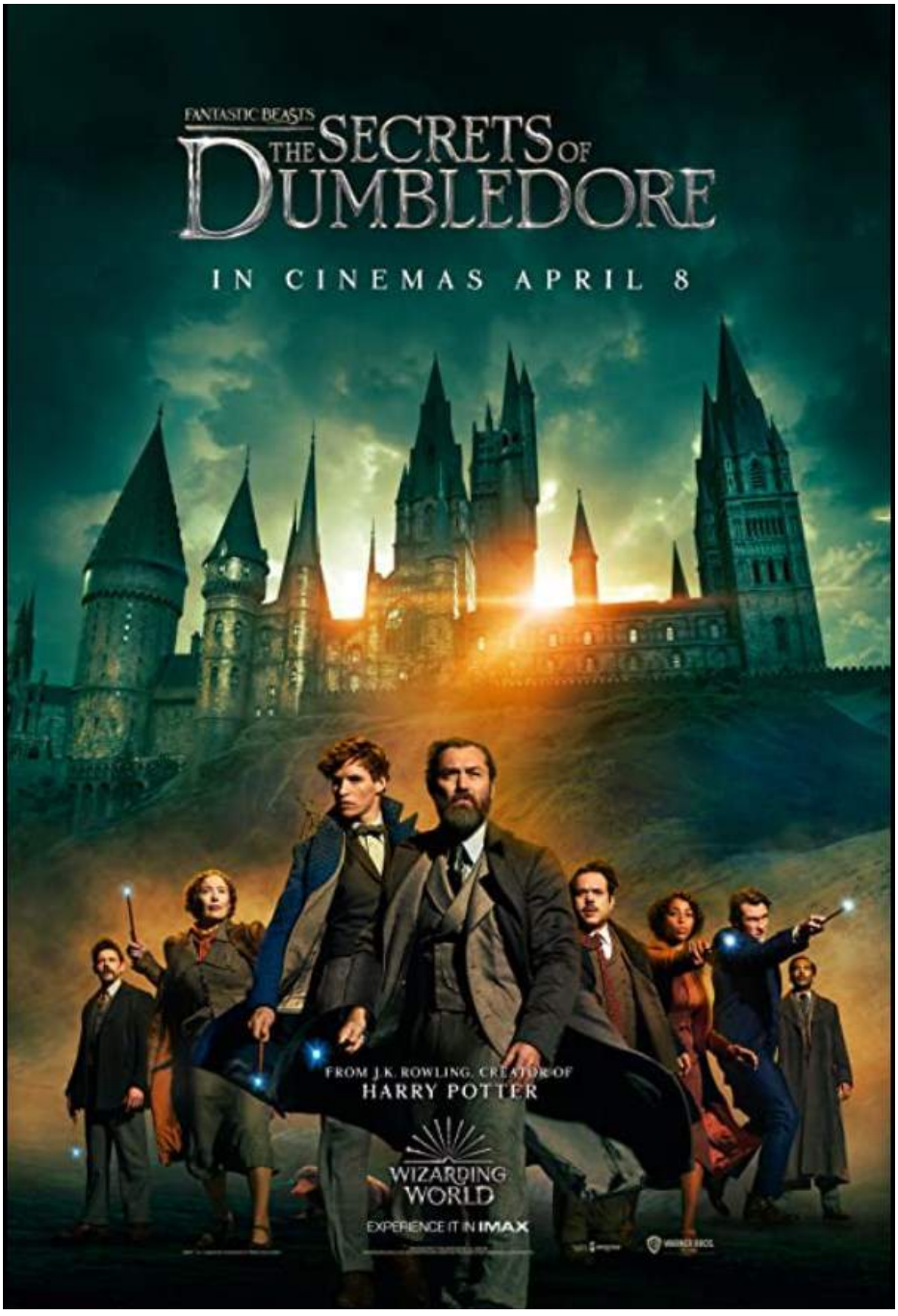
The movie is Fantastic Beasts - The Secrets of Dumbledoor (Rated PG -13). What can be better on a hot Brisbane weekend than watching a movie while comfortably seated and enjoying a tasty meal, sweet treats, and drinks?

You don't have to stay at home to be comfortable. You can join us to experience it all at the Blue Room Cinebar in Rosalie.

This boutique cinema with semi-reclining seats and foot rests, offers us a luxurious movie experience and great service without the noise and parking hassle of a super-sized crowded cinema at a shopping centre.

And it's not just a movie, you will also get to enjoy meals and drinks with us while watching the movie and without having to leave your seat. Popcorn, of course, is also available along with coffee, tea, and sweet treats like Mary Poppins sundae, muffin, and brownie.

The cost is $15.00 per person (includes meal and movie) up to a maximum of $50 per family, but there is limited seating capacity of about 60 patrons so places will be reserved on a first come, first served basis. Please book your seats as soon as possible so you won't be disappointed. If the cost of this event is too much for you or your family, please contact the office on 0419 706 056 as the fee can be waived on request.



