

ブログ等) について既に導入済み (NCI) や検討されている (IFPMA) ところもあった。

日本でも問題になっているインターネットを利用しない高齢者については、アメリカでも同じように問題を抱えているのが現状である。NCI では、医師を通じた情報提供か、情報を郵便等で送付することで対応していることがわかった。

臨床研究・治験登録件数を WHO の ICTRP と Clinicaltrial.gov と比べた時、ICTRP の方が約 25% 多い。例えば、日本で行われている臨床試験・治験の登録データ数について、JPRN の臨床研究・治験データ約 11,000 件に対し、WHO の ICTRP は約 15,000 件である。Clinicaltrial.gov や他の primary register に登録している約 4,000 件の英語データは今後どうするか検討が必要になると思われる。WHO の臨床試験・治験データベースを利用・協力した NHS choices のような情報提供の可能性も考えられる。日本で行われている臨床試験・治験約 2,900 件の英語データが登録されている Clinicaltrial.gov ウェブサイトから xml 形式のファイル (zip) をダウンロードし、臨床試験・治験データを取得して、データフォーマットを行うことも可能かもしれない。アメリカの法令により、治験依頼者は (ClinicalTrials.gov) 臨床研究・治験に関する結果の提出が義務付けられている。日本はまだ法令化されていないので、今後検討されることも考えられる。

IFPMA は、企業をベースにした組織なので EMA や WHO との連携は特にないが、今後データベースの増加、ユーザビリティの向上、多言語化 (増やす)、チュートリアル作成などの機能のアップデートを出版物が多いため、日本製薬工業協会 (製薬協: JPMA) へ翻訳を依頼しており、製薬企業の連携が強かった。

NCI は、ユーザビリティテストやフィードバック、調査等を積極的に取り組んでおり、今後さらに clinical trial の検索結果について、患者向けへわかりやすい trial のタイトルの説明等を入れることなど考えている。NCI は海外にも情報を発信しており、例えば、TRI (臨床研究情報センター) は、がん情報サイト PDQ 日本語版 (臨床試験検索) ページについて、NCI とライセンス契約し、

がんに関する最新かつ包括的な情報サイトを運営し、情報提供を行っている。NCI は海外情報発信している運営組織でもあるので参考になる点が多くあると思われる。

## E. 結論

ウェブサイト運営に関しては、米国の組織、製薬企業を除き、人的資源、資金面ともに少ないため、十分なユーザビリティ、フィードバック、調査を行うことができず、ウェブサイトの改善や機能の追加が非常に難しいことがわかった。

一般の情報から臨床試験・治験へアクセスが可能な NHS choices のような情報提供サイト、患者向けと研究者向けがあり、IFPMA のような複数の臨床試験・治験データベースから串刺し検索が可能なサイト、患者、医療専門家等のそれぞれのニーズに合わせた情報提供サイトであり、特に患者向けのウェブサイトは、画像、動画、ソーシャルメディアを使用した NCI のようなウェブサイトなど、患者さんの視点で作られていて、臨床試験・治験へスムーズに情報が得られる有用なウェブサイトがあり、検索機能やシステム、サイト構成やコンテンツ等参考になる点が多くあった。

## F. 研究発表

1. 論文発表  
なし
2. 学会発表  
なし

## G. 知的財産権の出願・登録状況 (予定を含む)

1. 特許取得  
なし
2. 実用新案登録  
なし
3. その他  
なし

## Representing the research-based pharmaceutical industry

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## IFPMA Mission

- IFPMA is a non-profit NGO with over 40 years of advocacy experience in the international arena
- IFPMA advocates policies that encourage discovery of and access to life-saving and life-enhancing medicines and vaccines to improve the health of people around the world.

“Our objective is to improve health around the world by contributing expertise, building trust, and establishing solutions for global health”



## IFPMA Leadership

President



John Lechleiter, Ph.D.  
Chairman, President and CEO  
Eli Lilly and Company

Vice President



Masafumi Nogimori  
Chairman  
Astellas Pharma Inc.

Vice President



Stefan Oschmann  
Merck Executive Board Member  
and CEO of Merck Serono

Director General



Eduardo Pisani

## IFPMA Objectives

- encourage a global policy environment that is conducive to medicines innovation, both therapeutic and preventative, for the benefit of patients around the world;
- promote and support principles of ethical conduct and practices voluntarily agreed upon as exemplified by the IFPMA Code of Practice;
- promote and support the adoption of high standards of manufacturing practices and quality assurance for pharmaceutical products;
- contribute industry expertise and foster collaborative relationships and partnerships with international organizations, national institutions, governments and non-governmental organizations dedicated to the improvement of public health, especially in developing and emerging countries;
- assure regular contact and experience-sharing and coordinate the efforts of its members towards the realisation of the above objectives.

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## Official Relationship with the United Nations



Based in Geneva, IFPMA has a formal consultative status with the United Nations and its specialist bodies, including:

- World Health Organization (WHO)
- World Intellectual Property Organization (WIPO)
- United Nations Children's Fund (UNICEF)
- United Nations Conference on Trade and Development (UNCTAD)
- United Nations Economic and Social Council (UN ECOSOC)
- United Nations Industrial Development Organization (UNIDO)

IFPMA has also formal relationships with the World Bank and the World Trade Organization (WTO)



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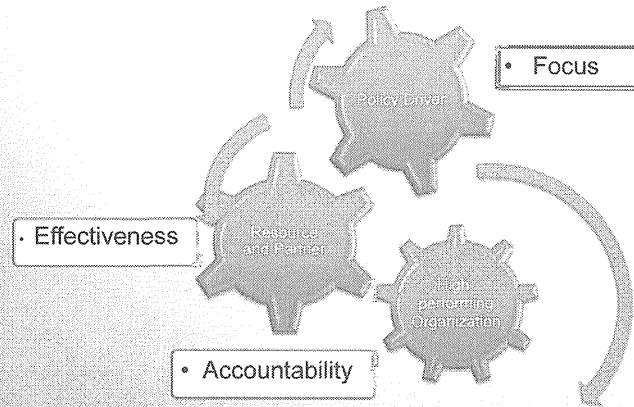
## IFPMA Global Health Network

"Improving global health through collaborations and dialogue"



...and many more

## IFPMA Guiding Principles



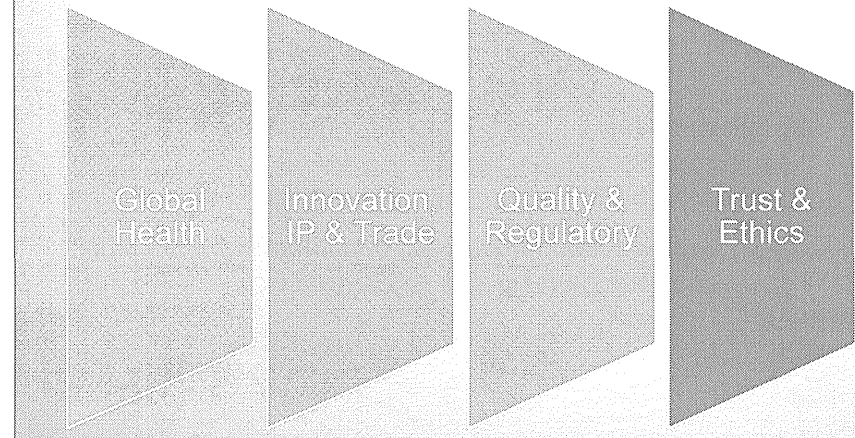
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May 11, 2012

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## Policy Areas

"IFPMA works to address a wide range of complex global health issues including sustainable access to medicines and vaccines, biopharmaceutical innovation, quality and regulations, and trust and ethics".



