ClinicalTrials.gov **Submitting Results to** ClinicalTrials.gov (including some Practical Helpful Hints) Heather Dobbins, PhD Lead Results Analyst, ClinicalTrials.gov National Library of Medicine, NIH May 2013 NIH) (L http://ClinicalTrials.gov Disclaimer! In this presentation, I may paraphrase or talk about FDAAA 801, but this is not meant to be legal advice and should not be interpreted as such. Information about FDAMA 113 and FDAAA 801 can be found on ClinicalTrials.gov and legal council should be sought from other appropriate sources. ClinicalTrials.gov **Background**

ClinicalTrials.gov Brief Timeline

- · 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 database

Why the need for a public database?

- Give patients access to information about clinical trials
- · Reduce/eliminate publication bias
- Publically acknowledge all prespecified outcome measures
- Publically display any changes made to a trial protocol that could affect the interpretation of the findings
 - e.g., changes to prespecified outcome measures

Why should trials register and report results?

- · Human Subjects and Public Health Benefits
 - Allows potential participants to find studies
 - Access to trial results influences medical decisions
 - Assists ethical review boards and others to evaluate studies (e.g., harms, benefits, redundancy)
 - Promote fulfillment of ethical responsibility to human volunteers all research contributes to medical knowledge
- · Scientific Research Integrity
 - Increasing transparency creates trust in research enterprise
 - Disclosure of protocol changes allows for contextualized interpretation of results
 - Keeping the existence of trials and their results hidden impedes scientific progress
 - Promotes more efficient allocation of resources

...and did we mention?

- FDAAA 801 enforcement provisions
 - Notices of non-compliance
 - Civil monetary penalties up to \$10,000/day
 - Withholding of NIH grant funds
- · the ability to publish research
 - ICMJE policy

Registering and Submitting Results to ClinicalTrials.gov

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Which studies? Who is supposed to register and submit results?

- Applicable Clinical Trials*
 - Interventional studies of drugs, biologics & devices
 - Not Phase 1 (drugs/biologics), not small feasibility (devices)
 - US FDA jurisdiction (e.g., IND/IDE or US site)
 - ACTs initiated on or after 9/27/07 or if initiated after 09/27/07, "ongoing" as of 12/26/07
- · Responsible Party*
 - Sponsor [only one per trial]
 - Sponsor may designate the Principal Investigator (PI) [only one per trial]

 $\underline{\ \ ^* http://prsinfo.clinicaltrials.gov/ElaborationsOnDefinitions.pdf}$

When do I register and submit results?

- · When to register
 - FDAAA 801: No later than 21 days after the first participant is enrolled
 - ICMJE: before the first participant is enrolled
- · When to submit results
 - FDAAA 801: Generally, submission within 12 months of Primary Completion Date (the date that the final subject was examined or received an intervention for the purposes of final collection of data for the primary outcome) or use official mechanisms for Delayed Submission of Results

ClinicalTrials.gov A serve of the U.S. rations installed of reads Concerting by country last 15,575 stades with localizer in a region and reads detailed under an od and the world. Learn more shoot discolor than the concerting the concerting for the concerting the concerting for the concerting for







What results do I submit?

- · Participant Flow
- Baseline and Demographic Characteristics
- · Outcome Measures
- Adverse Events (summary data)
- · Other Information
 - "Certain Agreements" related to Restrictions on Results Disclosure
 - Overall Limitations and Caveats
 - Results Point of Contact

Helpful Hint: Use the Simple Results Templates (On ClinicalTrials.gov, under Submit Studies, Support Materials) to organize your information before starting PRS data entry

Basic Results: Data Elements

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

ClinicalTrials.gov "Basic Results" Data Element Definitions (DRAFT)

Required by ClinicalTrials gov

[6] Conditionally required by ClinicalTrials gov

(PDAAA) May be required to comply with US Public Law 110-85, Section 801

Go to ClinicalTrials.gov

- → Submit Studies
- → Support Materials
- → Protocol Registration System (PRS) Information
- → Data Element Definitions

Participant Flow

"A table ..., including the number of patients who dropped out of the clinical trial and the number of patients excluded from the analysis, if any."