Intentional parenting

When my children were young my approach to parenting was reactive rather than proactive, go-with-the-flow rather than intentional. I was busy working hard to pay for all of those things I thought were important.

I now know that only a few of those things were actually important. The major problem I had, which I didn't realise was that I had no real vision for my life, outside of going on a family holiday for a couple of weeks every 2 years, and eventually paying off our mortgage.

I was carried through life by the fast-paced current of our world. Then in the year 2000, I asked myself...

- Why was I working so hard?
- What was the purpose of it all?
- What was I looking forward to?

It was those questions that provided the spark I needed, to begin to become more intentional in my approach to life, marriage, family, work, and helping others.

Here's what I knew…

1. I wanted stronger and healthier relationship with each of those people in my life whom I loved the most. i.e. my wife, and each of my children, and
2. I wanted each of my children to eventually become amazing adults, who would go on to make their unique contribution in our world.

None of that was going to be possible without me being intentional. I needed to...

a. Be deliberate.
b. Create meaningful family traditions, and incorporate various rites of passage into my children's lives. i.e. marking and celebrating significant moments at specific milestones.
c. Set some dates, and lock those dates away in our family calendar.

The good news is that my wife and I did just that, and everything changed for the better. My family responded really well to the new-found servant-leadership I had finally began to offer and implement.

And now I could not be more proud of my family... for who they are, and for how they choose to live. And I am proud of myself too... for having stepped up, for having cast a vision, for having made changes, for having followed through, and for having seen that vision realised.

Does that mean that our lives are perfect? Definitely not. There is no such thing as the perfect relationship, or perfect family. That said, we are all happy and content... blessed beyond our imaginations. We all have relationships with one another that are strong and healthy. And our children know, as we do, that they are now authentic adults, having had travelled the path from childhood to young adulthood, and young adulthood to authentic adulthood. I've honestly never wanted for more than those things.

My message to everyone is that life is good. Be sure to live yours to the very full. Be intentional. Begin today, to truly live your life, with the end in mind.

Darren Lewis

Daren is the founder of Fathering Adventures (https://fatheringadventures.com.au) who are committed to helping dads have the relationship with each of their children through weekend experiences

we are 25 y.o.

but going on 67

Haemophilia Foundation Queensland will have been an incorporated society for 25 years on 16 April this year (the day before World Haemophilia Day).

But did you know that we were previously known as the Queensland Haemophilia Society? It operated from at least 1955 by people with haemophilia and their parents who found that a mutual support group was helpful when there were no effective treatments available.

HFQ is a very important organisation which has achieved some good things for people with bleeding disorders in Queensland, this was done because of the dedicated efforts of a relatively small number of people. The majority of members today want HFQ to be here, particularly to be a voice for them in times of crises as we have been throughout our history, although relatively few of them play an active part in the running of the association.

We do know that in the early days members of the Queensland Haemophilia Society met in the homes of parents like Patricia O'Reilly. Then in the late 50's a Miss Scoles (physio) ran meetings at the Spastic Centre in New Farm (later called the Cerebral Palsy League).

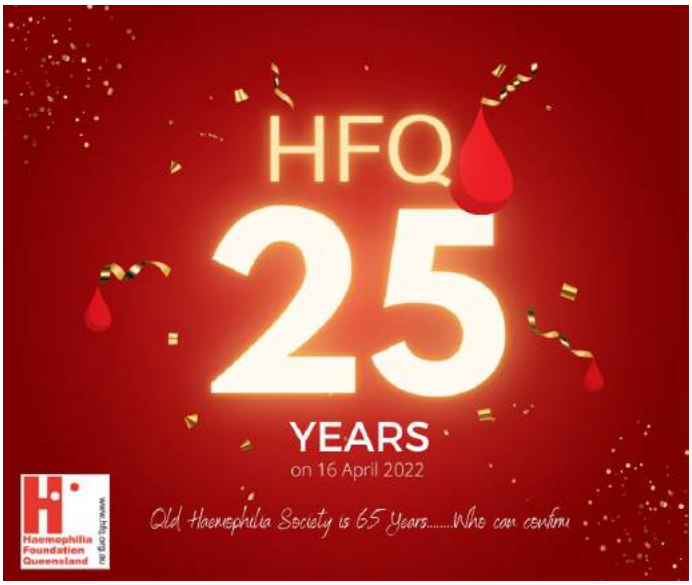
The early haematologists that supported HFQ and people with bleeding disorders like Doctors Engels, McWerter and Rowell where instrumental in keeping the society operating because they recognised the support a patient advocacy group such as ours could offer each other and encouraged patients and their families to join.

Dr John Rowell got rooms at RBWH at the time of Cryoprecipitate and home treatment and as an organisation we've had many offices across Brisbane.

It is a reality that the broader community has no real interest in haemophilia and other bleeding disorders, nor in the work HFQ does as the advocacy group for people with bleeding disorders in Queensland, so if we don't keep track of our history, no one else will.

We know there have always been active members such as the O"Reilly, Roberts, Metzroths and Weatherall familys who are still active today. Others like Jim and Margaret McArther-Onslow where active in the late 60's early 70's when Jim was president.

