

# **Non-factor treatment for Haemophilia A: new choices, new challenges**

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# Experience of a paediatric HTC

- Differences between factor & non-factor
- Transition at RCH Melbourne
- Educational Model
- Impact on practice
- New choices, changes & challenges
- The future

# National supply arrangements for Hemlibra (emicizumab)

## Key points:

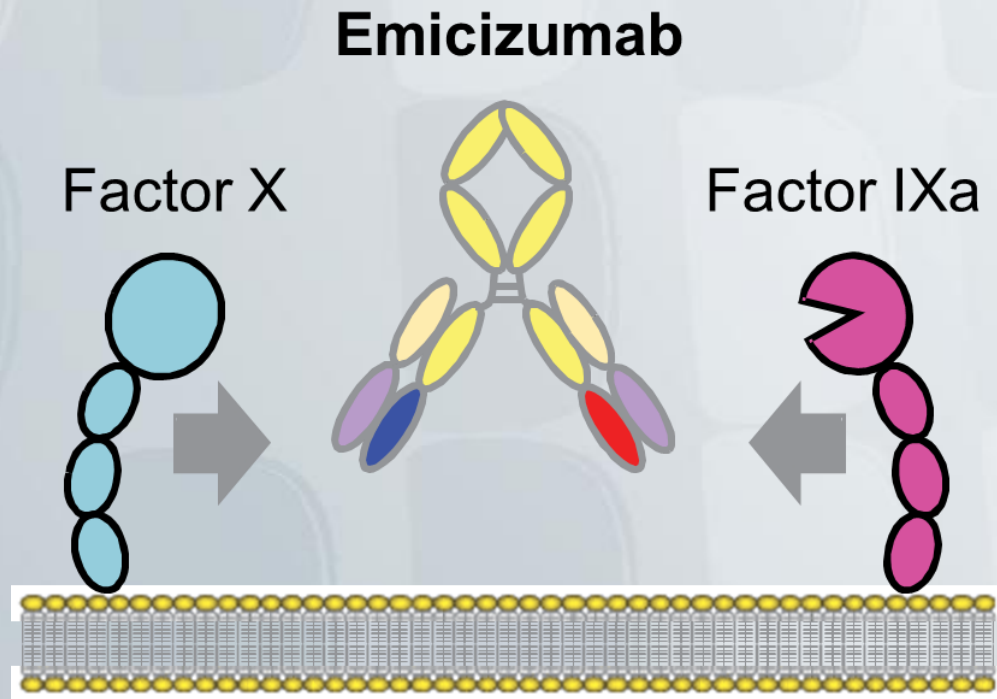
- Hemlibra became available under national supply arrangements on 2 November 2020.
- Hemlibra is available to prevent or reduce the frequency of bleeding in severe or moderate haemophilia A patients without inhibitors, and in haemophilia A patients with inhibitors.
- Hemlibra is available through specialist clinicians at Haemophilia Treatment Centres.
- Distribution arrangements will support local delivery for patients who can appropriately self-administer Hemlibra at home, with ongoing clinical oversight from a Haemophilia Treatment Centre. This includes distribution through a community pharmacy, or home delivery on an exception basis within a defined set of eligibility criteria.
- The timing of transition arrangements for Hemlibra took into account the need for appropriate clinical oversight of transitioning patients, and the efficient use of stock of current products held by Haemophilia Treatment Centres and patients, and stock required to be held in Australia under NBA contracts.

Further information on implementation, distribution and transition arrangements for Hemlibra, can be found  [here](#) (309.18 KB).

Clinical guidance on the appropriate use of Hemlibra can be found [here](#) .

<https://www.blood.gov.au/national-supply-arrangements-hemlibra-emicizumab>

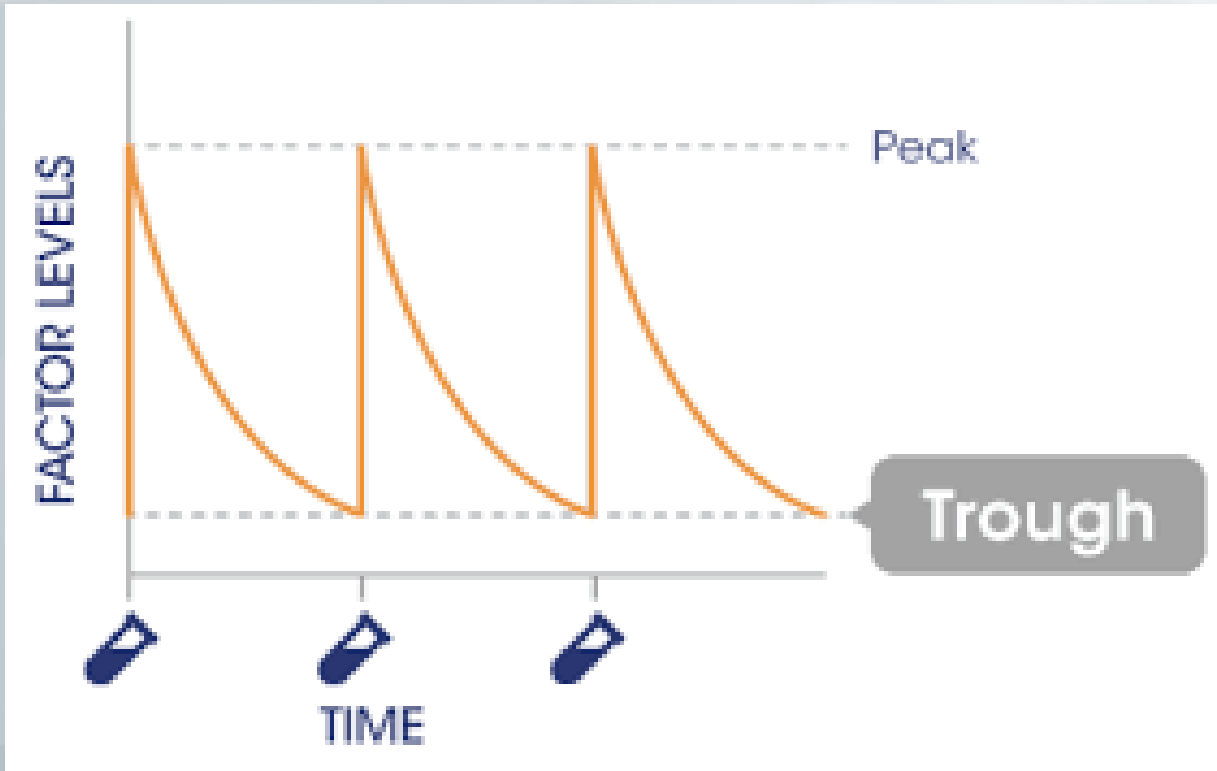
# About Emicizumab (Hemlibra)



