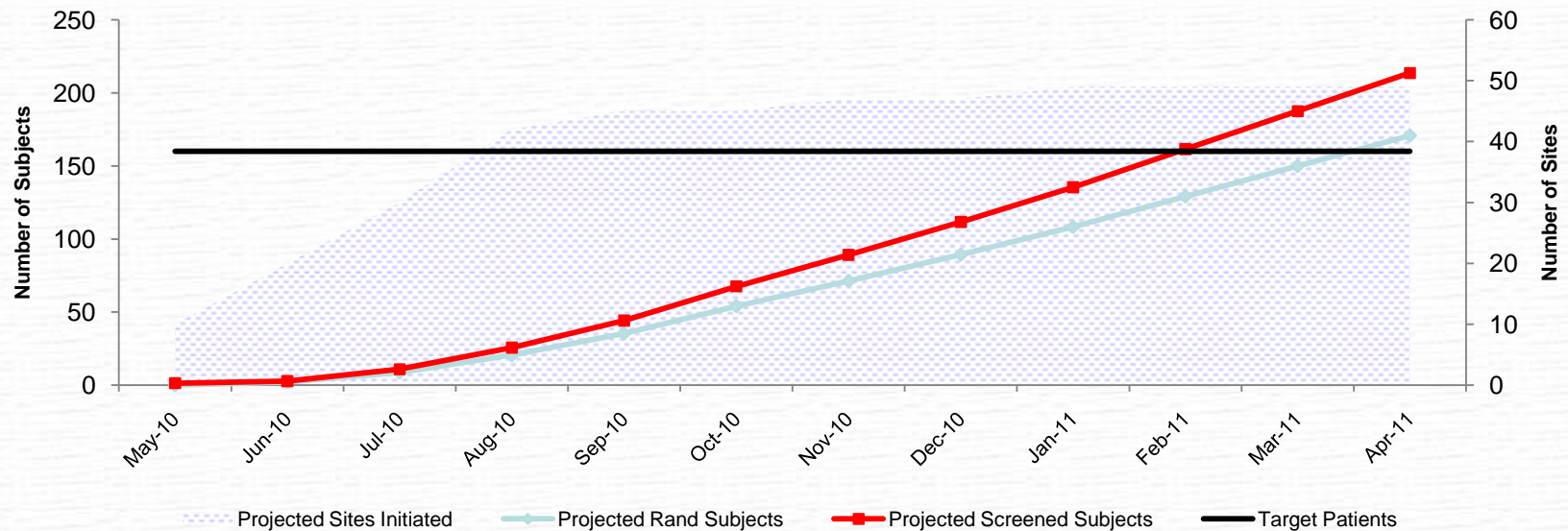


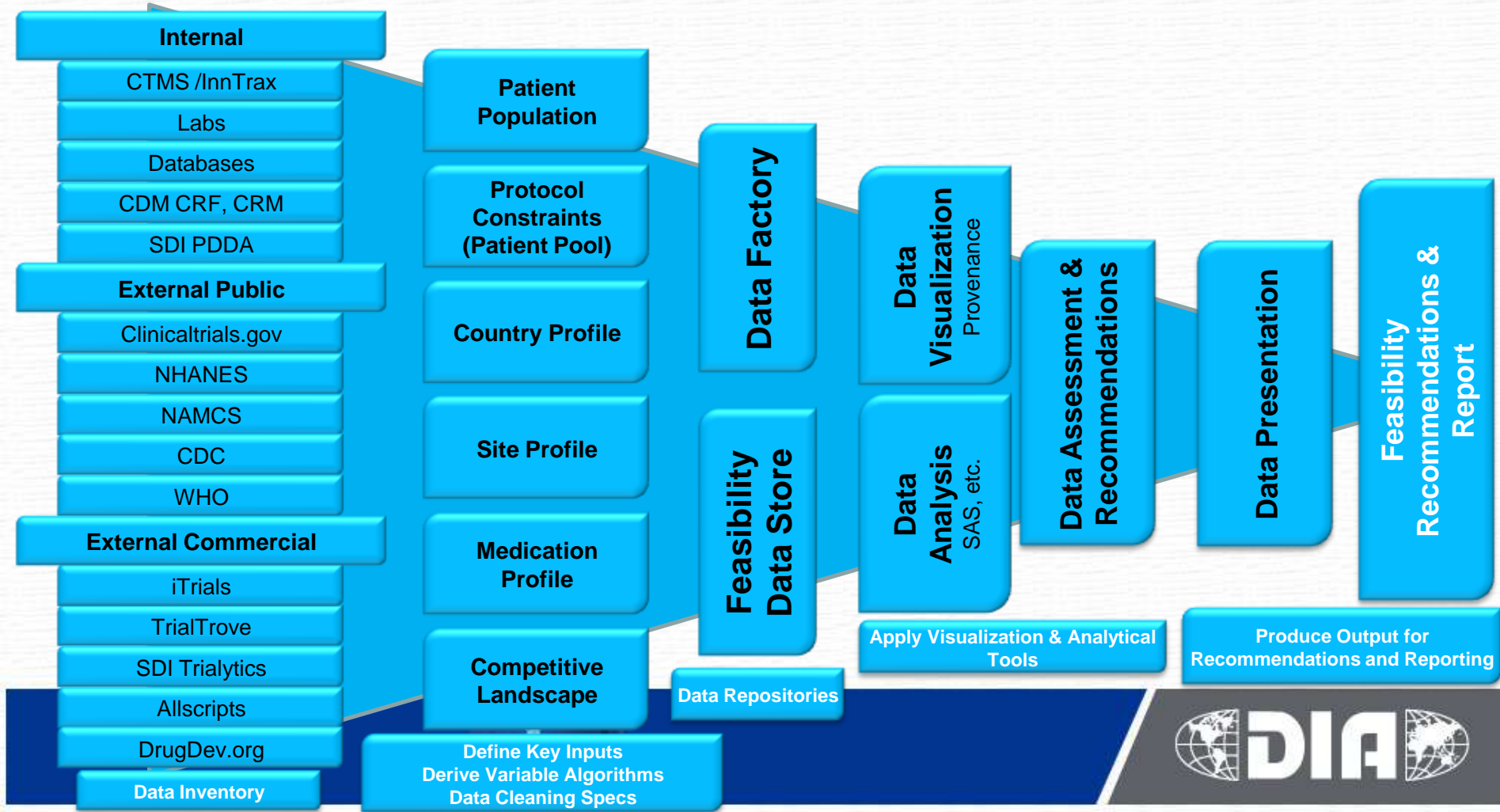
Current State

- Little accountability for enrollment projections
- Typically meet end goal through means other than accurate projections
 - By increasing resources when under enrolling
 - Re-negotiating the end goal