If you know these people or others that were involved across the years we'd like to hear from you as we don't have much information from these times or even when we became HFQ. If you have anything of our history that you would be happy to share with us (personal recollections or memorabilia) please contact the HFQ office on 0419 706 056 or email us on info@hfq.org.au



Gene Therapy for Haemophilia

After several decades of research, gene therapy for haemophilia is moving closer to becoming a reality. This one-time treatment may potentially increase a person's factor levels to normal or close to normal, which would enable them to avoid needing factor infusions for a long period of time.

Gene therapy is a treatment that involves modifying a person's genes in order to treat or cure a disease. Different methods of gene therapy include:

- Gene transfer, which puts genetic information into a vector, which then carries the working copy of a gene to a person's cells
- Gene editing, which removes or corrects pieces of DNA within the gene
- Cell therapy, which introduces a new gene or correcting a faulty gene in cells from the patient's own body, and then puts the modified cells back into the patient.

How is gene therapy used to treat haemophilia?

Most of the gene therapies being investigated for the treatment of haemophilia are done using gene transfer. The gene therapy inserts a functional version of the defective gene - a factor VIII gene or a factor IX gene - into the liver, which triggers clotting factor production. The vector used to transport the healthy gene to cells in the liver is usually an adeno-associated virus (AAV), which is a non-disease-causing virus, modified as a delivery vehicle, and given as an intravenous injection. AAV is a popular choice because it especially targets the liver, which is where the clotting factor proteins are made.

Currently, there are several gene therapy treatments for haemophilia A and B being studied in clinical trials to determine how well they work and how safe they are.

Who can take part in a clinical trial for gene therapy?

In general, individuals who are eligible to participate in gene therapy clinical trials for haemophilia are males 18 and older who:

- Have severe haemophilia A or B (factor levels of less than 1%) without inhibitors
- Have no evidence of hepatitis and if they have HIV, it must be under good control
- Have no evidence of liver dysfunction (such as abnormal liver enzymes or abnormal liver biopsy)
- Have no detectable neutralising antibodies against the vector
- Are otherwise healthy (no diabetes, history of cancer, heart disease, glaucoma, high blood pressure, etc.)

Gene therapy for haemophilia is generally not usually available for people under 18 because children's livers continue to grow until at least their early teens. As a person's liver grows, the effect of gene therapy may diminish. Researchers say that in the future, as they learn more about gene therapy safety, there may be opportunities for children to enrol in studies.

What are the risks involved with gene therapy for haemophilia?

One of the biggest risks is that there's no guarantee that it will work, and if it doesn't work, you won't get another chance using the same or similar vector. In addition, it isn't clear how long the effects of the gene therapy may last.

Other risks include a strong immune system reaction, the possibility that the vector would travel to other cells in the body outside the liver, and the possibility that the liver would produce too much clotting protein.

If you're thinking of enrolling in a clinical trial or you're interested in undergoing gene therapy once it is available on the market, discuss your options and concerns with your Queensland Haemophilia Centre team.

https://hemaware.org/research-treatment/gene-therapy-for-haemophilia-update?utm_medium=email&utm_source=mailchimp.com&utm_campaign=HemAwarExpress&utm_term=Communications&utm_content=An%20Update%20on%20Gene%20Therapy%20for%20Haemophilia

giving **von Willebrand disease** the attention it deserves

There are as many people in Queensland with von Willebrand disease (VWD) as there are Haemophilia A & B combined. In fact VWD is the most common inherited bleeding disorder, yet it often lags behind behind haemophilia, in terms of recognition, discussion, and treatment advances.

However, progress was made last year, with the publication of new international clinical practice guidelines for the diagnosis and management of von Willebrand disease developed by the World Federation of Hemophilia using a panel of international experts and patients.

Von Willebrand disease is estimated to be found in up to 1% of the global population, but many people have delayed or missed diagnoses due to an absence of universally applied diagnostic criteria. VWD is seen equally in men and women but affects women disproportionately due to gynaecological and obstetric bleeding. Although efforts to increase awareness of von Willebrand disease have been made gaps in knowledge see some patients feeling left behind. The clinical practice guidelines provide the most up-to-date recommendations, with a particular focus on priority topics defined by those directly affected during the development phase when 600 patients, caregivers, and health-care providers were surveyed.

An area of debate has been the von Willebrand factor (VWF) concentration and platelet-binding activity used to define VWD, since levels vary between individuals and can increase with age. The diagnostic guidelines provide valuable evidence and discussion around appropriate VWF thresholds for the diagnosis of type 1 von Willebrand disease.

The guidelines also cautiously recommend that the diagnosis of von Willebrand disease can be reconsidered if VWF concentrations normalise as the patient ages. However, this change could have negative consequences, for patients who continue to have bleeding episodes despite normalisation of their VWF levels. This area is one of many associated with the disease for which little evidence is available and for which further research will be crucial. Targeted genetic testing is another important factor in diagnosing VWD, with the guidelines highlighting the importance of identifying variants of type 2 disease. Improving genetic testing should be the aim for all countries, although this will probably be difficult for resource-limited settings.

