A Podium Presentation Primer for the Pharmacy Resident - Developing Effective Presentation Slides

OhioHealth Pharmacy Resident Workshop Series

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Learning Objectives

1. Develop a slide deck outline to effectively convey scientific information within a prespecified timeframe
2. Differentiate effective strategies and common pitfalls related to designing non-quantitative slides
3. Critique available slides for effective visual displays of quantitative and non-quantitative data

Start with the End in Mind

$$n_{slides} = t / 1.5$$

20-min Research Presentation:

Title, objectives, COI	2
Background incl. research question	3
Methods	3
Results	5
Discussion- limitations, implications	2
Conclusion	1
References (not presented)	1
Total	17

Start with the End in Mind

- READ ALL INSTRUCTIONS
- Provided or preferred templates

Best Colors?

Best Colors?

Best Colors?

Best Colors

- High contrast
- Solid or minimal gradient background
- Visually appealing without distraction
- Will change with screen, projector, lighting….

Fonts

- Serif fonts for print
- Sans serif for presentation
- Slide Master Tool - maximize font size
- Min size = **24**

Key Concepts Examples follow -->

- -How to adapt tables for visual presentation
- -How to incorporate graphics without plagiarizing
- -How to optimize figures for visual presentation

Do NOT use printed materials

Always Site 22 Payors			
	Referrals	Variances	Adherence
Medicaid/Medicare	231	3	98.7%
Managed Medicaid/Medicare	246	7	97.2%
Worker's Compensation*	3	1	66.7%
Tricare	0	0	
Always Site 22 Payor Totals	477	10	97.9%
Private Payors (Manual Chart Review)			
	Referrals	Variances	Adherence
Oncology Treatment (Site 22)	50	0	100.0%
Site 11	57	12	78.9%
Site 22	65	0	100.0%
Sometimes Site 11**	64	14	78.1%
Miscellaneous***	4	0	100.0%
Private Payor Totals	240	26	89.2%
Totals	713	36	95.0%

*All Worker's Compensation plans were affiliated with a Medicare/Medicaid plan
**Tysabri was considered site 11 for all MS patients.
***Miscellaneous referrals were for medications not on the Drug Matrix (i.e., antibiotics)

Always recreate to ensure readability + avoid plagiarism

Public Payors			
Payor	**Referrals**	**Variances**	**Adherence**
Medicaid/Medicare	231	3	98.7%
Managed Medicaid/Medicare	246	7	97.2%
Worker's Compensation*	3	1	66.7%
Tricare	0	0	n/a
Site 22 Payor Totals	**477**	**10**	**97.9%**

**All Worker's Compensation plans were affiliated with a Medicare/Medicaid plan*

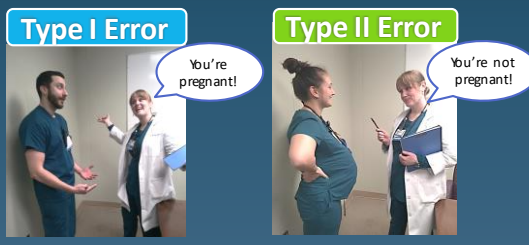
Not OK (without permission)

Image source: *unbiasedresearchblogspot.com*

OK (with permission)

Image source: *unbiasedresearchblogspot.com* – Used with permission

OK (with citation)



Adapted From: *unbiasedresearch.blogspot.com*

Liposomal Bupivacaine Analysis

Pooled analysis of studies that compared liposomal bupivacaine to placebo **or** to bupivacaine HCl

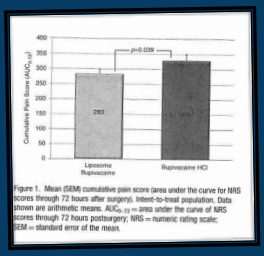


Figure 1. Mean (SEM) cumulative pain score (area under the curve for NRS scores through 72 hours after surgery), intent-to-treat population. Data shown are arithmetic means. AUC_{0-72} = area under the curve of NRS scores through 72 hours postsurgery; NRS = numeric rating scale; SEM = standard error of the mean.

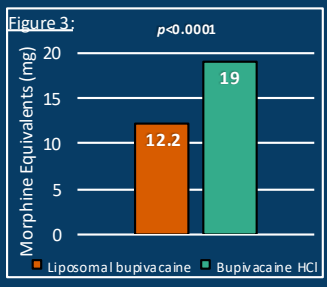
CMRO. 2012 Sep;28(1):1609-1615

Liposomal Bupivacaine Data Limitations - What is the comparator?