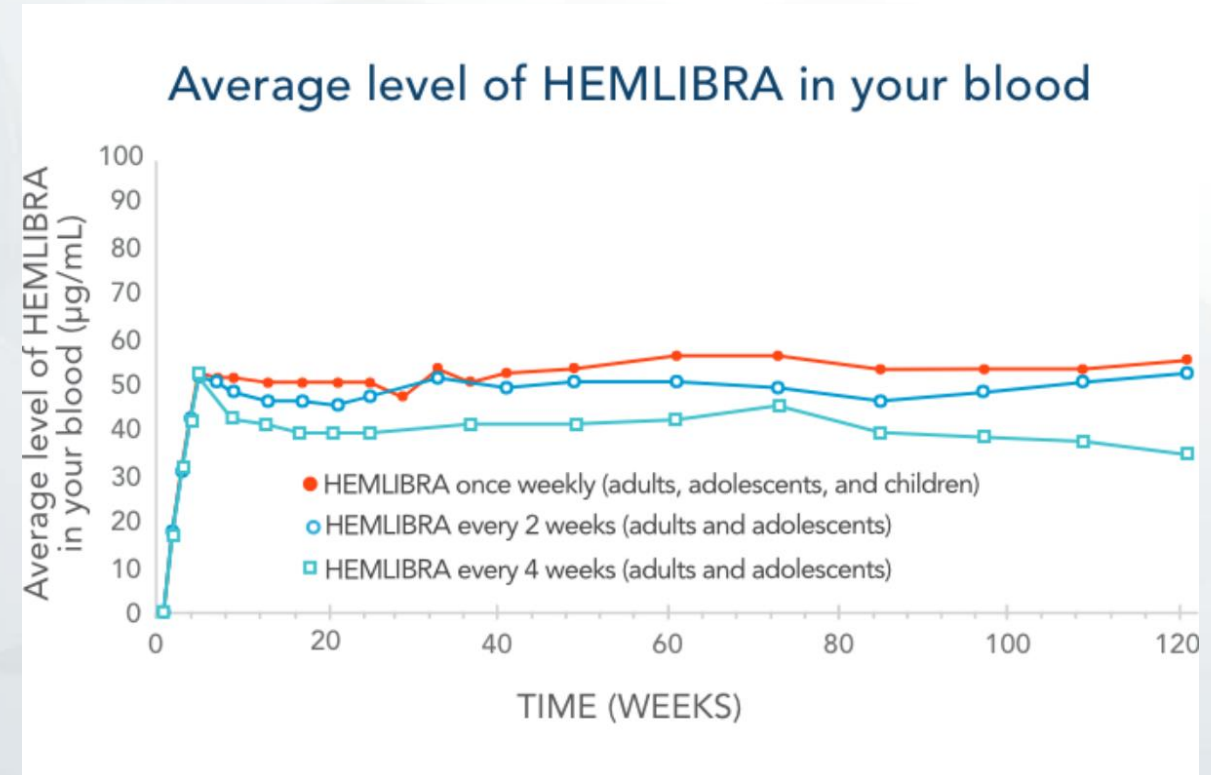
- Humanised bispecific monoclonal antibody<sup>1</sup>
- Bridges activated factor IX (FIXa) and FX to restore function of missing FVIIIa<sup>1</sup>
- No structural homology to FVIII, so does not induce FVIII inhibitors and is not affected by presence of FVIII inhibitors<sup>1</sup>
- Subcutaneous administration
- Long half life 26.9 +/- 9.1 days<sup>2</sup>
- Flexible dosing schedule: QW, Q2W, Q4W

# Factor vs non-factor

## Peaks and troughs (factor)



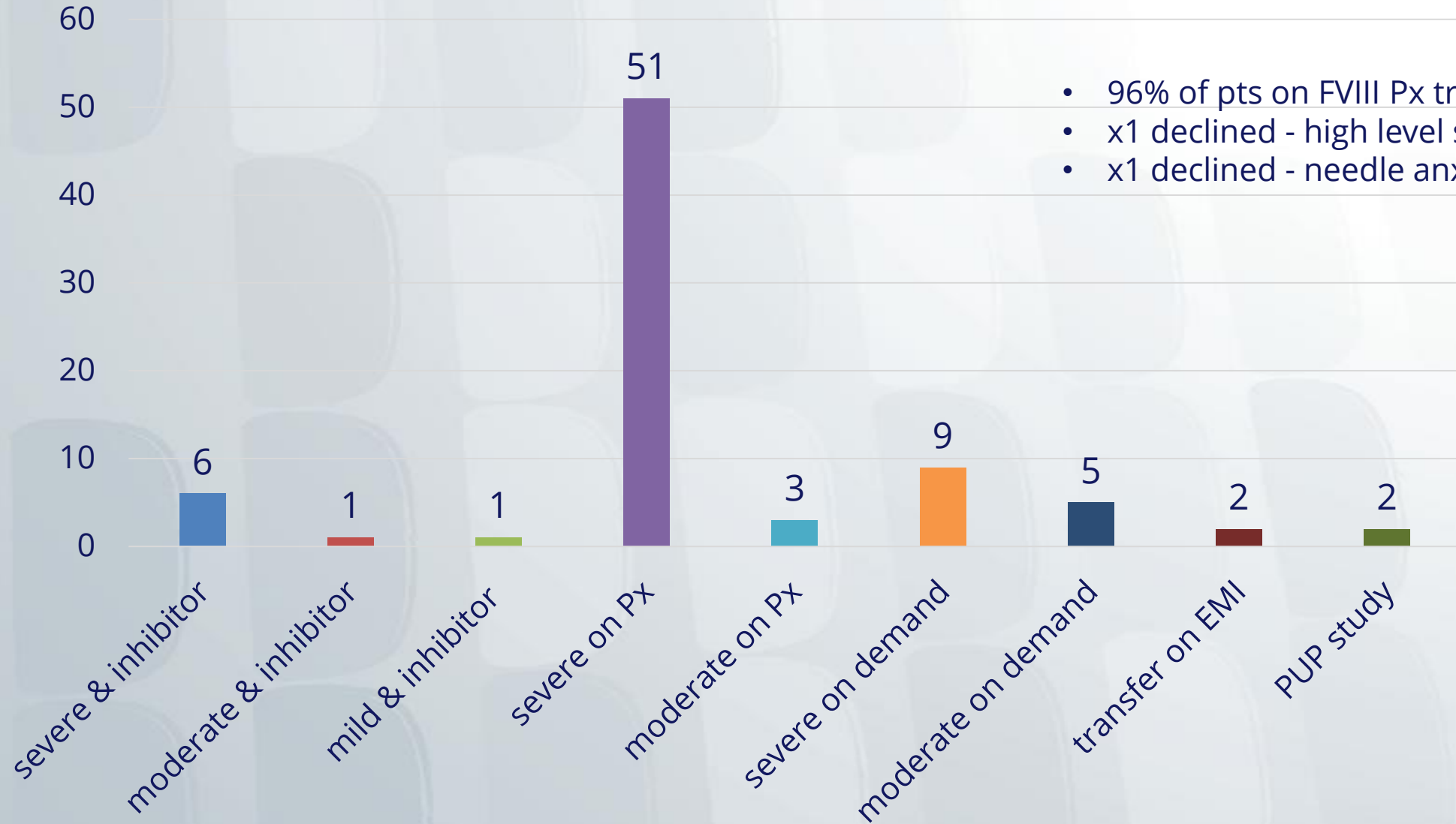
## Steady state (Hemlibra)



