SESSION 2

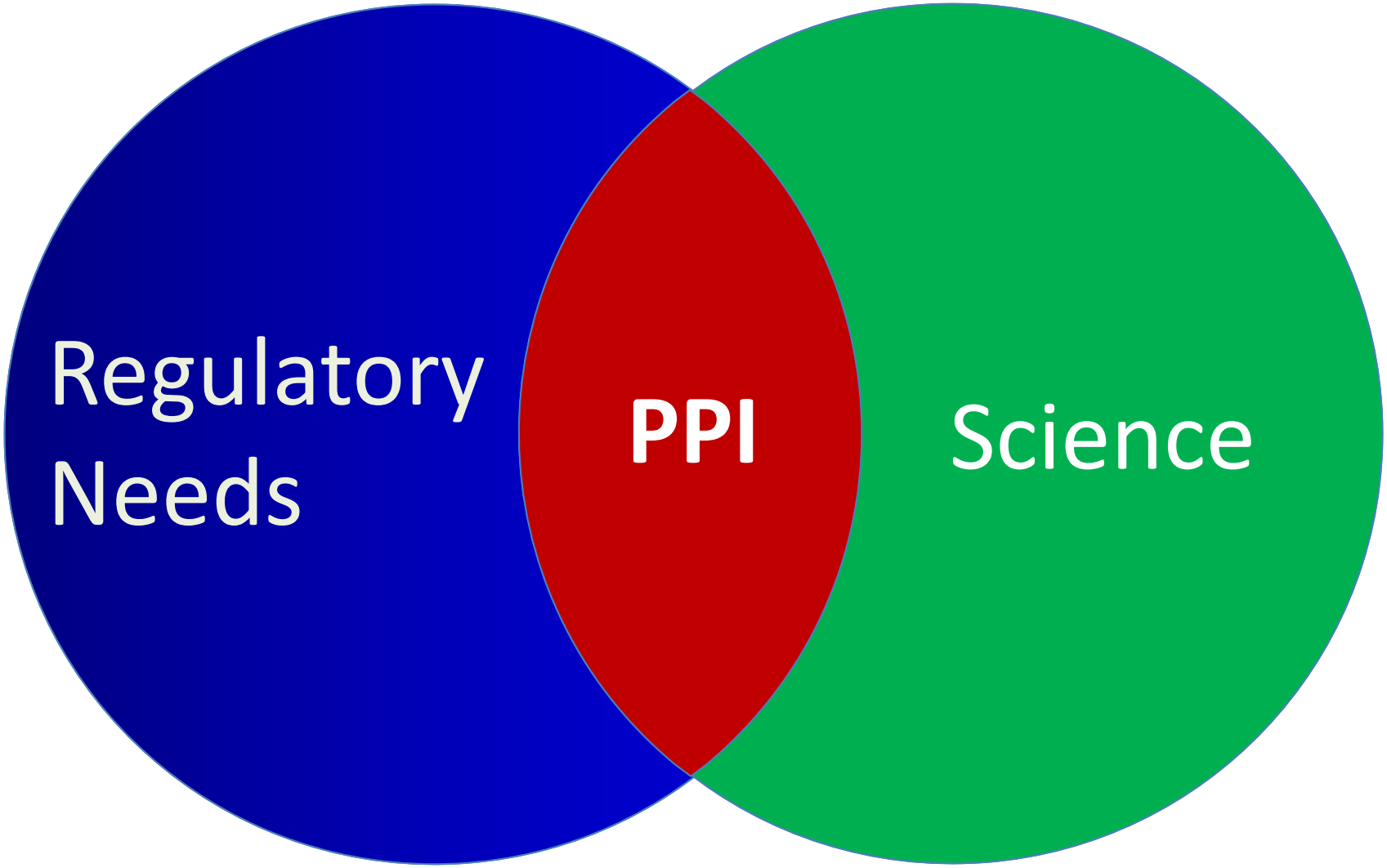
Part 2: Panel Discussion on the Intersection between Science and Regulatory Needs

Martin Ho
Associate Director for Quantitative Innovation
Office of Surveillance and Biometrics
FDA Center for Devices and Radiological Health

Leslie Wilson
Professor
Departments of Medicine and Pharmacy
University of California San Francisco

FDA-CERSI Patient Preference Workshop
December 7-8, 2017

PPI: Where Regulatory Needs Meet Science



Session 2 Panelists

Perspective	Panelist
FDA	Telba Irony (CBER) Laura Lee Johnson (CDER)
CERSI	Leslie Wilson (UC San Francisco) Fadia T. Shaya (University of Maryland) Erica S. Spatz (Yale University)
Academic	Brett Hauber (RTI Health Solutions) Juan Marcos Gonzalez (Duke University)
Industry	Becky Noel (Eli Lilly and Company)

Panel Question 1

What values does PPI add to regulatory decision making?