[Sec. 282(j)(3)(C)(i)]

8231 Patients and to double-bib population; 4305 Wave in di 4326 Wave in pl	reactif and distinct atoms of phase (subfer) statements group states group		
	100 () 2 (%) Year on chicked 3. We are in placing group 3. We are in placing group 3. We are in placing group 3. We are in placed group 4. We are in placed group 5. We are in placed group 6. We are in placed group 7. We are in placed group 7. We are in placed group 7. We are in placed group 8. We are in placed group 9. We are in placed group 1. We are in pl		
8122 (96.7%) War 409) Wars in 6	Participant Flow: Overall Study	Placebo	Dutasteride 0.5 mg
ACF3 Ware to pl			
	STARTED	4126	4105
HS (17.2%) Had no bupty 744 West in delaterated group	COMPLETED	2915	2912
645 West in placebo group	NOT COMPLETED	1211	1193
	Adverse Event	282	364
6608 (98. 324- 336-	Withdrawal by Subject	377	361
Biophy 244 244 255 Biophy	Lost to Follow-up	123	113
3181 3291	Protocol Violation	104	95
	Diagnosed with Prostate Cancer	202	166
	Listed as "Other" on Case Report Form	98	60
	Missing	25	34

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O	

What if I have a complicated Participant Flow?

Helpful Hints: The number of Arm/Groups is generally equal to the number of "experiences" to which a participant could be randomized/assigned. (e.g., number of sequences in a crossover, number of interventions in a parallel study, number of doses in a dose escalation, etc.) Although, this can be a little more nuanced if you have multiple randomizations/assignments.

We have some study design examples on ClinicalTrials.gov under

- → Submit Studies
- → Training Materials
- → Results Database Train-the-Trainer Workshop
- → Example Studies for Results Data Entry

OR email us: register@clinicaltrials.gov

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Some Participant Flow Data Elements of Note

Period(s

Definition: Discrete stages of a clinical trial during which numbers of participants at specific significant events or points of time are reported. If only one period, use *Overall Study* for "Period Title."

Milestone(s)

Definition: Specific events or time points in the trial when the numbers of participants are reported. While there is no limit to the number of milestones that may be used in a single period, data are required for two milestones, STARTED and COMPLETED, within each period.

From ClinicalTrials.gov "Basic Results" Data Elements Definitions (DRAFT)

Baseline Measures

"A table of the demographic and baseline data collected overall and for each arm of the clinical trial..."

[Sec. 282(j)(3)(C)(i)]

Characteristic Age — yr	Total Dutasteride (N = 8231) (N = 4105)	Placebo (N=4126)		
Mean				
Range	Baseline Measures			
Race or ethnic group — no. (%) †		Placebo	Dutasteride 0.5 mg	Total
White	-		- attactoriae ole mg	1014
Black	Number of Participants	4126	4105	8231
Asian	[units: participants]	4120	4103	0231
American Hispanic				
Other	Age			
Body-mass index;	[units: years]	62.7 ± 6.08	62.8 ± 6.04	62.8 ± 6.06
Geographic region — no. (%)	Mean ± Standard Deviation			
Europe	Gender			
Canada, United States, and Puerto Rico	[units: participants]			
Other				
Family history of prostate cancer — no. (%)	Female	0	0	0
Prostate-specific antigen	Male	4126	4105	8231
Total — ng/ml	male	4120	4103	0231
Free — %	Race/Ethnicity, Customized			
Prostate volume — ml	[units: participants]			
PSA density§				
Cores at baseline biopsy — no.	White	3747	3744	7491
International Prostate Symptom Score¶	Black	99	91	190
	Asian	67	67	134
	American Hispanic	173	160	333
	Other	39	43	82
	Missing	1	0	1 1

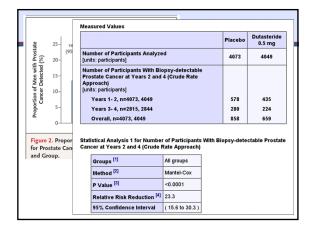
Outcome Measure

"...a table of values for each of the primary and secondary outcome measures for each arm of the clinical trial..."

[Sec. 282(j)(3)(C)(ii)]

Statistical Analysis

"...a table of values for each of the primary and secondary outcome measures..., including the results of scientifically appropriate tests of the statistical significance of such outcome measures." [Sec. 282(j)(3)(C)(ii)]



Which Outcome Measures are required?

Per FDAAA 801: Collected data for all Primary and Secondary Outcome Measures are required to be reported for an Applicable Clinical Trial whether or not the trial was terminated

Helpful Hint: You can include an "Other Pre-specified" Outcome Measure Type in Registration and/or Results, and you can include a "Post-hoc" Outcome Measure Type in Results.

Specific Example: What if a publication includes other Outcome Measures or analyses that were not prespecified?

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Are there any shortcuts for entering data?

Helpful Hints: You can "Copy" any Outcome Measure, and only edit the data elements that are different.

Sometimes it is possible to use Categories to present multiple "rows" of the same type of data.

We have an XML upload feature, and a separate adverse events upload feature.