# RCH transition to non-factor

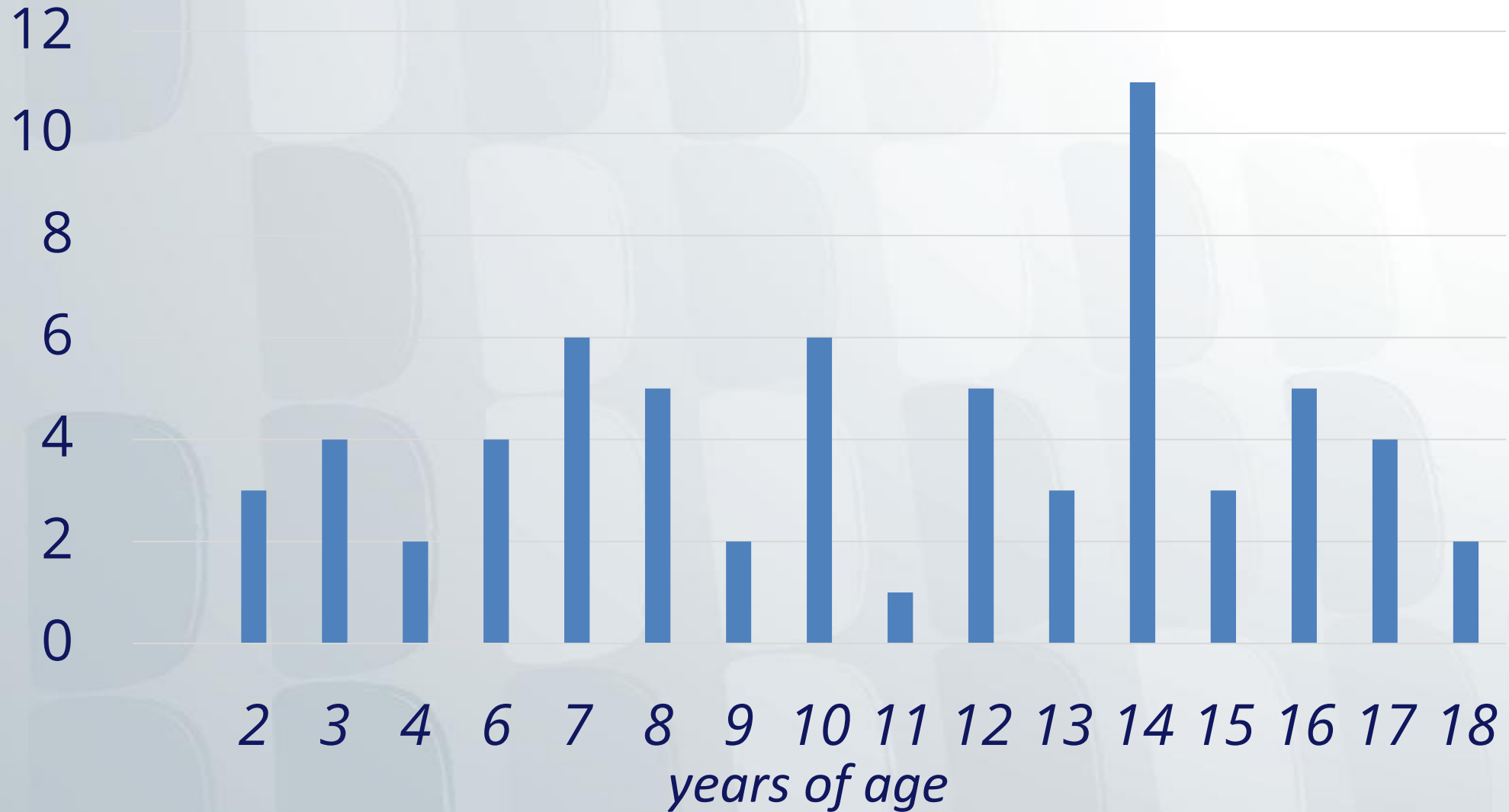
- 77 severe, 19 moderate (8 with FVIII inhibitor)
- High level of interest, webinar Dec 2020
- Categorise priority according to
  - Inhibitors (compassionate/early access)
  - On demand severe (infants/toddlers) (child aged 6)
  - Port malfunction
  - Target joints/bleeding on Px
  - Parent/patient interest
- Transition over ~ 14 months (navigation of COVID)