- Usage of a linear model through no demonstration of expected accuracy / known confidence



Planning to Study Start: Data Driven Feasibility

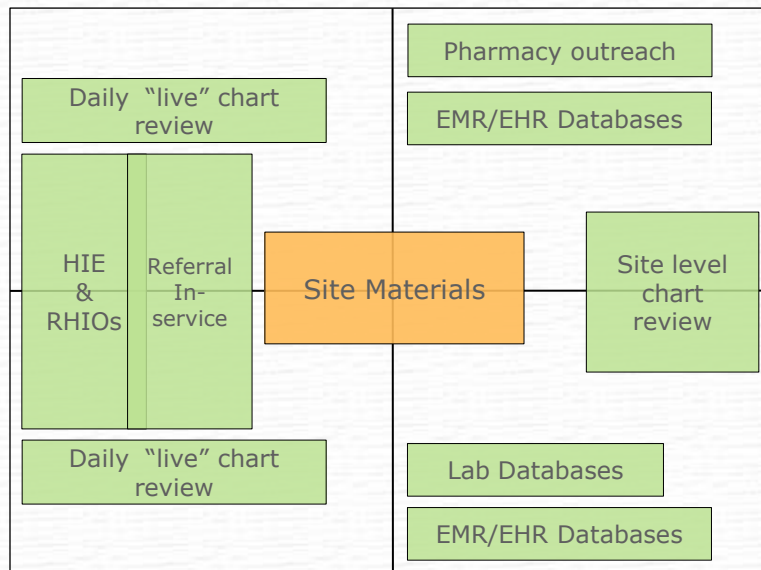
Integration of internal data with external sources thus providing sponsors unmatched insight into the feasibility of their protocol.



