Bio-Pharmaceuticals for the 21st Century:

Responsibility, Sustainability & Public Trust

WHITE PAPER
Clinical Trials Registries & Results Databases
The Fordham University Summit
New York City ◆ 10 – 11 January 2005

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PURPOSE OF THE WHITE PAPER

This white paper aims to provide policy makers with a roadmap to the issues surrounding the registration of clinical trials and the reporting of trial results in databases. It is meant to provide perspective, so that any future legislative, voluntary or other policy decision strikes an appropriate balance between two critical needs: the need for transparency and accountability of the bio-pharmaceutical research enterprise to advance public health and restore public trust, and the need to protect the intellectual property rights of sponsors and investigators so that they remain active players in an innovative, sustainable health product industry and healthcare delivery system.

This White Paper is based on a groundbreaking stakeholder summit hosted in January 2005 by the Fordham University Center for Ethics Education, entitled “Clinical Trials Registries and Results Databases: Responsible Policies and Public Access.” Summit participants represented patient advocacy groups, government, industry, the medical profession, ethics review boards, the law, journal editors, clinical research organizations, academic institutions and independent and institutional investigators.

The two primary objectives of the summit were to:

1) Discuss and debate the benefits and negative consequences of proposed clinical trials registries and results databases, and

2) Use the information shared at this summit to better inform policy makers and the public.

In light of the International Committee of Medical Journal Editors policy requiring clinical trial registration for new and previously initiated studies, the respective start dates for which are July 1 and September 13, 2005, pending legislation in the U.S. Congress and several international proposals for action, this overview is particularly timely.

DISCLAIMER

The opinions detailed in this White Paper were drawn from the discussions at the Fordham University Summit “Clinical Trials Registries and Results Databases: Responsible Policies and Public Access” 10-11 January 2005 at Fordham University, New York City. The views expressed in this document solely represent the opinions of the Center for Ethics Education and not necessarily those of the steering committee, participants, observers or Fordham University.
WHITE PAPER
Clinical Trials Registries and Results Databases
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Bio-Pharmaceuticals in the 21st Century: Responsibility,
Sustainability, and Public Trust
10-11 January 2005

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As a result of the “Clinical Trials Registries and Results Databases: Responsible Policies and Public Access” stakeholder Summit January 10-11, 2005, hosted by the Fordham University Center for Ethics Education, the Summit’s Steering Committee offers this White Paper.

The purpose of the White Paper is to inform legislatures and other policy making bodies about issues related to such Registries and Databases in order to ensure that any proposal that might be adopted properly balances the desire for transparency in order to restore trust in the research environment with the need to adequately protect trade secrets of researchers and sponsors in order to maintain incentives to conduct high risk research.

The paper begins with an Executive Summary, followed by an in-depth review of the issues and stakeholder perspectives. A list of Summit participants is included in the Appendix.

DISTINCTIONS BETWEEN CLINICAL TRIALS REGISTRIES AND RESULTS DATABASES

Recommendations for clinical trials registries and results databases have been linked in legislation and media attention. However there are distinctive differences in the possibilities and problems they pose for public health and safety. In general, clinical trials registries provide a public record of newly initiated, ongoing, and closed clinical trials.

Clinical trials results databases are public postings of findings of all clinical trials -- published and un-published -- including negative findings and potentially adverse side effects. In general, these postings are intended to provide the information and transparency necessary for patients, practitioners, journal editors, regulators, and the public to make informed healthcare decisions.

THE STEERING COMMITTEE SUPPORTS THE FOLLOWING:

REGARDING BREADTH AND FORMAT:

- A Registry that includes a results database, including publication of negative findings – providing certain human subject protection, trade secret, intellectual property, and legal considerations as well as considerations of different kinds of studies are taken into account; along with
• Simultaneous encouragement and facilitation of physician reporting of serious, unanticipated, and significant adverse events in everyday practice and a more timely process for evaluating safety data across multiple independent trials;

• Relating clinical trials results databases to product use and purchase;

• Registering studies if they prospectively assign human subjects to intervention or comparison groups to test a hypothesis about the cause-and-effect relationship between a medical intervention and a health outcome; and,

• A unique identifying number to facilitate tracking the progress of the trial and mid-point modifications in procedures or sample selection.

REGARDING HARMONIZATION:

• Creation of clear, uniform standards at the national level – especially if harmonized internationally in order to avoid placing U.S. companies at a global competitive disadvantage.

REGARDING COMPLIANCE:

• Registries being voluntary with the potential of the use of a third-party auditor;

• Use of the IRB as enforcement mechanism for registry compliance if the IRB is not responsible for submitting the registry information nor for continuous monitoring of registry updates; and an efficient and effective approach is defined to identify oversight responsibility for trial registration for multi-site studies with multiple IRBs.

THE STEERING COMMITTEE NOTES AS IMPORTANT AND FUNDAMENTAL CHALLENGES THE FOLLOWING:

REGARDING BREADTH AND FORMAT:

• Including statements regarding specific hypotheses tested, definitions of primary and secondary outcome measures, the name and chemical composition of products that may never come to market, or studies designed to test pharmokinetics, major toxicity, or feasibility of promising research designs;

• Developing a single, comprehensive, timely, cost-efficient, and easily navigated format if the Registry attempted to cover all the current and developing health conditions and healthcare products;

• Identifying the different targeted audience(s) in order to define access, clarity and relevance of the format; and,

• Determining the extent to which registries might succeed in enhancing accountability and transparency in health product development which depends on
whether requirements or voluntary registration is limited to or extends beyond studies subject to FDA or HHS Common Rule regulations.

**Regarding Compliance:**

- The importance of detail and frequency of Registry updates to ensure appropriate compliance, fairness, administrative cost-effectiveness, and public benefit;

- Use of withholding of funding for NIH-sponsored clinical trials as a means to enforce compliance – which, as with IRB oversight, the administrative burden of monitoring timely registry updates is essential to consideration; and issues of fairness might be raised since withholding of NIH funds would only affect federally-sponsored, but not industry-sponsored, research;

- Use of Civil monetary penalties (e.g., $10,000.00 a day for sponsors) for noncompliance as yet another mechanism to encourage compliance, and the attendant concern of equity regarding the degree of economic burden such fines would impose on private- and government-supported institutions, small PhRMA, or biotech companies, on the one hand, and the major industry players on the other;

**Regarding Trade Secret/Intellectual Property:**

- With results databases, there is the possible threat to intellectual property and competition depending upon the scope of studies that must be reported and the level of detail required, the most significant concern being to posting information on unapproved compounds that never make it to the market; and exploratory studies that are not designed to provide firm evidence of safety and efficacy.

