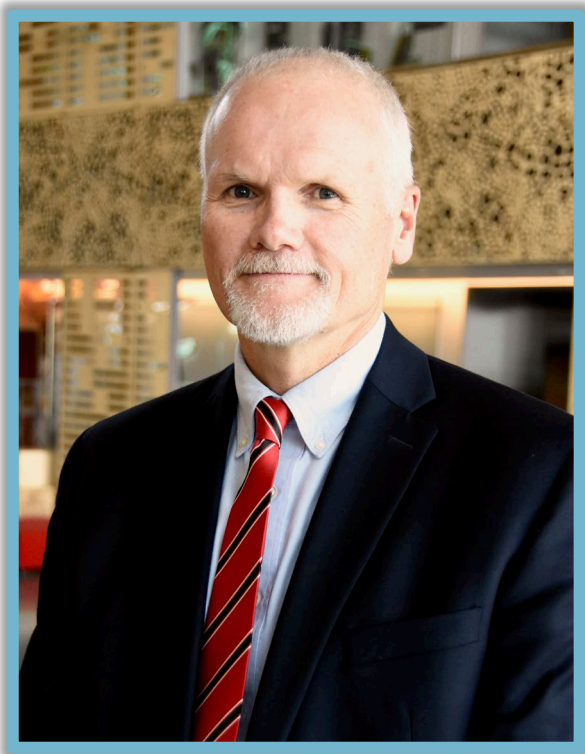


Speaker Introduction



Daniel M. Witt, Pharm.D., FCCP, BCPS is a Tenured Professor and Chair of the Department of Pharmacotherapy at the University of Utah College of Pharmacy. He received a B.S. degree in pharmacy from the University of Utah and a PharmD degree from the University of Washington. He completed a Clinical Pharmacy Residency at the University of Washington and Harborview Medical Centers, Seattle, WA and an Advanced Residency in Primary Care and Family Medicine, University of Washington. Dr. Witt has authored or co-authored over 100 journal articles, 11 book chapters, and given numerous lectures for continuing education programs.





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Daniel M. Witt
September 24, 2022

Tips for Precepting Resident/Student Research Projects

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Disclosure

- **Relevant Financial Conflicts of Interest**
 - **CE Presenter, Daniel M. Witt:**
 - None
- **Off-Label Uses of Medications**
 - None



Learning Objectives – Pharmacists

- Design a plan for overcoming common barriers to successful completion of research projects
- Identify common elements of successfully completed projects
- Create a framework for aligning strategic priorities with research
- Develop a research project management plan
- Describe the need for teamwork and role differentiation in completing research projects



Learning Objectives – Technicians

- Design a plan for overcoming common barriers to successful completion of research projects
- Identify common elements of successfully completed projects
- Create a framework for aligning strategic priorities with research
- Develop a research project management plan
- Describe the need for teamwork and role differentiation in completing research projects





Shameless plug

Helpful hints for residents/students/preceptors on the process of residency/student research projects

<https://store.ashp.org/Default.aspx?TabID=251&productId=735775>
352



Why Do Research?

- Required element of PharmD/residency
- Quest for truth
- Improve care outcomes
- Improve the quality of care/processes
- Improve efficiency of care/processes
- Improve care experiences
- Reduce costs
- Love and passion



Complete the following sentence
in your mind:

If something is worth doing, it is
worth doing _____.

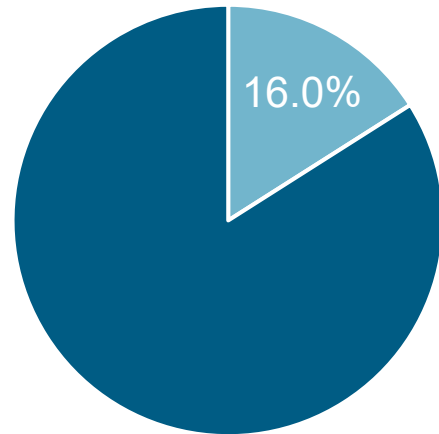


When something is really important...it's okay to just do it to the best of your ability today. Maybe tomorrow it will be better, or even perfect. Today it's just done, and that's okay. –Karen Banes