Pooled analysis of studies comparing liposomal bupivacaine to

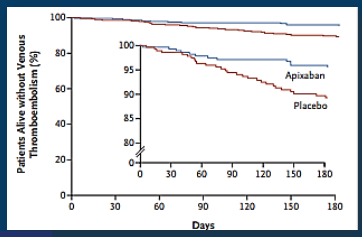
[bupivacaine HCl **or** placebo]

Figure 3:



Adapted from CMRO. 2012 Sep;28(1):1609-1615

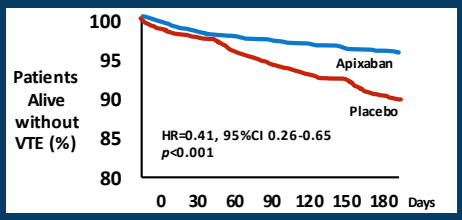
Survival Curves: The AVERT Trial Cumulative Event Rates of VTE



No. At Risk							
Apixaban	288	276	265	256	249	244	229
Placebo	275	268	259	244	237	228	215

N Engl J Med. 2019 Feb 21;380(8):711-719. doi: 10.1056/NEJMoa1814468. Epub 2018 Dec 4.

AVERT Trial: More patients alive without VTE with apixaban



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(Poorly) Adapted from N Engl J Med. 2019 Feb 21;380(8):711-719. doi: 10.1056/NEJMoa1814468. Epub 2018 Dec 4.

Bullet Points per Slide

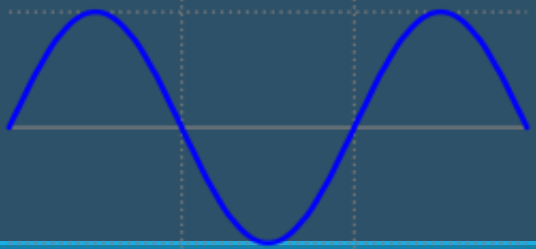
- Rule of 7s?
- 6x6 Rule?

Bullet Points per Slide

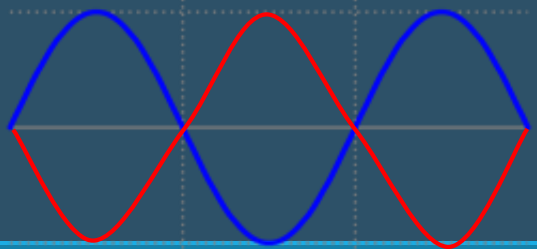
- Rule of 7s?
- 6x6 Rule?
- None >>> Less >>>>> More

→ **Effective oral presentations are not text-based**

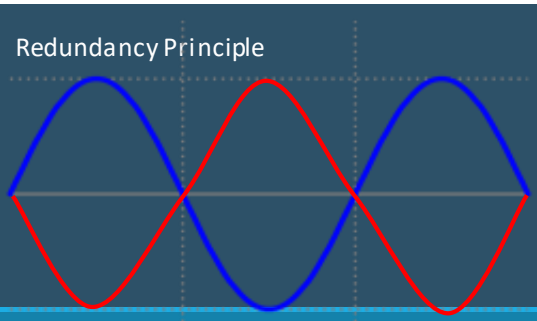
Redundancy Principle



Redundancy Principle

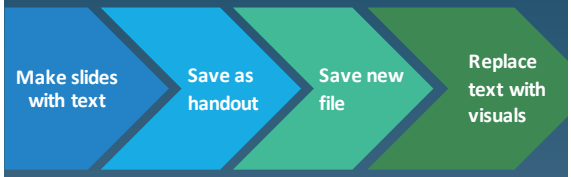


Redundancy Principle



Oral presentations slides should NOT be text-based

Verbal Presentation = Limited Words on Slides



Ineffective

- 640 licensed beds
- Community, not-for-profit, community teaching hospital in Columbus, OH
- Level 1 Trauma Center - >85,000 ED admissions, ~5500 traumas annually
- >20,000 surgeries annually

Getting Closer

- 640 beds
- Columbus, OH
- Level 1 Trauma Center
- >85,000 ED admissions
- >20,000 surgeries

Optimal

Recall

Charts/diagrams > tables >>>> text

- Data type informs chart type
- Avoid "Chartjunk"
- Maximize font size

Judicious use of color

Cognitive Load Theory

Avoid ClipArt®

Define Relationship → Choose Diagram

- Related List
- Collage
- Process or Cycle
- Hierarchy/Category
- Timeline
- Pro/Con Balance
- Components
- Compare/Contrast

Key Concepts Examples follow -->

-Creating visual representations of your concepts or data to decrease text on your slides and maximize audience engagement

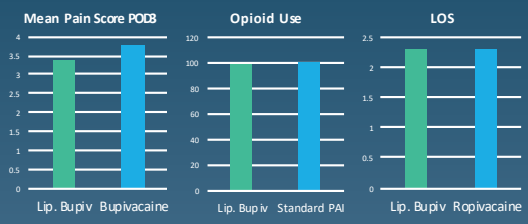
-Optimizing visuals for effectiveness of conveying message