# Patients on EMI: Haemophilia severity & treatment type (n =80)



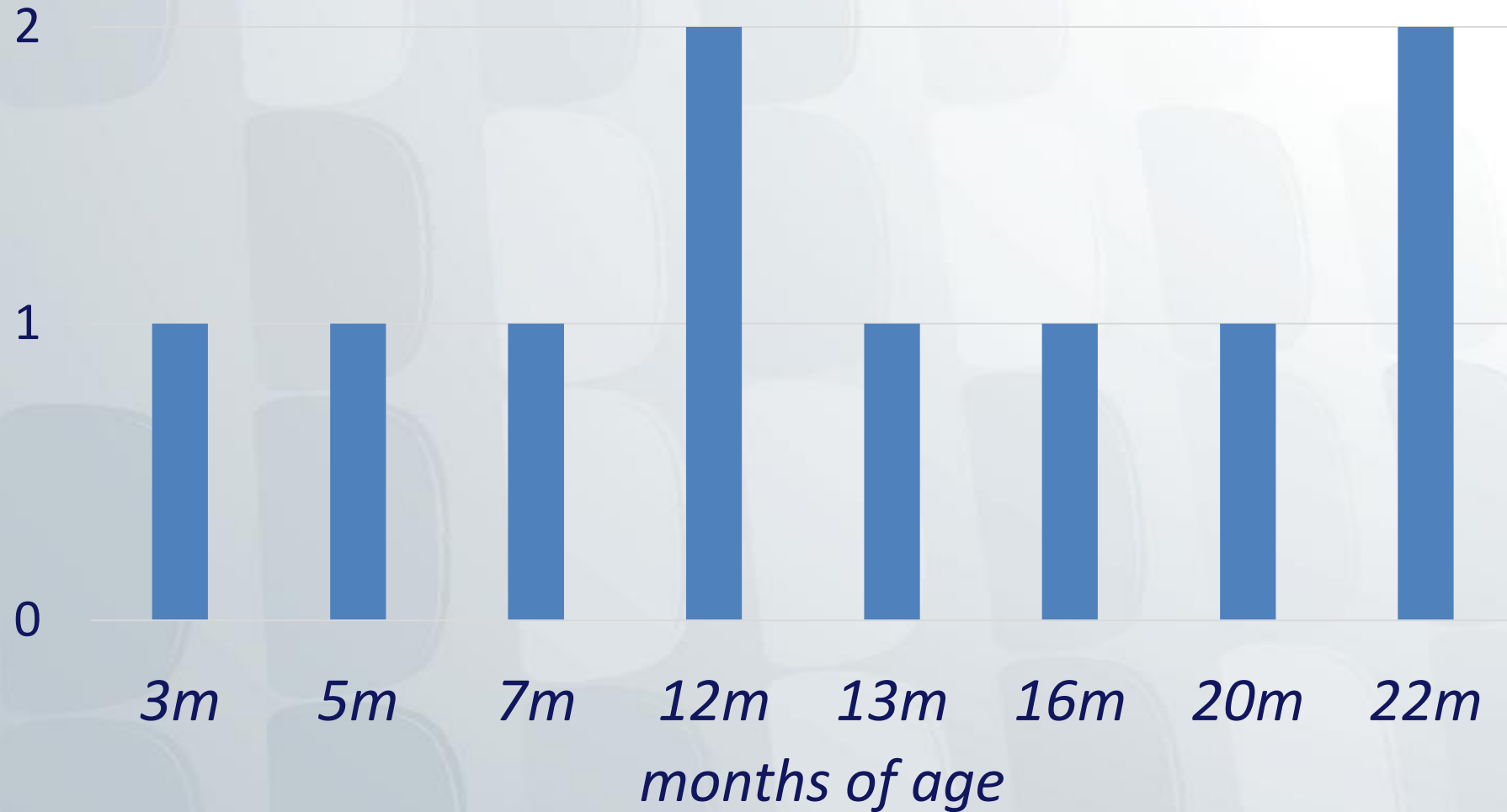
- 96% of pts on FVIII Px transitioned
- x1 declined - high level sport
- x1 declined - needle anxiety

# Age (years) commenced EMI (>2 years of age, n=70)





# Age (months) commenced EMI ( $<2$ years of age, $n=10$ )



# Educational Model

- Information kit, instruction mat, practice pad, video
- x 5 weekly visits for loading and education
  - Number of visits tailored according to needs
  - Virtual education - COVID restrictions/regional families
- Week 5 - confirm maintenance dose/frequency
- Take home message:
  - Call HTC if you suspect a bleed
  - Wait and see approach
- Ongoing 6 month review - weight/script renewal

# Adapting to change

- From factor 2 or 3 x per week
- To subcutaneous injection
  - Every week for 5 weeks
  - Then every week, 2 weeks or 4 weeks
- Sounds easy!
  - Straightforward technique
  - Reduced treatment burden

*“I get to forget about my Haemophilia.”*

(aged 14)

*“What do you think you might do to make sure you don’t forget your needle?”*

(fortnightly administration)

*“I’m not going to forget, this is important!”*

(aged 14 years)

Before

*“Uncertain. Anxiety. Pain.”*

After

*“Relief. Freedom. Quality of Life.”*

*Mother of 10 year old child  
with Factor VIII inhibitor  
after 3 years on Hemlibra  
treatment*

## It's still a needle

*"I want to go back to my port."* (aged 7)

*"Is it my needle night?"* (aged 4)

*"I just can't do it."* (aged 10)

*"We would cry in the other room after the injection because he got so upset."* (parents of child aged 6)

ORIGINAL ARTICLE

## Real-world use of emicizumab in patients with haemophilia A: Bleeding outcomes and surgical procedures

Isabella McCary, Christine Guelcher, Jan Kuhn, Regina Butler, Gita Massey, Michael F. Guerrero,  
Lance Ballester, Leslie Raffini ✉

First published: 20 April 2020 | <https://doi.org/10.1111/hae.14005> | Citations: 43

- N=93, 66% <12 yoa
- “...not anticipated, but repeatedly observed in our practice, was the initial fear and resistance to subcut administration expressed by many of our pts.’
- Had assumed readily accepted and preferred