**The Steering Committee Observes as Possible Solutions to Specific Issues the Following:**

**Regarding Trade Secret/Intellectual Property:**

- The notion of blinding certain fields, such as primary and secondary outcomes, until such time as a publication review process is triggered following completion of the study. This should not have any negative consequences from a public health perspective as such information is generally not needed by patients to assess eligibility and its absence in clinicaltrials.gov has not raised concerns.

**Regarding Developing a Systemic Approach:**

- Given the range of challenges, it may be best to monitor and evaluate the success of current voluntary models. Congress might ask for a short-term HHS feasibility study. If legislation is advanced, it would be useful if it were broad enough in scope to enable the promulgation of regulations that are thoughtfully put together by relevant agencies.
REGARDING EXPANSION OF A CURRENT MODEL (CLINICALTRIALS.GOV):

- Expansion of clinicaltrials.gov to a wider array of diseases and health products meets in many ways the needs and concerns of the healthcare community. However, its expansion would require consideration of whether a U.S.-based system could serve the interests of all those who conduct a broad range of biomedical clinical research as well as conduct trials globally, including trials not subject to U.S. regulations. In addition, depending upon the number of diseases/disorders for which products are being developed, a government-sponsored mandatory registry may need to develop inclusion and exclusion disease/disorder criteria – an action that will undoubtedly be met with objection by excluded patient groups. Compliance and monitoring issues will also need to be addressed.

CONCLUDING OBSERVATION:

As this complex and compound issue moves forward it is important to note that Registries inclusive of results databases by themselves in any form are not a panacea for monitoring the safety of commercially available products. Safety concerns may not be apparent until a product is studied for use within a patient population with a disorder different from the disorder for which the product was originally approved, until practitioners have prescribed it to a wide heterogeneous population, or until consequences of minor or major misuses of the product come to light.
BACKGROUND SITUATION

The last decade has witnessed rapid advances in the biomedical research arena (from biotechnology through medical devices). Industry research and development has produced life-saving and life-enhancing treatments for many. Yet, the American public (and those abroad in many instances) is skeptical of the willingness of pharmaceutical and biotech sponsors to shoulder social responsibility for the conduct of clinical trials.

There is cynicism about healthcare delivery, health product integrity, and the foundations of innovation – clinical research. There is also disagreement within and outside the enterprise on how to best balance assuring public access to safe health products and the economic sustainability of the enterprise itself.

The need to act ethically and to be perceived as acting ethically is of vital importance to the industry’s survival and ability to continue its life-saving and life-improving contributions. Regaining public trust is crucial for sponsors of research and investigators.

Current government and public scrutiny was prompted by a series of allegations throughout 2004 and 2005 that a lack of transparency and accountability in product development and clinical trials had compromised safety monitoring and public health. Allegations receiving the widest public attention were the concealment of negative results of research involving the safety and efficacy of antidepressants for adolescent populations and lack of timely evaluation of research suggesting cardiac risks associated with the use of COX-2 inhibitors. These allegations triggered calls by the International Committee of Medical Journal Editors, the American Medical Association, the World Health Organization and others for increased industry transparency and accountability involving clinical trials research on product development and post-market safety, efficacy and new applications.

As a result, a variety of federal and state legislative measures have been proposed. At the federal level, in the United States, the Fair Access to Clinical Trials Act of 2005; and in the United Kingdom, a proposal to condition marketing licenses for new drugs on publication of findings of all clinical trials. At the state level in the U.S., at least 20 legislatures are considering measures involving clinical trials registries.

Industry has responded by promoting and implementing voluntary clinical trial registries and study results databases available on individual company websites and through umbrella websites such as that hosted by the Pharmaceutical Research and Manufacturers of America (PhRMA).
DISTINCTIONS BETWEEN REGISTRIES AND DATABASES

Recommendations for clinical trials registries and results databases have been linked in legislation and media attention. However there are distinctive differences in the possibilities and problems they pose for public health and safety. In general, clinical trials registries provide a public record of newly initiated, ongoing, and closed clinical trials. The original intention of registries (as conceived in Section 113 of the Food & Drug Modernization Act and operationalized through Clinicaltrials.gov in 2002) was primarily to aid patients with serious and life threatening conditions to find out about clinical trials in which they might participate. To do so, essential information posted in the registry includes the purpose of the trial, eligibility criteria, location of the trial and a point of contact for patients. Summaries of and links to publications reporting the results of the completed clinical trials may be available in a registry, but are not tied to the primary goal.

In contrast, clinical trials results databases are public postings of findings of all clinical trials -- published and un-published -- including negative findings and potentially adverse side effects. In general, these postings are intended to provide the information and transparency necessary for patients, practitioners, journal editors, regulators, and the public to make informed healthcare decisions.

REGISTRIES DEFINED

Generally, clinical trials registries provide a public record of newly initiated, ongoing, and closed clinical trials. The Federal government established the first national, mandated trial registry, as conceived in Section 113 of the Food & Drug Modernization Act of 1997 and made operational with www.clinicaltrials.gov in 2002, to enable patients with serious and life-threatening conditions, such as cancer and HIV/AIDS, to learn about clinical trials in which they might participate.

Run by the National Library of Medicine at the National Institutes of Health (NIH), www.clinicaltrials.gov is an Internet-based system that uses easily understood language, allows for focused searches by disease and geographical regions, contains links to other information sources and conditions, and provides a unique identifier number and an extensive list of data element definitions. It is also a historical registry that maintains closed trials in the database. It identifies the initiation of clinical trials with key information, but does not include proprietary detail or exploratory studies testing for toxicity of a new compound or pharmacokinetics. It permits pre-market products to be listed as “investigational drugs,” and devices as well as pharmaceutical products are currently listed. Summaries of and links to publications reporting the results of the completed clinical trials may be available in a registry, but are not tied to its primary goal.
In addition to the nationally mandated [www.clinicaltrials.gov](http://www.clinicaltrials.gov) for serious or life-threatening illnesses, several major pharmaceutical companies as well as such umbrella associations as the Pharmaceutical Research and Manufacturers of America (PhRMA) in the United States, and others in Europe and elsewhere have established their own voluntary clinical trials registries on websites, using many of the same defining characteristics.

**RESULTS DATABASES DEFINED**

By contrast, clinical trials results databases are the public postings of findings of clinical trials – published and un-published – that include positive and negative findings and potentially adverse side effects. In general, these postings are intended to provide the information and transparency necessary for patients, practitioners, journal editors, regulators and the public to assess the effectiveness of treatments in making informed healthcare decisions.