## IFPMA Services for Members



- **POLICY BRIEFINGS**
  - Advocacy kits
  - Position papers
- **SOCIAL & ECONOMIC RESEARCH NETWORK (SERN)**
  - Global network of national associations for the exchange of socio-economic data
- **PUBLIC AFFAIRS**
  - Accreditation of members to access WHO, WIPO, WTO meetings
  - Advising on national impact of international regulations
  - Support for national advocacy efforts on strategic issues impacting our industry
  - Facilitation and policy coordination of industry associations and members
  - Policy and technical workstreams and sharing of best practices



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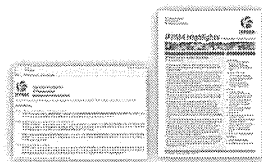
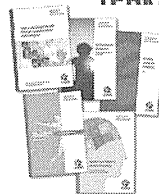
May 11, 2012

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## IFPMA Services for Members



- **PUBLICATIONS**
- **MEDIA**
  - News releases
  - Articles
  - Interactions with UN correspondents
- **EVENTS**
  - Biennial Assembly
  - Geneva Pharma Forums
  - World Health Assembly Reception
- **ELECTRONIC UPDATES**
  - Daily press review
  - Monthly internal newsletter
- **ONLINE TOOLS**
  - IFPMA website, a comprehensive information resource
  - Online Developing World Health Partnerships Directory
  - Clinical Trials Portal
  - Online Code of Practice Training



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## How to get information about trials A user journey through the IFPMA Clinical Trials Portal

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## R&D Industry Commitment to Transparency

### Commitment #1

Industry will make information about all ongoing trials in patients publicly available

### Commitment #2

Industry will also post summary results of all completed trials in patient after drug approval



A WORLD'S FIRST

September 2005

**Creation of the FIRST global clinical trials portal**  
To facilitate access to worldwide online CT information sponsored by R&D based pharmaceutical companies.

© IFPMA 2010

## Access Clinical Trials Information



hundreds of diseases  
thousands of trials  
billions of people



Make sense of it!  
Number of trials on the portal available by IFPMA Portal - Data per region

- IFPMA Clinical Trials Portal is brought to you by IFPMA on behalf of its Member Companies and Associations.
- IFPMA Clinical Trials Portal services
  - Access and improve the value of patient and health professionals able to participate in trials, clinical trial results and communications information on related issues.
  - Improve patient and health professional information.
  - Supporters commitment to the transparency of clinical trials.

**Clinical Trial Quick Search**

Search

Advanced Search:

- Interventions
- Pharmaceuticals
- Devices
- Diagnosis
- Other

**myPortal**

Quick to access, easy to use, and reliable information on clinical trials through personalized information.

Are you a patient? [Yes](#) [No](#)

Are you a health professional? [Yes](#) [No](#)

Are you a sponsor? [Yes](#) [No](#)

No need to visit 10 different websites to find non-promotional and reliable information on clinical trials.

## IFPMA Portal in numbers

- Today, the IFPMA Portal features trials from 160+ countries

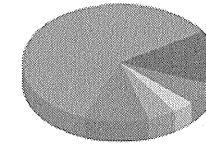
Number of Clinical Trials made available by the IFPMA Portal - Data per region



Region of the Americas	64203
European Region	56260
South-East Asia and Western Pacific Region	10350
African Region	1990
Eastern Mediterranean Region	894

Number of results of completed clinical trials made available by the IFPMA Portal - Data per condition

Total: 9750



Cancer	11%
Cardiovascular diseases	8%
HIV/AIDS	7%
Diabetes	6%
Neurological disorders and mental health	15%
Other	65%

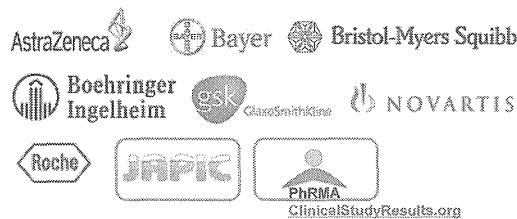
## Sources

The Portal provides links to clinical trials conducted by R&D industry posted on company/industry association websites and government websites listed below.

### Government websites



### Company & Industry association websites



## Find information on clinical trials

**Clinical Trial Advanced Search**

Terms to search for:

Terms to exclude:

Terms conducted in:

Search by:  ClinicalTrials.gov  Other

By condition status:  All clinical trials  Ongoing trials  Results available

Results of completed trials:

Use synonyms:

Language:  English  Spanish  French  German  Italian  Japanese  Korean  Chinese  Russian  Arabic  Hindi  Portuguese  Vietnamese  Thai  Turkish  Urdu  Bengali  Telugu  Malayalam  Kannada  Marathi  Gujarati  Odia  Assamese  Nepali  Sinhala  Tamil  Malay  Indonesian  Vietnamese  Thai  Turkish  Urdu  Bengali  Telugu  Malayalam  Kannada  Marathi  Gujarati  Odia  Assamese  Nepali  Sinhala  Tamil  Malay  Indonesian

Location:  All locations  Africa  Americas  Asia  Europe  Middle East  Oceania

Search Clear Receive email alerts

- Search by Medical Condition and Drug Name

- Search a particular country or city

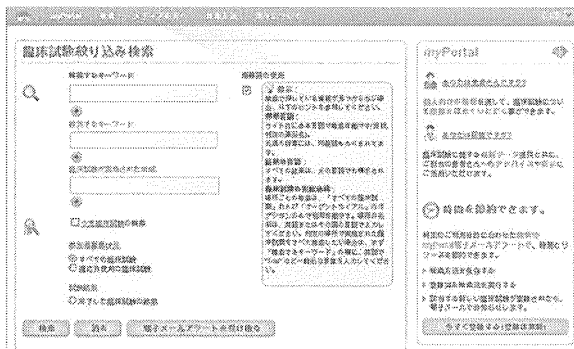
- Learn more about trials in children

- Find information on ongoing and completed trials

- Find information on trial results

If you are interested in specific information on clinical trials, refine your search with the Portal filters.