Treatment of von Willebrand disease typically involves administration of desmopressin or replacement therapy with plasma derived or recombinant VWF. The management guidelines recommend, for the first time, that patients with a history of severe and frequent bleeding should receive long-term prophylaxis with VWF concentrates.

Important recommendations are also made for managing the disease in women, such as treating heavy menstrual bleeding with hormonal therapy or tranexamic acid over desmopressin, depending on whether the patient is trying to conceive. Post-partum bleeding can be worse for women with von Willebrand disease than those without.

The guidelines highlight an area in urgent need of further research to protect these patients from the risks associated with pregnancy and birth with a bleeding disorder.

These new international guidelines are a welcome addition to the current information available for VWD and are currently being reviewed for the Australian context. If they get approved here they should help promote sustained improvements in the health outcomes and quality of life of all patients with von Willebrand disease.

Edited for size and local context from an editorial published in www.thelancet.com/haematology Vol 8 March 2021

Haemophilia's Toll

A haemophilia diagnosis takes a toll on the social and mental health of men, who often feel misunderstood and excluded from activities such as sports. According to a Canadian study published in the Journal of Thrombosis and Haemostasis.

While blood-clotting replacement therapies have improved quality of life, the study participants highlighted the need for multidisciplinary teams, more disease awareness among doctors in emergency rooms, and better access to HTC's.

The researchers conducted interviews focused on three categories: impact on identity and daily life, changes in treatment, and care needs.

Of the patients interviewed 64% had haemophilia A (five severe and two mild disease) and 36% had severe haemophilia B. 27% of patients had a history of inhibitors and two of them were still positive for inhibitors.

All but one patient visited haemophilia clinics every six to 12 months. One of the patients visited the clinic more regularly (four to six times a year) due to bleed frequency. 27% of patients had contracted hepatitis C from blood transfusions, and about 10% of them also had HIV.

45% of patients lived within half an hour of their care centre, while 18% resided an hour away and 27% lived one to three hours from their HTC.

All patients described bleeding symptoms occurring at an early age. 90% of patients were diagnosed before age 3 and the rest by age 6. Bleeding symptoms led to chronic pain and limited their activity.

The patients' pain and limited mobility contributed to increased stress levels and social isolation, and had a negative impact on their mental health. Some patients described being hypervigilant for bleeds, and feeling misunderstood and often "invisible" to their peers.

The patients felt excluded from sports activities, and as a result of disease-associated complications, had to miss school and work days.

Clotting factor replacement therapies offered flexibility as they could be given at home, curbing the need for frequent hospital visits, but Hemlibra (emicizumab) was the top treatment choice.

When asked about gaps in current care management, the participants identified the need for multidisciplinary teams of healthcare professionals, particularly physiotherapists, social workers, and chronic pain specialists.

The patients noted the need for readily accessible consultations for pain management.

In general, the patients were satisfied with their treatment plans, but visits to the emergency room were often described as a negative experience, with physicians lacking familiarity with haemophilia and treatment being delayed. Patients with a pre-existing treatment plan, or who knew what they needed, thought their plan was disregarded despite their efforts to advocate for themselves.

The researchers concluded that; "Collaborative efforts between haematologists, emergency room physicians, and surgeons to establish hospital-specific testing, treatment and referral guidelines, and regular [haemophilia treatment centres] audits may help address these care gaps, providing more person-centred, equitable care."

https://onlinelibrary.wiley.com/doi/abs/10.1111/jth.15570

5 Minutes with Brett

Talking with Jenny as a woman with von Willebrand Disease

What type of VWD do you have?
VWD Type 1. This is the most common form of VWD, a person with Type 1 VWD has lower-than normal levels of VWF and might also have low levels of factor VIII. About 85% of people treated for VWD have Type 1.

How was it recognised?
I was born into a family of 6 kids -4 boys and 2 girls. I am the second eldest sibling and the oldest girl. I am now 65 years old.

One of my brothers took his toddler son to see a Specialist in the early 1990's as it was suggested he needed grommets and his adenoids removed. When the specialist became aware of my brothers' bleeding issues (including major bleeds when having wisdom teeth removed and needing a blood transfusion from haemorrhaging a week after a tonsillectomy) they advised that my nephew be tested for VWD and the results came back positive.

My brother was informed that he too should be tested for VWD. I was married and living in Canberra with my husband and 4 young children at the time, and his Haematologist in Brisbane sent me a letter strongly advising I also get tested for VWD.

When where you tested / diagnosed?
I had the necessary blood tested taken in Canberra and they were sent to a Lab in Sydney in November 1994. The results came back VWD Type 1 severe. This fitted with my observations.

All my life I have had bleeding episodes. Endless nose bleeds that went on and on were a feature of growing up, especially during the hot summer Queensland school holidays at the beach.

Bruising would appear in places I couldn't even remember bumping. If I came off my bike the blood would just poor down my leg and take ages to stop. I got very good at NOT coming off!

