Breakout Group Report: Pharmacogenomics

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On behalf of the Working Group

Charge to Working Group

Identify one or more collaborative demonstration projects that would advance implementation of pharmacogenomics into clinical practice.

NextGen Sequencing is highly valuable for discovery research, but …

- For implementation of Pgx, do sequencing platforms add value over directed genotyping platforms?
  - Some Pgx genes are sequenced poorly on ‘off the shelf’ whole genome sequencing platforms.
  - We know the relevant ‘actionable’ variants, so why sequence?

- Proposed collaborative project
  - Apply a PGRN-derived custom approach (VIPgx sequence platform), across eMERGE sites
    - Ourcomes to measure:
      - Technical aspects of variant calling
      - Relating drug response/AE phenotypes to genotypes

Non-RFA issues to tackle

- Publication
  - Meta meta analysis
    - What is the state of PGx assessment
    - Can we define some ‘rules’ to aid assessment groups
  - Comparison of the advant/disadvant of current platforms for PGx
  - Who is going to push the PGx agenda

- Selecting small group of favorite examples
  - As your health system clinical leadership to define their favorite endpoints
- x

Rex's barriers to genomic medicine

- Lack of evidence for benefit/value
- Institution and physician acceptance
- Education of patients, physicians
- Consents
- Sample availability and biobanking
- Recruitment for genetic studies