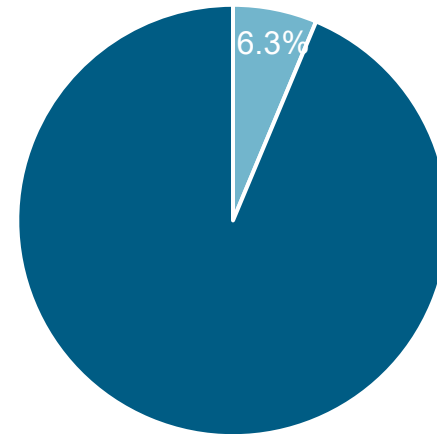
Case Study: Resident Research

Southern Residency Conference



■ Published ■ Not Published

Western States Residency Conference



■ Published ■ Not Published

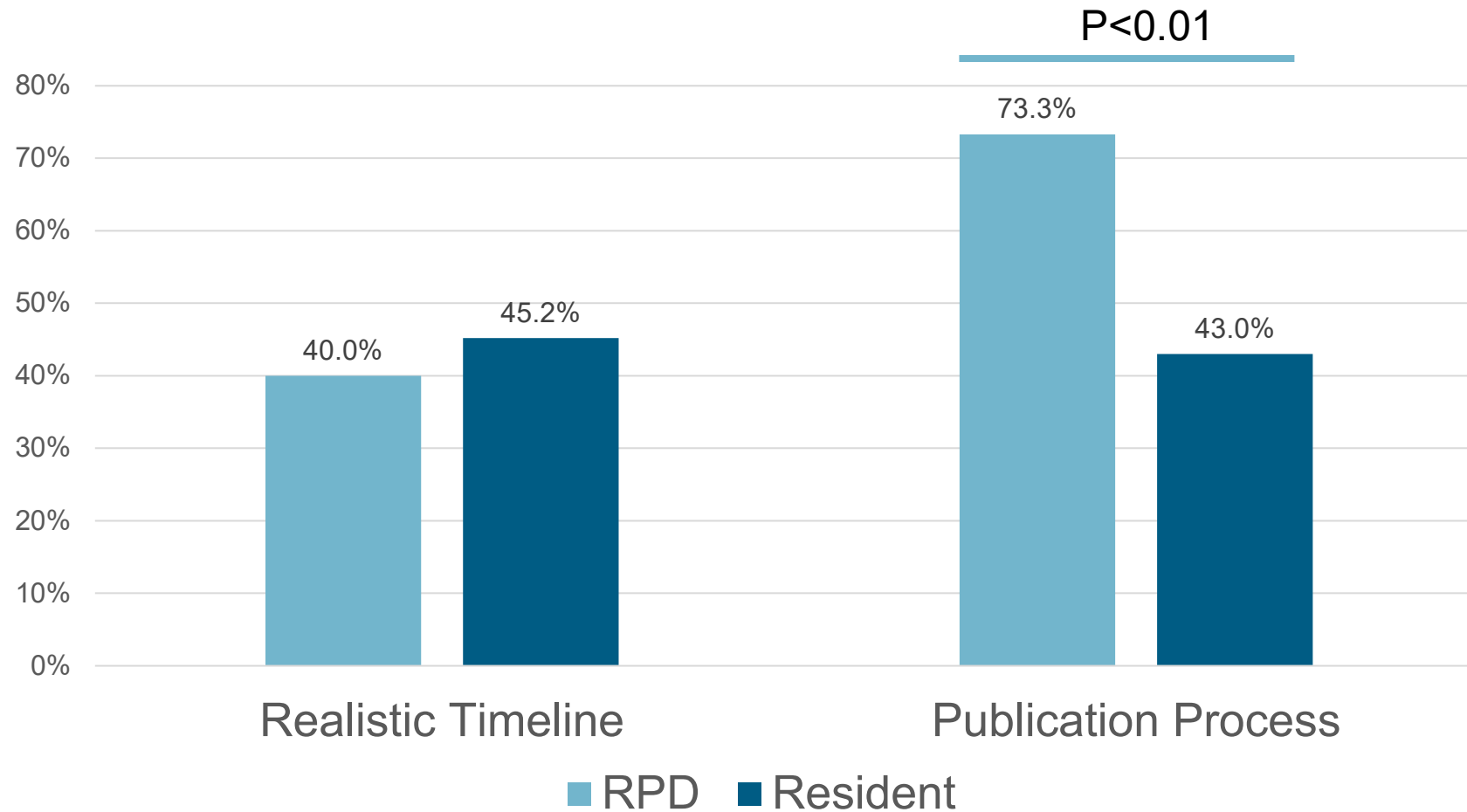
Mean time to publication = 24 months (SD 10 months)

Am J Health-Syst Pharm 2012;69:59-62

Am J Health-Syst Pharm 2010;67:830-6



Perceived Barriers



Audience Response Question

In order to be meaningful, a student/resident research project must be published in the peer-reviewed medical literature.