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Are Statistical Analyses Required	Are	Statistic	al Analys	es Required
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Per FDAAA 801: If the trial is an Applicable Clinical Trial, then you should submit "the results of scientifically appropriate tests of the statistical significance of," Primary and Secondary Outcome Measures

Note: We do not review for compliance! We will post a record without statistical analysis sections, but this is not a determination of compliance or even "good practice".

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Serious Adverse Events

"A table of anticipated and unanticipated serious adverse events grouped by organ system, with number and frequency of such event in each arm of the clinical trial."

[Sec. 282(j)(3)(I)(iii)(I)]

Table 4. Incidence		Placebo	Dutasteride 0.5
GN	Total, serious adverse events		
Event	# participants affected / at risk Blood and lymphatic system disorders	837/4126 (20.29%)	748/4105 (18.225
Any adverse event	Iron deficiency anaemia †A #participants affected / at risk	3/4126 (0.07%)	2/4105 (0.05%)
Any serious advers	Lymphadenopathy †A		
Drug-related adver	# participants affected / at risk	1/4126 (0.02%)	3/4105 (0.07%
Any	Thrombocytopenia ^{† A} # participants affected / at risk	0/4126 (0.00%)	4/4105 (0.10%
Leading to perr tion of t	Anaemia ^{† A} #participants affected / at risk	0/4126 (0.00%)	2/4105 (0.05%)
Occurring in ≥1 either st	Febrile neutropenia ^{† A} # participants affected / at risk	1/4126 (0.02%)	1/4105 (0.02%
Decreased	Leukopenia ^{† A}	0/4126 (0.00%)	2/4105 (0.05%
Loss of libid	# participants affected / at risk	0.4120 (0.00%)	24103 (0.03%)
Erectile dys	Microcytic anaemia ^{† A} # participants affected / at risk	0/4126 (0.00%)	2/4105 (0.05%
Decreased	Splenomegaly †A		
Gynecomas	# participants affected / at risk	0/4126 (0.00%)	2/4105 (0.05%
Death§	Leukocytosis ^{† A} # participants affected / at risk	1/4126 (0.02%)	0/4105 (0.00%
	Spienic haemorrhage ^{† A} #participants affected / at risk	0/4126 (0.00%)	1/4105 (0.02%
	Autoimmune thrombocytopenia ^{†A} # participants affected / at risk	0/4126 (0.00%)	1/4105 (0.02%
	#participants affected / at risk Blood disorder †^ #participants affected / at risk	0/4126 (0.00%)	1/4105 (0.0

Frequent Adverse Events

"A table of anticipated and unanticipated adverse events that are not included in the [Serious Adverse Events] table ... that exceed a frequency of 5 percent within any arm of the clinical trial, grouped by organ system, with number and frequency of such event in each arm of the clinical trial." [Sec. 282(j)(3)(I)(iii)(II)]

Γ	Table 4. Inc	Other Adverse Events		
ŀ	Tuble II IIIe		Placebo	Dutasteride 0.5 mg
l	Event	Total, other (not including serious) adverse events	•	
l		# participants affected / at risk	1151/4126	1296/4105
	Any adverse	Cardiac disorders		
	Any serious	Hypertension †A		
	Drug-relate	# participants affected / at risk	321/4126 (7.78%)	349/4105 (8.50%)
	Any	Infections and infestations		
	Leading t	Nasopharyngitis ^{† A}	288/4126 (6.98%)	313/4105 (7.62%)
	Occurri	# participants affected / at risk	200/4120 (0.90%)	313/4105 (7.02%)
	Deci	Influenza ^{† A} # participants affected / at risk	212/4126 (5.14%)	204/4105 (4.97%)
	Loss	Musculoskeletal and connective tissue disorders		
	Erec	Back pain ^{† A}		
	Deci	# participants affected / at risk	245/4126 (5.94%)	261/4105 (6.36%)
	Gyn	Reproductive system and breast disorders		
	Death§	Erectile dysfunction ^{† A} # participants affected / at risk	363/4126 (8.80%)	494/4105 (12.03%)
		† Indicates events were collected by systematic as: A Term from vocabulary, MedDRA	sessment.	

Why is organ system required?

FDAAA 801 says that both the Serious and Other (Non-Serious) Adverse Events tables should be "grouped by organ system"

Helpful hint: You can upload Adverse Events from a tab delimited spreadsheet (this can be organized using Excel), if you explicitly follow the instructions

Link located in "Adverse Event Overview"

Download or Upload Adverse Events (BETA)

This is the beta version of a feature for downloading and uploading adverse event tables in a Tab Delimited file format.

