Turning QI into Scholarly Output

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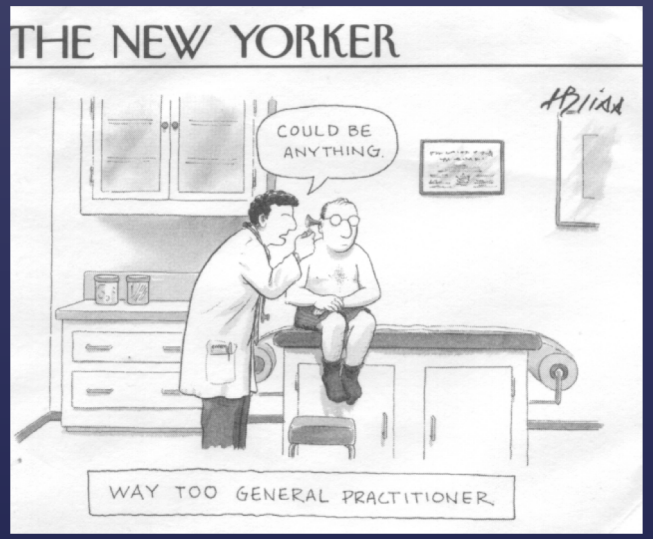
Introduction



Background: Faculty in the Division of General Internal Medicine and Philip R. Lee Institute for Health Policy Studies

My research goals: Ensuring patients receive high value, evidence-based care through research and interventions at the patient, physician, and health system levels

DeQCAD

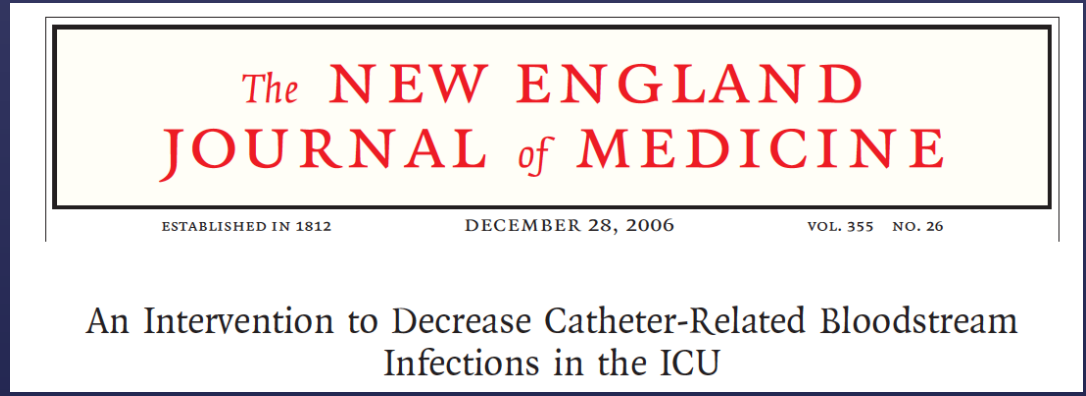
ICER
INSTITUTE FOR CLINICAL AND ECONOMIC REVIEW

My experience:

- Primary data collection
- Secondary data analysis
- Qualitative research
- Implementation/QI projects
- Health technology assessments
- Journal editorial board member

Why Consider Turning a QI Project into a Scholarly Product

- Shortage of information on how to reliably implement interventions into routine care settings
- Dissemination of high quality, high impact QI projects can have change care delivery



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An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

- Presenting/publishing can be beneficial for career (e.g., networking, promotions, etc)

Considerations for Turning QI Project into Scholarly Product

- Is the project novel?
  - Novelty can be in the idea, the execution, or setting/context
- Are appropriate data being collected?
  - What will you be measuring?
  - How will you be measuring it?
  - How will be keep track of data and contextual information that may affect outcomes?
  - Is there an appropriate comparison group?
- Do you need IRB approval?
- Documentation
  - Most journals will want detailed information about each step of the project
- When possible, design projects with scholarly output in mind; consider partnership with researchers

Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) Checklist

- Consensus guidelines published in 2015 to increase the completeness, precision, and transparency of publications about quality improvement

- Checklist includes elements that should be reported in a manuscript (www.squire-statement.org) http://squire-statement.org/index.cfm?fuseaction=Page.ViewPage&PageID=471

- May be required/strongly recommended by journals

Example: Michigan ICU Study to Reduce Catheter-Related Infections

- Evidence-based interventions implemented in 108 ICUs in Michigan over 18 months aiming to reduce catheter-related bloodstream infections
- Interventions: Education and adherence to hand-washing, avoidance of groin insertion site, full contact precautions, cleaning skin with chlorhexidine, removing unnecessary catheters
- Measurements: number of catheter-related bloodstream infections (standardized definition), catheter-days, collected monthly
- Outcomes: quarterly rate of catheter-related bloodstream infections, compared to baseline

Main Outcome: Rates of catheter-related bloodstream infection from baseline (0-18 months)

Table 3. Rates of Catheter-Related Bloodstream Infection from Baseline (before Implementation of the Study Intervention) to 18 Months of Follow-up.*

Study Period	No. of ICUs	No. of Bloodstream Infections per 1000 Catheter-Days				
		Overall	Teaching Hospital	Nonteaching Hospital	<200 Beds	≥200 Beds
		median (interquartile range)				
Baseline	55	2.7 (0.6–4.8)	2.7 (1.3–4.7)	2.6 (0–4.9)	2.1 (0–3.0)	2.7 (1.3–4.8)
During implementation	96	1.6 (0–4.4)†	1.7 (0–4.5)	0 (0–3.5)	0 (0–5.8)	1.7 (0–4.3)†
After implementation						
0– 3 mo	96	0 (0–3.0)‡	1.3 (0–3.1)†	0 (0–1.6)†	0 (0–2.7)	1.1 (0–3.1)‡
4–6 mo	96	0 (0–2.7)‡	1.1 (0–3.6)†	0 (0–0)‡	0 (0–0)†	0 (0–3.2)‡
7–9 mo	95	0 (0–2.1)‡	0.8 (0–2.4)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.2)‡
10–12 mo	90	0 (0–1.9)‡	0 (0–2.3)‡	0 (0–1.5)‡	0 (0–0)†	0.2 (0–2.3)‡
13–15 mo	85	0 (0–1.6)‡	0 (0–2.2)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.0)‡
16–18 mo	70	0 (0–2.4)‡	0 (0–2.7)‡	0 (0–1.2)†	0 (0–0)†	0 (0–2.6)‡

* Because the ICUs implemented the study intervention at different times, the total number of ICUs contributing data for each period varies. Of the 103 participating ICUs, 48 did not contribute baseline data. P values were calculated by the two-sample Wilcoxon rank-sum test.
† P≤0.05 for the comparison with the baseline (preimplementation) period.
‡ P≤0.002 for the comparison with the baseline (preimplementation) period.

Pronovost P et al. N Engl J Med 2006;355:2725-2732.

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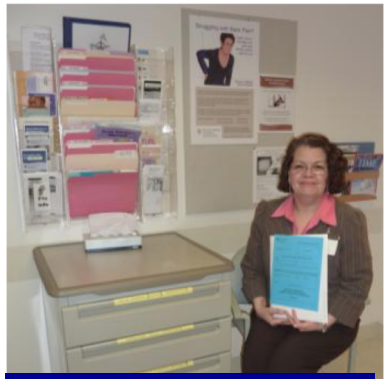
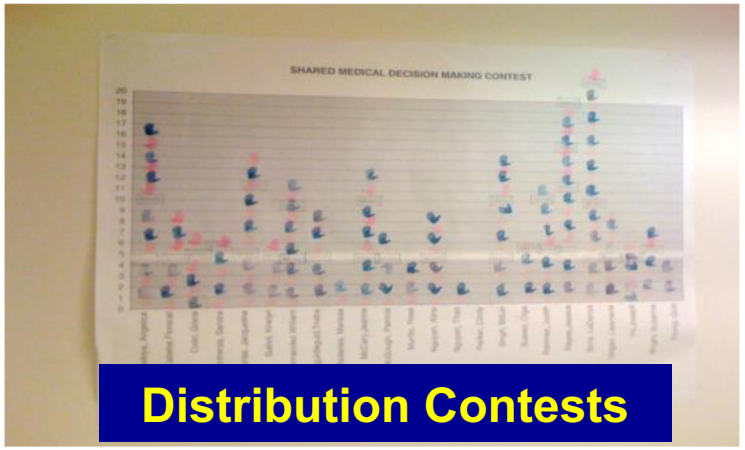
Example: Implementing Decision Aids into Primary Care Practices

