Research: An Essential Component of a Comprehensive MS Center

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Agenda

1. A Goodman: Introduction to MS clinical research
2. M Bellizzi: From "bedside to bench to bedside?"
3. J Robb: Outcome Measures: The How and Why

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4. E Scheid: Study Coordination, the Main Cog in the Wheel
5. A Goodman: General Discussion Q and A

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Introduction

- Research categories
- Ethics considerations: institutional review board
- FDA requirements: personnel; facilities
- Budget considerations: how to avoid pitfalls

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Research categories

- Bench research: animal models; genetics; immunology
- Translational research: “bench to bedside”
- Clinical trials: investigator initiated; sponsored; single center; multi-center
- Clinical research: surveys, systematic study of symptoms; immunological abnormalities; epidemiology; demographics; registries

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Drug Development

Pre-Clinical Studies

- Bench research studies (pharmacologic or biologic mechanism)
- Animal studies (proof of concept; toxicology)

Clinical Studies

- Phase 1 (safety)
- Phase 2 (safety and proof of concept)
- Phase 3 (safety and pivotal trials)
- Phase 4 (post-marketing)

Ethical considerations: the IRB

- Role of the Institutional Review Board (IRB): to ensure that the rights and welfare of the human subjects are adequately protected
- IRB process: guided by the ethical principles described in the Belmont Report and by the regulations of the U.S. FDA (21 CFR 50 and 56) and the U.S. Department of Health and Human Services (45 CFR 46)
- IRB types: local (hospital/university); national (e.g.WIRB)

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Investigator responsibilities:

- Will seek a properly constituted IRB and obtain initial and on-going review
- Will obtain informed consent of subjects and submit progress reports to the IRB at intervals not to exceed 1 year
- Will maintain case histories designed to record all pertinent observations for each subject

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- Will prepare and maintain adequate and accurate drug accountability records
- Will collect and report the data in a way to accurately and completely reflect the observations noted during the study
- Will report immediately and promptly if adverse events are alarming
- Will assure that the study will not start prior to review and approval by the IRB
- Will conduct and personally supervise the study according to the relevant protocol

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- Will ensure that the drug is administered according to the stated dosing regime, including dose, route, rate, and duration, and maintains records documenting such facts
- Will communicate to sub-investigators information on scientific matters of importance related to the investigation
- Will only change the protocol after notifying the sponsor and obtaining IRB approval prior to implementing the change

Budget Considerations

Potential pitfalls:

- Negotiated trial budget does not include all costs to be incurred
- Inflation factor is not applied to cost components
- Clinical procedures are not budgeted properly
- Inadequate internal cost information (rents; pharmacy)

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Budget pitfalls

- Effort of clinical trial team members is not fully budgeted
- Unrelated business income tax implications of residuals/surpluses
- Large residuals/surpluses allow for appearance of conflicts of interest

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