# Haemophilia outcome measures: what outcomes are important to patients?

EHC Round Table of Stakeholders

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# ABOUT THE SPEAKER

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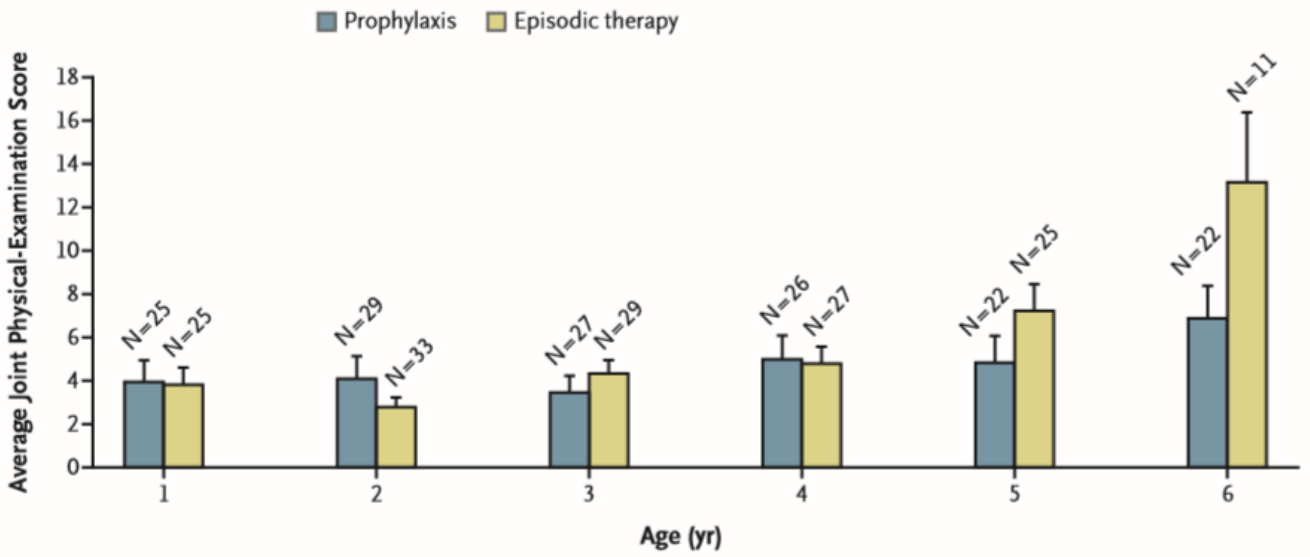
# DISCLOSURES

| Conflict | Disclosure - if conflict of interest exists |
|---|---|
| Research support | Please fill in as appropriate |
| Director, officer, employee | Please fill in as appropriate |
| Shareholder | Please fill in as appropriate |
| Honoraria | Please fill in as appropriate |
| Advisory committee | Please fill in as appropriate |
| Consultant | Please fill in as appropriate |

# Limitations of data collection in haemophilia

- Haemophilia is a rare disease
- Benefits of high-quality haemophilia care are multidimensional (some hard to capture or digitalise)
- Ethical issues






Manco-Johnson M, Abshire T, Shapiro A, *et al. N Engl J Med.* 2007;357(6):535–44.

# Growing demand for outcome measures

- In times of austerity haemophilia is a tempting target of financial scrutiny

- HTA bodies assessing haemophilia drugs and care programs often point out limited amount or lack of high-quality evidence for benefits of different interventions

# Growing demand for outcome measures (2)

- Common considerations:
- prophylaxis vs episodic therapy
- prophylaxis in children only vs continued into adulthood
- tertiary prophylaxis
- low, intermediate or high-dose prophylaxis
- The role of outcome measure tools (objective, patient reported outcomes)

# Challenges in use of outcome measure tools

- Objective tools desired but do not tell „the whole story”
- Different perceptions of outcome and benefit

- number of bleeds vs what a bleed means to an individual
- joint score vs how a damaged joint affects daily life
- number of days missed from school/work per year due to bleeds/debilitating joint damage
- use of painkillers
- burden to the family, anxiety
- bleeding sites are not limited to joints (dangers of soft-tissue and limb- or life-threatening bleeds)

# Health-related quality of life tools

- Tools that measure HRQoL are not flawless, but:
- bridge the scientific evidence and policy gap
- allow deeper understanding of the impact of haemophilia than objective tools alone
- engage patients as collaborators in research efforts

# Involvement of patients in research

- Patients insight can improve validity of data analysis
- importance of the right definitions: „bleed is not a bleed is not a bleed”

*Bleeds were defined as any complaint requiring treatment with clotting factor concentrate. Joint bleeds were defined as bleeds located in shoulders, elbows, wrists, hips, knees or ankles.*