Dentist visits were horrific, especially if I needed a filling or tooth extraction; my mouth would fill up with blood and once it seemed to stop it would start off all over again. Dentist visits usually wiped me out the next day as well so I often had mine scheduled for Friday afternoon after school. I didn't like those visits much!

I had my tonsils and adenoids out when I was in Primary School. I had been told I would be in Hospital for a few days but that stretched to nearly 2 weeks as I had a massive haemorrhage. When I got to high school, I then had to contend with periods. I played A Grade Netball and Softball and swam in the swimming squad at school. I had extremely heavy period that lasted for longer than any of my friends, and there didn't seem to be any known device to help stem the flow. I would have to say to my coach that I just couldn't play this week and a substitute would stand in. That was far better than having the embarrassment of everyone see what was going on! Also going off to the locker rooms and having to change at the end of every class was rather tedious.

Having children was also filled with some grief as I lost a lot of blood and needed to have blood transfusions but as this was at the height of the AIDS scare, I could not be given them. I also had to contend with bleeding for 12-16 weeks after giving birth. Not a whole lot of fun!

During my working life [I began as a Special Needs Teacher] prior to having a VWD diagnosis, and children, I guess I learnt to be very careful

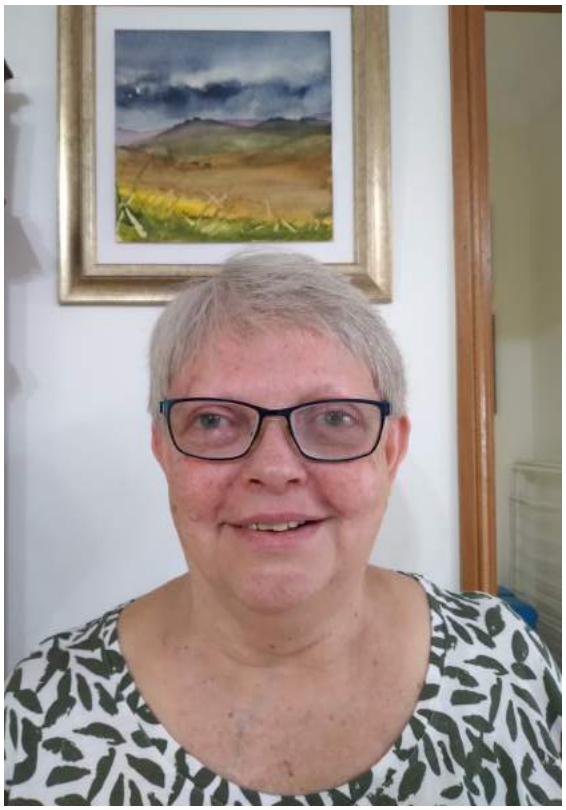
I did have some spectacular injuries though, during primary and secondary and at Teachers College. I ran into a barbed wire fence and the blood kept seeping through the stitches in my hands. Another time I fell over on the road and my hand was cut by a concealed beer bottle. I required skin grafts taken from my wrist and placed into the palm of my hand. It took weeks to heal and kept bleeding off and on for a week or more.

I also ended up with bruising on my legs from stray softballs as I fronted up to the pitch to bat. Mostly the RICE principal has worked to a degree, but I always thought I must be a little different from my friends.

Did things change for you post diagnoses?
I was fortunate to get my diagnosis just prior to having a hysterectomy in July 1996. I was given a

trial of synthetic blood product by unfortunately had an anaphylaxis reaction to it. I was also trailed on Cryoprecipitate but that left me with serum sickness. So back then it was plasma derived Factor 8 concentrates. I now have blood product before ANY medical procedure that involves cutting, routine or otherwise. These days it tends to be Biostate.

When I broke my knee it swelled up rapidly to a very large size. No question on whether to call an ambulance on that occasion. I have slowly learnt what injuries need medical intervention and what I can cope with at home.



Jenny with one of her paintings in the background.

How do you treat for it if at all?

Before injections I have a tranexamic acid an hour prior to prevent deep tissue bruising. This also helps to make the site not so achy.

With dental work (as a minimum) I have some tranexamic acid 1 hour prior and crush the tablet and swill out my mouth afterwards. But now I factor in 6 monthly visits to the Dentist and if an extraction is on the cards plan to have biostate before and after either as an in-patient or out - patient depending how my Dentist and haematologist request it. Having Biostate in conjunction with tooth extraction is a game changer as is being able to have Biostate for even minor procedures e.g. colonoscopies. It usually means a longer than 'everyone else' stay in hospital but the benefits to me are huge.

I now always have to discuss with my GP/Specialist if I need an operation and the Haematologist MUST be involved.

I also now take some Tranexamic Acid with me wherever I go. I had an episode in a Café not too long ago when I had a bleeding mouth/throat that wouldn't stop. Not a good look in a Café! I asked for more serviettes as the blood kept seeping out of my closed moth and also for a large glass of ice to suck on. These helped and I could eventually take the tablet which had I known then I could have crushed and swilled. You learn new things all the time!