## Access to the Portal in 6 languages



Enter your search Criteria in:

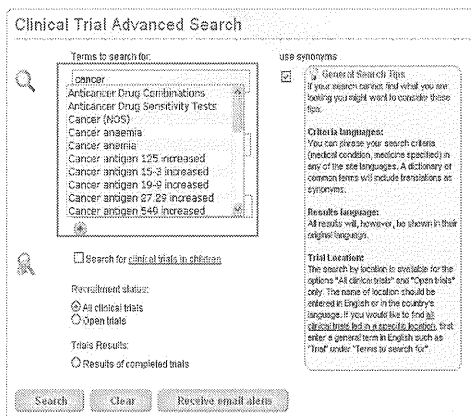
- English
- French
- German
- Japanese
- Spanish
- Swedish via Fass.se website

More language soon

No dictionary needed: the same unique tool is available in your native language.

© IFPMA 2010

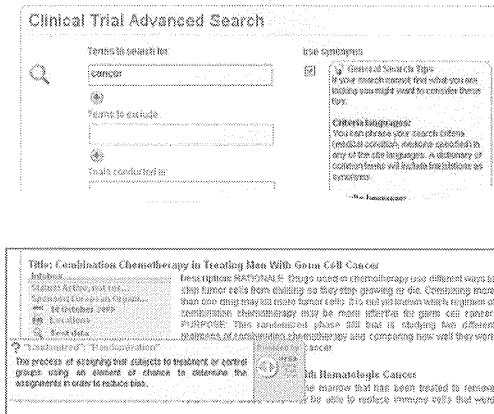
## Spelling suggestions



Not sure of the spelling? The Portal will suggest names for disease or medicines specified.

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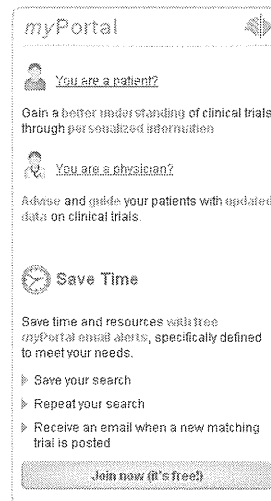
## Easy-to-understand explanations



Complicated trial postings are suddenly much easier to understand!

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## Make Portal yours



• Save your search and receive an email each time a clinical trial is posted in the medical category you are interested in.

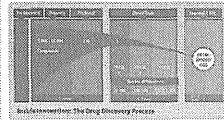
• You let us do the work and spend less time searching for trials!

© IFPMA 2010

## Learn more about Clinical Trials

### Helping you understand the Drug Development Process

Understand the drug development process through an easy-to-use [interactive module](#) by [Innovation.com](#).



### FAQs

IFPMA provides access to ongoing clinical trials and results of completed clinical trials. Use the navigation to get answers to questions you may have.

[View FAQs by Country](#)

#### 1. IFPMA CLINICAL TRIALS PORTAL

- Q: Where is the clinical trial information developed in order to search for information on a list of trials?
- Q: What are common ways that you use the portal?
- Q: How does the portal work?
- Q: How can I get help from search assistance?

#### 2. CLINICAL TRIALS

- Q: What is a clinical trial?
- Q: What are the types of clinical trials?
- Q: What are the stages of clinical trials?
- Q: What are the phases of clinical trials and where are they conducted?
- Q: What are the risks?
- Q: What are the benefits?
- Q: What are the different types of clinical trials?
- Q: What are the different types of clinical trials?



Understand the drug development process and find answers to frequently asked questions about trials in general or focusing on child-specific needs.

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## Conclusion

• The IFPMA Clinical Trials Portal is built to help you find information about ongoing/completed clinical trials and clinical trial results:

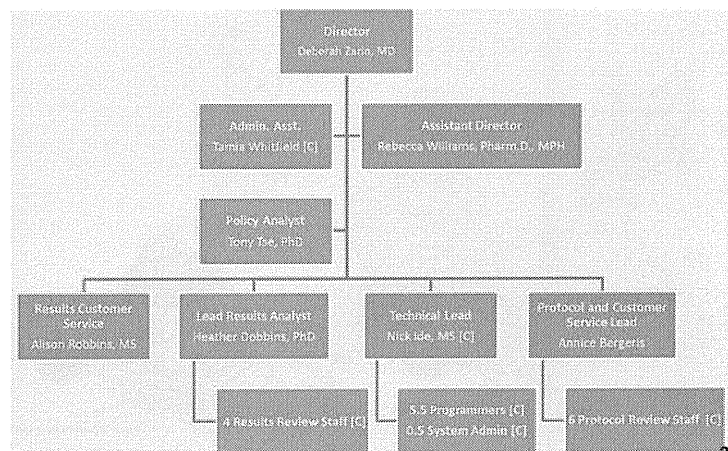
- A search engine available in 6 languages
- A complete set of tools focused on your needs:
  - Search for clinical trials in your country
  - Lay language explanations of technical terms
  - Spelling suggestions
  - Synonyms & Translations
- A personal account that reduces the time you spend looking for information

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# ClinicalTrials.gov

Nicholas Ide  
 ClinicalTrials.gov  
 National Library of Medicine

## ClinicalTrials.gov Onsite Staff



[C] = Contractor

Study and Intervention Type (Data as of February 05, 2013)	Number of Registered Studies and Percentage of Total	Number of Studies With Posted Results and Percentage of Total***
<b>Total</b>	140,003	8,077
<b>Interventional</b>	113,527 (81%)	7,530 (93%)
<b>Type of Intervention*</b>	Drug or biologic	6,436
	Behavioral, other	806
	Surgical procedure	312
	Device**	685
<b>Observational</b>	25,843 (18%)	547 (6%)
<b>Expanded Access</b>	190	N/A

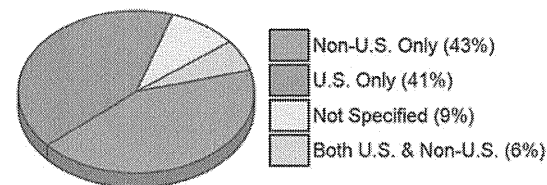
3

Source: <http://clinicaltrials.gov/ct2/resources/trends>

## ClinicalTrials.gov Statistics

(as of 1/29/2013)

Locations of Registered Studies



Location	Number of Registered Studies and Percentage of Total
Non-U.S. Only	59,893 (43%)
U.S. Only	57,699 (41%)
Not Specified*	13,107 (9%)
Both U.S. & Non-U.S.	8,891 (6%)
<b>Total</b>	<b>139,590</b>

\* Not Specified: The location of the study was not provided by the Sponsor.