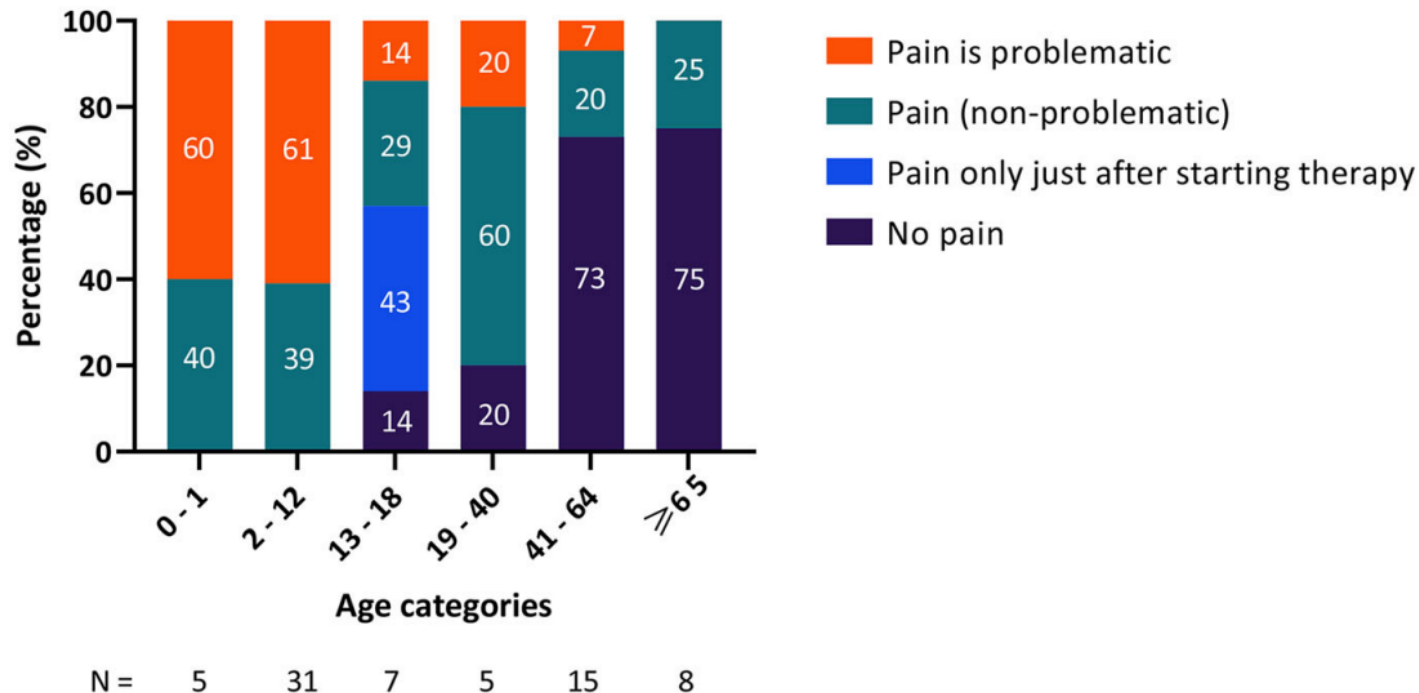
LETTER TO THE EDITOR

## Pain while injecting emicizumab predominant in children, a report of Dutch patient experiences

Ilmar C. Kruis ✉, Mariëtte H. Driessens

First published: 09 February 2023 | <https://doi.org/10.1111/hae.14757>

### (A) Experienced pain during administration

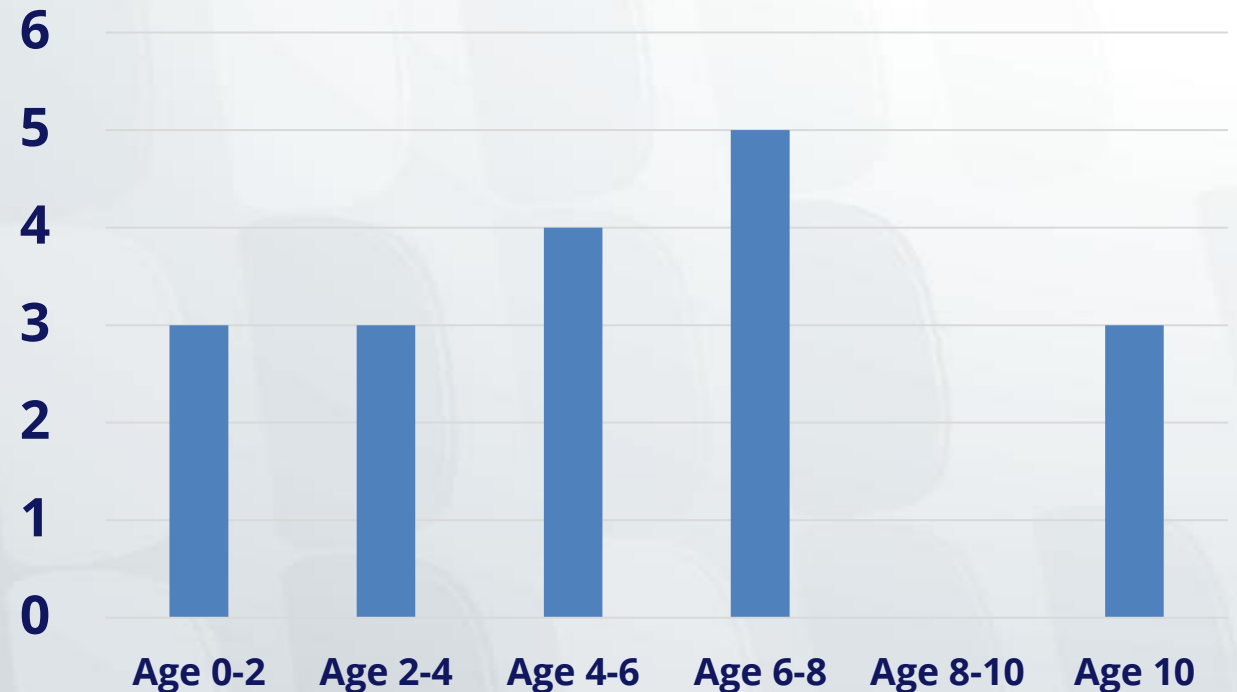


- Survey via haem society
- Suggestions
  - Out of fridge
  - Distraction
  - Anaesthetic cream
  - Try different sites
  - Slow injection
  - Change schedule
- 'Advantages outweigh inconvenience'
- ? Bias