Currently, sponsors and investigators can provide a link to such databases from clinicaltrials.gov tied to the trial registration unique identifier. Industry associations such as PhRMA and a few large companies have initiated their own voluntary results databases. The PhRMA results database aims to provide physicians and patients with centralized access to meaningful information about marketed prescription medicines. While the number of clinical trials postings on the PhRMA website have continued to increase, they still represent a small fraction of trials conducted. Some companies, such as Eli Lilly, Forest Laboratories, and GlaxoSmithKline have elected to post results on their own company websites.

This White Paper addresses in separate sections, the goals of both registries and results databases, the information each requires to meet those goals, implications for public health and safety, effects on medical practice, trade secret and intellectual property concerns, issues of compliance, and harmonization of state, federal and international initiatives. Finally, it advances several recommendations that Summit stakeholders agreed on, and identifies areas for further consideration.
I. CLINICAL TRIALS REGISTRIES

GOALS AND OBJECTIVES

1. Increase physician awareness of and patient access to participation in clinical trials.

   The original intent of the first nationally mandated registry – and subsequent industry-sponsored registries – was to enable patients and their physicians to have greater access to information about new, ongoing and completed clinical trials. By posting basic criteria about these studies, registries serve an important informing function.

   At present, no single registry provides complete information about all the clinical trials being conducted in the United States or abroad. The clinical trials registry www.clinicaltrials.gov, providing information on trials targeting serious and life-threatening conditions, is the most complete. The number of trials on the newly established industry-developed PhRMA registry http://www.clinicalstudyresults.org and on individual industry websites continues to increase.

2. Establish a public record of all clinical trials on health products to create a more complete, publicly available body of clinical evidence.

   A public record of the initiation, modification and completion of clinically relevant research trials—published and unpublished—conducted on a particular drug, device, technology or procedure can improve industry accountability and transparency, thereby restoring public trust in the dissemination of clinical trial results.

3. Provide a corrective against ‘positive results bias’ and ‘selective reporting’ of positive research results to peer review publications.

   In September 2004, following public disclosure of unreported safety concerns in studies examining the use of Paxil to treat adolescent depression, the International Committee of Medical Journal Editors (ICMJE) noted that registries can provide a corrective against “positive results bias” in the submission of clinical trials data to peer reviewed publications. “Selective reporting” of only positive research results occurs when principal investigators and sponsors do not include in reports submitted for peer review information about previous or concurrent studies that yielded negative or equivocal support for product efficacy. By registering clinical trials in a public repository at their inception, all stakeholders in clinical research will be aware of the existence of additional studies, thus assisting in efforts to put single study results into the context of a larger body of evidence. A primary goal of registries is to increase physician awareness of and patient access to participation in clinical trials through timely and easily accessible postings of ongoing studies, their goals and eligibility requirements.
REGISTRY ELEMENTS NECESSARY TO MEET TO THESE GOALS

1. The Nature of Information

Summit stakeholders agreed generally that to meet these goals, at the studies inception clinical trials registries should be available to the public at no cost and electronically searchable, with each trial registration including a unique identifier and at minimum the following information written in easily understandable language:

- Statements about the purpose of the study (the disease or condition being studied, interventions studied)
- Participant eligibility criteria
- The sources of funding
- The location of the trial
- Contact information for the principal investigator

The unique identifier would facilitate tracking the progress of the trial as well as mid-point modifications in the trial procedures or sample selection. Once data collection is completed, it would also provide a permanent historical record of the trial to stakeholders irrespective of whether the results are published, as well as links to related informational sources or publications.

There is less stakeholder consensus on whether, to achieve the above goals, it is necessary to include statements of specific hypotheses tested, key study dates (registration and dates of anticipated start or actual start; closure of data collection and data entry), target number of subjects, definitions of primary and secondary outcome measures, or the name and chemical composition of products. Some journal editors, for example, have called for the listing of primary and secondary outcomes and dates of subject enrollment and data collection as a further means of aiding the peer review process.

Industry representatives raised concerns that this level of detail could jeopardize competitive practices, especially for products that might never reach the market. Some took the position that patient access, transparency and accountability, and journal review could be adequately served through registration of basic descriptive information about the study, purpose of the investigational drug, general inclusion and exclusion criteria, and contact information. While some public advocacy groups have called for inclusion of earlier phase studies in registries, most current proposals endorsed by legislators, industry, and journal editors exempt studies conducted solely to test the pharmokinetics of a new promising compound or to determine safety of an unapproved drug, product, or device. Also exempt would be pilot or feasibility studies conducted to confirm design and operating specifications of an unapproved or not yet cleared product.
One possible compromise discussed during the Summit was the notion of blinding certain fields, such as primary and secondary outcomes and study completion dates, until such time as the publication review process is triggered following completion of the study. This should not have any negative consequences from a public health perspective, as such information is generally not needed by patients to assess eligibility and its absence in www.clinicaltrials.gov has not raised concerns.

2. Breadth of Disease and Audience Formats

The registry’s utility depends on its ease of access, clarity, and relevance to different target audiences, such as patients, physicians, scientists and journal editors. Stakeholders questioned, for example, if a format designed for patients and physicians to use easily to enroll in clinical trials could also have the detail necessary for scientists and editors to scrutinize studies during scientific and peer review to correct against ‘positive results bias.’

The extent to which registries will meet the stated goals is also dependent upon the breadth of clinical trials registered including the scope of diseases/conditions, range of products (pharmaceuticals, biologics, and medical devices) and the national versus international nature of the research protocol. Questions arose as to whether any one registry could develop a comprehensive, timely, cost efficient, and easily navigated format if it attempted to cover all the current and developing health conditions and healthcare products.

3. Mandatory or Voluntary Registries

Finally, Summit participants held differing views about whether or not registries ought to be voluntary or mandatory. While www.clinicaltrials.gov registration is mandatory for serious and life-threatening conditions, it does not have an adequate enforcement mechanism in place to ensure compliance. Thus, the extent to which registries might succeed in enhancing accountability and transparency in health product development will depend on whether requirements are limited to or extend beyond studies subject to FDA or HHS Common Rule regulations. The voluntary association and industry sponsored clinical trials registries that have emerged depend on members or companies to show good faith in registering trials. Summit stakeholders generally believed that it is too soon to know if the pressures from the public, regulators and legislators, as well as recent highly publicized New York State Attorney General cases against major companies, will have an effect on compliance.