- Aim: To establish effective methods of distributing decision aids into 5 primary care practices in the South Bay
- Interventions: see next slide
- Data collection:
  - Qualitative data:
    - 325 encounters from ethnographic field notes
    - Transcripts from 3 physician and 4 staff focus groups
  - Quantitative data:
    - 10 question survey to physicians assessing attitudes, behaviors, facilitators, barriers to decision aid use
    - Decision aid distribution – total number of eligible patients who received a colorectal cancer screening or back pain decision aid per month

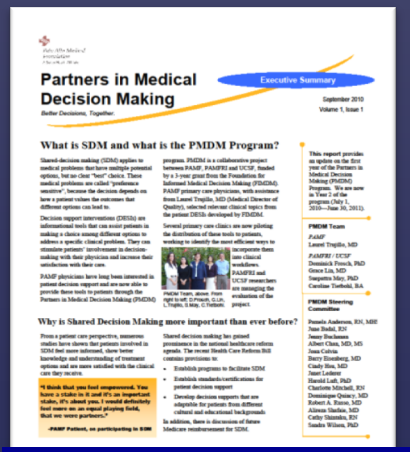
Interventions: marketing to physicians and staff



Academic Detailing



Distribution Contests



Newsletters

"HealthFlix"

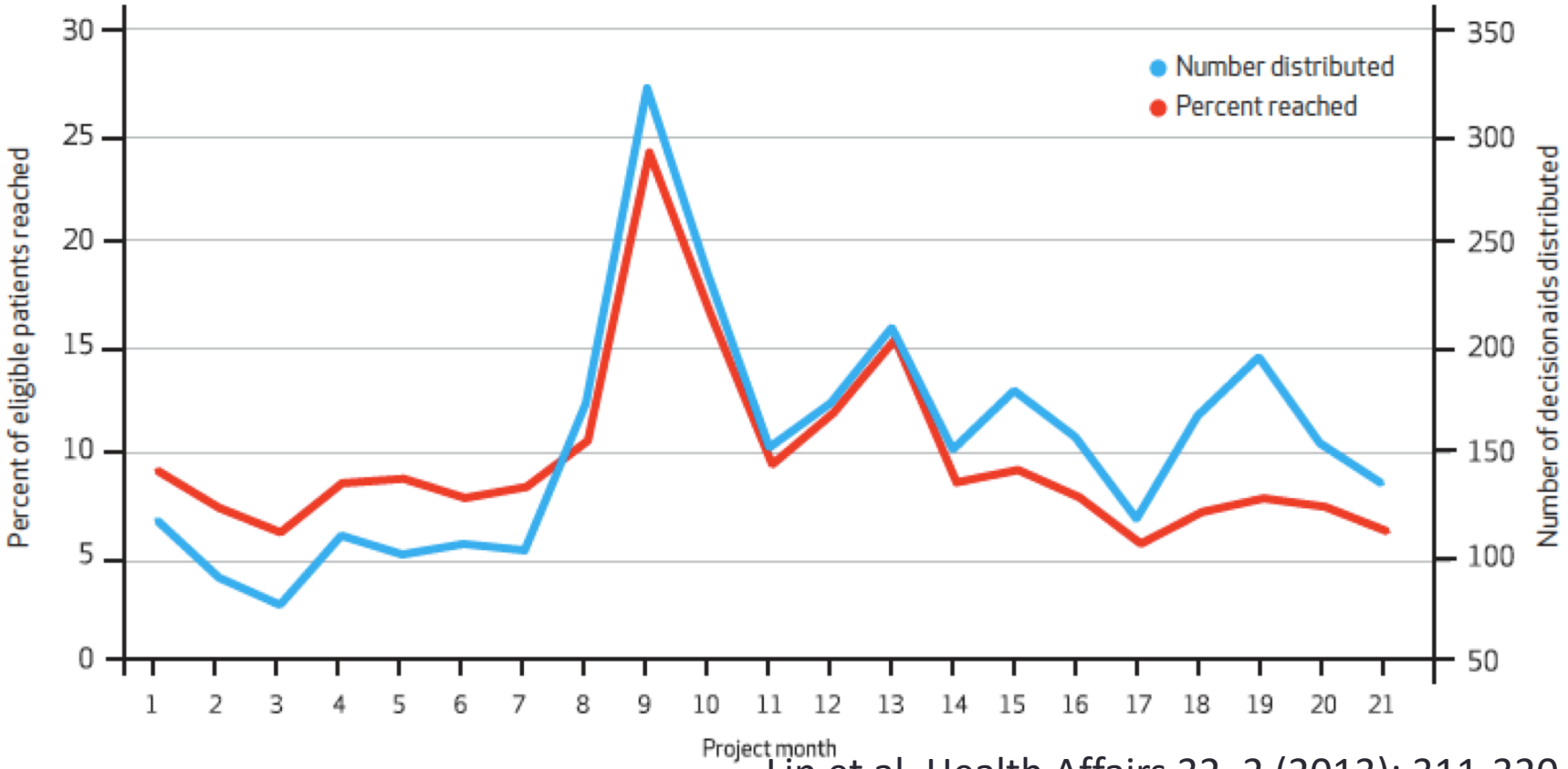
Grand Rounds

Branded promotional items

Main Outcome: Despite Intensive Efforts, Reach of Decision Aids was Low

EXHIBIT 1

Number Of All Decision Aids Distributed And Proportion Of Patients Who Received Aids For Colorectal Cancer Screening Or Back Pain