- A. True
- B. False



Perceived Value of Research Projects

Survey Item, median (% , n)	Residency Program Director (n=30)	Resident (n=93)	P-value
The results of my research or practice-related project were valuable to my institution	4.5 (73.3%, 22)	4.0 (64.5%, 60)	0.50
The research or practice-related project adequately prepared me to conduct research in the future	3.0 (46.7%, 14)	3.5 (50.5%, 47)	0.87
The research or practice-related project provided me adequate management/administrative skills	4.0 (60.0%, 18)	4.0 (59.1%, 55)	0.93
The research or practice-related project provided expanded career opportunities	3.0 (33.3%, 10)	3.0 (35.5%, 33)	0.97
Rated using a 5-point Likert scale, where 1=strongly disagree and 5=strong agree. Responses dichotomized and presented by proportion who reported strongly agree or agree as well as median values.			

Both Residency Program Directors (RPDs) and residents felt their projects were valuable to the institution and provided resident with management/administrative skills



Building Blocks of a Good Student/Resident Project

Pharmacy practice

Strategic
alignment

Feasibility

Strategic Alignment

Healthcare

- Triple aim
 - Better health
 - Better healthcare
 - Lower cost
- Preventative care
- Patient engagement
- Reducing harm
- Expanding new delivery models

Profession

- Establishing credibility as clinicians
- Comprehensive medication management (CMM)
- Contributing value to patient care
- Workforce development



Strategic Alignment

Organization

- HEDIS/Medicare 5-Stars
- Patient satisfaction
- Workforce development
- Cost of goods sold/ Per member per month
- Triple aim
- Patient safety
- Marketing

Practice Site/Care Team

- Waiting time
- Patient safety
- Productivity
- Teamwork
- Patient satisfaction
- Staffing



Strategic Alignment

Personal

- Professional development
- Career goals
- Reputation
- Patient care
- Passion

Patients/Caregivers

- Improved health
- Healthcare experience
- Avoid harm
- Autonomy
- Concerns addressed
- Engagement



Research as a Business Imperative



Dennis Helling, PharmD



The 3-Legged Stool:

- World class Rx operations
- World class Clinical Pharmacy Services
- Research & scholarship



Key Feasibility Questions

- Focused study question(s)?
- Appropriate study design?
- Adequate methodology?
- Skilled research team?
- Clear pathway to data acquisition?
- Realistic timeline?
- Management support?
- Adequate resources/funding?

SAFE Score

See Appendix A in: Am J Health Syst Pharm
2015;72:309-16



Audience Response Question

A pharmacist has a student scheduled for an upcoming Advanced Pharmacy Practice Experience (APPE) block. She and her supervisor have developed a quality improvement project to increase Medicare Stars performance on medication monitoring. A protocol has been written. She isn't sure how she is going to pull the data yet.

Which of the following is the greatest threat to having the student help with this project?

- A. Strategic alignment with company objectives
- B. Feasibility
- C. Both A and B



Developing Research Questions

PICO

- **Population**
- **Intervention**
- **Comparison Group**
- **Outcome**

FINER

- **Feasibility**
- **Interesting**
- **Novel**
- **Ethical**
- **Relevant**

Finding the Link

- Clinical observations
- Unique/challenging cases
- Strategic priorities
- Wasteful practices
- Keeping up with the literature
- Brainstorming with colleagues
- Building on previous studies
- New pharmacy services
- Etc.



Out of Plan Prescriptions

During the pharmacy department's annual service, quality & resource management presentation senior leadership asks what proportion of plan membership is taking advantage of \$4 prescriptions at local big box retailers

Study: Out-of-Plan Pharmacy Use

Objective: Asses the rate and characteristics of prescriptions written to out-of-plan pharmacies



OsteoHEDIS

While reviewing annual HEDIS results it is noted that performance on the osteoporosis measure is substantially below the 90th percentile.

Study: Role of Clinical Pharmacists in Improving Treatment of Elderly Patient with Atraumatic Fractures

Objective: To examine the impact of a clinical pharmacy specialist-managed intervention to identify, screen, and initiate appropriate osteoporosis pharmacotherapy in elderly patients after an atraumatic fracture.

Saving Physician's Time

Primary care physicians are overwhelmed by the amount of work in their 'in-baskets'. Medication refill requests make up a significant proportion of this work.