Discussant: Telba Irony Respondent: Brett Hauber

PPI's Values for Regulatory Decisions

PPI in early stage of development (e.g. discovery to phase II)

- Exploratory study to inform selection of best endpoints (PROs) for clinical trial designs
- Help understand patients' views on the benefits and risks of currently available therapies
- Help understand if there are unmet medical needs of the disease, disease burden, symptom relief, adverse events that are particularly important, etc.
- Evaluate how patients value certain benefits and risks

PPI's Values for Regulatory Decisions

PPI in late stage development (e.g. phase III to post-market)

- Evaluate how patients make benefit-risk trade-offs and inform overall benefit-risk determinations for regulatory decisions
- Inform of the minimum clinically meaningful benefit that would offset a certain risk from the patient perspective
- Inform of the maximum risk patients would be willing to bear in exchange for a certain benefit
- Assess variability in patient preferences and identify subgroups of patients by their tolerance for risk and/or uncertainty
- Assess the proportions of patients who would select a certain treatment with defined benefits, risks and other attributes
- Evaluate if patients value a benefit more than a reviewer and thus accept more risk (risk tolerance)

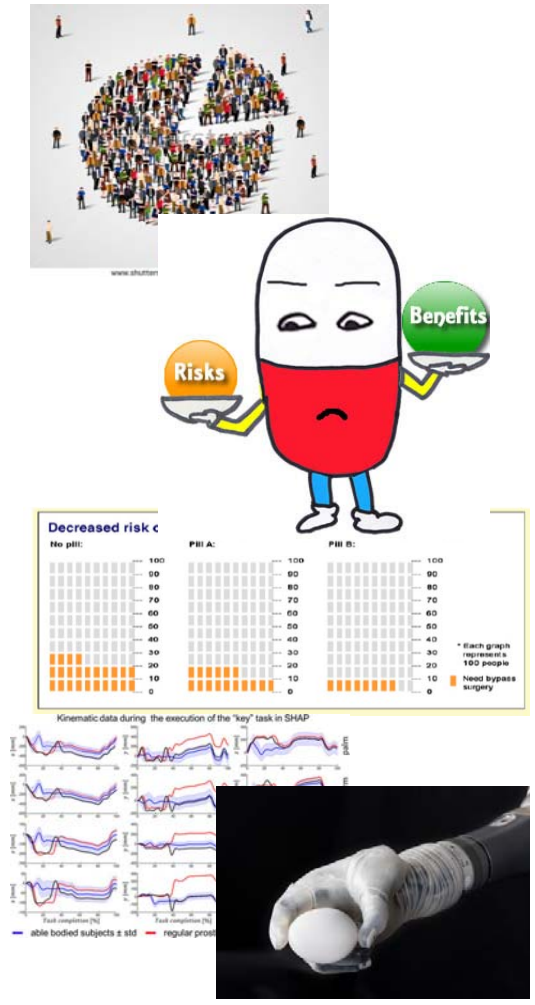
Panel Question 2

When designing PPI studies for regulatory purposes, what qualities are necessary and why?

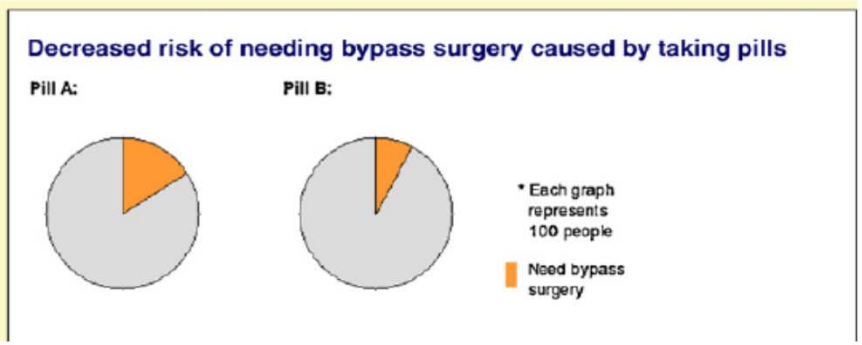
Discussant: Leslie Wilson Respondent: Laura Lee Johnson

