The Rise of the Patient Voice

PATIENT PERSPECTIVES ON CLINICAL AND ECONOMIC ASPECTS OF NOVEL TREATMENT PRODUCTS

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## Disclosures for: Mark Skinner

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The new normal

Patient-Centered Care

Shared Decision Making

Patients as Partners

Value-based

Outcomes important to patients

Direct patient voice

Patient-Focused Drug Development
What is shared decision making?

• It is more than informed consent

• *Shared decision making is a process wherein*
  
1. a health care provider shares with a patient all of the relevant information and best scientific evidence available on the pros and cons of all potential treatment options,

2. a patient shares with the provider all of their relevant values, preferences and goals, and

3. with this mutual understanding the patient and provider decide the best course of action.

Source: Foundation for Informed Medical Decision Making
A new patient voice

*Health reforms across the world are altering the relationship between providers of goods and the health systems they serve.*

- Increasing patient engagement
- Introducing structural reforms to integrate care around the patient
- Increasing the importance of the patient voice in determining value
- Increasing patient price sensitivity as costs are shifted to patients
- Increasing the need for more effective, patient-directed management of chronic diseases

*Increasing patient engagement presents opportunities to improve understanding of clinical effectiveness in the real world.*

Adapted from PharmaFutures: Pathway to Value, Meteos 2013
Patient engagement throughout a product life-cycle

• No longer a binary approach to bring a new drug to market
  1. Drug development / Market authorization
  2. Reimbursement / Coverage Decision

• FDA Drug Development Overview

Bench ↔ Bedside

Basic Science → Translational → Clinical → Postmarket

E.g.,
Drug discovery/MOA
Animal models
Endpoint development
Natural history

FDA’s oversight begins when testing investigational new drug in human subjects
FDA Patient-Focused Drug Development initiative

FDA believes that drug development and FDA’s review process could benefit from a more systematic and expansive approach to obtaining the patient perspective on disease severity and current available options in a therapeutic area.
Patient-Centered Outcomes Research Institute

The Patient-Centered Outcomes Research Institute (PCORI) helps people make informed health care decisions, and improves health care delivery and outcomes, by producing and promoting high integrity, evidence-based information that comes from research guided by patients, caregivers and the broader health care community.
Aligning treatment and patient values improves outcomes

When patients are fully informed of all their available treatment options, they make choices that are more aligned with their preferences and values; therefore, leading to a higher quality of care.

- Foundation for Informed Medical Decision Making
There is a new role for patients

• The engagement of patients with other stakeholders will provide new opportunities for:
  - Participation in formulation of research questions
  - Defining essential characteristics, comparators, and outcomes
    • Defining patient relevant clinical endpoints
  - Monitoring study conduct and progress
  - Dissemination of research results

• Patients have a unique perspective and will consider issues differently than regulators, manufacturers, scientists, clinicians and payers
Preparing for the transition to novel treatment products

• Aligning patient preferences and values with treatment
• Migration to personalized treatment
  - Right product
  - Right patient
  - Right time
  - Right dose
• Education and Training
  - Patients, Health professionals, Payers
• Access & Affordability issues
What is the goal?

• To be moderate, mild or normal?
• Greater bleed protection?
• Reduced treatment burden?
• Reduce overall cost of care?
Have we achieved normal?

• Does the current treatment approach allow for a fully “normal” life?

• There are many dimensions to defining normal
  - Factor levels
  - Lifespan
  - Work / Career
  - Family / Social life
  - Function / Mobility
  - Activity / Sport

• What are the outcomes important to patients to achieve normal?
Danger of microhemorrhages

We propose that chronic microhemorrhage into the joints or subchondral bone in young boys with hemophilia causes deterioration of joints without clinical evidence of hemarthroses and that prophylaxis prevents this subclinical process.

Source: Manco-Johnson et. al. NEJM 2007
What is optimal treatment?

- Prophylaxis prevents subclinical bleeds (microhemorrhages)
- The aim of treatment is to reduce the frequency of joint bleeds and the crippling effect
- Concept of prophylactic treatment to maintain FVIII/FIX levels >1% was pioneered in Sweden in the 1960s
Is 1% the correct target?

- Normal FVIII / FIX activity is 50-150%
  - Isn’t it self-evident that 1% is not normal?
- Patients and clinicians have been conditioned to accept converting from a severe to a moderate (borderline severe) state as a desired end-point
  - e.g., maintaining a 1% baseline factor level

Is 1% sufficient to prevent sub-clinical bleeding or is it simply based on historical supply constraints, economics and treatment protocol burdens?
Aspire to absence of joint bleeds

- Demonstrated association between joint bleeds and baseline factor levels
- No expected joint bleeds in patients with baseline factor activity of ≥15%
- 18% reduction in joint bleed frequency with every 1% increase in residual clotting factor activity

Source: Den UiJL et. al. Haemophilia 2011
A multinational study exploring patient values and preferences

- A study to directly explore the thoughts of patients with moderate and severe hemophilia A and B on novel FVIII / FIX agents that will be introduced in the next few years.

- Novel treatments have mainly focused on improving quality of life by reducing the number of infusions per time period and improving the ease of administration.
  - Is this enough?
  - Is it relevant to patients?
  - Are their other goals?
Population pharmacokinetic modeling for dose setting

Fig. 4. Predicted FIX activity profiles following 40 U kg$^{-1}$ N9-GP dosed once every second week. Blue shading, 95% prediction interval; blue dashed line, mean predicted value; blue solid line, 1 U dL$^{-1}$ FIX activity; red line, 3 U dL$^{-1}$ FIX activity.

Source: Collins et.al. JTH 2012
What is the right next goal?

- If normal is not yet achievable, then we should move treatment forward to a functional cure
- Personalized treatment based on patient-centered values and preferences
  - E.g. Reduced treatment burden or Greater bleed protection
- Economics should not limit treatment goals
It’s time for a new paradigm – A 21st century business model

• Cost and access to treatment is the greatest barrier to improving care globally today
• Accelerating innovation of treatment products presents the opportunity to accelerate global access
• A 21st century business model is required
  • A new paradigm based on high-volume, lower margins
• Payers expect the optimization, innovation and efficiencies achieved in manufacturing will be passed on in final product pricing
Summary

• Patient preferences will vary based on their values
• Anticipate some PWH will prefer more frequent dosing and maintenance of higher baseline trough levels
  - Closer to normal
  - Less need to modify activity level
  - Reduced risk in daily activity
  - Reduced risk of breakthrough bleeds
  - Greater protection against sub-clinical bleeds ("microhemorrhages")
• Individually tailored dosing (personalized PK) important
• Significant impact on pharmacoeconomics of hemophilia can be mitigated with new treatment and business approaches
We can’t solve problems using the same kind of thinking we used when we created them.

- Albert Einstein
If at first the idea is not absurd, then there will be no hope for it.

- Albert Einstein