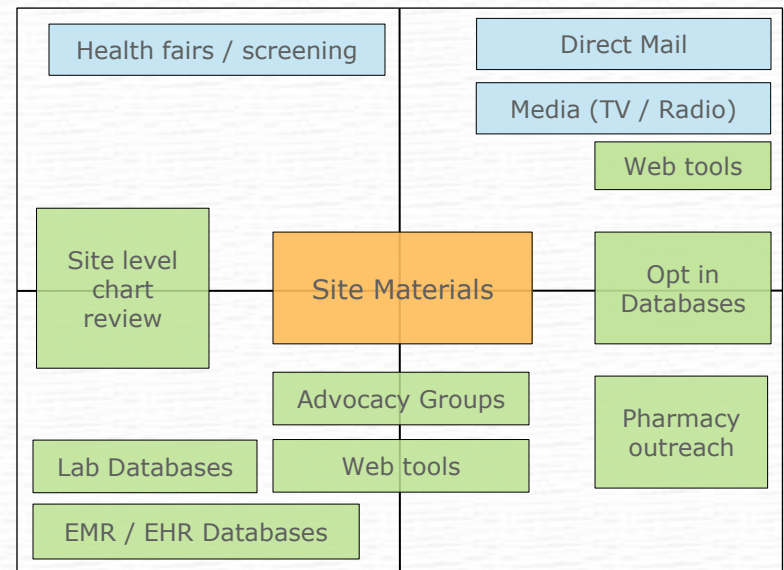
Planning to Study Start: Recruitment Tool Strategic Framework

- Understanding and classification of each protocol helps to determine appropriate tool selection, recognizing each study is unique