# Needle distress in RCH transition cohort (n=80)

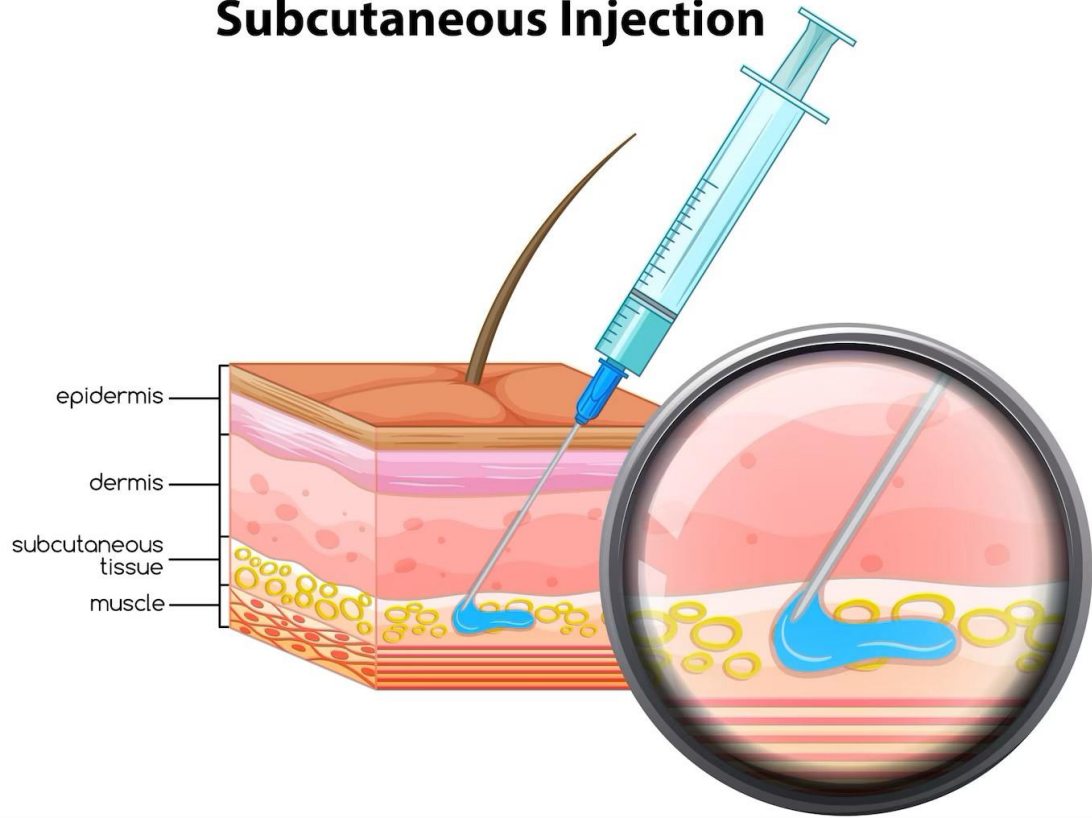
- 18 boys (22.5%) experienced initial needle distress during administration of Emicizumab
- All primary school age or younger

## By age (years)

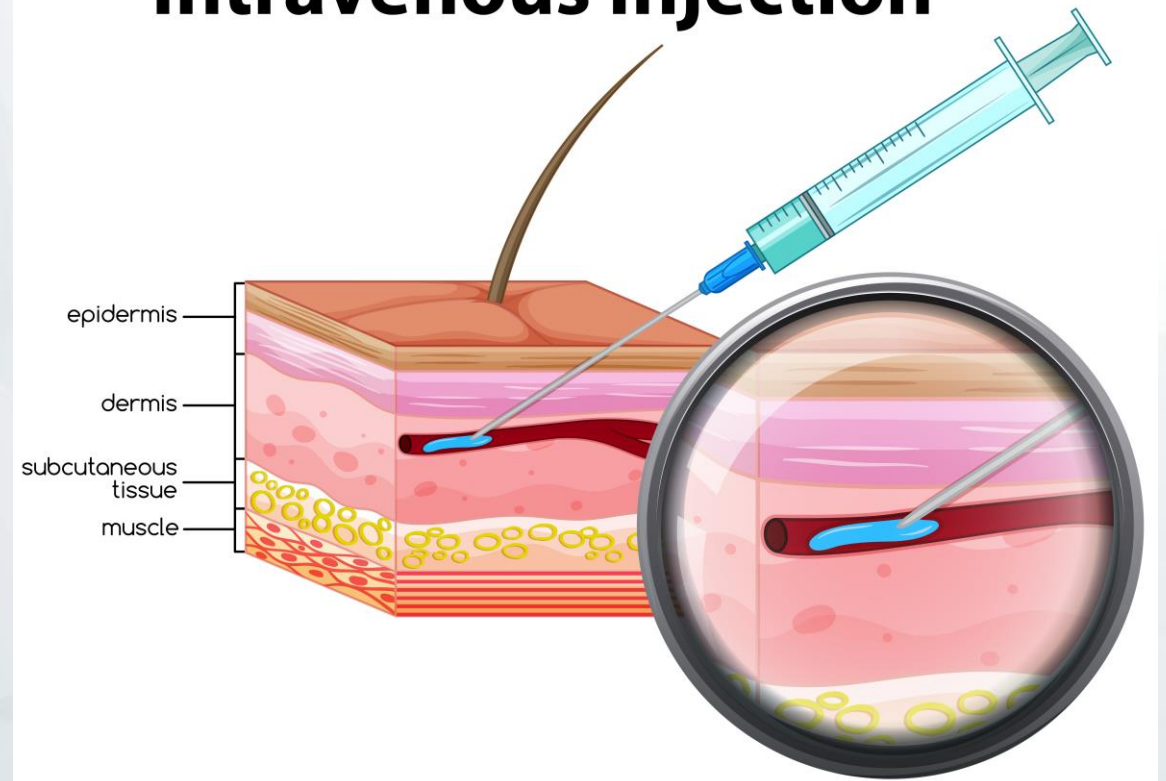


# Intravenous vs subcutaneous

## Subcutaneous Injection



## Intravenous Injection



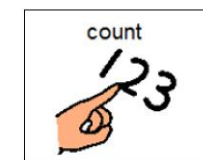
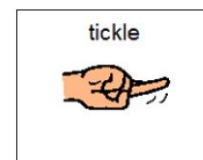
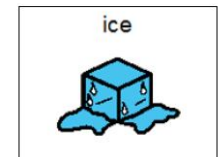
# Needle distress