4

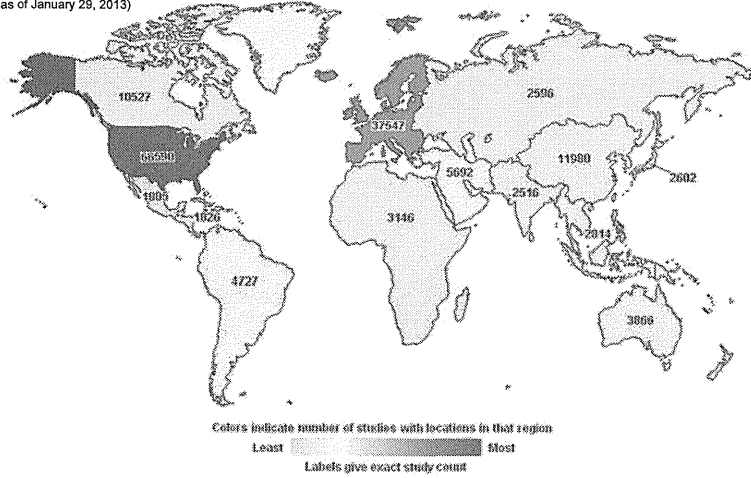
Source: <http://clinicaltrials.gov/ct2/resources/trends>



### Map of All Studies in ClinicalTrials.gov

Click on the map below to show a more detailed map (when available) or search for studies (when map not available).

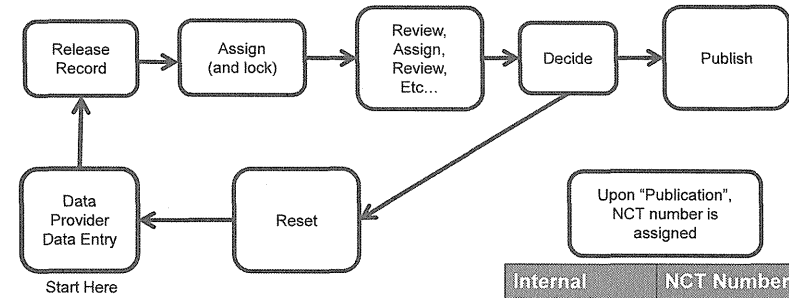
(Data as of January 29, 2013)



Source: <http://clinicaltrials.gov/ct2/resources/trends>

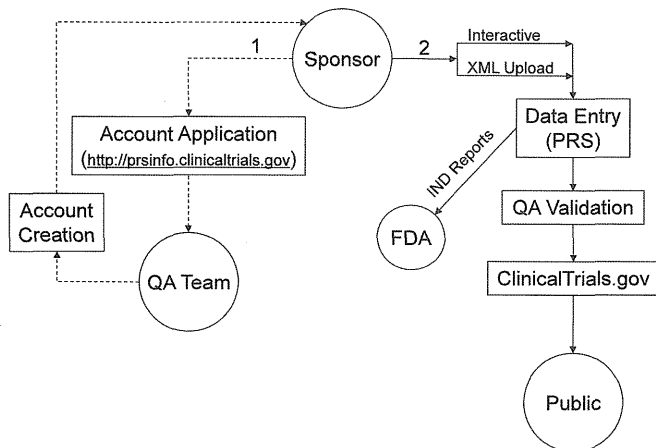
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5

### Internal PRS Flow



Internal Study Id	NCT Number
S0000123	NCT0005431
S0000ABC	NCT00004531
S0001212	NCT00121016

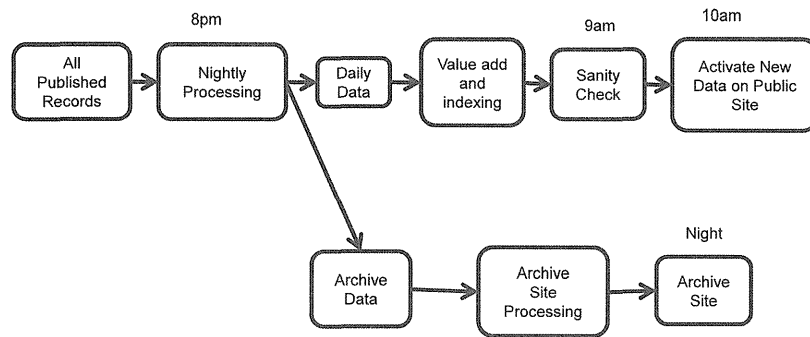
### Data Flow



### Quality Assurance

- Protocol Registration System (PRS)
  - Organizational accounts
  - Automated validation (e.g., required fields)
- QA team manual review
  - Internal consistency
  - Duplicate registrations
- Evidence of IRB approval
  - Contact information
  - IRB approval letter submission
- We don't have the trial protocol

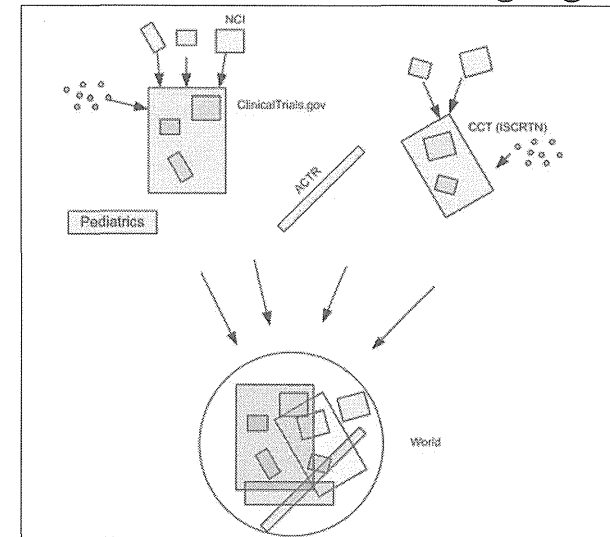
## Daily Flow



## Global System of Trial Registration

1. Incentives – policies, legislation
2. Communication – outreach, guidelines
3. Data Collection – the database
4. Validation – correct and complete
5. Dissemination – available to constituents

## Uncoordinated Merging

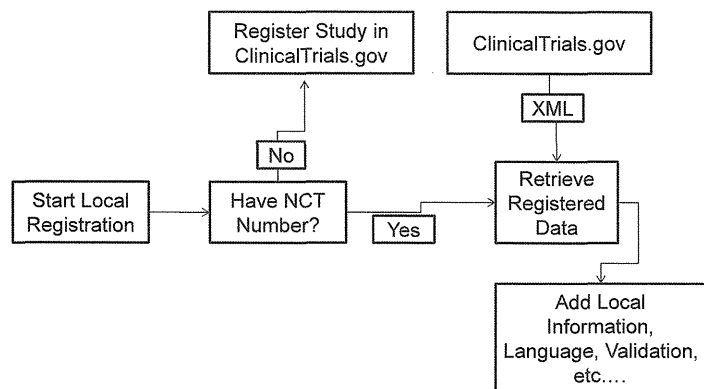


## Collaborative Models: Data Collection

Collaboration is essential and complicated

- Register in primary *then* secondary
  - Record primary identifier in secondary register
- Opportunities for country specific additions and validation