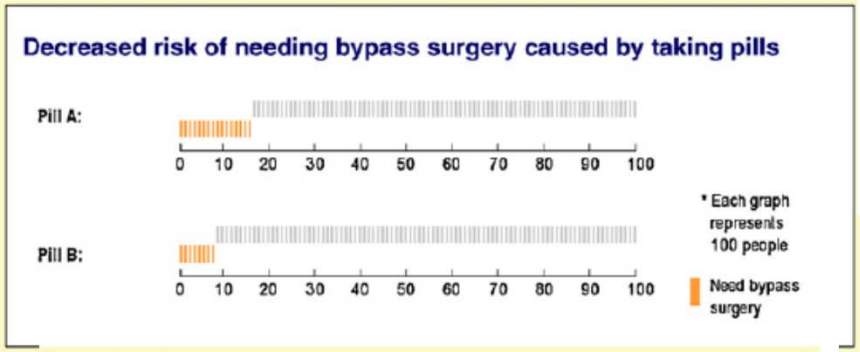
Science and Regulatory: Use of Discrete Choice PPI: Study Qualities

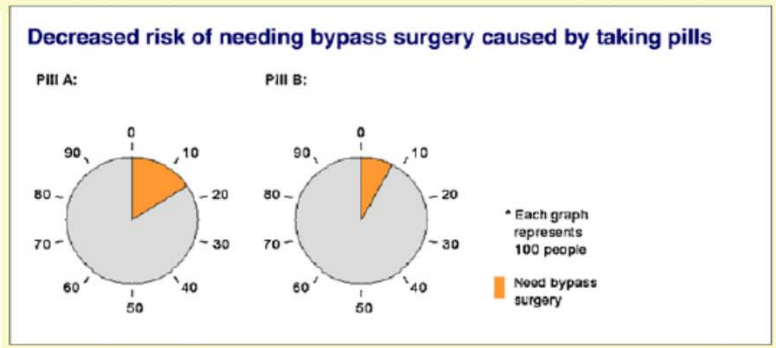
1. **Sample Choice**: Representative, generalizable, heterogeneous
2. **Objective is a relevant question**: Not too narrow, No costs, ability to trade-of risks/benefits, relevant to both developer outcomes & patient priorities
3. **Provide the best PPI method for the regulatory need**: Conjoint analysis, SG, Best/Worst, PROs
4. **Attribute selection is biggest risk for gaming the system**: standardize process for selection with meta-ethnography & conceptual synthesis
5. **Numeracy matters**: takes steps to reduce bias in survey design and methods
6. **Provide a robust analysis**: Utility scores, MARs, trade-offs, sub-analysis
7. **Provide a presentation of results useful to regulatory users**