Fischer et al. Haemophilia. 22, 80-86, 2016

# Involvement of patients in research (2)

- Patients community may proactively help in data collection
- Patient-led data collection and analyses initiatives may help create advocacy tools

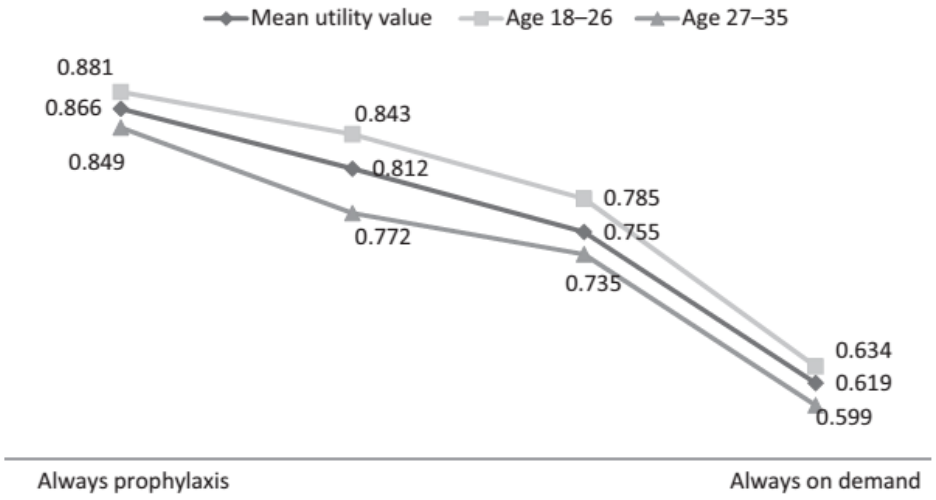



**Fig. 1.** Comparison of health utility value by the time spent on prophylaxis.

Noone et al. Haemophilia. 19, 44-50, 2013

# Involvement of patients in research (3)

- While both patients and clinicians appreciate the value of outcome measures, they have been shown to be underused in clinical settings

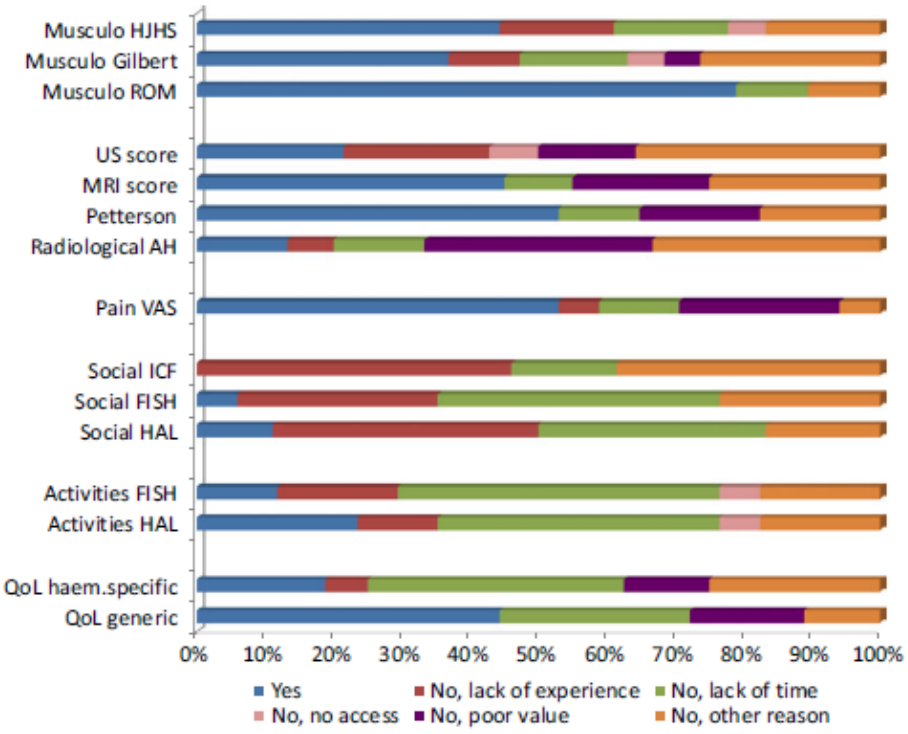



Fig. 1. Summary of outcome tools used by participating physicians. HJHS, Haemophilia Joint Health Score; Gilbert, Gilbert score (WFH); ROM, range of motion; US, ultrasound; MRI, magnetic resonance imaging; AH, Arnold–Hilgartner system; VAS, visual analogue scale; ICF, International Classification of Functioning, Disability and Health; FISH, Functional Independence Score in Haemophilia; HAL, Haemophilia Activity List; QoL, quality of life.