- Can make home therapy challenging
- Parents of 6/18 boys contacted HTC re ongoing needle distress
- All 6 changed frequency from 2 to 4 weekly
- 3/6 frequency change improved distress
- 3/6 required additional support in clinic

# Procedural pain strategies

- Child life therapy
- Choices chart
- Squeezy toy for distraction
- Reward, special treat
- Buzzy bee, ice
- Medical role play
- Anaesthetic cream?
- Psychology

## Menu for injections



# Empower & support families

- Initially offer families a break from treatment
- Build confidence in parent/care givers own abilities
  - Expert with factor administration
  - Loss of confidence with sub cut
  - Parental distress with injection pain
- Role-model positive language around procedure

# The parent experience: learning to give IV factor to their child.



1. Dealing with fear & anxiety
2. A supportive learning environment
3. Establishing a ritual
4. Empowerment & liberation



## **Giving factor at home**

A guide to using your child's port

*“... I’m putting a needle into my son, even though you know he is numb there [due to anaesthetic cream] that didn’t register and it was like I’m sorry for what I’m doing to you. And I remember I broke down and cried and I go “oh gee”, and it was just the relief..... it was such a build up ..... and after that to be honest we fell into it pretty quickly.”*



*'The port is just part of my son's life at home now, the factor gets done in a familiar and safe environment and he's very comfortable with it.'*

“Time... and the most effective strategies have been making sure I am distracted and don't watch the needle, + Barry the buzzy bee. (Mum talks too much when she does the injection, Dad is quicker).” (aged 10)

“What has made the injections better?”

“Getting new toys!”

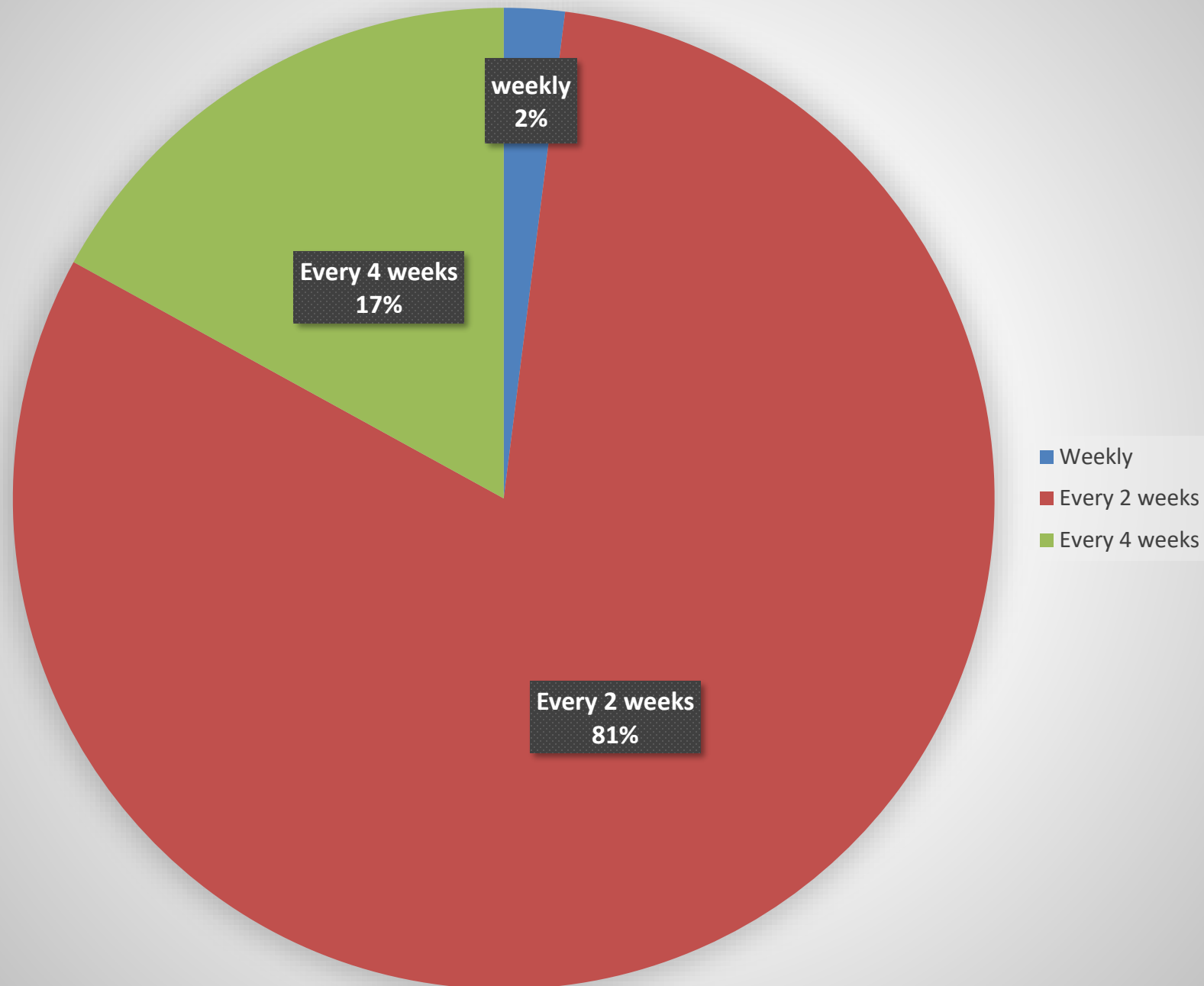
(child aged 6)

# Treatment schedule - how to decide?

- 4 weekly if injection administered by HTC/GP
- Maintenance every 2 weeks to gain confidence with technique & with the medication
- Fortnightly initially most preferred frequency
- Patient/family centered approach - choice
- Volume and number of injections