Have you told people you have VWD?

Since I have been diagnosed I have always let Medical staff know, family know and when I was working those I worked with also knew.

Do you have any joint issues or locations where you bleed more often / more frequently?

From those years of playing netball I have continued problems with my feet – ankles in particular. I also have some residual swelling in my knees.

How do you manage pain?

Pain is perpetual but I hope I am now beginning to see it as a bit more of a friend than a foe. I now have fewer worries with stopping and resting when the pain gets too much. Ice packs and heat packs help. We keep a wide variety of sizes of ice packs in our freezer. Panadol Osteo round the clock every 8 hours also helps. I used to spend time playing my guitar and Piano these activities no longer assist in the way they did. I now have a new hobby painting with water colours. It is like magic!

What would you tell others about living with VWD?

When I was a child I knew I bleed a bit more than others, as Aunties would say "nothing to worry about. You are just a bit of a bleeder!' We suspect our Mum and several of her siblings also had VWD .

Not knowing what it was I had didn't stop me from engaging in life to the fullest, and once diagnosed *LOTS* of things fell into place. Two of our 4 children have been tested positive. Before their diagnosis I was pretty sure they were like me so even though we didn't know exactly what if was we could use strategies to minimise their hurt.

Once a diagnosis is made and you live in an area where there is a Centre that caters for Haematology, hook up with it!

Having an ABDR card with your diagnosis and how to give initial treatment is VERY helpful as is having a Medic Alert bracelet.

Acquired **Haemophilia A** after **COVID-19 Vaccine**

Four people in a region of Northern Italy were diagnosed with acquired hemophilia A (AHA) weeks after receiving the second dose of a vaccine against COVID-19, scientists reported.

The unusually high number of newly identified acquired hemophilia A cases within eight months in the Italian province led the investigators to suspect the Pfizer-BioNTech vaccine.

But they also noted that three of these four people had autoimmune disorders or cancer, which could have heightened their susceptibility to this form of hemophilia.

Moreover, "the overall number of cases observed does not allow [us] to draw any definitive conclusion over a possible causal relationship," they wrote, adding that establishing such a relationship "would need more epidemiological and pharmacovigilance data about suspected vaccine-related adverse events."

Their report, "Four cases of acquired hemophilia A following immunization with mRNA BNT162b2 SARS-CoV-2 vaccine," was published as a letter to the editor in the March 2022 issue of the journal Thrombosis Research.

All cases occurred with the first eight months of province's vaccination campaign.

Because the "immunomodulatory effects" of COVID-19 vaccination are "still poorly understood … four cases of AHA in our province could be of interest and could sensitize healthcare personnel toward a possible complication of SARS-Cov-2 immunization," the scientists noted.

But with three of these four patients having pre-existing conditions and "co-occurence of autoimmune diseases or immune derangement … are both well-known [AHA] phenomena, these associations could reflect susceptibility to autoimmunity potentially triggered by vaccination," they added, noting that two other AHA cases during this time were diagnosed in people "not vaccinated nor affected by COVID-19."

Vaccination benefits, the scientists continued, "exceed potential side effects and play a central role in individual and public health to effectively protect people from COVID-19 and to stop the pandemic."

https://www.thrombosisresearch.com/article/S0049-3848(22)00016-0/fulltext

Clues to block and lock HIV

Anti-retroviral treatments can suppress HIV replication as long as treatment continues, but the virus can establish a latent reservoir that is unreachable by anti-retrovirals and usually invisible to the immune system. While these so-called HIV proviruses appear to lie dormant in resting immune cells, they can start churning out new copies of the virus if treatments are discontinued.

Over the years, researchers have identified a small number of people who manage to naturally control HIV without treatment and experience no obvious disease progression. Some (known as elite controllers) have never taken antiretrovirals while others (known as post treatment controllers) are able to maintain viral control after stopping therapy.

In 2020 researchers of Massachusetts General Hospital reported that some 60 elite controllers had HIV blueprints locked up in parts of their chromosomes—dubbed "gene deserts"—where they can't be used to make new copies of the virus. Two woman appear to have eliminated HIV despite never taking antiretrovirals.

The new study suggests that some people who have been on antiretrovirals for a long time may also sequester HIV proviruses in gene deserts, which could enable them to achieve long-term remission after stopping treatment, sometimes called a functional cure.

Cure researchers have tried many "shock and kill" or "poke and clear" strategies that aim to activate the viral reservoir, making the latently infected cells visible to the immune system while using antiretrovirals to mop up newly produced copies of virus. But the latest findings suggest that a "block and lock" strategy that keeps latent virus in a deep sleep may be a more fruitful approach.

A research team at Brigham and Women's Hospital analysed 1,270 proviruses in immune cells from six people who had been on antiretroviral therapy for nine years or more, mapping the location of transcriptionally active and silent proviruses. Only 147 proviruses encoded intact HIV genomes capable of replication. In three people, this latent HIV appeared to gradually concentrate in gene deserts and regions with inactive genes that encode zinc finger proteins, similar to what happens in elite controllers.

