



The Research Process in Family Practice at S&W

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Objectives of Presentation

- **The 10 Basic Steps of Research**
- Focus on Scott & White
- **Role of Clinical Research Nurse Coordinator**
- Role of Director of Research



The Ten Steps of Research

1. Formulating the research idea
2. **Brainstorming idea with team**
3. Doing a literature search
4. **Developing the protocol**
5. The IRC-IRB review



The Ten Steps of Research ...

6. **Project start-up**
7. Project monitoring
8. **Data management**
9. Data analysis
10. **Reporting & dissemination**

#1 - The Research Idea

• Strive for a **FINER** research idea

- Feasible
- Interesting to investigator
- Novel & innovative
- Ethical
- Relevant

Research Feasibility ...

• A feasible research:

- Adequate number of subjects
- Adequate technical expertise
- Affordable in time and money
- Manageable in scope

Novelty & Innovation ...

• **A novel & innovative research:**

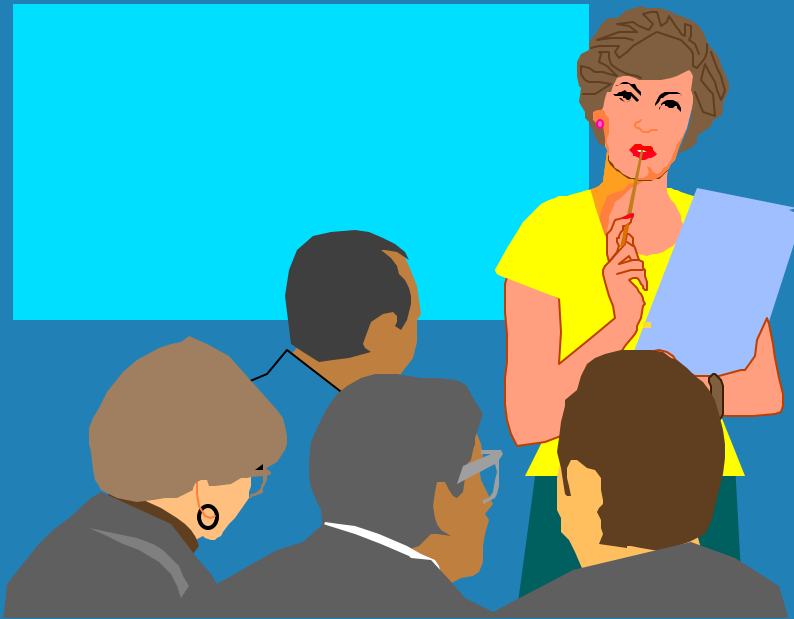
- Provide new findings
- Extend previous findings
- Confirm or refute previous findings

Relevant Research ...

• A research idea with relevance to:

- Scientific knowledge
- Clinical & health policy
- Future research direction(s)
- Evidence-based practice

#2 - The Brainstorming Session



- **The Power of Brainstorming**
- What to do for a successful brainstorming
- **What to do after the brainstorming session**



The Power of Brainstorming ...

- **Produce most ideas in shortest time**
- Reduce negative reactions to new ideas
- **Provide team members with an equal opportunity to create ideas**
- Increase participation and involvement among team members



For a Successful Brainstorming ...

- **Record all ideas on a flip chart !**
- Solicit ideas re: quantity; not quality !
- **Defer all judgment and evaluation !**
- Welcome wild ideas !
- **Encourage building on ideas of others !**
- Stimulate participation by giving each member a chance to contribute !

After the Brainstorming ...

- ⦿ Review suggested ideas and group similar items together !
- ⦿ **Select ideas that seem to be most workable !**
- ⦿ Ensure a fit with organizational mission & goals !
- ⦿ **Keep rest of list for future reference !**

#3 - The Literature Search

- On-Line searches: e.g., Medline, Pubmed
- Manual search at library
- Phone calls to experts/authors
- Use the [See Related Articles] feature in Pubmed

#4 - Development of the Protocol

- What question(s) will the study address?
- Why are these questions important?
- How will the study be carried out?
- Who are the subjects ... how selected?
- Where will the study be carried?
- What measurements will be made ... when?
- How large is the study ... how