## Collaborative Data Collection

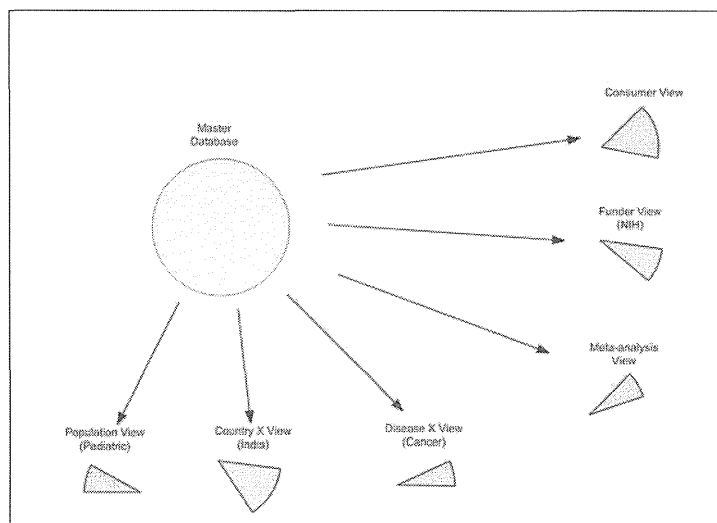


## Components of Global System

	ClinicalTrials.gov	Registry Partner X	WHO
Incentives	U.S. FDAMA, ICMJE, Other laws,		
Communication	Some <b>Need Help !</b>		
Database	Done		
Validation	Some <b>Need Help !</b>		
Dissemination	Done <b>English Only!</b>		



## Collaborative Dissemination



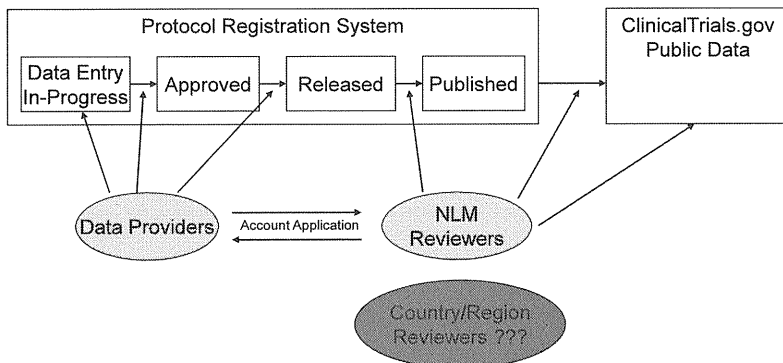
## Options on Language Issues

- Parallel Registration
  - Register in English site, capture identifier, then register in language specific registry with cross links between the registries
    - Data provider does the translation
- Capture multiple languages in one database
- Translated Site
  - Using software and human translators, translate some or all of the English data to the target language
- Data Entry Assistance for non-English
  - Is this something the countries could help with ?

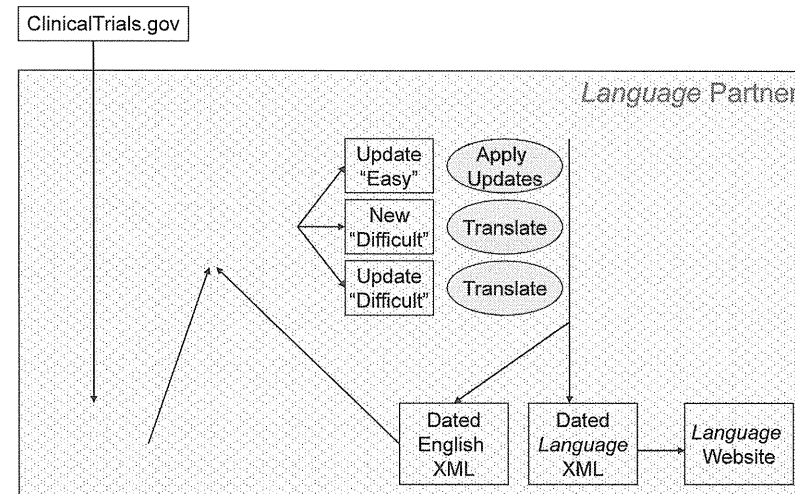
## Partner Models

- Content Validation Partner
  - Assist ClinicalTrials.gov with validation activities for studies conducted outside of the United States
- Content Dissemination Partner
  - Take data from ClinicalTrials.gov,
  - translate portions of the data,
  - make information available in other language

## Content Validation



## Content Dissemination



### ClinicalTrials.gov

A service of the U.S. National Institutes of Health

Example: "Heart attack" AND "Los Angeles"

Search for studies:

Search

Advanced Search | Help | Studies by Topic | Glossary

Find Studies | About Clinical Studies | Submit Studies | Resources | About This Site

Home > Find Studies > Search Results

Text Size ▾

2503 studies found for: Japan

Modify this search | How to Use Search Results

List | By Topic | On a Map | Search Details

+ Show Display Options

Download

Subscribe to RSS

Include only open studies  Exclude studies with unknown status

Rank	Status	Study
1	Active, not recruiting	<b>Capecitabine vs. S-1 in Unresectable or Recurrent Breast Cancer</b> Condition: Breast Neoplasms Interventions: Drug, Capecitabine; Drug, S-1
2	Completed	<b>Safety Study of Lenalidomide With and Without Dexamethasone in Japanese Subjects With Previously Treated Multiple Myeloma</b> Condition: Multiple Myeloma Interventions: Drug, lenalidomide; Drug, dexamethasone
3	Completed Has Results	<b>Randomized Evaluation of Long Term Anticoagulant Therapy (RE-LY) With Dabigatran Etexilate</b> Conditions: Atrial Fibrillation; Stroke Interventions: Drug, warfarin; Drug, Dabigatran dose 1; Drug, Dabigatran dose 2

## PRS Organizations from Japan

Sample of organizations providing data to ClinicalTrials.gov:

AbbottJapan	Abbott Japan Co.,Ltd	INDUSTRY
ADVANCED-J	Advanced-J	OTHER
AichiCC	Aichi Cancer Center	OTHER
AichiGakuinU	Aichi Gakuin University	OTHER
AkitaUH	Akita University Hospital	OTHER
Anseropharma	Anseropharma Science, Inc.	INDUSTRY
AnGes	AnGes	INDUSTRY
Arigen	aRigen Pharmaceuticals, Inc.	INDUSTRY
ArtistSG	ARTIST Study Group	OTHER
AsahiKasei	Asahi Kasei Pharma Corporation	INDUSTRY
AsahiKJM	Asahi Kasei Kuraray Medical Co.,Ltd.	INDUSTRY
AshikagaRCH	Ashikaga Red Cross Hospital	OTHER
AshiyaU	Ashiya University	OTHER
AssociationsEEI	Associations for Establishment of Evidence in Interventions	OTHER