The researchers found that some cells continue to produce a small amount of virus. These transcriptionally active proviruses may "play a critical role for driving viral rebound in case of treatment interruptions," they suggested.

The study authors speculated that, over time, cells with active proviruses are eliminated by the immune system, so the proviruses that remain are increasingly segregated in inactive sections of the cells' DNA. Immunotherapy and latency-reversing agents used to "shock and kill" may accelerate selection of silent proviruses, resulting in a peaceful coexistence between HIV and the host and enable drug-free control of HIV infection.

While elite controllers may have unique immune responses that facilitate this process, it may also occur in some typical people with HIV on long-term treatment whose proviruses have been sequestered in gene deserts, allowing them to stop anti-retrovirals without setting off a new round of viral replication.

The researchers are starting another study to look for more people on long-term treatment who have the same viral integration pattern.

From a study published in Cell. Volume 185, ISSUE 2, P266-282.e15, January 20, 2022 https://www.cell.com/cell/fulltext/S0092-8674(21)01449-5

who can **kids** lean on if they have a bleeding disorder?

Your parents have a big role in helping you with your bleeding disorder, but they aren't the only ones you can turn to for support and love. There may be times when a parent can't be around or when you want to spend time with some fresh faces. Other family members, as well as friends or people you know well, can also help you—or simply be there when you want someone to talk to, play with or just hang out.

Here's how to make the most of the time you spend together:

Grandparents

Grandparents may live nearby or far away, but they are important to both you and your parents. Your grandparent may be the perfect person to spend time with on days you have to take it a little easy. There are lots of things you can do together—play cards, bake treats or draw pictures. Ask your grandparent to tell you a story or teach you a game from when he or she was a kid. Sharing in these memories can make you feel special, too.

Siblings

No one understands your parents like your brother or sister! Who else gets those inside jokes or laughs with you when your mom and dad do something silly? It's possible your siblings feel a little left out when you get more attention because of your bleeding disorder, so it can be important to show them they're loved and needed. Whether your brother or sister is older or younger, there are plenty of ways to have fun together. Find a game to play, such as a scavenger hunt around the house or backyard. Act out a funny skit, sing a song or make up a dance and have a talent show for the whole family to enjoy.

Friends

It can be hard for friends to understand what it means to have a bleeding disorder, but that doesn't mean they don't care. If your friends ask about your bleeding disorder, you can decide how little or how much you want to share with them. If you do feel comfortable telling a friend about your bleeding disorder, you may explain that it means you have to take special medicine because your blood doesn't act like his or hers does. But you can still find plenty of ways to play together, inside and outdoors, and you probably won't even think about your bleeding disorder when you are together.

Edited for size from an article by Ian Landau that first appeared in HemAware Junior in October 2017. https://hemaware.org/life/whom-can-you-lean-if-you-have-bleeding-disorder

Health Updates

First Dosing of Subject in Gene Therapy Clinical Trial for Haemophilia B

Belief BioMed Group (BBM) has successfully dosed the first subject in the registrational gene therapy clinical trial by intravenous (IV) infusion of BBM-H901, an adeno-associated virus (AAV) vector expressing factor IX gene for treatment of adult male haemophilia B patients. BBM-H901 is the first investigational new drug (IND) approved in China for gene therapy by the IV delivery route for genetic diseases, and in specific, for haemophilia B. At present, no AAV gene therapy product has been approved for marketing for haemophilia in China and globally.

The Trial of BBM-H901 is one of the earliest clinical trials for AAV gene therapy carried out in China and started in 2019 when Belief BioMed submitted its original application. They received clearance to proceed on August 6th, 2021.

https://www.prnewswire.com/news-releases/belief-biomed-completed-dosing-of-the-first-subject-in-the-registrational-gene-therapy-clinical-trial-for-hemophilia-b-301452471.html

HIV reservoir changes dramatically during prolonged ART

HIV integration into the host genome, forming the HIV reservoir, represents the major barrier to HIV eradication. It is not clear, however, how the HIV reservoir changes during long-term antiretroviral therapy (ART). Researchers have performed the first comprehensive study analysing the intact integrated HIV virus. Profound changes in the structure and composition of HIV reservoir were found in 3 HIV-infected individuals undergoing suppressive ART for at least 8 years. There was also a selection of deeper viral latency during prolonged ART.

https://pubmed.ncbi.nlm.nih.gov/30688658/

Generation Bio announces significant setback for non-viral gene therapy

Last year Generation Bio raised $230 million to develop the world's first non-viral gene therapy. Such an approach, if proven, could eliminate many of the key hurdles that have hindered the field over the last decade: It would allow doctors to dose patients who have pre-existing immunity to the viruses commonly used today, to re-dose a patient if the therapy ever wore off, and to avoid many of the immune-related safety concerns that have come to the fore over the last 18 months.

Researchers have been trying to make non-viral delivery work since the 1990s and the company announced new animal data showing that the therapy was highly effective in mice. But it failed to do much in monkeys, setting back a program they had hoped to have authorised for clinical trials this year.