#5 - IRC-IRB Review

◉ IRC Review at Scott & White

- The scientific merit of the protocol
- Intra-mural funded projects

◉ IRB Review

- The ethics of the protocol
- Intra- & extra-mural funded projects

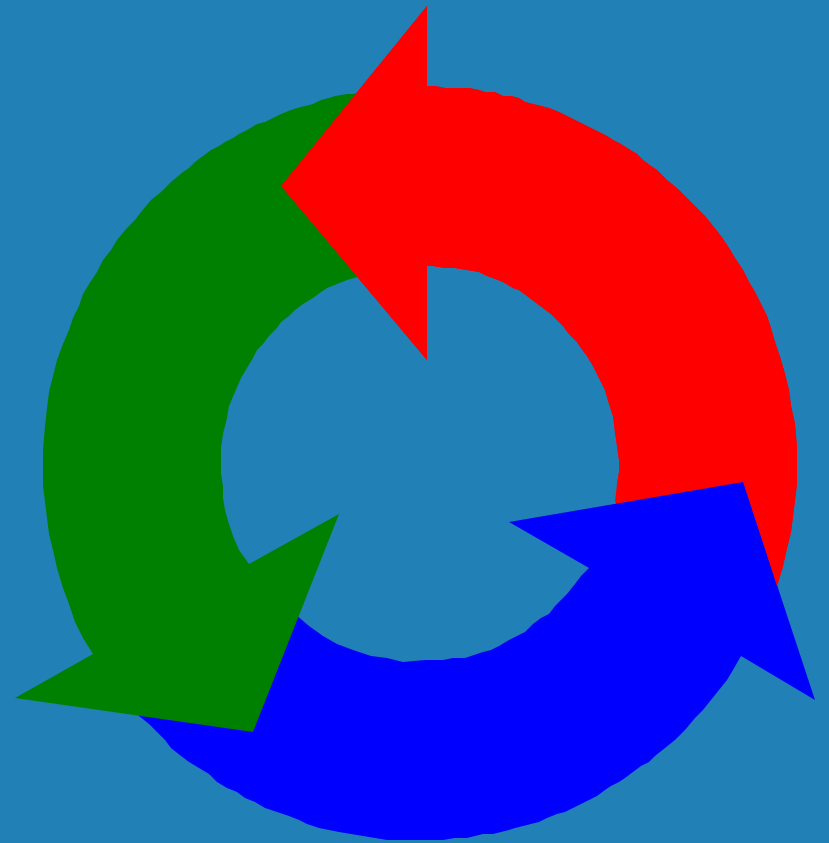
#6 - Project Start-Up

• Involves & requires

- Proper planning
- Adequate personnel
- Check-list of relevant activities
- Copies of study protocol

Project Planning ...

- Proper
- **Prior**
- Planning
- **Prevents**
- Poor
- **Performance**



Project Personnel ...

- ◉ **Mentor**
- ◉ Research Nurse
- ◉ **Librarian**
- ◉ Fiscal (budget)
- ◉ **Biostatistician**
- ◉ Significant others



#7 - Project Monitoring

⊙ Research project management

- Leadership qualities
- Open line of communication
- Ability to negotiate, e.g., w/ sponsors
- Problem-solving skills

⊙ Quality control measures

- Field validation of responses
- Follow-back validation of responses

#8 - Data Management

• Software choice

- Type of analysis planned
- Data entry procedures

• Quality assurance measures

- Reliable data entry, editing & cleaning
- Double data-entry validation procedures

#9 - Data Analysis

• Software choice

• Type of variables

- Continuous *versus* discrete
- Normal *versus* skewed distribution

• Plan of analysis

- Univariate analysis
- Bivariate analysis
- Multivariate analysis



#10 - Reporting & Dissemination

- **Technical/Project reports**
- Monographs (non-technical)
- **Peer-reviewed abstracts**
- Peer-reviewed manuscripts
- **Newsprint (non-technical)**

Role of Clin. Res. Coordinator

- ◉ Literature search from library
- ◉ **Medical records issues**
- ◉ Assistance with writing protocol
- ◉ **Meeting arrangements**
- ◉ Consent form
- ◉ **IRC/IRB forms**

Role of Clin. Res. Coordinator

- ◉ **Budgetary issues**
- ◉ Make changes to IRC/IRB
- ◉ **Maintenance of research files**
- ◉ Preparation of research packets
- ◉ **Data collection**
- ◉ Time line issues