**Objective**

To characterize the types of sponsor-principal investigator (PI) results disclosure restrictions reported to ClinicalTrials.gov (as required by law) to improve the existing categorization scheme.

**Introduction**

Concern about undisclosed conflicts of interest and associated withholding of trial data is growing. An FDA Amendments Act (FDAAA)[1] provision mandating public disclosure of agreements that restrict the PI’s ability to disclose results became effective on September 27, 2008. As part of its implementation of this provision of FDAAA, ClinicalTrials.gov includes categories regarding sponsor review and embargoes (see Figure), which are based on published reports of survey of trial sponsors and organizations that conduct trials[2]. These “default” embargo categories address agreements where sponsors can only review results communications during the embargo period but cannot require any changes or extensions. If the categories do not apply, “Other” can be selected and an optional 500-character text field may be used to describe the agreement, such as provisions allowing the sponsor to require changes, ban the communication, or extend an embargo.

**Figure.** Algorithm for Characterizing Restrictions and Sample Display at ClinicalTrials.gov

- **Certain Agreements:** Principal Investigators are not employed by the sponsor or its agents that restricts the PI’s rights to disclose or publish trial results after the trial is completed.
- **Extension Agreement:** The right disclosure restriction on the PI that the sponsor can review results communications prior to public release and can embargo communications regarding results for a period that is more than 30 days but less than or equal to 90 days.
- **Embargo Agreement:** The right disclosure restriction on the PI that the sponsor can review results communications prior to public release and can embargo communications regarding results for a period that is more than 30 days but less than or equal to 90 days.
- **Other** Agreement that restricts the right of the PI to discuss or publish trial results after the trial is completed.

**Table 1. Schematic of Restrictions by Funder and Study Phase (8/17/09)**

<table>
<thead>
<tr>
<th>PI Employed by Sponsor</th>
<th>No Disclosure Restrictions</th>
<th>Type of Disclosure Agreement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Sponsor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry</td>
<td>97</td>
<td>35</td>
<td>132</td>
</tr>
<tr>
<td>Non-Industry</td>
<td>18</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td><strong>Study Type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observational</td>
<td>9</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Interventional</td>
<td>70</td>
<td>29</td>
<td>99</td>
</tr>
<tr>
<td>Phase 1 – 2</td>
<td>16</td>
<td>24</td>
<td>40</td>
</tr>
<tr>
<td>Phase 3 – 4</td>
<td>47</td>
<td>52</td>
<td>100</td>
</tr>
<tr>
<td>N/A</td>
<td>17</td>
<td>23</td>
<td>40</td>
</tr>
</tbody>
</table>

*No descriptive text was provided for “Other” Disclosure Agreement Types*

**Within the “Other” category,** the following were addressed (see Table 2):

1. **After Multi-Site Results Disclosure** – Sponsor-prohibited disclosure of study results until the multi-site study results are disclosed (153/555), including those permitting disclosure by the PI if no publication occurs within a particular time limit after study completion (68/153),
2. **Control of Content** – The rights of a sponsor to review, edit, or approve communications (298/308),
3. **Embargo with Content Restrictions** – Sponsor-imposed embargo for a specific period of time in conjunction with other “control of content” restrictions (182/308)

In general, sponsors used consistent, standardized text for their entries.

**Results**

Overall, of the 513 studies for which PIs were not employees of the sponsor, 419 (81%) indicated a restriction (see Table 1):

- 35 (8%) impose embargoes ≤60 days,
- 72 (17%) impose embargoes >60 days and ≤180 days, and
- 308 (74%) described “Other” restrictions.

Across all restricted studies, the majority (405/415) were sponsored by Industry. Of the 396 “interventional” studies reporting restrictions, there were 24 (27%) phase 1-2 trials and 42 (47%) phase 3-4 trials.

Of the unrestricted studies, the majority (67/98) were non-Industry-sponsored. Among the 80 “interventional” studies, there were 24 (27%) phase 1-2 trials and 42 (47%) phase 3-4 trials.

**Discussion**

Of the studies with sponsor-imposed restrictions on results disclosure, 74% (308/415) were not captured by existing embargo categories at ClinicalTrials.gov.

Limitations of this analysis relate to both the sponsor-provided text describing “Other” disclosure agreements as well as the categories to which we assigned this text. For example, non-specific language was difficult to code accurately and restrictions specified infrequently in the sample (e.g., interim results, press releases) were not captured by our categories. Despite these limitations, our analysis suggests that additional categories would more accurately reflect common restrictions.

**Conclusion**

Developing and implementing additional categories of disclosure restrictions could enhance transparency by providing consistent, comprehensive descriptions common to sponsor-PI agreements.

**Background on ClinicalTrials.gov**

- Largest public (NIH-funded) registry with 78,000 interventional and observational clinical research studies
- Results reporting required by law—as of September 27, 2008[1]
- Online submission of summary results: interactive and batch upload
- Public access to “basic results,” of certain clinical trials

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