



ClinicalTrials.gov: A Public Database of Clinical Research

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Background (<http://clinicaltrials.gov>)

- Largest public registry of clinical research studies
- Public access to “basic results” of certain interventional studies
- Reporting required by law—effective as of September 27, 2007 [1]
- Accepts wide range of interventional and observational studies
- Supports many registration and/or results reporting policies (e.g., WHO and medical journal editors [2])

Levels of Transparency [3]



FDA Amendments Act (FDAAA) Requirements

Which Trials are Involved?

- **Drugs and Biologics:** Controlled trials, other than Phase I, of a product regulated by the FDA
- **Devices:** Controlled trials with health outcomes of devices regulated by the FDA (not small feasibility studies) and pediatric postmarket surveillance device studies
- Trials initiated after September 27, 2007
- Trials initiated on or before September 27, 2007 and ongoing as of December 26, 2007

Who Needs to Submit Data?

- Publicly and privately funded trials
- Responsible for registration
 - Sponsor or
 - Principal investigator, if designated

Additional FDAAA Resources

<http://clinicaltrials.gov/ct2/manage-recs/fdaaa>

Registration at ClinicalTrials.gov

What Data Elements are Included?

- Protocol Description
 - Recruitment Information
 - Location and Contact Information
 - Administrative Data
- <http://prsinfo.clinicaltrials.gov/definitions.html>

When to Register?

- No later than 21 days after enrollment of the first participant
- [NOTE: Must be *prior* to enrollment of the first participant to fulfill journal editors registration policy]

“Basic Results” Reporting at ClinicalTrials.gov

Which Trials Must be Reported?

- Generally, trials of *FDA-approved* drugs, biologics, and devices that were required to be registered (see above)

When to Report?

- No later than 1 year after the date of final collection of data for the primary outcome or early study termination
- Requests for delayed submission available
 - Seeking initial approval
 - Seeking approval of a new use
 - Extension for “good cause”

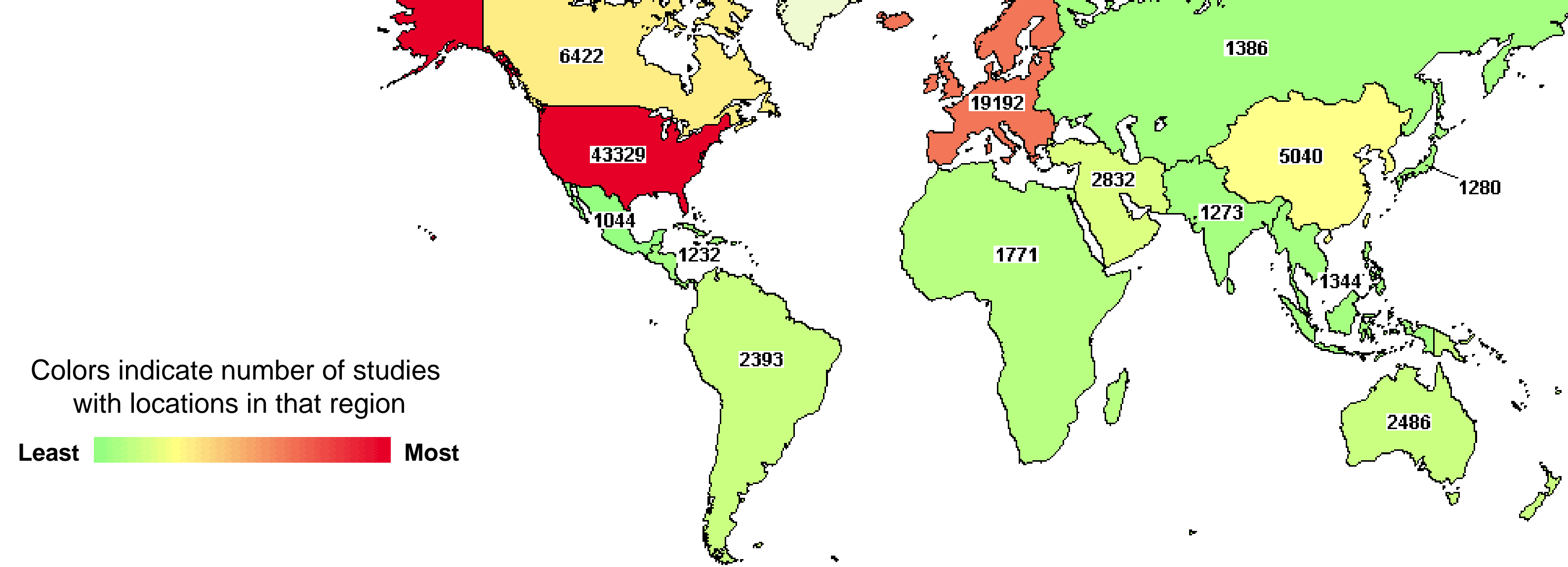
What Information Is Included?