Which Studies to Include

Stakeholders generally agreed that a registry should include confirmatory (also called clinically directive or “hypothesis-testing”) trials – those trials that are intended to provide firm evidence in support of efficacy or safety claims. Confirmatory clinical trials include all Phase III trials, many Phase IV trials, and some late Phase II trials.
The group disagreed about including earlier phase exploratory studies in the registry. While some public advocates have called for including earlier phase studies in registries, clinicaltrials.gov, and most legislators, industry, and journal editors endorse proposals that take a more cautious approach to the registration of exploratory studies. Generally, exploratory studies are not designed or powered to draw firm conclusions about safety or efficacy, but serve to set direction for future testing. Some studies, for example, solely test the pharmokinetics of a new promising compound, while other proposals test the safety of an unapproved drug, product, or device. Some pilot or feasibility studies are conducted to confirm design and operating specifications of an unapproved or not yet cleared product. Industry, in general, opposes inclusion of exploratory studies to protect trade secrets and intellectual property at early stages of drug development.

**BENEFITS OF REGISTRIES**

Stakeholders generally agreed on the following benefits of clinical trials registries:

1. **Clinical trials registries can increase patient and physician awareness of potential clinical trials, at both the local and national level.**

   They can help patients and physicians identify if patients meet enrollment criteria, thus avoiding unnecessary time, effort, travel costs, and anticipation for studies for which the patient would not qualify. In many cases participation in clinical trials offers the possibility of health benefit in situations in which established treatments have not been effective.

2. **Registries can advance health science by facilitating patient recruitment for clinical trials and providing a larger, more diverse, and potentially more representative sample of patients.**

   Registries can facilitate the peer review process by establishing a baseline of studies testing the efficacy of a given health product, which, in turn, can provide a frame of reference for evaluating whether a report of positive results submitted for peer review or public dissemination is an outlier among a series of terminated or negative results studies.

3. **Registries provide checks and balances to avoid ‘positive results bias’ in journal publications, strengthening confidence in published studies and benefiting both medical practice and public health.**

   Registries can provide a corrective against “positive results bias” in the submission of clinical trials data to peer reviewed publications. “Selective reporting” of only positive research results occurs when principal investigators and sponsors do not submit or include in reports submitted for peer review information about previous or concurrent studies that yielded negative or equivocal support for product efficacy. By registering in a public repository all clinical trials at their inception, all stakeholders in clinical research can more fully evaluate the results of a single clinical trial within the context of knowledge of the existence of the full body of evidence.
4. **Improve clinical decision making by providing links to a more complete, publicly available body of clinical evidence.**

Registries may provide a link to summary results published on a sponsor website or peer reviewed journal, a non-promotional summary of results in lay person’s language, or a detailed summary of participants, design, statistical analysis of data, result tables, and interpretation at the level of scientific review.

5. **A viable clinical trial registry may serve as a model in helping the healthcare service industry to become more transparent and accountable to the public.**

Healthcare providers have been addressing similar demands for transparency. Specifically hospitals are struggling to determine the most appropriate media for disclosure of quality assurance activities and patient safety data including medication errors.

**LIMITATIONS OR POTENTIAL NEGATIVE IMPACTS OF REGISTRIES**

1. **Registries do not – and are not intended to – have a direct effect on patient safety.**

They do not replace Institutional Review Board evaluation of research risks and benefits prior to study initiation, nor do they substitute for the required disclosure and discussion with prospective patients of the risks and benefits of participating in a clinical trial during informed consent. They are not intended to replace data safety monitoring boards.

2. **Registries could have a negative impact on public health if the scope of required studies is not tailored narrowly enough to meet public health objectives.**

The registration of exploratory studies is an important case in point. If exploratory studies, which are not designed or powered to draw any conclusions about the safety or efficacy of a drug for a particular use or condition, were registered, they might give patients unfounded hope in the future benefits of an unproven treatment, or even worse, might potentially cause these patients to forego other, proven treatments. Such a situation would not serve the public interest.

3. **Registering exploratory trials could infringe on the intellectual property rights and proprietary clinical development plans of drug and treatment sponsors.**

These trials are commercially sensitive, often involving new fields of research on unapproved and approved medicines. Disclosure of key information about these trials – sometimes their very existence – could undercut the value of the basic research that supports these trials. It can also undermine competitiveness in an international industry in which many companies closely guard their early phase research to keep pace with or outpace their competitors. In addition, since many of these compounds fail in early development, companies use the data and insights from these programs to
refine backup drug candidates and programs. This learning process, typical of all science, enables pharmaceutical and biotech companies to gain knowledge benefits from its failures in ways that contributes to new product development.

COMPLIANCE

For clinical trials registries to be effective, they need to include adequate detail and to be updated frequently. The registry must also have mechanisms in place – and ways to enforce them – to require companies and drug sponsors to comply with complete registration. Summit participants proposed a number of ways to enhance compliance:

1. **Tie clinical trials registration to Institutional Review Board approval.**

   Since all clinical studies that use human subjects cannot be initiated without prior approval of institutional (or independent) review boards (IRBs), clinical trials registries could make IRB approval contingent upon evidence of trial registration as an effective enforcement mechanism.

   While the main drawback to this approach is that it would place undue administrative burden on an already over-burdened, and in the case of academic institutions under-funded, IRB system, enforcement could be accomplished by placing the burden of proof of trials registration on investigators and sponsors and leaving the IRBs free to refuse approval if such registration cannot be verified. A mechanism, such as centralized IRBs, would also need to be developed to ensure compliance in the case of trial registration for multi-site studies with multiple IRBs.

   Monitoring the appropriate updating of registry information presents a more difficult challenge. Criteria for updating should be straightforward and only include information essential to maintaining informed patient access to clinical trials (such as changes in termination date, enrollment criteria, location of trials, etc.) with the timing and format of mandatory updates as simple and automatic as feasible (such as timed electronic prompts for updates to both sponsors and communication to IRBs regarding whether the update requirement has been met). Electronic notification that a sponsor has failed to update the registry in a timely fashion could initiate suspension of IRB approval.

2. **Withhold funding for NIH-sponsored clinical trials.**

   As with IRB oversight, the federal administrative burden of monitoring timely registry updates would need to be considered. In addition, issues of fairness might be raised since withholding of NIH funds would only affect federally sponsored, but not industry sponsored research.
3. **Require companies or drug sponsors to pay civil monetary penalties (e.g., $10,000.00 a day for sponsors) for failure to comply.**

Funds collected from non-complying companies could support government-sponsored clinical trials. Sanctions against companies failing to comply ought to be proportionate with their market presence, so that small PhRMA or biotech companies do not pay the same fines as major pharmaceutical industry players or private and government supported institutions.