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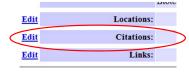
How can I provide more contextual information for adverse events? Helpful Hint: Use the Additional Description free text for the Adverse Event Module and/or Adverse Event Term to provide more information! Specific Example: How do I convey adverse event severity and attribution? Duration of study plus follow-up, approximately 2 years total Safety population includes all participants who received at least one dose. All adverse events are included whether or not they were attributed to the study intervention. Serious Adverse Events Total # participants affected/at risk 0/23 (0%) 1/24 (4.17%) Vascular disorders # participants affected/at risk 0/23 (0%) 1/24 (4.17%) [1] Grade 3 (SBP \geq 180 mmHg or DBP \geq 110 mmHg)

			exan ar to r						ıt
Helpf	ul H	int: Do	a search	on Cli	nical	Trials.go	v!		
			le: How o				Stu	idy with	
Clinical	ITvia	le gov				Example: "Heart atta	ick* ANI	D "Los Angeles"	
A service of the			Health	Search fe	or studies:	Advanced Search	Help	Studies by Topic	Search
Find Studies	Abo	out Clinical Stu	udies Submit	Studies R	esources	About This	ite		
Home > Find St	tudies > S	earch Results							Text Size ▼
		225 s	tudies found for. Modify this	pharmacokinetic search How to			se 1		
List B	By Topic	On a Map	Search Details						
+ Show Display	Options					₽ o	wnload	® Subscrib	e to RSS
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Who	is the Audience?
4	PI and Clinical Research Team
	Other Medical Researchers in same field
	Other Medical Researchers in other fields
	General Readers of the medical literature
	Science Writers
,	Lay Public (readers of consumer health literature)
	Il Hint: From the "Edit Protocol Record" screen, e "Preview" link to see the public view in its entirety.

How can I link to manuscript(s) with Results for more info?

Located in "Edit Protocol Record" screen:



- \rightarrow Click "Edit" next to Citations
- \rightarrow Click "Add" a Citation
- \rightarrow Search for the manuscript, enter the PMID, or manually enter the citation text
- → Select "Yes" from the "Results Reference" drop down menu

NOTE! This can be done in addition to but NOT in lieu of entering data into PRS

How can I provide disclaimers or caveats for the submitted data?

Helpful Hint: Use the free text fields to provide contextual information, particularly the Limitations and Caveats data element.

Specific Example: What if my study was terminated and I am reporting for transparency, but know that the data are not significant?

Limitations and Caveats -- Limitations of the study, such as early termination leading to small numbers of subjects analyzed and technical problems with measurement leading to unreliable or uninterpretable data:

Study was terminated due to lack of funding before power analysis target accrual was met. Results are reported for transparency only, and should not be used to extrapolate significant conclusions.

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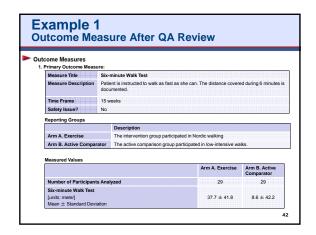
Protocol and Results Review

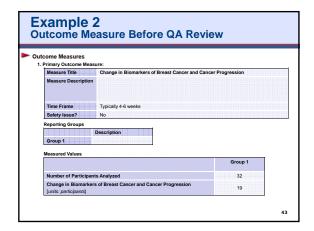
- · Protocol and results must be clear and informative
- · Review focuses on:
 - Logic and internal consistency
 - Apparent validity
 - Meaningful entries
 - Formatting
- Note: Review is NOT "peer review" and is NOT a determination of compliance

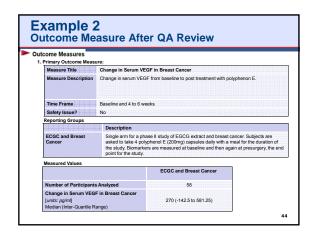
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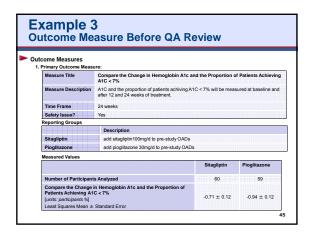
Results QA Review (i.e., What kinds of things are we trying to prevent in QA Review?)