Lin et al, Health Affairs 32, 2 (2013): 311-320

Physician barriers to decision aid use

	Percentage of respondents (N=253)
Perceived Structural Barriers	
Not enough time during visit/competing demands	81%
No reimbursement for SDM	24%
Fear legal liability if patient makes decisions	11%
Perceived Cultural Barriers	
Patients have difficulty understanding what they need to know to make a decision	62%
Patients don't want to participate in decision making or don't know what they want	15%
Prefer patients rely on physician recommendation	4%

Qualitative data: Physicians were reluctant to cede traditional decision making roles

"I usually don't go into the choices…I usually try to sell them on the colonoscopy because I feel like it's probably better…"

"I don't think you should give the patient a choice if you're not willing to accept that choice. I think that's confusing and unfair to the patient."

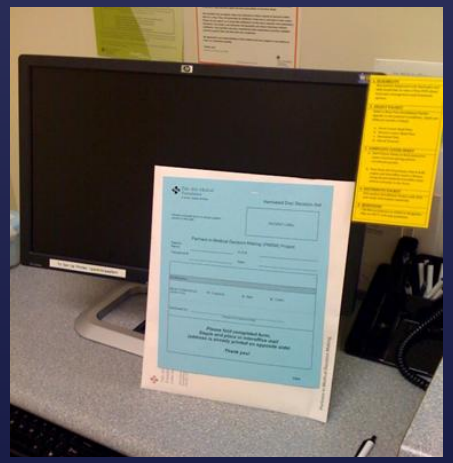
"I've seen my patients for a long time and they have enough information from our discussion and they don't need more."