**HARMONIZATION OF STATE, FEDERAL AND WORLDWIDE INITIATIVES**

Recent events have triggered the promulgation of federal and state legislative proposals, international guidelines, and new association and independent industry registries. Not surprisingly, these newly developed and proposed registries differ in scope of disease/disorder, phase of research, content and format, coupling with results databases, and compliance mechanisms. These different registries and guidelines have the potential to create confusion among patients, practitioners, investigators, sponsors, and institutional review boards (IRBs) as to which registries are most appropriate to their mission and whether each clinical trial must be posted on all registries.

Given the rapid increase, diversity, and in some cases overly broad language of proposed state legislation calling for mandatory registries, the general consensus among Summit stakeholders was that federal legislation would create clear, uniform standards at the national level of benefit to the public and to the industry, as long as it does not put U.S. companies at a competitive disadvantage globally.

On the global level, there are currently over 300 registries internationally. Some registries in countries like France, Italy, Spain, and the Netherlands contain confidentiality protections. In April 2005, the World Health Organization (WHO) proposed international standards for registries and serving as a global portal to other links. Similarly, the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA along with PhRMA, European Federation of Pharmaceutical Industries and Associations (EFPIA) and the Japanese Pharmaceutical Manufacturers Association (JPMA) have developed a Joint Position Paper recommending the creation of a set of global principles for a voluntary registry and database. Being able to enforce compliance is a primary factor in considering if a voluntary global registry and database can be effective.

Given the complexity of issues and the rapid and still evolving emergence of voluntary registries, Summit stakeholders were wary of hastily crafted federal or state legislation. The Summit stakeholder consensus was that Congress should consider having Health and Human Services conduct a feasibility study to assess the pros and cons of developing a mandatory registry.
II. CLINICAL TRIALS RESULTS DATABASES

GOALS AND OBJECTIVES

1. Enhance the timely communication of evidence-based healthcare by providing physicians with information about clinical trials (positive, negative, neutral, failed) to make informed treatment decisions.

Unlike registries, the major purpose of results databases is not to increase patient access to clinical trials, but to help healthcare providers and patients keep pace with rapid advances in product efficacy and safety knowledge regarding old and new products.

Results databases can enhance patient care by insuring that all clinical trial results are available to practitioners in a comprehensive, objective and unbiased manner.

2. Improve scientific and peer review of reports submitted for publication.

By making accessible for critical analyses data from previous studies that have failed or produced equivocal results or data contradictory to the report submitted for review, results databases can help journal editors and scientific reviewers correct against positive results publication bias and reduce the degree to which product efficacy is over-estimated.

INFORMATION RESULTS DATABASES NEED TO MEET GOALS

As with registries, the extent to which clinical trials results databases can meet these ambitious goals depends in part on the breadth of results they publish: the scope of diseases/conditions, the range of products (pharmaceuticals, biologics, and medical devices), the objective of the study (exploratory or confirmatory) and the efficacy of a pre-market product or new uses for products already on the market.

This raises questions about the healthcare value of results databases for
   a) Exploratory studies designed to only generate signals of safety and efficacy that must be confirmed in larger, well-controlled studies;
   b) Studies of products that never reach market; or
   c) Studies that have design flaws (sampling problems, poor design) that invalidate any interpretation of results.

Not all clinical research data is of equal value to the public and medical community in assessing safety and efficacy. Scientific understanding of the value and limitations of any study depends upon highly technical descriptions of the study population, product composition, variations in measurements, distinctions between surrogate and outcome measures, choice of statistical analyses, and interpretation of results. Summit
stakeholders strongly agreed that minimal or questionable healthcare value is realized when patients and practitioners lack the expertise to interpret results.

**Filtering Good Studies from Poor Ones**
Currently data is filtered and interpreted through the FDA and peer review journals. The adequacy of these filtering systems have been questioned with respect to transparency and product safety. However, this raises the risk that dissemination of results without the benefit of these expert filters will result in a more misinformed public. How will general practitioners and patients be able to distinguish among implications of well-controlled statistically significant studies and studies that end prematurely for various reasons (low recruitment; a new product is introduced on the market; data from another trial suggests a change in research design) or for which the data should be judged as invalid because of an unanticipated problem in trial design or data collection?

**Serving Diverse Audiences**
Results databases are aimed at diverse audiences including federal regulators, scientists, healthcare practitioners, patients, and the general public. Consequently, consideration must be given to the format, language, and level of detail by which these data are presented and whether these diverse audiences would be equally served by a single format. Some Summit participants suggested that to serve these diverse audiences requires multiple sites differing in level of detail, raising questions of administrative burden for any federal or industry site taking on results database responsibilities. Some have also suggested the multiple sites require limits on the audience who would have access to the site with greatest level of detail available to scientists and regulators exclusively. Such a model, GemCRIS, has been adopted in some genetics/genomics research. However, such a protectionist approach might work against the call for transparency and raise public skepticism rather than renew public trust.

**Posting Raw vs. Summary Data**
The extent to which raw data, rather than summary data, should be posted has also raised concerns regarding public relevance and privacy violations. For example, decisions regarding the level of detail required for results databases can also have implications for participant privacy concerns. When studies are conducted on rare diseases in samples of relatively small size, details of participant characteristics (age, ethnicity, gender, hospital at which the study is conducted, nature of disease) may sometimes compromise participant privacy and confidentiality.

As to intellectual property, there are rules in the U.S., Europe and other countries that allow generic manufacturers and other applicants to obtain approval through abridged procedures by referencing safety and efficacy data in the public domain (in the U.S., these are called “505(b)(2)” applications). To the extent that raw data or full study reports are included in the database, these results could be used as a basis for such applications thereby significantly compromising regulatory exclusivity for marketing authorization holders.
**INTERPRETIVE SUMMARIES**
Recently proposed state and federal actions have called for “non-promotional” language in results postings. These proposals typically prohibit providing “conclusions” about the implications of the results in terms of product efficacy and relevance to treatment decisions. Stakeholders raised some serious questions:

- Will the absence of interpretive summaries diminish the usefulness of results databases for consumers and general practitioners?
- For example, might any data posted on a website be construed as support for the product tested?
- Are such public misimpressions more likely if data presented in the absence of interpretation are posted on a government sponsored versus an industry website?