## PRS Organizations from Japan

Benesis	Benesis Corporation	INDUSTRY
Biomedis	Biomedis International Ltd.	OTHER
BiotronikJapan	Biotronik Japan, Inc.	INDUSTRY
BoocaClinic	Booca Clinic	OTHER
CanBas	CanBas Co. Ltd.	INDUSTRY
ChemoSero	The Chemo-Sero-Therapeutic Research Institute	INDUSTRY
ChibaU	Chiba University	OTHER
ChugaiPharmaceutical	Chugai Pharmaceutical	INDUSTRY
Chugai_Pharma	Chugai Pharma USA	INDUSTRY
CitizenSystems	Citizen Systems Japan Co., Ltd.	INDUSTRY
COLMSRO	COLM Study Research Organization	OTHER
CopeTG	COPE Trial Group	OTHER
Cosmos	Cosmos Technical Center	INDUSTRY
CSHOT	Center for Supporting Hematology-Oncology Trials	OTHER
CSPDR	Comprehensive Support Project for Oncology Research	OTHER
CTAISSG	Combination Therapy for Acute Ischemic Stroke Study Group	OTHER

## PRS Organizations from Japan

>>>> many removed from middle of list for presentation purposes <<<<<<

UShizuoka	University of Shizuoka	OTHER
UToyama	University of Toyama	OTHER
UYamanashi	University of Yamanashi	OTHER
Valish	VALISH study	OTHER
VulnerablePS	Vulnerable Plaque Society	NETWORK
WakayamaMU	Wakayama Medical University	OTHER
WJapanThoracicOG	West Japan Thoracic Oncology Group	OTHER
YakultHonsha	Yakult Honsha CO.,LTD	INDUSTRY
YamagataU	Yamagata University	OTHER
YamaguchiUH	Yamaguchi University Hospital	OTHER
YodakuboH	Yodakubo Hospital	OTHER
YokohamaCUMC	Yokohama City University Medical Center	OTHER
YoshinoNC	Yoshino Neurology Clinic	OTHER
YubariKibounomori	Yubari Kibounomori	OTHER
ZenyakuKogyo	Zenyaku Kogyo Co., Ltd.	INDUSTRY
Zeria	Zeria Pharmaceutical	INDUSTRY

Total of 252.

Thank you

## ClinicalTrials.gov

**Rebecca J. Williams, PharmD, MPH**  
Assistant Director, ClinicalTrials.gov

**Tony Tse, PhD**  
Program Analyst, ClinicalTrials.gov



<http://ClinicalTrials.gov>

## Outline

- Rationale for clinical trial registration and results reporting
- Background – ClinicalTrials.gov
- Key policies and laws
- Basics of registration and results reporting
- Finding Results Submitted to ClinicalTrials.gov
- Uses of ClinicalTrials.gov

## Evidence Based Medicine (EBM)

- Clinical and policy decisions informed by evidence regarding the benefits, risks and other burdens associated with all possible alternatives.
- Clinical trials are a key component of the scientific evidence that must be used to make decisions.
- Most decision makers currently depend on summary data from journal articles

## Three Key Problems

- Not all trials are published in the literature
- Publications do not always include all prespecified outcome measures
- Unacknowledged changes are made to the trial protocol that would affect the interpretation of the findings
  - e.g., changes to the prespecified outcome measures

June 2, 2004

## New York Sues Maker of Antidepressant Drug Paxil

By KENNETH N. GILPIN

The New York State attorney general accused the British drug giant GlaxoSmithKline of consumer fraud today, asserting that the company had withheld negative information and misrepresented data about the efficacy and safety of prescribing the antidepressant drug Paxil to children.

The civil lawsuit, filed in New York State Supreme Court, says that starting in 1998, Glaxo suppressed the results of four studies that did not find the drug effective in treating children and adolescents and that suggested a possible increased risk of suicidal thinking and acts.

"By concealing critically important scientific studies on Paxil, GlaxoSmithKline impaired doctors' ability to make the appropriate prescribing decision for their patients and may have jeopardized their health and safety," the attorney general, Eliot Spitzer, said in a statement.

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The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

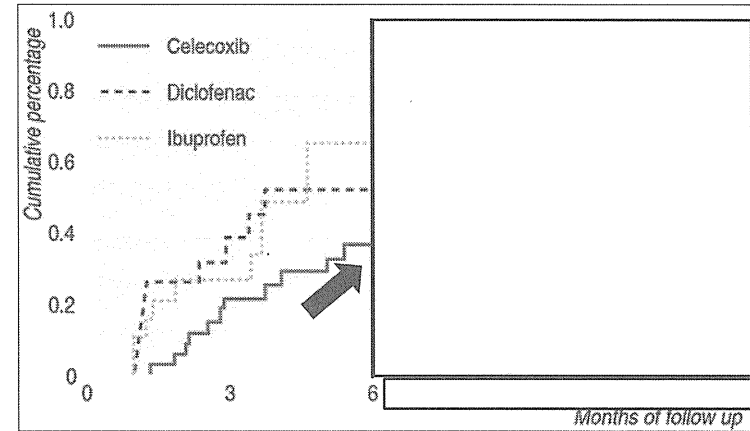
## Selective Publication of Antidepressant Trials and Its Influence on Apparent Efficacy

Erick H. Turner, M.D., Annette M. Matthews, M.D., Eftihia Linardatos, B.S.,  
Robert A. Tell, L.C.S.W., and Robert Rosenthal, Ph.D.

N Engl J Med. 2008 Jan 17;358(3):252-60.

6

Kaplan-Meier estimates for ulcer complications according to traditional definition. Results are truncated after 12 months, no ulcer complications occurred after this period. Adapted from Lu 2001.



Jüni P, Rutjes AW, Dieppe PA. *BMJ*. 2002 Jun 1;324(7349):1287-8.

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## Avandia (Rosiglitazone)

The Washington Post

### CAN DRUG RESEARCH STILL BE TRUSTED?

Even in the most respected of medical journals, firms' influence over studies opens door to bias

By Peter Winkovics

**F**or decades, physicians have read the New England Journal of Medicine as the most respected source of medical information. The 2007 survey by the Washington Post and the Washington Post found that the journal's research is still widely trusted.

The survey also found that a large international study that the journal published in 2006, which reported that the journal's research is still widely trusted.

What the survey found is that the journal's research is still widely trusted.