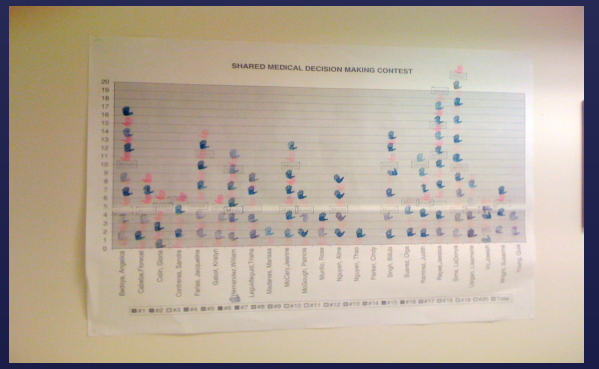
From physician focus groups, June-Oct 2011

Ethnographic data: Successful clinics transformed DA distribution from “optional” to “routine”

Based on field note observations, most successful clinics:

- Had standard procedures for identifying patients and decision aid distribution
- Involved the entire clinic team in patient ID & distribution
- Had ready access to decision aids (eg, in exam room)
- Incorporated decision aid distribution into staff performance expectations





Contextual information: Competing interests can affect decision aid distribution

Tips for Choosing a Journal/Meeting

- Who is the intended audience?
- What's the scope of the journal/meeting?
  - Has the journal/meeting published similar/relevant work in the past?
- Assess the credentials of the journal or publisher or meeting sponsor
  - Journal reputation (e.g., impact factor)
  - Review process transparent
  - Timeline for review
  - Open access/fees for publishing?
- Read through author instructions to determine if there is a category of article that is relevant to work
  - E.g., original research, quality improvement reports, brief reports, research letters, etc.

Potential Target Journals

- Joint Commission Journal on Quality and Safety
- Implementation Science
- BMJ Quality and Safety
- BMJ Quality Improvement Reports
- PLoS Medicine
- American Journal of Medical Quality
- Journal for Healthcare Quality
- Journal of Hospital Medicine
- Journal of Clinical Outcomes Management
- Specialty Journals
- NEJM, BMJ, JAMA, JAMA Internal Medicine, Health Affairs also sometimes publish QI work

Tips for Manuscript Writing

- Discuss authorship/division of labor up front
- Browse target journal for examples of similar work
- Set aside dedicated writing time, even if it's just 30 min or 1 hour per week
- Tell a story through your writing
  - Introduction should review literature, set stage for results, discussion
  - Guide the reader step by step through your intervention
  - You will have too much data (usually), so think about your main take home points and which data reflect those the best
  - Put results in context and discuss limitations and policy implications in your discussion
- Get feedback early and often
- Read the author instructions carefully!
- Take advantage of any departmental/division writing resources
  - Some departments have editors that can help with clarity, editing