Acute / Oncology Indications



Chronic Indications



Low → High
Time Since Diagnosis

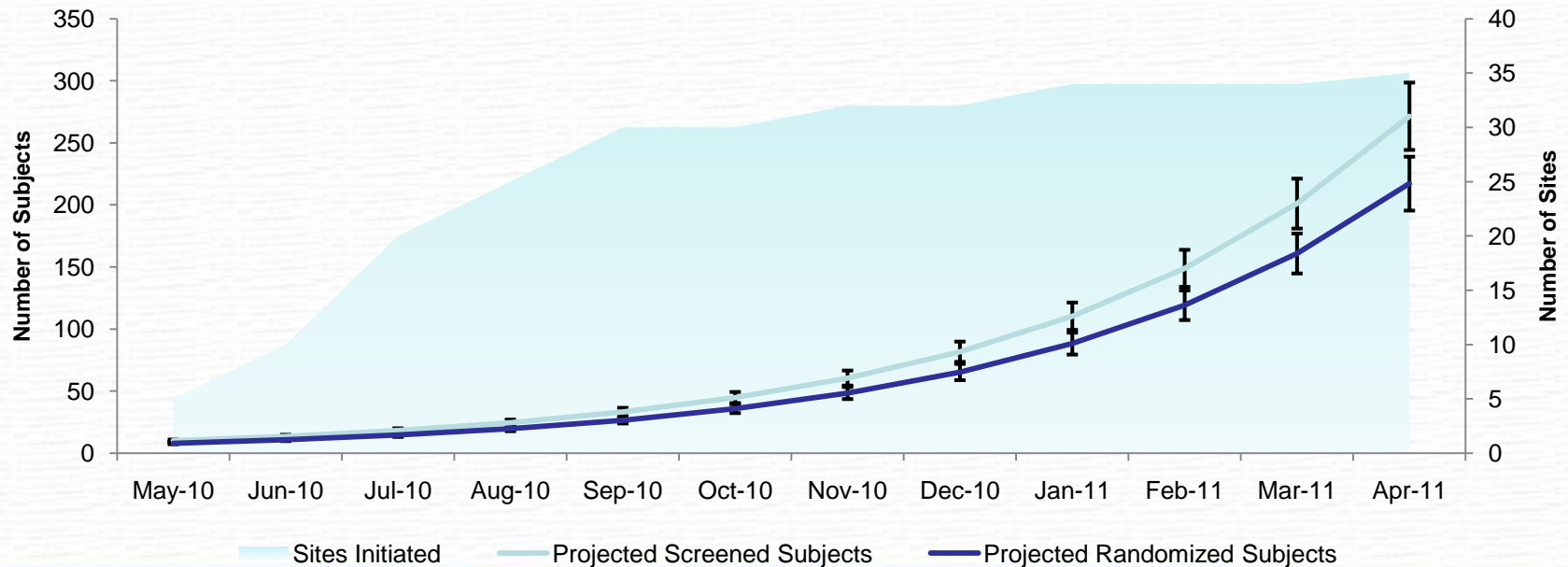
Low → High
Ability to Self Report

■ Tier 1
 ■ Tier 2
 ■ Tier 3



Future Vision

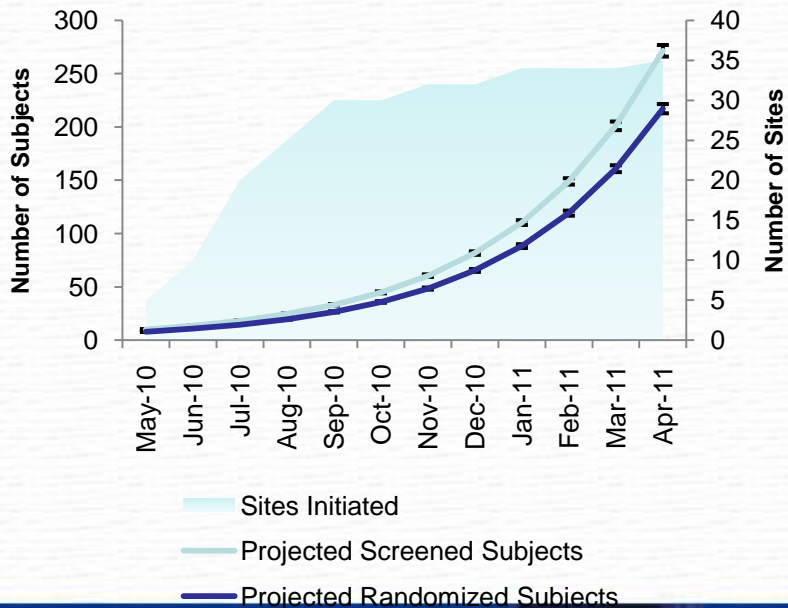
- Models incorporating confidence intervals
 - When actual levels move outside the intervals, an action is signaled
 - Leading to more accurate risk calculations and allowing Quintiles to price appropriately and take on more execution risk based upon greater understanding of potential variability
- Feedback loop to refine approaches going forward