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Avandia (Rosiglitazone) is a diabetes drug. It is sold by GlaxoSmithKline. Photo by Peter Winkovics for The Washington Post.

In 2007: "...[Nissen] discovered the summaries of 42 trials — 35 of them unpublished. Most of them had been sponsored by Glaxo.

After analysis, the results were stark: Avandia raised the risks of heart attack by 43 percent and of death from heart problems by 64 percent."

Sunday November 25, 2012

## RESEARCH

## Publication of NIH funded trials registered in ClinicalTrials.gov: cross sectional analysis

 OPEN ACCESS

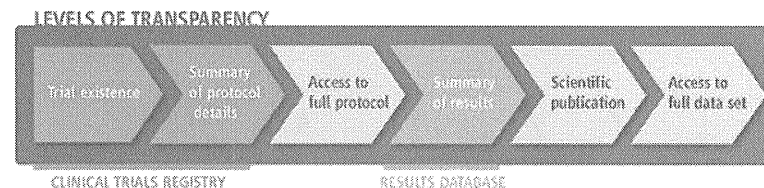
Joseph S Ross *assistant professor of medicine*<sup>1,2</sup>, Tony Tse *program analyst at ClinicalTrials.gov*<sup>3</sup>, Deborah A Zarin *director of ClinicalTrials.gov*<sup>4</sup>, Hui Xu *postgraduate house staff trainee*<sup>5</sup>, Lei Zhou *postgraduate house staff trainee*<sup>6</sup>, Harlan M Krumholz *Harold H Hines Jr professor of medicine and professor of investigative medicine and of public health*<sup>2,5,6</sup>

<sup>1</sup>Section of General Internal Medicine, Department of Medicine, Yale University School of Medicine, New Haven, CT, USA; <sup>2</sup>Center for Outcomes Research and Evaluation, Yale-New Haven Hospital, New Haven, CT; <sup>3</sup>Lister Hill National Center for Biomedical Communications, National Library of Medicine, National Institutes of Health, Bethesda, MD, USA; <sup>4</sup>Fuwai Hospital and Cardiovascular Institute, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China; <sup>5</sup>Robert Wood Johnson Clinical Scholars Program and Section of Cardiovascular Medicine, Department of Medicine, Yale University School of Medicine, New Haven, CT; <sup>6</sup>Section of Health Policy and Administration, Yale University School of Epidemiology and Public Health, New Haven, CT

## Summary of Findings

- Fewer than half of NIH funded trials registered at ClinicalTrials.gov after September 2005 and completed by December 2008 were published in a peer reviewed biomedical journal indexed by MEDLINE within 30 months of trial completion
- After a median of 51 months after study completion, a third of NIH-funded trials in the sample remained unpublished

## Levels of “Transparency”



Zarin DA, Tse T. *Science*. 2008 Mar 7;319(5868):1340-2.

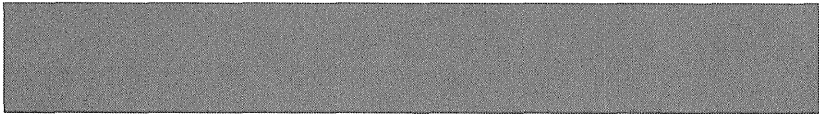
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## Reasons to Register Clinical Trials and Report Results

- Human Subject Protections
  - Allows potential participants to find studies
  - Assists ethical review boards during review of study
  - Promote fulfillment of ethical responsibility to human volunteers – contribution to medical knowledge
- Research Integrity
  - Facilitates tracking of protocol changes
  - Increases transparency of research enterprise
- Evidence Based Medicine
  - Facilitates tracking of studies and outcome measures
  - Allows for more complete identification of relevant studies
- Allocation of Resources
  - Promotes more efficient allocation of resources

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## ClinicalTrials.gov Background



### What is ClinicalTrials.gov?

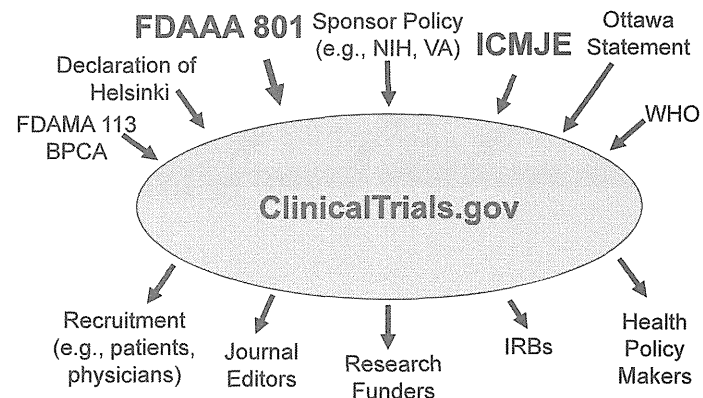
A registry and results database of publicly and privately supported clinical studies of human participants conducted around the world.

## History of ClinicalTrials.gov

- FDAMA\* 113 (1997) mandates registry
  - Investigational New Drug application (IND) trials for serious and life-threatening diseases or conditions
- ClinicalTrials.gov launched in February 2000
- Calls for increased transparency of clinical trials
  - Maine State Law; State Attorneys General
  - International Committee of Medical Journal Editors (ICMJE) statement (2004)
- ClinicalTrials.gov accommodates other policies
- FDAAA† Section 801 (2007): Expands registry & adds results reporting requirements

\* Food and Drug Administration Modernization Act of 1997  
 † Food and Drug Administration Amendments Act of 2007

## Policies and Users



## ClinicalTrials.gov Visitors by "Role" (n = 2,216)

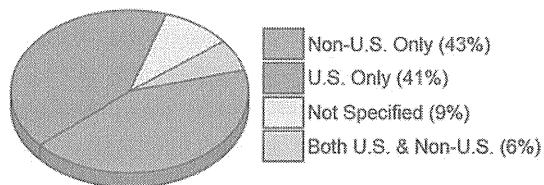
Patient	28%
Scientist/Researcher	18%
Family/Friend	14%
Health Care Provider	8%
Other	7%
Clinical Trial Staff	6%
Clinical Research Support	5%
Student/Educator	4%
Medical Communications	3%
Librarian/Information Prof.	2%
IRB or Ethics	<1%

Source: American Customer Satisfaction Index (ACSI) Online Consumer Survey; 4<sup>th</sup> Quarter 2012

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## ClinicalTrials.gov Statistics (as of 12/9/2012)

### Locations of Registered Studies



Location	Number of Registered Studies and Percentage of Total
Non-U.S. Only	58,484 (43%)
U.S. Only	56,806 (41%)
Not Specified*	12,960 (9%)
Both U.S. & Non-U.S.	8,857 (6%)
Total	137,107

\* Not Specified: The location of the study was not provided by the Sponsor.