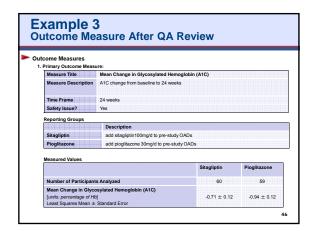
Participant	Flow		Outcome N	ieusui es	
Reporting Gro	ups		1. Primary Outco	ne Measure:	
	Description		Measure Title	Physical F	unction
L High ntensive exercise	High intensive ex	ercise	Measure Description	Six-minute	walk test
3. Low-	Low-to-moderate supervised walks		Time Frame	15 weeks	
Exercise	supervised walks		Safety Issue?	No	
			Reporting Group		
verall Study			neporting Group	Descript	ion
verall Study	A. High Intensive Exercise	B. Low- intensive Exercise	Exercise	Openia colorania	ion
,	Intensive	intensive		Openia coloniani	
STARTED	Intensive Exercise	intensive Exercise	Exercise	Openia coloniani	Exercise
TARTED OMPLETED	Intensive Exercise 34 29	intensive Exercise	Exercise Measured Values Number of Part	Descript	
TARTED	Intensive Exercise 34 29	intensive Exercise 33 29	Exercise Measured Values	Descript	Exercis
TARTED OMPLETED of Complete	Intensive Exercise 34 29	intensive Exercise 33 29 4	Exercise Measured Values Number of Part	Descript cipants	Exercise











come Measures			
Primary Outcome Meas	ure:		
Measure Title	Adherence (MMAS and Pharmacy	Refill Data)	
Measure Description			
Time Frame	Q 4 Months		
Safety Issue?	No		
Reporting Groups			
	Description		
Intervention	UC Home Automated Telemanagement		
Control	Best Available Care		
Measured Values			
medsured values		Intervention	Control
Number of Participants Analyzed			22
Number of Participant	s Analyzed	25	22

ome Measures Primary Outcome Meas	uro:		
Measure Title	Percentage of Participants Adherent to Therapy		
Measure Description	Adherence was assessed using the Morisky Medication Adherence Score, a 4 item survey in which participants self-eport medication-taking behavior. Each question that answered with a No receives a score of 1. The possible scoring range is therefore 0 to Higher scores correlate with better medical adherence. For the purpose of evaluating provided to the provided of the provided of the provided of a North- Adherent." Any response of Yes to one of the 4 items was scored as North- Adherent."		
Time Frame	12 Months		
Safety Issue?	No		
Reporting Groups			
	Description		
Intervention	UC Home Automated Telemanagement		
Control	Best Available Care		
Measured Values			
		Intervention	Control
Number of Participants Analyzed			22
Number of Participant	s Analyzed	25	22

Example 5
Baseline Measure Before QA Review

Baseline Measures

	Women Pregnant
Age Continuous	
[units: years]	$288 \pm .01$
Mean ± Standard Deviation	

Example 5Baseline Measure After QA Review

Baseline Measures

	Women Pregnant
Age Continuous	
[units: years]	27.26 ± 5.81
Mean ± Standard Deviation	

Example 5Outcome Measure Before QA Review

Outcome Measures

1. Primary Outcome Measure:

Measure Title

Women Pregnant

Measure Description

Healthy pregnant women between 15 or greater weeks gestation reporting with signs or symptoms of rupture of membranes. Reporting Groups

Description Women Pregnant Healthy pregnant women between 15 or greater weeks gestation reporting with signs or symptoms of rupture of membranes.

Measured Values Number of Participants Analyzed Women Pregnant [units: positve for membrane leakage]

Measure Title	CD3+T Cell Change	
Measure Description	Number of participants with blood samples was analyzed. The earlier baseline absolute CD3+T call court and the later absolute CD3+T call court where measured. The CD3+T cell change level as the later are point minus. He earlier time point in cit. He is the later time point in cit. He is the later time point in cit. He is the later time point in cit. He is months minus the baseline A mean increase of CD3+T cell count from Baseline to 8 months was measured. Flow Cytometry laboratory analysis was performed.	
Time Frame	Baseline and 6 months	
Safety Issue?	No No	
Reporting Groups		
	Description	
"Kallunk Oxide"	Number of participants with received a daily regimen of Kallunk coide(immunotherapy) + Long Pepper*, that is a combination of a traditional alternative medicine(Complementary and Alternative Medicine CAM). The participant were received the duty for once daily dose in 6 days treatment. The powder from 200 mg obsages administered. Drug was assigned to 0.200 mg Kallunk coide molecules with 499,800 mg antidote. This antidote used as a carrier of Kallunk coide molecules. The Bedratica name of the antidote to "Spert Longuin".	
Measured Values		
		"Kallunk Oxide"
Number of Participants	Analyzed	40
CD3+ T Cell Change		
funits: "Cells/mm^3"1		175 + 30

Where can I get information?

www.clinicaltrials.gov

 General info about Submitting studies: http://clinicaltrials.gov/ct2/manage-recs

Where do I send questions?

register@clinicaltrials.gov

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Questions?