**UPDATING AND MONITORING**
To have ongoing effectiveness, results databases will need to be constantly evaluated to determine if they are fulfilling their original purpose, and if the public understands the differences: (1) among results of a trial posted on a government or industry website, published in a peer-reviewed publication, and those reviewed and approved by the FDA; (2) between surrogate measures and treatment outcome measures; and (3) validity of different study designs (such as results from a trial terminated because of sampling problems, subject attrition, or poor design).

**BENEFITS OF RESULTS DATABASES**
Summit stakeholders generally agreed that results databases:

1. **Can increase public health treatment and safety through timely communication of evidence-based medical information.**

2. **Enhance public trust in health product research and development by providing greater industry accountability and transparency.**

3. **Can advance health science by providing a more comprehensive body of negative and equivocal trial results upon which the relevance of published studies can be evaluated.**

   In addition, safety data from a broader array of unpublished studies can help investigators, sponsors, IRBs, and prospective participants better assess the risk of adverse events beginning with the design stage of new clinical trials and through the ethical review approval process.

**LIMITATIONS OR POTENTIAL NEGATIVE IMPACTS OF RESULTS DATABASES**

1. **Results databases do not replace – and should not be seen as a replacement – for federal, scientific, and IRB review of the potential benefits and risks of research participation in individual clinical trials nor as a replacement for expert safety and data monitoring of trials during the course of a study.**
Evaluating the significance of adverse participant reactions in a clinical trial requires an understanding of many factors: the overall health status of the participant population, the types of side effects that were or were not anticipated during the design of the study, the seriousness of an adverse event in terms of immediate and long-term participant health, the extent to which the event has a clear causal relationship to the product under investigation, and statistical power necessary to draw conclusions regarding causal relationships. If investigators provide updated tables or summaries of adverse events without a larger context, they may lead to unmerited public or health provider concern about the safety or risk of medical products awaiting FDA approval or already on the market.

2. **Posting data from exploratory studies may not benefit public health and could hamper competition.**

Since many exploratory studies are not designed or statistically powered to draw firm conclusions regarding product efficacy, healthcare providers might inappropriately base treatment decisions on results that appear on a database without the benefit of a full body of studies. While an educated public is essential to the advancement of public health, wide dissemination of exploratory results from small scale studies (at least without sufficient accompanying interpretation) may unnecessarily build false hope for patients, lead them to abandon standard treatments and seek new treatments based on weak preliminary findings. It may also exert pressure on the FDA to approve products prematurely.

Regarding intellectual property and competition, companies have expressed concern about the posting of information on unapproved compounds that never make it to the market, and on exploratory studies that are not designed to provide firm evidence of safety and efficacy. The posting of pre-market product trial results related to effectiveness could reveal analyses or end points derived from intensive negotiation with the FDA and international regulatory authorities. This information can be competitively valuable and may occur over an extended period of time. If other companies glean information about these initial efforts, it may hurt investor return and discourage research funding. In addition, there is little public health benefit in publishing efficacy results of trials with products that are not or may not ever make it to market.

3. **Results databases could exert unintended pressure on the cost of healthcare.**

Impacts on cost are a rarely discussed but important issue. Summit stakeholders raised several questions that need to be addressed:

- How will health insurance plans react to results databases?
- Will a single study indicating a negative result of a post-market product discourage healthcare plans from covering this form of treatment?
- Depending on the model adopted, will administrative resources required to maintain and monitor results databases increase the costs of healthcare products?
4. **Unfiltered posting of trial results in databases may hamper further innovation.**

Some Summit stakeholders argued that drug sponsors have an ethical obligation to trials participants to publish results from successful and non-successful trials because informed consent forms often indicated that a study would contribute to medical knowledge. Others noted that public availability of negative findings will strengthen the scientific process, by discouraging other investigators from taking what may be a futile investigatory path.

Both positions have merit, but continued discussion indicated they rest on an incomplete view of the scientific process. First, in any systematic program of research, a failed study contributes to the hypotheses, design and evaluation of studies that follow. Thus, whether or not investigators publish the results of a preliminary or failed study, participants have contributed to a knowledge base that will affect the future direction of that research program. Second, a cornerstone of science is replicability within and outside the laboratory in which a study was originally conducted. Just as discouraging replication of studies demonstrating product effectiveness is not desirable, neither is discouraging independent trials on an approach that has seemingly failed in another laboratory.

5. **Physicians and hospitals may not have the time or resources to interpret unfiltered database results.**

Physicians and hospitals often are caught in the middle between conflicting research reports and the delivery of new treatments to patients. Physicians already feel enormous pressure to prescribe new medications about which they do not feel sufficiently informed and hospitals are under constant pressure to adopt new and costly medical technology that may be quickly antiquated during periods of rapid biotechnological innovation. Database results posted in an unfiltered format, as opposed to the current data model where results are analyzed and interpreted through the regulatory agencies and peer review processes, could increase this pressure.

Another concern is whether physicians have the time and knowledge to use and interpret the databases, especially if the database contains extensive reporting of results on unapproved compounds or too much information presented in a complex format. Investigators ascertain the adequacy of a medical product over a series of clinical trials, with proof of replicability of successful trials a cornerstone of scientific acceptance of results. Pressures for physicians to modify prescribing based on currently posted studies that have or have not been subjected to peer review and regulatory interpretation may lead to prematurely withdrawing patients from useful treatment regimens or prescribing a new use of a product already on the market, based upon a single un-replicated study. Some legislative proposals, such as the FACT Act 2005, seek to limit such negative consequences by requiring prominent display of a statement indicating when trials are assessing the safety, effectiveness or benefit of a use not described in the approved labeling for the drug, biological product or device.
6. Unreasonable demands for new treatments might increase medical malpractice and healthcare costs.

Expecting healthcare providers to incorporate database knowledge into their practice in a timely manner may also create an unreasonable demand of a medical standard that leads to an increase in malpractice suits. If the American Medical Association and other such organizations indicate that accessing these data are necessary to make informed prescribing decisions, the review of results from these databases may create a new “standard of care” for practitioners, hospitals, and health insurance organizations in malpractice cases. At minimum, plaintiff lawyers cross-examining practitioner defendants or medical experts could draw upon an unlimited body of data, much of which may not be applicable to practice, to challenge witness credibility, with a resulting negative impact on medical malpractice insurance rates.

7. Results databases could affect purchasing decisions of healthcare providers.

Summit stakeholders considered the relationship of clinical trials results databases to product use and purchase. What if, for example, preliminary results reported in a database supporting less costly products discourage hospitals from purchasing a proven but more expensive device? Might healthcare insurers pressure physicians to switch to less costly medications on the basis of preliminary trials posted on a results database? Stakeholders were concerned that the posting of safety data in an unfiltered format could increase professional liability insurance for certain medical specializations.