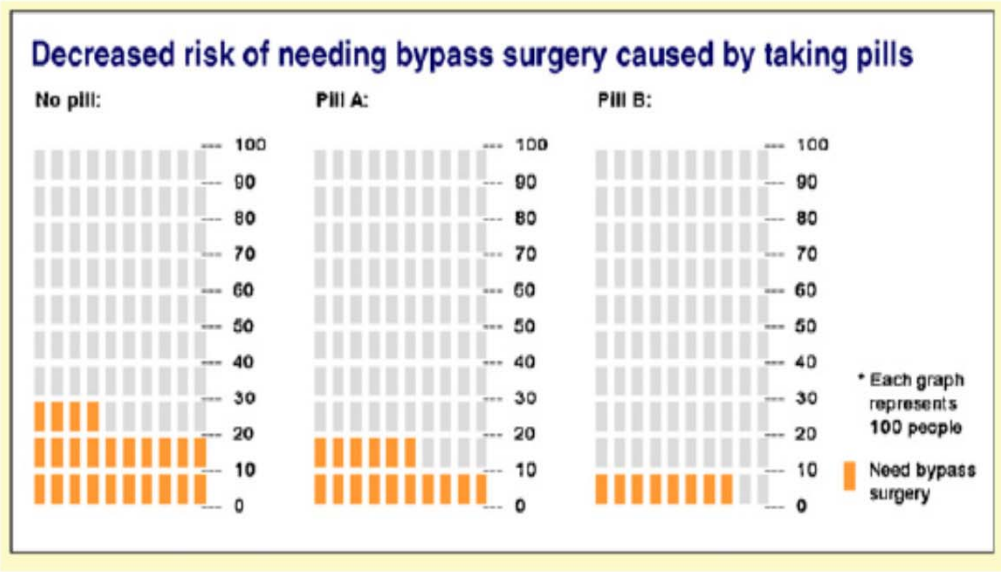


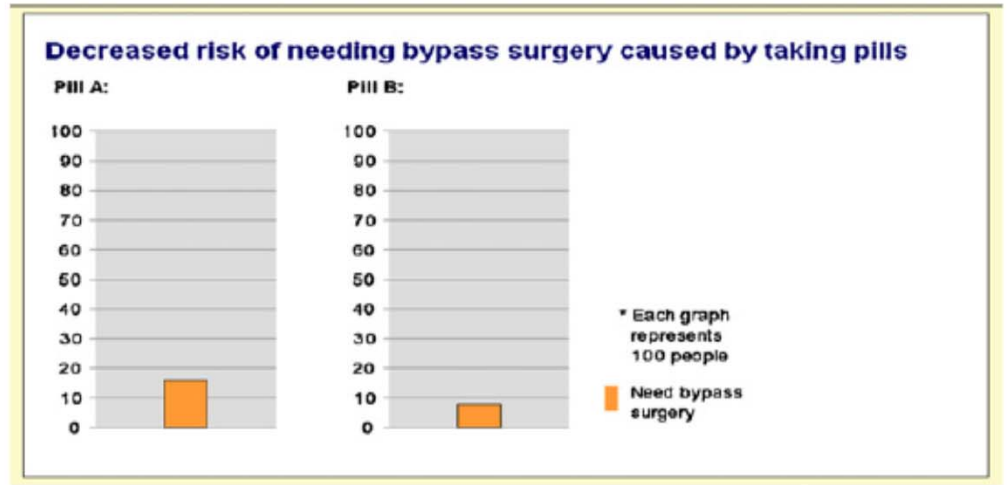
Numeracy Matters









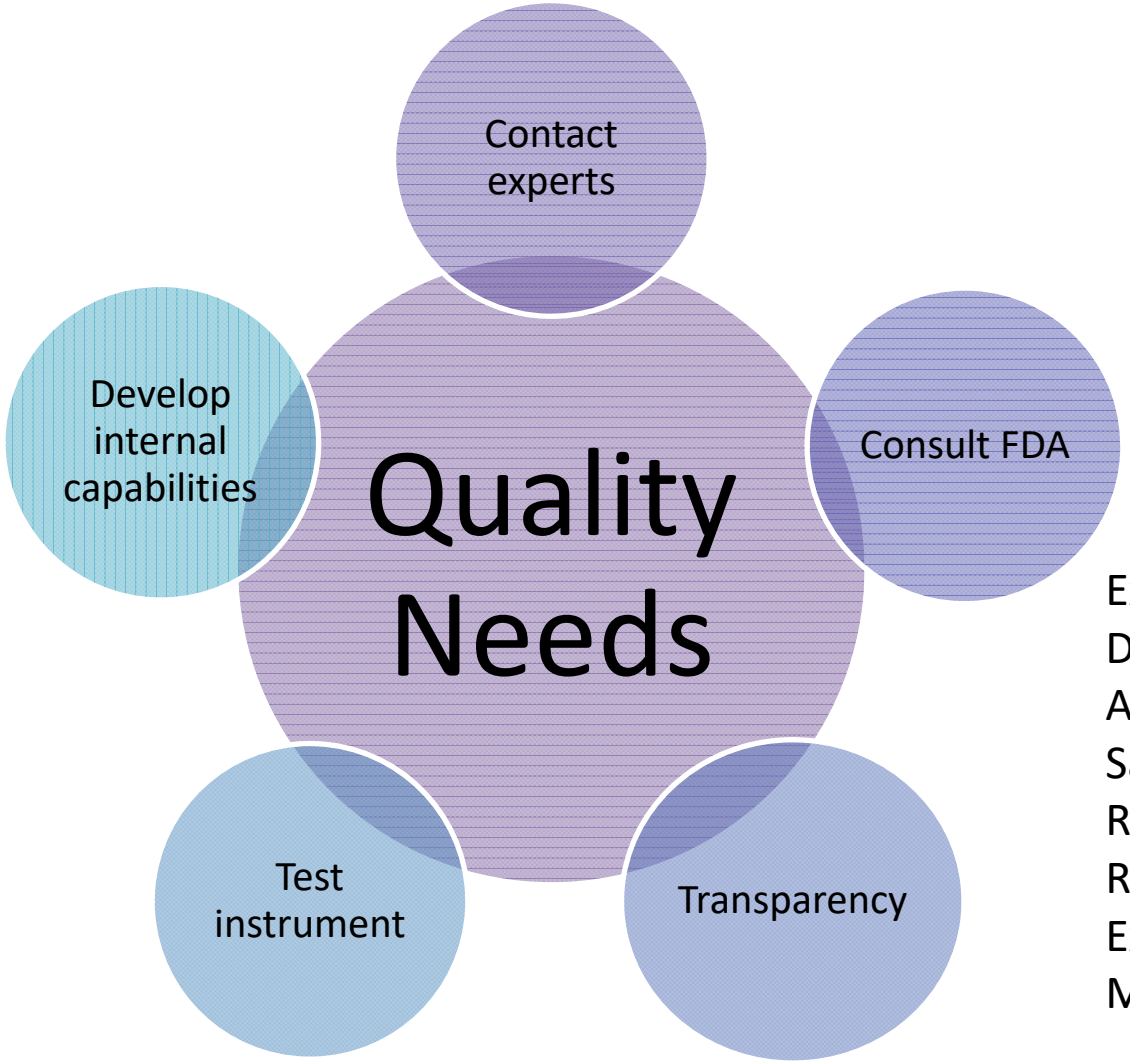


Panel Question 3

What should a sponsor do when designing the study to achieve these qualities?

Discussant: Juan Marcos Gonzalez Respondent: Becky Noel

How Sponsor Ensures the Study Design Meets Quality Needs for Regulatory Use?



Experimental design
Decision context
Attribute & attribute level definitions
Sample/respondents' characteristics
Response rates
Response validity measures
Ex-post exclusions of respondents
Modeling assumptions

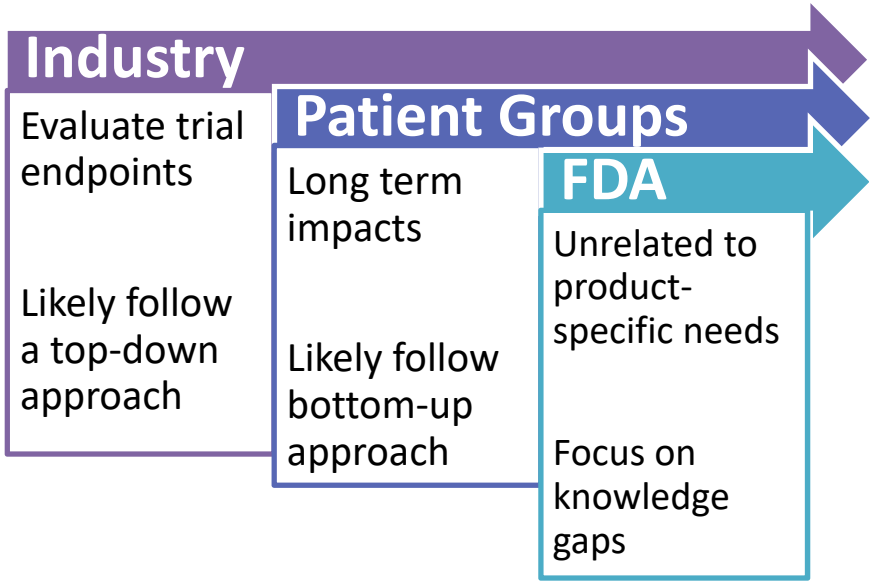
Are there any differences if a study is sponsored by FDA, industry, or a patient group?

- There should not be any differences. All studies should provide robust evidence to support regulatory decisions
- More broadly, however …

Different objectives

Industry	Patient Groups	FDA
Show that trial evidence represents acceptable tradeoffs for some or most patients Identify patients who are more likely to benefit	Ensure tradeoffs evaluate patient-centric outcomes Ensure tradeoffs evaluate patient-centric outcomes Help determine whether tradeoffs fully capture patients' concerns about outcomes	Mitigate Knowledge gaps in PPI literature Facilitate the use of PPI by sponsors

Different flavors of PPI evidence



Panel Question 4

How can CERSIs and FDA work together to advance the science of PPI to achieve these qualities?

Discussant: Fadia Shaya Respondent: Erica Spatz

CERSI and FDA Collaborate to Advance Science of PPI

- Cross training in methodologies
- Inviting FDA to campus workshops
- Leveraging post doctoral experiences to rotate at the FDA
- Pros and Cons of CERSI working together as a group with the FDA? This workshop can be an example.
- Creating courses for FDA staff

Thank you!

Questions?