# What are the Sources of Uncertainty When A Patient Is Faced With A Choice?

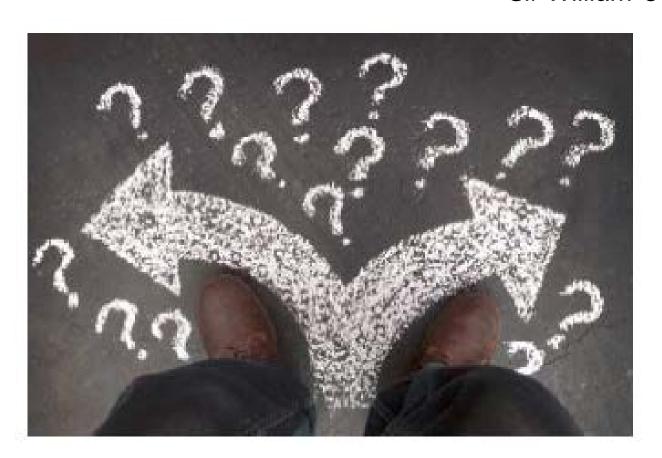
"Characterizing and Communicating Uncertainty in the Assessment of Benefits and Risks of Pharmaceutical Products" Institute of Medicine | May 12, 2014

K. Kimberly McCleary, Director of Strategic Initiatives



## "Medicine is a science of uncertainty and an art of probability."

Sir William Osler





# Patients facing life-altering conditions face life-altering trade-offs and uncertainties





### Patient view of uncertainty differs from regulator and provider views

#### FDA

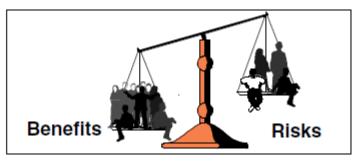
evaluates benefits and risks for the population

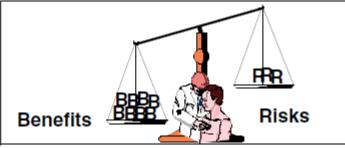
#### **Provider**

evaluates benefits and risks for a patient

#### **Patient**

evaluates benefits and risks in terms of personal values

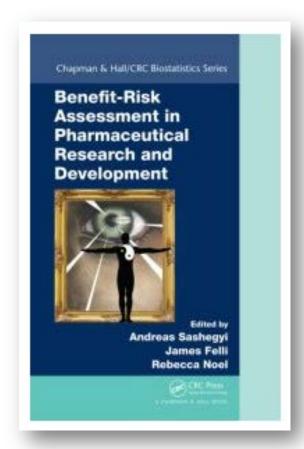






"Understanding the Benefits and Risks of Pharmaceuticals: A Workshop Summary" Institute of Medicine, 2006





"No party is better able to assess a drug's acceptable risk than those living with the illness the drug is designed to address." – *Timothy Franson and Philip Bonforte, FaegreBD* 

"Attitudes toward bearing risk and related behavior depend strongly on the decision context, sources of risk, and content of available information, as well as specific characteristics of the risks in question." – F. Reed Johnson, A. Brett Hauber, and Jing Zhang, RTI

"Broader inclusion of multiple researchers, healthcare providers, and patients in a larger benefit-risk communication effort, geared toward a more dynamic communication process, might encourage a more mutual goal regarding informing the public of evidence and uncertainty around important public health questions." – Marilyn Metcalf, GSK



#### Patients' BR trade-offs may be based on needs + life



Disease Prevention

- · safe
- · minimally invasive
- durable effect



End of Life
•minimal AEs

 based on desire for hospital, hospice, or home care



Acute life-saving

- effective
- immediate
- · manageable AEs



Chronic disease delay

- durable
- manageable AEs
- convenience for desired activity level



Chronic treatment

- durable
- ·minimal AEs
- convenience for desired activity level



Curative targeted

- •durable
- •manageable AEs



#### Varying levels of medical evidence & options



#### Varying levels of medical evidence & options



#### Other sources of information & influence



#### Other factors

Insurance coverage
Reimbursement
Out of pocket costs
Disability vs.
employment
Geographic proximity
Support system