8. Failure to post results could be construed as fraud or negligence.

Another concern is that product liability actions could be more frequent if the failure to publicize information posted on a results database is argued as a fraudulent or negligent act. At the same time, manufacturers who do publicize preliminary product findings posted on mandatory databases might be accused of fraudulently promoting an insufficiently tested product. Product manufacturers may have to carry Errors and Omissions (E&O) insurance to cover this type of exposure, and the products liability premiums could be adversely affected.

9. Posting of results on databases may create undue investor hype.

Stakeholders expressed concern that mandatory posting of clinical trials results databases could put companies at risk of violating Securities and Exchange Commission Rules by providing “forward-looking statements” as defined in the Private Securities Litigation Reform Act of 1995 that hype a drug under FDA review. If a company has several different studies running and posts positive results from the first one completed and then completes a second study that does not support the first, the company might well be accused of misleading investors.
10. Results databases, in any form, are not a panacea for safety monitoring of commercially available products.

Some adverse side effects of a product may not emerge in well-controlled clinical trials in which patient inclusion and exclusion criteria are carefully adhered to. As in the case of the COX-2 inhibitors, safety concerns may not be apparent until a product is studied for use in a patient population with a disorder different from the disorder for which the product was originally approved, until practitioners have prescribed it to a wider heterogeneous population, or until consequences of minor or major misuses of the product come to light. Companies need to establish streamlined two-way communication channels with practitioners and need to take steps to encourage and facilitate physician reporting of serious, unanticipated, and significant adverse events in everyday practice. Companies also need to work on a more timely process for evaluating safety data across multiple independent trials in multiple sites across the globe.

COMPLIANCE

Legislators and other governing bodies have called for mandatory compliance mechanisms in both the U.S. and U.K.

PROPOSED FACT ACT
As currently proposed, the FACT Act 2005 would base eligibility to receive an HHS grant, contract or cooperative agreement on written certification that results would be (or have been) entered into a database. Failure to comply would result in a series of pre-determined timed communications between HHS and the investigator that could ultimately lead to public notice of “failure to comply.” Non-compliance could also result in daily civil monetary penalties of $10,000. The FACT Act has attempted to address equity regarding economic burden of such fines by including a waiver for non-profit entities. However, inequities of economic burden among large and smaller pharmaceutical, biotech, and other for profit companies are still a concern. Stakeholders also raised issues of fairness, since withholding of NIH funds would only affect federally sponsored, but not industry sponsored, research.

The U.K. Labour Party’s election manifesto called for mandatory publication or posting of all clinical trials, including potentially adverse side effects, as a condition for obtaining a U.K. marketing license for new drugs.

If a mandatory U.S. results database were put into effect, linked by a unique identifier to an expanded www.clinicaltrials.gov, it could follow a model used in some European countries: at trial initiation, design details (and protocol amendments when appropriate) are submitted to a database (ICH E3 template form) and blinded until the product is commercially available. Summaries of results for studies of pre-market products may follow a similar procedure. The rationale for the pre-market approval blind is that public health may not be advanced through knowledge of non-commercial products. However, an investigator or sponsor could also give permission for the blind to be broken that would provide access to all related studies when a paper was submitted for peer review. It is also important to consider whether agencies that are subject to freedom of information
law may maintain information in such a “blind” without further legislative adjustments. Within such a model there would have to be criteria for the posting of safety data from preliminary trials that would have a significant impact on the safety of research participants or on treatment decisions for commercially available products.

Monitoring of compliance and auditing the accuracy of postings will be an administrative challenge for either mandatory or voluntary clinical trials results databases. The nature of detail and frequency of database updates would need to be considered to ensure completeness and accuracy of information as well as fairness, administrative cost-effectiveness, and public benefit. To verify database information, should regulators or independent auditors have limited or unlimited access to sponsor records? Federal mandatory models have recommended that the FDA or other regulatory body have the authority to correct false or misleading statements. For voluntary databases, some have suggested use of a third-party auditor. Ways of assuring and determining the continued independence of third-party auditors will need to be explored.

One advantage of a national regulatory model or voluntary international portal such as that proposed by the World Health Organization would be an easily accessible centralized standardized database with links to trial registration.

**Harmonization of State, Federal and Worldwide Initiatives**

Clinical research on drugs, biologics, and medical devices is a multi-site, multi-state, global enterprise that requires a solution that is at once national and global. Any mandatory or voluntary clinical trials results database will have to consider implications for harmonization across government and private sponsors, state and federal legislation, global and national studies, and products that are approved or commercially available in some but not all countries.

For example, the 2005 FACT proposes that foreign trials submitted to the FDA or used in advertising to U.S. physicians adhere to the same registry and results database requirements. Given the challenges to intellectual property and competitiveness, adoption of a results database system in the U.S. would need to evaluate whether information requirements would place U.S. based companies at a competitive disadvantage. If multiple registries will fulfill mandatory or voluntary database models, there would be a need to consistently monitor and update a dynamic listing of approved databases.

The Joint Position Paper of the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) along with PhRMA, the European Federation of Pharmaceutical Industries and Associations (EFPIA) and the Japanese Pharmaceutical Manufacturers Association (JPMA) recommends creating a set of global principles for a voluntary results database linked to a clinical trials registry. Any database that would meet the principles outlined in the paper should serve as a repository for the results of all hypothesis testing clinical trials on a drug approved for marketing and that is commercially available in at least one country, regardless of outcome; with results from exploratory trials disclosed if they are deemed to have significant medical importance and may have an impact on a marketed product’s labeling. Within one year after the drug is
first approved and commercially available, a link or citation should be provided for studies published in a peer-reviewed journal and a non-promotional summary, such as the ICH E-3 format is to be used to post unpublished results (note as an aside, that with an extension such posting could compromise publication in a peer-reviewed medical journal or contravene national laws or regulations). Finally, the paper encourages companies to make public how they will adhere to the standards.
III. CONCLUSIONS AND RECOMMENDATIONS

1. Expand www.clinicaltrials.gov to provide a national uniform standard for trial registries that can encourage harmonization with current state, industry and international efforts.