Hermans et al. Haemophilia. 1-10, 2016

# Seeking the right approach

- Ideally evaluation of outcome should combine objective and self-reported instruments
- Both, objective and self-reported outcome tools may lack sensitivity and fail to correlate when comparing similar interventions (intermediate and high-dose prophy) in specific populations (everyone on early prophylaxis)

**Table 4.** Non-parametric correlations for self-reported outcome parameters.

| Spearman's correlations | Annual joint bleeds | 5-year joint bleeds | HAL_sum | HAL_upper extr | HAL_lower extr basic | HAL_lower extr complex | SF6D utility | EQ5D utility |
|---|---|---|---|---|---|---|---|---|
| 5-year joint bleeds | 0.87 | | | | | | | |
| HAL_sum | NR | NR | | | | | | |
| HAL_upper extremities | NR | NR | 0.76 | | | | | |
| HAL_lower extremities basic | NR | NR | 0.92 | 0.61 | | | | |
| HAL_lower extremities complex | NR | NR | 0.96 | 0.66 | 0.90 | | | |
| SF36 Physical functioning | NR | NR | 0.43 | NR | NR | NR | 0.73 | 0.66 |
| SF36 Physical role limitations | NR | NR | NR | NR | NR | NR | 0.69 | 0.56 |
| SF36 Pain | NR | NR | NR | NR | NR | NR | 0.69 | 0.64 |
| SF36 General health | NR | NR | NR | NR | NR | NR | 0.59 | 0.48 |
| SF36 Social functioning | NR | NR | NR | NR | NR | NR | 0.72 | 0.66 |
| SF36 Emotional role limitations | NR | NR | NR | NR | NR | NR | 0.50 | 0.42 |
| SF36 Mental health | NR | NR | NR | NR | NR | NR | 0.72 | 0.57 |
| SF36 Vitality | NR | NR | NR | NR | NR | NR | 0.58 | NR |
| SF36 PCS | NR | NR | NR | NR | NR | NR | 0.69 | 0.67 |
| SF36 MCS | NR | NR | NR | NR | NR | NR | 0.45 | NR |
| SF6D Utility | NR | NR | 0.41 | NR | NR | NR | – | 0.75 |
| EQ-5D Utility | NR | NR | NR | NR | NR | NR | 0.75 | – |

NR, non-relevant (Spearman's rho <0.40).
All correlations presented are statistically significant ($P < 0.01$).

Fischer et al. Haemophilia. 22, 80-86, 2016

# Personalisation

- Growing trend toward personalisation of therapy
- Personalisation of patient-reported outcomes?

# Personalisation

- Goal attainment scaling (GAS) may overcome limitations of classical PROs and quantify even small, idiosyncratic benefits

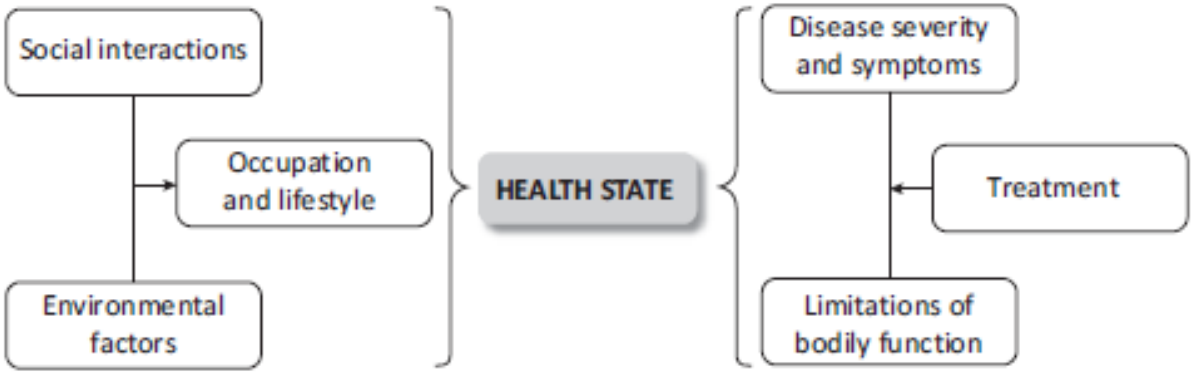



Fig. 1. Interactions between disease parameters, treatment effects and patient lifestyle determine overall health state.



Recht et al. Haemophilia. 22, 825-832, 2016

# Conclusions

- Choosing and combining the right tools to capture the full spectrum of differences between haemophilia therapies is challenging
- Evaluation of outcomes should be routinely done to help optimise care and politically protect optimal care
- Optimal treatment and care should allow patients achieve their full potential in life