

IDENTIFYING "BEST PRACTICES" THAT CAN MAKE YOUR LAB A "WORLD CLASS" PERFORMER

Paul Epner Quality Confab 2010



- o Job Scope
- Job Challenges
- o Job and Personal Goals

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Define the Problem

THE PROBLEM STARTS WITH THE PROBLEM





• Outcome - how will you measure the benefit

Example: Will the use of an inpatient bar coded wrist band system reduce the number of patient-sample identification errors when compared to no bar code?







Define the Problem WRONG MEASURE, WRONG SOLUTION



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E 9.	Perioperative creatine phosphokinase (CPK) and troponin I trends after elective hip surgery. J Trauma. 2007 Aug.63(2):388-83. (Original)	10
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LABORATORY MEDICINE Best Practices

OBJECTIVES

- Establish <u>transparent</u> <u>systematic review</u> methods to evaluate quality improvement practice effectiveness
- Improve healthcare quality and patient outcomes by disseminating completed evidence reviews of practice effectiveness identifying evidence-based laboratory medicine "best practices"

Paul

- Increase engagement of laboratory professionals in quality improvement research and data collection
- Encourage recognition of laboratory professionals as partners in healthcare policy and decision-making

11/3/2010



Looking for Solutions Contents Purpose..... How to Use the Guide. le 1: Does the Innovation Fit? boes the Innovation Fit?..... s the Innovation? t Further Our Goals? smpatible With Our Organization? It contained by the point of the point of the point of the potential Benefits? hat Are the Potential Costs?... in We Build a Business Case?.. a III: Can We Do It Here? II Epne anges Will We Have to Make? ave the Ingredients for Succe ile IV: How Will We Do It Here?..... w Will We Measure the Impact of the Inr impact How Will We Measure the Impa Can We Try the Innovation Firs How Will We Implement the Inn ndex of Tools 65 73 Deferencer ppendix: Case Study Report.... Clinica Campesina and Group Visits...... Mt. Carmel and Six Sigma Golisano Children's Hospital and Family-Cente N.C. Children's Hospital and Pediatric Rapid Re red Rr

Solving It Yourself

IF CONDUCTING RESEARCH IS REQUIRED

http://www.innovations.abrg.gov/resources/InnovationAdoptionGuide.pdf

o Local research might be required if

- Multiple solutions exist with no clear best practice
- · Your institution wants to see proof before adoption
- o Process is important
 - PICO Formulate an answerable question
 - Protocol Address key study quality issues
 - Data Collection Consider data collection issues early
 - Analysis
 - Decision
 - Troubleshooting

Solving It Yourself

COMMON PROBLEMS IN GENERATING EVIDENCE

- Incomplete Project/Study time periods or dates
- Population sample
 - Total number of tests, patients and or specimens not documented
 - Too few observations, too small to allow a robust estimate of the impact of a practice
- o Practice description components not identifiable
- o Study Setting Too distinctive (e.g. pediatric oncology)
- Insufficient measurement period to allow a robust estimate of the impact
- o Results reported are not attributable to the practice

Solving It Yourself

Study Setting

 Description of where practice implemented? (e.g. ICU, ED) Intervention

- Practice description includes requirements and components for operations that are replicable?
- Duration (start and end dates)
 <u>Sample population</u>
- Description (e.g. patients, samples, tests)
- Number(s) and description (s) of participants or specimens e.g. blood, urine
- Selection criteria for participants or specimens

Comparator Practice

- Description of comparison practice or standard (status quo)
 Key characteristics (in relation
- to practice) Outcome Measures

Definition of the measurement(s) used to assess

practice impact (e.g. error rate, length of stay) Method of data collection described

uesu

- Results
- Findings described with supporting data provided
- Appropriate analysis

LABORATORY_MEDICINE

STANDARDIZE, SUMMARIZE AND RATE STUDIES

Practice:									
Bar-coding Systems		St	udy Qualit	y Rating			Effect Size Rating		
			Outcome						
Evidence	Study	Practice	Measure	Results	Total	Rating			
Bologna 2002	2	2	2	2	8	Good	Substantial		
Havden et al. 2008	3	2	2	3	10	Good	Substantial		
2 2		2	3	9	Go	od	Substantial		
Sandler et al. 2005	1	1	1	0	3	Poor	n/a		
Turner et al. 2003	1	1	1	1	4	Poor	n/a		
Zarbo et al. 2009	2	2	2	3	9	Good	Moderate		
Unpub A 2009	3	1	1	2	7	Fair	Substantial		
U of MN 2009	1	2	1	1	5	Fair	Substantial		
U of WA 2009	2	2	2	2	8	Good	Substantial		
LBJ 2009	2	2	2	2	8	Good	Substantial		
Study characteris Practice descriptio Outcome Measure Results of Study	LBJ 2009 Z Z Z Z B Good Substantial Study characteristics (Maximum = 3) Practice description (Maximum = 2) Outcome Measure (Maximum = 2) Results of Study (Maximum = 3) Good: 8 -10 points Fair: 5-7 points Poor: <=4 points								