#### Other factors



Opportunity to participate in clinical trials to gain access to experimental therapies





#### **Evaluating evidence**



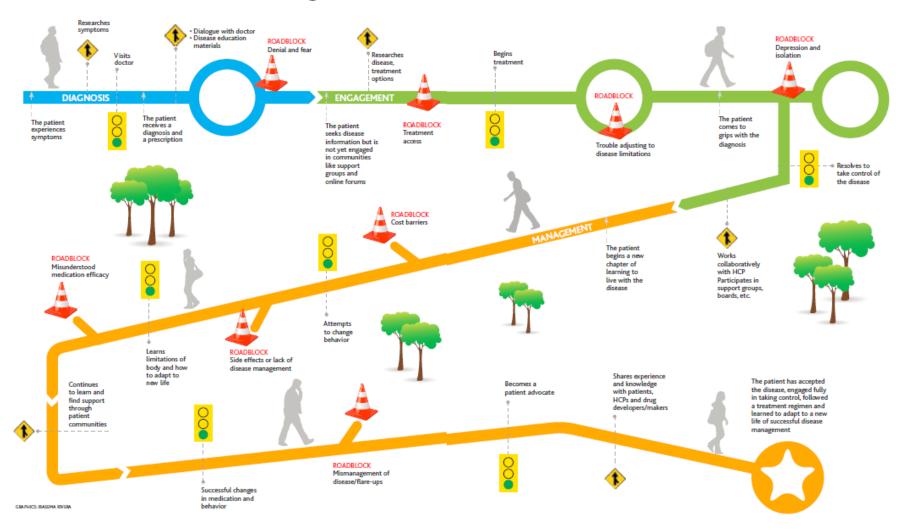
- Age
- Gender
- Race
- Stage of disease
- Severity of disease
- Subtype (pharmacogenetics, others)
- Comorbidities
- Prior medical history
- Prior treatment history
- Prognosis
- Family history/genetics
- Lifestyle factors
- Risk tolerance

How closely do the study participants resemble me?

How well do the potential benefits meet my needs?



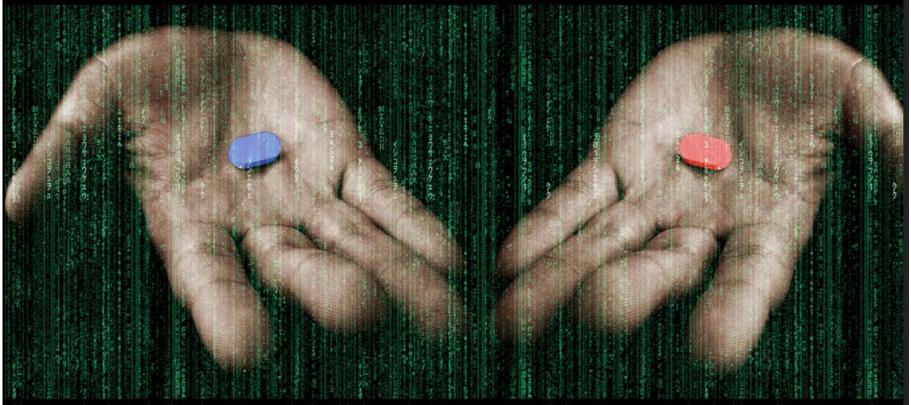
#### The Patient Journey Illuminating gaps and opportunities in the case of a rheumatoid arthritis (RA) patient



The Patient Journey | Medical Marketing & Media



#### After this there is no turning back



You can take the red pill, wake up in your bed and believe what ever you want to believe or you can take the blue pill, stay in wonder-land and I will show you how deep the holerabbit goes





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Breaking down barriers that stand in the way of medical progress.

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