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## ClinicalTrials.gov Statistics (as of 12/9/2012)

50 million pages views *monthly*  
65,000 unique visitors *daily*

	Registration	Results
<b>Total</b>	<b>137,107</b>	<b>7,617</b>
Type of Trial		
Observational	25,232 (18%)	517 (6%)
Interventional*	111,253 (81%)	7,100 (93%)
- Drug & Biologic	75,412	6,078
- Behavioral, Other	26,442	746
- Surgical Procedure	12,533	291
- Device**	9,450	637

\* Intervention types not additive; study record may include more than one type of intervention  
\*\*436 applicable device clinical trials submitted, but qualify for "delayed posting" under FDAAA

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## Key Policies and Laws

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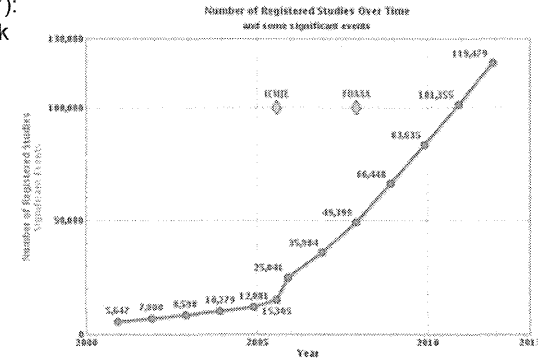
## Two Disclosure Policies

- ICMJE – Journal Editors Policy (2004)
  - Prospective registration of all clinical trials as a precondition for publication of the study results
  - Effective Date: September 13, 2005
- FDA Amendments Act, Section 801 (2007)
  - Enacted on September 27, 2007
  - Expanded Trial Registration Requirements (FDAMA)
  - Added New Results Reporting Requirement
  - Added Enforcement Provisions: e.g.,
    - Civil monetary penalties (up to \$10,000/day)
    - Withholding of NIH grant funds
  - Current Status: Rulemaking

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## Rate of New Registrations

- After FDAMA (2000):  
25 – 30 registrations per week
- After ICMJE (2005):  
200 – 250 per week
- After FDAAA (2007):  
300 – 350 per week



## FDAAA Results Requirements

- Which Trials?
  - Same as registration for FDA approved or cleared drugs, biologics, devices
  - Initiated on or after 9/27/07 or ongoing as of 12/26/07
- When Must Results be Reported?
  - Within 12 months of (primary) completion date; OR
  - ≤ 30 days of approval or clearance
  - Delays possible
    - Seeking approval of a new use
    - Extensions for “good cause”

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	ICMJE	FDAAA
Why?	Required for journal publication	Required by US federal law
Which Trials?	Interventional Studies -All Phases -All Intervention Types	Interventional Studies -Not Phase 1/Feasibility -Drugs, Biologics, Devices
Who?	Author	Sponsor or designated PI
When to Register?	Prior to enrollment of first participant	Within 21 days of enrollment of first participant
What to Register?	WHO Data Items	ClinicalTrials.gov and FDAAA Data Elements
Where to Register?	ClinicalTrials.gov or WHO Primary Registry	ClinicalTrials.gov
When to Submit Results?	Not Applicable	Within 12 months of final data collection for the primary outcome

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## FDAAA “Basic”

- Participant Flow
- Baseline and Demog
- Primary and Second
- Scientifically appropri
- Adverse Event Inform
- Administrative Inform
- Point of Contact (for s
- Certain Agreements ( publish results after tr

**Participant Flow**

Overall Study	Group 1	Group 2	Group 3	Group 4
Enrolled				
Completed				
Not Completed				
Lost to Follow-up				
Withdrawn				

**Baseline Characteristics**

Characteristic	Group 1	Group 2	Group 3	Group 4
Age				
Gender				
Race				
Ethnicity				
Other				

**Outcome Measures**

**Primary Outcome Measure**

**Secondary Outcome Measure**

**Statistical Analysis for Primary Outcome Measure**

Measure	Group 1	Group 2	Group 3	Group 4
Mean				
Standard Deviation				
Other				

**More Information**

**Conclusions**

**Limitations and Caveats**

**Results Point of Contact**

<http://prsinfo.clinicaltrials.gov/fdaaa.html>

## Clarifications about Results Reporting Requirements

- Summary results at the end of the trial
  - No interim or “real time” reporting
  - No participant level reporting
- Information currently targeted at readers of the medical literature
  - “Tables” of information; “just the facts”
  - No conclusions or discussion

## Results Submission and Journal Publication

- Deadlines for reporting to ClinicalTrials.gov are independent of publication status
- Submitting results to ClinicalTrials.gov will not interfere with publication\*
  - But failing to register before the first participant is enrolled will!
- ClinicalTrials.gov records are linked, via NCT number, to publications

\* Laine C, Horton R, DeAngelis C, et al. *Ann Intern Med.* 2007; [http://www.icmje.org/faq\\_clinical.html](http://www.icmje.org/faq_clinical.html)

**ClinicalTrials.gov**  
A Service of the U.S. National Library of Medicine

**Full Text View**

**Published**  
U.S. National Library of Medicine  
National Center for Human Genome Research  
11/13/2006 12:58:15 PM

**Abstract**

**Background:** Second-generation atypical antipsychotic drugs in outpatients with Alzheimer's disease (AD) have been shown to improve cognitive function and behavior. However, the effectiveness of atypical antipsychotic drugs in patients with AD is unclear.

**Methods:** In this 42-week, randomized, double-blind, placebo-controlled trial, 42 patients with AD were randomly assigned to receive 1 mg per day of placebo or 1 mg per day of atypical antipsychotic drug (olanzapine, risperidone, or quetiapine). The primary outcome was the change in the Alzheimer's Disease Assessment Scale-Cognitive Subscale (ADAS-Cog) score from baseline to 42 weeks.

**Results:** There were no significant differences between the groups in the change in ADAS-Cog score from baseline to 42 weeks. Overall, 24% of patients in the placebo group and 26% of patients in the atypical antipsychotic drug group were rated as responders.

**Conclusions:** Adverse effects offset advantages in the efficacy of atypical antipsychotic drugs for the treatment of psychosis, aggression, or agitation in patients with Alzheimer's disease. (ClinicalTrials.gov number, NCT0015548)

**CONCLUSIONS:** Adverse effects offset advantages in the efficacy of atypical antipsychotic drugs for the treatment of psychosis, aggression, or agitation in patients with Alzheimer's disease. (ClinicalTrials.gov number, NCT0015548 [ClinicalTrials.gov])

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**Secondary Source ID:**  
ClinicalTrials.gov/NCT0015548

**Publications:**  
Schneider LS, Eschwarthoff S, Wenrich M, et al. Effectiveness of atypical antipsychotic drugs in patients with Alzheimer's disease. *N Engl J Med.* 2006;354(26):2411-22.

**Additional Information:**  
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