- Participant Flow (# Started/Completed)
- Baseline Characteristics
- Outcome Measures
- Adverse Events (AEs)
- Results Point of Contact
- Restrictions on PI Publication
- Overall Limitations and Caveats

http://prsinfo.clinicaltrials.gov/results_definitions.html

Study Locations (all registered clinical studies; n = 80,513 as of 10/23/09)

170 Countries (as of 10/23/09)



Purposes of Registration and Results Reporting

- Promote fulfillment of ethical responsibility to human volunteers – use of research to contribute to medical knowledge
- Provide information to potential participants
- Identify relevant studies reporting harms and efficacy results
- Mitigate “publication” and “outcome measure reporting” bias
- Promote more efficient allocation of resources
- Assist ethical review boards and others in determining appropriateness of studies being reviewed
- Increase transparency in dissemination of clinical research information

Characteristics of Studies

	Number of Studies (Oct 23, 2009)
Total	80,513
Study Type*	
Observational	13,118
Interventional	67,063
Data Provider Category	
Federal (including NIH)	19,192
Industry	25,293
University/Foundation/Other	36,028
Phase (Interventional only)**	
N/A	13,906
I	12,542
II	22,285
III	15,055
IV	8,502
Intervention Type (Interventional)**	
Drug & Biologic	48,966
Device***	4,786
Medical Procedure	8,560
Behavioral, Gene Transfer, Other	8,355

*Additionally, 90 “expanded access” studies; 242 studies not specified

**Not additive – trials may have more than one phase or intervention type

***Does not include 242 trials of devices “not previously cleared or approved” by the FDA, which have been submitted but are not posted (in the “lock box”)

Using ClinicalTrials.gov

The screenshot shows search results for 'rotavirus'. It lists four studies: 1. Completed: A Study of Safety, Reactogenicity and Immunogenicity of HRV Vaccine in HIV Infected Infants in South Africa. 2. Not yet recruiting: Introduction of Oral Live Human Rotavirus (Rotarix) Vaccine in Malawi. 3. Recruiting: Molecular Epidemiology of Rotavirus Diarrhea Among Young Children Attending Maua Hospital, Kenya. 4. Active, not recruiting: Dose Escalation Study to Evaluate Oral Rotavirus Vaccine 116E Live Attenuated in Healthy Children.

The screenshot shows the details for study NCT00263666. It includes the title 'A Study of Safety, Reactogenicity and Immunogenicity of HRV Vaccine in HIV Infected Infants in South Africa', the sponsor 'GlaxoSmithKline', and the purpose: 'The aim of this study is to evaluate the reactogenicity, safety and immunogenicity of GSK Biologicals' human rotavirus (HRV) vaccine given concomitantly with routine vaccines including OPV in HIV positive infants.' It also lists conditions, interventions, and phases.

The screenshot shows the participant flow table for the study. It tracks the number of subjects in the Rotarix Group and Placebo Group across different stages: Started, Completed, Not Completed, Adverse Event, Lost to Follow-up, and Withdrawal by Subject.

The screenshot shows the front page of The New England Journal of Medicine, featuring an article titled 'Safety and Efficacy of an Attenuated Vaccine against Severe Rotavirus Gastroenteritis'.

The screenshot shows the FDA website for Rotarix vaccine, providing information on approved products, resources for vaccine, and supporting documents.

The screenshot shows the 'Basic Results' section of the study details for NCT00263666, including participant flow, pre-assignment details, reporting groups, and overall study flow.

Practical Applications for Researchers

- Identify ongoing and completed studies for particular diseases
- Supplement current literature reviews in a research area
- Scan the horizon for the current research in areas of interest
- Review other research approaches and opportunities for collaboration

[1] FDA Amendments Act of 2007 (FDAAA), Section 801 (Pub L No. 110-85); FDA Modernization Act of 1997 (FDAMA), Section 113 (Pub L No. 105-115).

[2] Laine C, Horton R, DeAngelis CD, Drazen JM, Frizelle FA, et al. Clinical trial registration--looking back and moving ahead. *N Engl J Med*. 2007 Jun 28;356(26):2734-6.

[3] Zarin DA, Tse T. Medicine. Moving toward transparency of clinical trials. *Science*. 2008 Mar 7;319(5868):1340-2.