Generation indicated that they kept seeing different results in different monkeys, both on safety and efficacy. There was "higher-than-expected variability in both factor VIII expression and tolerability within and across studies," the company said.

https://www.sec.gov/Archives/edgar/data/1733294/000155837021016736/gbio-20211214xex99d1.htm

HIV Self Testing Kit Vending Machine Study in Queensland

The RAPIDVend: HIVST Vending Machine Study aims to explore the feasibility and acceptability of dispensing HIV Self-testing (HIVST) kits from a Smart Vending Machine among priority populations and the wider public in a range of settings; and evaluate how reliable the vending of HIVST kits is with respect to machine operability and maintenance.

The project was launched in late October last year and in the initial 3-month period 144 kits were dispensed and 30% were collected by people who have never tested for HIV or who have not tested for over 12-months. The preliminary results suggest that this model of HIV Self testing dissemination is acceptable and reaching the priority group of at risk sub-optimal testers.

The researchers have now moved to Phase 2 of this health promotion project which involves targeting other populations with barriers to accessing conventional HIV tests and one of the smart vending machines will be moved and installed on USQ Toowoomba campus to test suitability with a student population.

Home test kits can also be requested from: *https://survey.surveymanager.net.au/survey/1OrderForm.aspx?ver=350783570*

https://www.rapid.org.au/vend

AAV Gene Transfer Feasible for the Treatment of Haemophilia A

In a phase 1-2 trial, 16 out of 18 men with hemophilia A had sustained expression of factor VIII after gene transfer with adeno-associated viral vector (SPK-8011). They also experienced a reduction in bleeding episodes, according to a study published in the Nov. 18 issue of the New England Journal of Medicine.

The phase 1-2 trial included four dose cohorts and had a median safety observation period of 36.6 months. There were 33 treatment-related adverse events that occurred in eight participants; 17 were vector-related and 16 were related to the glucocorticoid. The annualized bleeding rate decreased by 91.5 percent.

The data shows that liver-directed AAV gene therapy is a viable approach for long-term treatment of haemophilia A.

https://consumer.healthday.com/adeno-associated-viral-vector-for-factor-viii-safe-in-hemophilia-2655770588.html

Approval of Prophylactic Indication for VWD Takeda Therapy

Takeda recently announced that the U.S. Food and Drug Administration (FDA) has approved VONVENDI for routine prophylaxis to reduce the frequency of bleeding episodes in adults with severe Type 3 von Willebrand disease (VWD) receiving on-demand therapy. Type 3 VWD is the rarest and most severe form of the disease.

The new FDA approval represents an expanded indication for VONVENDI, which was first approved in 2015 for the on-demand treatment and control of bleeding episodes in adults 18 and older with VWD.

https://www.takeda.com/en-us/newsroom/news-releases/2022/fda-approves-prophylactic-treatment-with-vonvendi/

Important Dates for HFQ Members

Covid-19 is still a concern and all HFQ activities are subject to any restrictions that may apply at the time of the activity.

Autumn Social Event:
Saturday, 23rd April 2022
The Blue Room Cinemas, Rosalie

HFQ 25th Anniversary
16 April 2022

World Haemophilia Day
17 April 2022

OBE Men's Meetings:
Wednesday, 4th May 2022
Easts League Club

Sunday, 5th June 2022
Fox & Hounds Country Inn

Women's Lunch :
Sunday, 15th May 2022
Tingalpa Hotel

World Hepatitis Day
28 July 2022

Please ask for events and activities happening in your area.

Please call Graham or Sam at the office on **0419 706 056** for more info on any of these events and other activities.

World Haemophilia Day 2022

Every year on 17 April World Haemophilia Day is recognised worldwide to increase awareness of haemophilia, von Willebrand disease and other inherited bleeding disorders. This is a critical effort since with increased awareness comes better diagnosis and access to care for the millions who remain without treatment.

This year the theme is *Access for All.* The World Federation of Hemophilia, with the support of volunteers from around the world, does remarkable work with developing countries with their GAP and Twinning Programs and Cornerstone Initiative. HFA is currently connected with the Myanmar Haemophilia Patient Association as a part of the WFH Twinning Program.

Haemophilia Foundation Australia (our peak body) is a WFH member organisation, and many Australian volunteers have been involved with WFH programs. HFA has supported many programs over the years and participated in the WFH Twinning Program and various committees that work to achieve the objectives of WFH.

We are grateful that our community has access to high quality treatment, but we recognise that many other parts of the world do not have access to diagnosis, treatment and care. Together as Australians, let's take this opportunity to recognise this special day and put our support behind the worldwide effort for Access for All.

About The H' Factor

The 'H' Factor is published four times each year by HFQ by the HFQ manager and assisted by Brett Williams, our communications volunteer. We occasionally send important information and updates on local and relevant events for people affected by bleeding disorders to subscribers of our email list. If you would like to be on the HFQ Email List, please register your interest by sending through an email with the subject title The 'H' Factor email list' to info@hfq.org.au. You can be removed from the list at anytime.

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