- Recent legislative proposals at the federal and state levels recommend requiring sponsors of bio-pharmaceutical research to register the initiation of clinical trials on a public registry. The FACT Act of 2005 sponsored by Senators Charles Grassley (R-IA) and Christopher Dodd (D-CT) recommends expanding www.clinicaltrials.gov to give patients and physicians access to information about a broader range of clinical studies. These proposals, which advocate including in the registry a wider array of diseases and health products meets the needs and concerns of the healthcare community.

- Summit stakeholders generally agreed that expanding www.clinicaltrials.gov would enhance public health by providing patients and physicians with easy to understand and timely access to information about ongoing clinical trials on a national level. It would increase transparency and accountability necessary to correct for publication bias and re-establish public trust in the publication of medical results. At the same time, limiting information to clinically relevant studies currently required on the government site would protect industry trade secrets and intellectual property, thereby helping to sustain and encourage a viable and competitive health products industry. In addition, expanding the current format of www.clinicaltrials.gov would be cost-effective in that individual sponsors can enter the data directly.

- Given the rapid increase, diversity, and in some cases overly broad language of proposed state legislation calling for mandatory registries, the general consensus among Summit stakeholders was that federal legislation would create clear, uniform standards at the national level of benefit to the public and to the industry, as long as it does not put U.S. companies at a competitive disadvantage globally.

- In addition, depending upon the number of diseases/disorders for which products are being developed, a government-sponsored mandatory registry may need to develop inclusion and exclusion disease/disorder criteria. Such criteria may well meet with objection from excluded patient groups.

- Use of institutional review boards (IRBs) to ensure registry compliance is a practical step as long as it does not burden already under-funded and over-worked IRBs. An efficient and effective approach is to have sponsors/investigators responsible for submitting their study to the registry and providing documentation of the registry to the IRB. IRB approval to initiate the research would be contingent on this documentation.
2. Provide links on www.clinicaltrials.gov to summaries of completed clinical trials and link results databases to it in a way that is transparent and informative for practitioners, enhances patient health and protects industry proprietary information.

- Practitioners and the public are best served when the results of clinical trials are filtered through the publication peer-review process or FDA review and approval. Premature public posting of individual studies viewed outside the context of a body of replicated research risks may encourage practitioner treatment decisions based upon inadequate and incomplete information.

- Companies have expressed concern that posting information on unapproved compounds and particularly exploratory studies could erode important intellectual property protections, thereby diminishing incentives to invest in new therapies and novel indications for existing medicines.

- Some legislation has recommended also requiring that sponsors provide “non-promotional” summaries of studies that would not qualify for publication as well as those that would. Extended national and international discussion of the nature of these summaries is critical to avoid a legal morass where failure of sponsors to adequately interpret the meaning of the results could be construed as fraud or negligence and too much interpretation might be criticized as creating undue investor hype.

3. Conduct further study to consider if, in increasing the types of studies registered on www.clinicaltrials.gov and mandating posting of clinical trials results serves the interests of those who conduct a broad range of biomedical clinical research and is in harmonization across government and private sponsors, state and federal legislation, and global and national studies.

- Greater transparency and accountability are important, but so, too, is protection of industry’s proprietary intellectual property and the health of U.S. based companies in the highly competitive global market. More national conversation is needed to determine if proposed registries and databases adequately serve companies who conduct trials globally, including those not subject to U.S. regulations.

- Summit participants discussed the merits of creating a ‘blind’ data repository, where sponsors would record all clinically relevant trial data results, but the information would not be made public until a paper was submitted for peer review or had obtained FDA approval. This approach would ensure the transparency of tamper-proof results of clinical trials for products that become available to patients and at the same time protect the data from premature competitive scrutiny.
4. **Public drug registries and clinical trial databases are not a panacea for monitoring the safety of commercially available products.**

- Timely and transparent reporting of clinical trials results is essential to effective healthcare decision-making and consumer confidence in the healthcare industry. The drug companies must take a leadership role, showing greater willingness to engage with other players. But it is not their responsibility alone. Doctors and hospitals must also step up to the plate, providing timely information from the field. An active post-market monitoring interface among industry, government and the examining room is essential to long-term understanding of how medical products benefit or adversely affect the public.
Fordham University
Center for Ethics Education Summit
Clinical Trials Registries: Responsible Policies & Public Access
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**D-CO Member of the House Energy and Commerce Committee**
Democratic Floor Whip Diana DeGette is a fourth generation Coloradan. She began her first term in Congress in 1997 and was sworn in to serve her fourth term in January 2003. She has served on the House Energy & Commerce Committee, an exclusive congressional committee with vast jurisdiction over healthcare, trade, business, technology, and consumer protection, since her first term. In 2003, Rep. DeGette was named to a leadership post as the Democratic Floor Whip. In addition, she is the co-chair of the Congressional Diabetes Caucus, the largest congressional member caucus, and the Bipartisan Congressional Pro-Choice Caucus. As a member of the Oversight and Investigation Subcommittee, Rep. DeGette has been a leader on a variety of investigations, including corporate wrongdoing, National Institutes of Health ethics guidelines, and the safety of the diet supplement ephedra. She established a national reputation as a leader on corporate accountability issues during her committee's investigation of Enron, Arthur Andersen, and other companies embroiled in the accounting scandals. As a result of these investigations, Rep. DeGette sponsored legislation which would establish tough new accounting and auditing standards.

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**Acting Assistant Secretary for Health, U.S. Department of Health and Human Services (HHS)**
Dr. Cristina V. Beato joined the Department of Health and Human Services in the fall of 2001 as deputy assistant secretary for health and was later promoted to principal deputy assistant secretary for health. President Bush nominated her to be assistant secretary for health on July 30, 2003, and she awaits confirmation from the U.S. Senate. In her current capacity as the acting assistant secretary for health, HHS, Dr. Beato serves as the principal advisor on health policy and medical and scientific matters to the Secretary of HHS, oversees the Office of Public Health and Science, supervises related programs, and activities within the Department. In addition, she is a rear admiral in the U.S. Public Health Service Commissioned Corps.

Dr. Beato is focused on leading the Department’s efforts to reduce health disparities, combat HIV/AIDS, encourage prevention strategies for reducing chronic diseases, and advance women’s health. She is a spokesperson for HHS and has been actively involved in the Department’s efforts to encourage immunizations, increase preparedness for public health emergencies, promote research integrity and ethics, and establish a women’s hospital in Afghanistan.

Board certified in family medicine, Dr. Beato has dedicated her professional life to improving the health and well-being of individuals, families, and communities. She received her undergraduate and medical education at the University of New Mexico (UNM), where she later served as a member of the UNM School of Medicine faculty, the associate dean for clinical affairs, and chief medical officer of the UNM Hospital System.
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