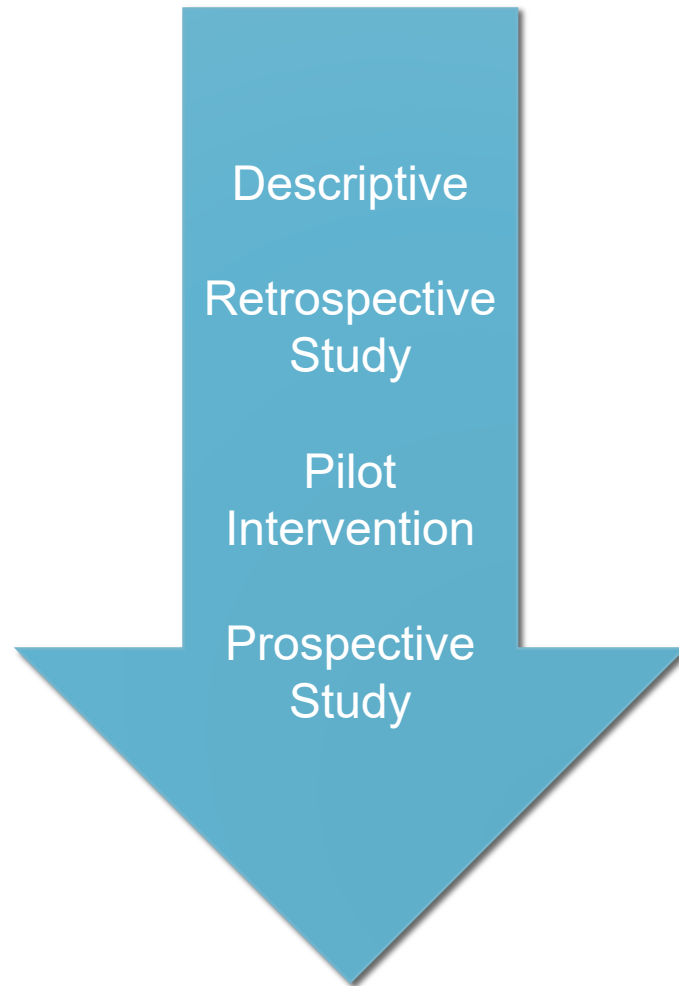
Study: Outcomes of a Pharmacist-managed Medication Refill Program

Objective: Compare completeness of medication and blood pressure monitoring among patients requesting refills through pharmacist refill program

Study Methodology

- Meet with statistician/analyst early and often
- Do not short change the control group
- Controlling for confounding and bias
 - Dictated by study design
 - Influenced by sample size
 - Needed for higher tier journals
- Complexity—what software will be needed?

Study Design Continuum



- Supports the study question
- Clearly described
- Study groups clearly defined
- Doable with available resources
- Building from low to higher complexity

Out of Plan Prescriptions, Part II

Study: Patient Behavior and Out-of-Plan Pharmacy Use

Objective: Identify and describe patient reasons for using out-of-plan pharmacies



OsteoHEDIS, Part II

Study: Pharmacist Intervention in Postmenopausal Women after Atraumatic Fracture

Purpose: Assess impact of decentralized clinical pharmacy intervention on HEDIS measure

OsteoHEDIS, Part III

Study: Evaluation of Primary Nonadherence to Osteoporosis Therapy

Purpose: Understand why patients fail to purchase prescriptions for bisphosphonates

OsteoHEDIS, Part IV

Study: Labor Costs and Economic Impact of a Primary Care-Based Clinical Pharmacy Service on Postfracture Care in Postmenopausal Women

Objective: Compare costs associated with pharmacist and nurse-based services and quantify cost-avoidance due to projected hip fracture prevention

OsteoHEDIS, Part V

Study: Impact of interactive voice response technology on osteoporosis primary adherence—randomized controlled trial

Objective: Determine if an automated message regarding availability of osteoporosis prescription improved primary nonadherence

Study Team

- Does team composition ensure successful project completion?
 - Statistical analysis
 - Regulatory issues
 - Project management
- Are adequate human resources on hand?
 - Chart reviews
 - Recruiting
- Resident/student should NOT be the principle investigator



Research is a Team Sport

- Advantages of collaborating and doing research in teams
 - Idea generation
 - Content expertise
 - Data acquisition
 - Data analysis
 - Involving learners
 - Workload balancing
- Interprofessional collaboration



Key Data Considerations

- Data needs clearly identified
- Data are obtainable from known sources
- Outcomes are measurable
- Who will pull your data and where do your needs fit on their list of priorities?
- Clear analytical plan



Audience Response Question

A pharmacist is precepting a resident research project involving a survey aimed at healthcare team member's perceptions of a new standardized order set for venous thromboembolism prophylaxis.

Which of following individuals should be included in the research study team?

- A. A physician representative
- B. A nursing representative
- C. Someone from business analytics
- D. All of the above



Timeline

- Realistic given the scope of the project?
- Factor in poster presentations and manuscript submission (including some rejections and manuscript revisions)
- Usually way longer than anticipated (sort of like home improvement projects)



Management/Departmental Support



- Dedicated project time vs. own time
- Business plans supported by quality research more likely to be approved
- Negotiate
- Include on annual performance goals

Key Points

- Research projects that are aligned with strategic priorities and formally evaluated for feasibility are more likely to be successfully completed
- The study design continuum is a powerful method for driving research hypothesis generation
- Your pharmacy practice is fertile ground for research opportunities regardless of setting
- Research is best accomplished in interprofessional teams



Tips for Precepting Resident/Student Research Projects

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