Welcome to Workshop #7:
Incorporating the Patient Perspective in Rare Disease Drug Development

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ANNUAL RARE DISEASE SCIENTIFIC WORKSHOP

Improving the Clinical Development Process

Thank You Scientific Workshop Sponsors
EveryLife Foundation For Rare Diseases
Five years of Advocating for Rare Disease Drug Development

• Focus on improving the development of treatments of rare diseases in February 2009
• Workshops, conferences and policy statements to help promote scientifically sound change
• Supporter of ULTRA/FAST legislation in FDASIA, the OPEN ACT & 21st Century Cures legislation

200 Partners+
Basic Principles for the EveryLife Foundation

• No disease is too rare to deserve treatment
• We could be doing more with the science we have
• All drugs should be safe and effective
Workshop Series Topics

- Workshop #1  Statistical analyses of rare disease studies
- Workshop #2  Clinical evaluation of rare disease treatments
- Workshop #3  Surrogate endpoints & accelerated approval
- Workshop #4  Developing Policy Recommendations for Accelerated Approval
- Workshop #5  Accelerated Approval in Rare Disease: Review of a White Paper Proposal
- Workshop #6  Rationalizing Safety Testing to Enable Clinical Studies & Approval in the US for Rare Disease Treatments
- Workshop #7  Incorporating the Patient Perspective in Rare Disease Drug Development

Find slides from prior workshops at www.everylifefoundation.org
Specific Challenges in Rare Disease Drug Development and the need for Enhanced Patient Engagement?

- Disease impact knowledge is often limited
- Diseases are complex and multi-system
- Large differences between physician impression and patient experiences
- Finding optimal treatments requires understanding patient needs
Rare Disease Patient Engagement: How to do it?

- Advisory Committee Public Sessions?
- Large conferences or town hall meetings?
- Advocacy by patient groups?
- Testifying on Capital Hill?
- Chained to the fences at FDA?

Critical need for an improved **quantitative** and **objective** assessment of patient disease burden and treatment needs for effective inclusion in drug development and drug review.
Goals of the Workshop

• Discuss how to create a practical, quantitative, and scientifically rigorous approach for patient input
• Explore various methodologies, case studies, or existing frameworks
• Work toward a clear and scientifically sound framework for patient engagement
Agenda for Workshop #7

• Session A: Policies and Practices
• Session B: Best Practices – Patient Organizations Leading the Way & Examples from Small & Large Drug Sponsors
• Session C: Sample Frameworks & Implementation
One example:
EveryLife Framework:
Patients as Critical Partners in Rare Disease Drug Development

Establishing Disease Burden, Disease Measurement, and Benefit-Risk Assessments as Part of Rare Disease Drug Development
Why and When to Engage Patients

• **Disease Burden** – IND Stage
  – How does the disease impact patients?

• **Disease Measurement** – Phase 1-2
  – What are the relevant endpoints and tools for the assessment of important disease impacts?

• **Disease Treatment & Benefit-Risk** – Phase 2-3
  – How does the drug benefit and safety, compare with risks to patients relative to no treatment and also to their goals for treatment?
EveryLife Framework for Rare Disease Patient Engagement

**Disease Burden**
- How does this disease impact patients?

**Disease Measurement**
- How do we construct endpoints for the assessment of important disease impact?

**Disease Treatment & Benefit-Risk**
- How does the effect of the drug compare with the risks to patients relative to no treatment?

Pre-IND Phase I Phase II Phase III
More Comprehensive Picture of Disease Burden

• Medical literature on rare diseases is often lacking, incomplete, and has misinformation

• Disease burden survey using patient interviews and if needed physical measurement

• Extensive cross-sectional survey with retrospective data may be a more practical alternative to long natural history studies
Establishing Disease Endpoints

- Patient engagement is critical for developing a more comprehensive suite of endpoints
- Endpoints can be selected and then tested in early stage “learn” studies
- Types of Endpoints:
  - Clinical Non-Drug Survey Studies: testing methods without drug treatment involved
    - Test variety of tools and test methods with patients
  - PROs developed using interviews/item creation and then testing
Assessing Benefit-Risk: Evaluating Therapy Impact on Patients

- Can be done theoretically at any time
  - Valuable example in PPMD program for DMD
- By post-Phase 2, sufficient data is available to appreciate disease burden, efficacy and risks
  - Real data enhances the relevance of the assessment and utility to both Sponsor and regulators
- Evaluate results with patients and assessment of efficacy relative to therapeutic goals and safety relative to risk tolerance of patients
  - Stem cell transplant example
Reconciling Risk Tolerance

• Perception of risk and risk tolerance will vary among patients, clinicians, regulators, and drug developers

• Patients with rare or life-threatening diseases may demonstrate high risk-tolerance given lack of alternatives

• Important to incorporate patient risk tolerance, but patient risk tolerance should not be the sole basis for approval
EveryLife Framework
for Rare Disease Patient Engagement

- **Disease Burden**
  - Pre-IND: How does this disease impact patients?

- **Disease Measurement**
  - Phase I: How do we construct endpoints for the assessment of important disease impact?

- **Disease Treatment & Benefit-Risk**
  - Phase II: How does the effect of the drug compare with the risks to patients relative to no treatment?
  - Phase III

**RARE DISEASE WORKSHOP SERIES**
Improving the Clinical Development Process
Formal Incorporation of Patient Input into the Drug Development Process

• Consideration of inclusion of patient input sections in the Common Technical Document

• Clinical Overview 2.5
  – New 2.5.6 on patient input

• Clinical Summary 2.7
  – Section 2.7.5 on patient input study summaries

• Submit patient input study reports
  – Like clinical study reports
Concluding Thoughts

• Patients are ready and waiting to increase engagement
• Sponsors and regulators need a scientifically rigorous framework for patient engagement
• Must partner with patients, sponsors and regulators to get the best input for optimal rare disease drug development and regulation
Thank you! Questions?

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