Future Illustrative Example

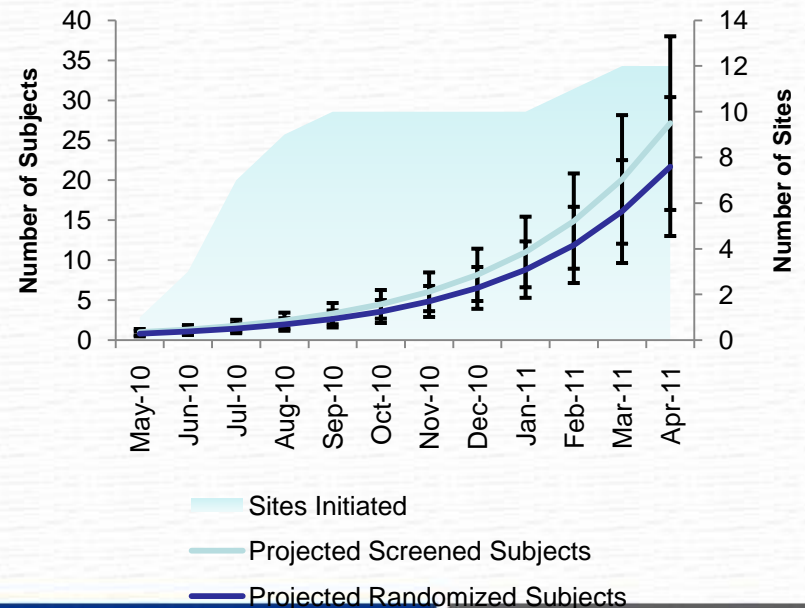
Flu Vaccine

- Point estimates with tight confidence intervals
- Low risk



Gaucher's Disease

- Much larger variance expected due to limited available knowledge



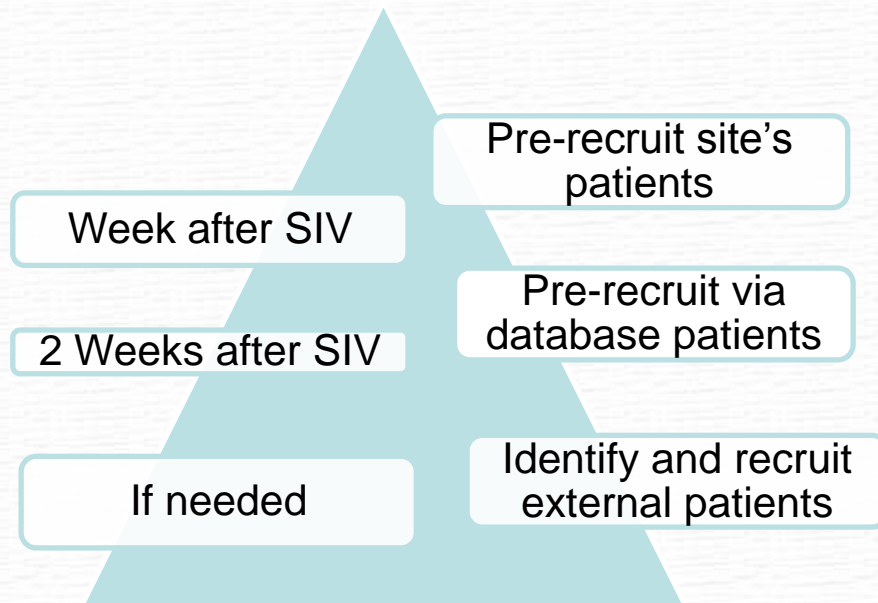
Study Start to Quality Finish: Patient Recruitment Strategic Vision

Acute / Oncology

Real-time identification of patients as they present to:

- Attending healthcare professional
- Investigator
- Requires:
 - Patient pathways
 - Referral networks
 - Multiple entry points to study

Chronic



Study Start to Quality Finish: Data Driven Patient Recruitment & Retention

Targeting patients inside and/or outside the practice with tailored outreach programs dramatically effect recruitment rates and can ultimately save sponsors money.

Tier I – Site Based Tool Kits

- Patient facing items
- Site facing items

Tier II – Direct To Consumer Campaign

- Study Branded Website
- DTC Traditional Mail and/or Email Campaign
- Branded Physician Office Materials
- Patient Level Pharmacy Outreach

Tier III - Media Placement

- Radio, Newspaper, Television