How we can help

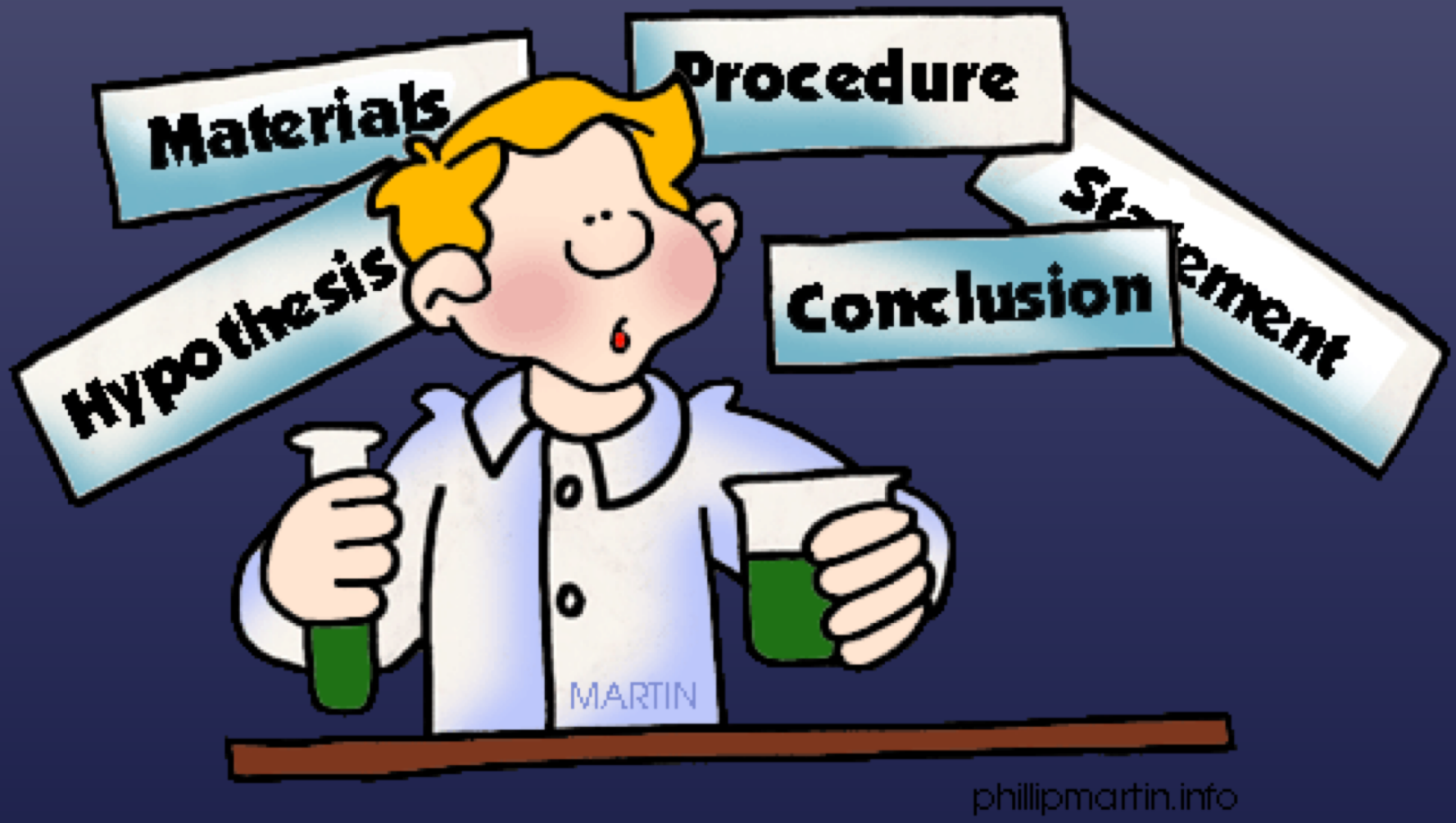
- At the beginning of a project
  - Assistance with study design, including data collection and choice of outcomes
- Data analysis stage
  - Consult with statistician (Christy Boscardin, link with departmental resources)
  - Review results and suggest revisions as needed
- Manuscript/presentation preparation
  - Assistance with writing, journal selection, posters, slides for oral presentation

Sample Timeline – Projects in Early Stages

- February-March 2019 – Meet to discuss desired scholarly product(s)
  - Review project aims, data collection, outcomes
  - IRB application (if necessary)
- March-December 2019
  - Data collection
  - Meetings as needed to monitor progress
- January-March 2020
  - Data analysis
  - Draft abstracts for meeting submissions
  - Initial drafting of manuscript
- April-June 2020
  - Review meeting presentations/posters
  - Manuscript revision and submission

Sample Timeline – “Sprint to the finish line”

- February 2019 – Meet to discuss desired scholarly product(s)
  - Decide on authorship/roles and division of labor
  - Discuss target journal(s) or meetings
  - IRB application (if necessary)
- March-May 2019
  - Data analysis
  - Draft abstracts for meeting submission(s)
  - Draft manuscript and revisions
  - Review posters/slides for oral presentations
- June 2019 – Submit for publication
  - Most submissions are rejected at least once and/or require revisions


Materials
Procedure
Hypothesis
Conclusion
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