Practice: Bar-coding Syst	ame		St	udv Qualit	v Rating			Effect Size Rat
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Evidence		Study	Practice	Measure	Results	Total	Rating	
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LABORATORY MEDICINE Best Practices

Effect Size Rating

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Practice: Bar-co	ding							I
Systems			Stu	udy Qualit	y Rating			l
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Turner et al.	2003	1	1	1	1	4	Poor	t
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Solving It Yourself

EVIDENCE EXAMPLE: FAIR Practice - Description - Duration - Training - Training - Duration - Training - Tra

- Time Period - Population/Sample - Comparator - Study bias	- Training - StafflOther Resources - Cost		- Stat. Significance/Test(s) - Results/Conclusion Blas
Design: Backors after Teality: Academic model conter in Vieweinn U.S>300 reality: Academic model academic model and point (11-12/2008) migmentelid on other migmentelid on other migmentelid on other migmentelid on other migmentelid on other migmentelid on other migmentelid on other man Parisa Time Parisa migmentelid on other migmentelid on other migmentelid on other mentology, med / samp. mentology, m	Description: Sincoding system prioritis of philotomis using patient biodite kincode speciment patient biodite kincode speciment biocode	Outcome Messure Johnnu & Jer Jahret specime Identification (PSD)ennos Imod das provided by auftors: Recording Methods: Event Ingoling system and occurrence management reports log	"Intel® Variation of the second
Study (3 pts maximum): 3	Practice (2 pts maximum): <u>1</u> ; - Description lacks detailed specifications on how system interfaces with hospital & requirements for implementation	Outcome measures (2 pts maximum): 1: - Recording method may not accurately capture all instances of the outcome	Results/lindings (3 pts maximum): 2: - Small number of errors reported yields unstable effect size estimate

Evidence	Study	Practice	Measure	Results	Total	Rating	
Bologna 2002	2	2	2	2	8	Good	Substantial
Hayden et al. 2008	3	2	2	3	10	Good	Substantial
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Zarbo et al. 2009	2	2	2	3	9	Good	Moderate
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LBJ 2009	2	2	2	2	8	Good	Substantial
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Suppose Suppose

2. Increase sample size

3. Provide more description on the recording method 4. Apply statistical treatment to characterize results

Solving It Yourself

EVIDENCE EXAMPLE: POOR

<u>Study</u> - Design - Facility/Sotting - Time Period - Population/Sampla - Comparing - Comparing - Study bias	<u>Practice</u> • Description • Duration • Training • StatffOther Resources • Cost	Outcome Measures - Description (s) - Recording method	Results/Findings - Type of Findings - Findings/fifest Size - Stat. Significance/Fest(s) - Results/Conclusion Bias	
Design: Non-comparise study Design: Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-comparise study Non-princip Non-comparise study Non-comparise Non-princip Non-comparise Non-princip Non-comparise Non-comparise Non-princip Non-comparise Non-compa	Description: Benoaling system to translation (integraphic) attained on the system of the the system of the system of the system of the system of the system of the system system of the system of the system of the system system of the system system of the system	 - Outcome Measures: (U) Poothe identification rate Percentage of patients, Biood campites and Biood components patients, Biood Components patie	- Hon-comparise Budy, Time series (Junya): (Junya): (Junya): (J	
Study (3 pts maximum): fj - Complete study time period not reported - Transtasion study may be too distinctive to be generalizable	Practice (2 pts maximum):]; No practice duration specified	Outcome measures (2 pts maximum): 1: Recording method is not adequately described.	Hesults/tindings (3 pts maximum): 9 - Insufficient sample: Statistical power not of locussed and sample size too small - Data insufficient to allow effect size calculation(non comparative study)	4

11/3/2010

Wrap-up THE PROFESSION NEEDS TO BE ENGAGED! Access best practice findings Utilize educational materials Submit quality improvement project data for ongoing evidence reviews Submit topic suggestions/ideas Provide input on draft review topics and evidence reviews Promote the use of best practices in your facility



If you always do what you've always done,

then you'll always get what you've always gotten

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