# February 2022 Transition cohort (n=80)

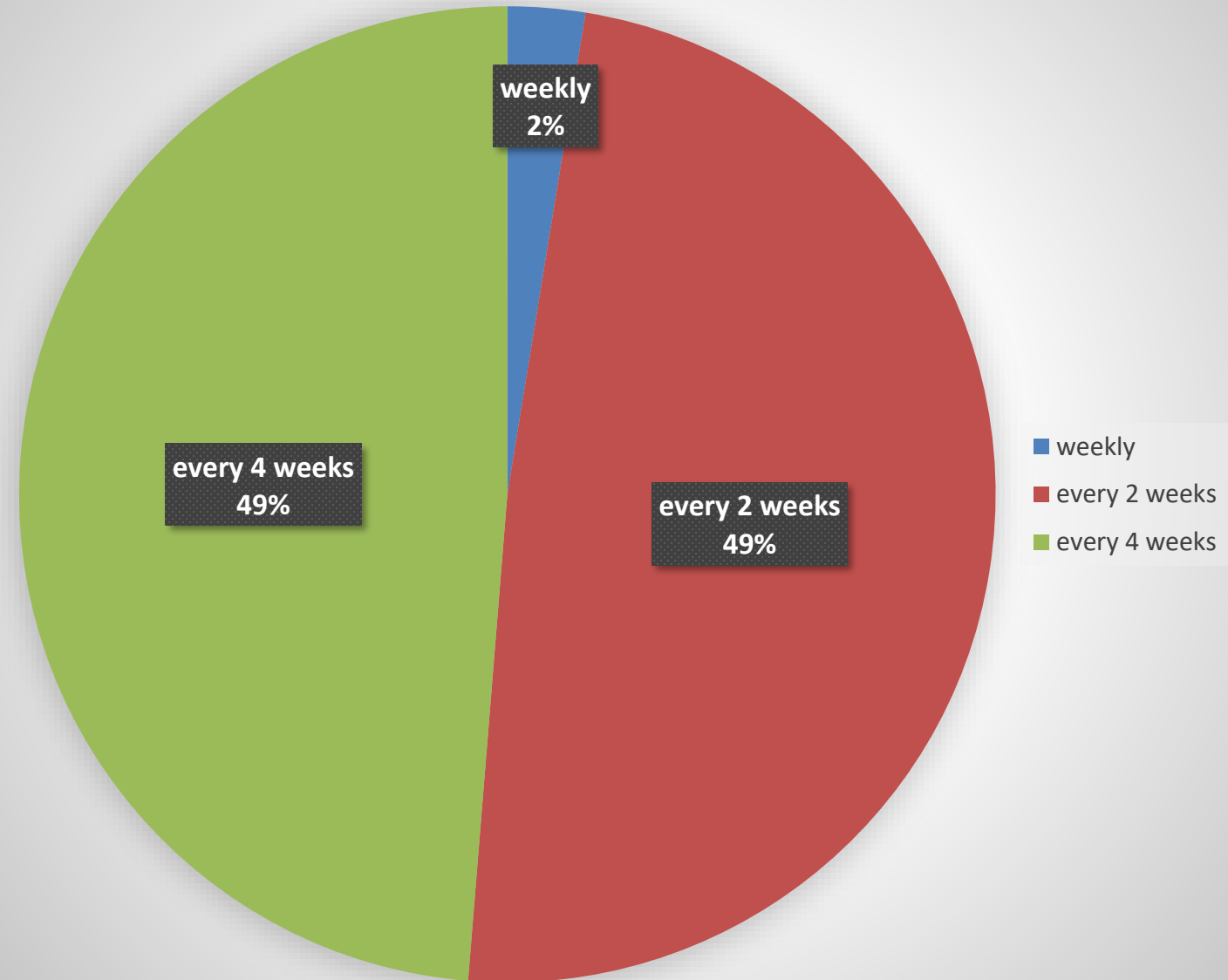
Emicizumab frequency



# August 2023

- ~80 children on Hemlibra
- 1 young person with needle worry changed to Hemlibra
- 1 young person back to FVIII
- Additional 9 on Hemlibra (new Dx)
- 9 transferred to adult care or interstate

Emicizumab frequency



# New diagnosis

- A different conversation
- Px treatment from an early age without the need for CVAD (port)
- ?Less time to adjust before starting Rx
- Needles are still tough & confronting
- ?Associate clinic with needles, trust issues
- Need to attend hospital to treat bleeds/assess injury but infrequent

# Sports & activities

- Peaks of protection with factor prophylaxis regimens
  - Choice of sport based on peaks
  - Planned factor Rx around sports schedule
- Will Emicizumab be enough?
  - Dr Sally Campbell
    - Small cohort, cf 6/52 EHL FVIII vs 6/12 Hemlibra
  - Choice, can return to factor VIII



# Bleeds

- Experience of bleeds
  - Now often start Rx prior to experiencing a bleed
  - How to recognise
  - Different on Hemlibra – is it a bleed or not?
- Bleed management
  - Treat with Factor VIII (not EMI)
  - No longer able to Rx bleeds at home (no port, not vein trained)
- Communication with HTC

# Surgery/procedures

- Major: treat with factor as previously
- Minor: factor may not be needed
- RCH Melb 32 ports removed
  - 5 r/o in pt with FVIII inhibitors - no treatment prior
  - 27 r/o with single dose of FVIII prior
- Dental work
  - Primary tooth extraction, tranexamic acid

# Immunisations

- Guidelines (WFH, NBDF, AHCDO)
  - Subcut + pressure (10/2/5)
  - If on Factor Px - dose prior
  - NBDF – factor level >10% or on Hemlibra, may not require additional treatment prior
- COVID vaccine Australian recommendations
  - Severe/mod on factor Px – factor prior
  - Hemlibra or mild – general precautions

# Travel/school camp

- Factor at home
  - 2 doses if able to treat (monitor expiry, MyABDR)
  - If rural (factor at home or at local hospital)
- Travel
  - Usually take 2 doses FVIII
  - Hemlibra (or not)
  - Plan ahead – factor & Hemlibra & letters, MyABDR
- School camp
  - If high activity camp may take emergency factor

# The future

- Ongoing studies (HAVEN 7 and others)
- Inhibitor development, ? shift to later in life
- Celebrate the positives
- Work together to address new challenges
- Procedural pain – requires further investigation
  - Dr Elise Flynn RCH study
  - Survey children/young people/parents
  - Practice informed by PWH and their families

# Acknowledgements

*RCH Families*

*RCH Haemophilia Team*

- *Assoc Prof Chris Barnes, Director HTC*
- *Julia Ekert, Data/clinic Manager*
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- *Clinical Haematology Dept*
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