Liposomal Bupivacaine: Theoretical Benefits

Liposomal dosage form → ↑ Duration of action → ↓ Post-op pain ↓Narcotics ↓ORAEs → ↓LOS, Better outcomes

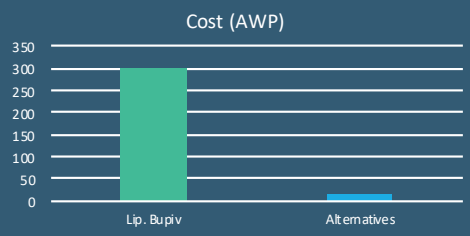
Liposomal Bupivacaine: Underwhelming Reality

p>0.05



Knee. 2012 Oct;19(5):S306; J Arthroplasty. 2016 Sep;31(9 Suppl):22-5; J Arthroplasty. 2014 Apr 4. pii: S0883-5403(14)00222-8.

Liposomal Bupivacaine: Underwhelming Reality



Medication-Related Targets

- Periop drug costs
  - Intraop charge capture
    - Reduce waste
    - Improve documentation
  - Medication use/stewardship
    - High-cost drug use
    - Reduce indirect costs

Medication-Related Targets

- Periop Drug Costs
  - Intra-op Charge Capture
    - Waste
    - Improve Documentation
  - Med Use/ Stewardship
    - High-Cost Drug Use
    - Reduce Indirect Costs

Types of Data

Categorical/Discrete		Continuous	
Nominal	Ordinal	Interval	Ratio
→Yes/No	→Ordered list	→No true zero	→Contains zero

Should everyone who needs NMB reversal get sugammadex?

Where does it fit?

Disadvantages

- Anaphylaxis?
- Blocks subsequent NMB
- Not recommended in CrCl<30 mL/min

Advantages

- Faster onset
- ↓ post-op curarization
- More predictable
- Deeper NMB reversal

Sugammadex (Bridion®) side-by-side evidence summary. 2017 Vizient, Inc
Efficacy and safety of sugammadex versus neostigmine in reversing neuromuscular blockade in adults. Cochrane Database of Systematic Reviews 2017, Issue 8.

What can we do?

NPO with sips

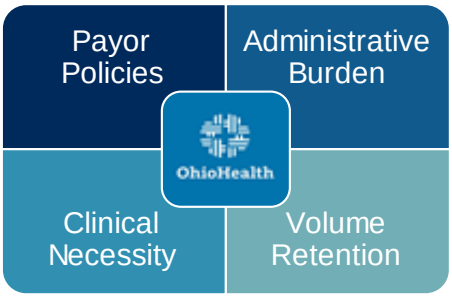
Preemptive multi-modal analgesia protocols

https://www.humana.com/prevention-and-care/managing-conditions/medications/medication-safety

OhioHealth Strategy

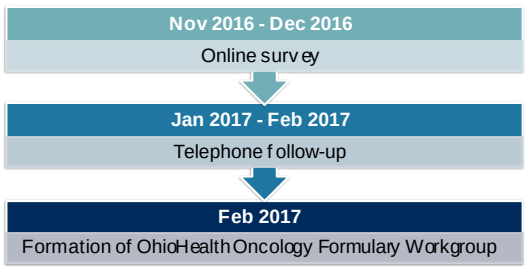
- Address payor policies
- Retain patient volume
- Minimize administrative burden
- Driven by clinical necessity
- Objective site-of-service management

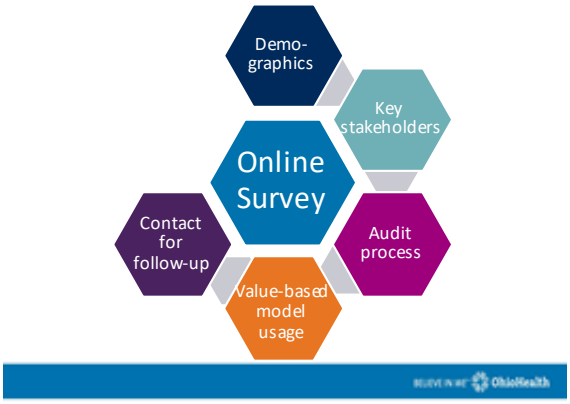
OhioHealth Strategy



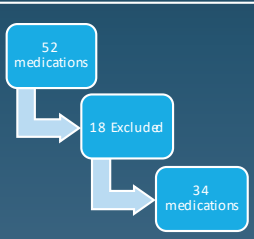
Online Survey

- Surveys Sent to 92 PGY-2 Oncology Residency Program Directors
- Responses: 11
- Evaluated
  - Demographics: Location and Type of Hospital, Number of Physicians and Patients, Existence of a separate oncology formulary management system.
  - Formulary Process
  - Audit Process
  - Willingness to be contacted for further follow-up





Methods



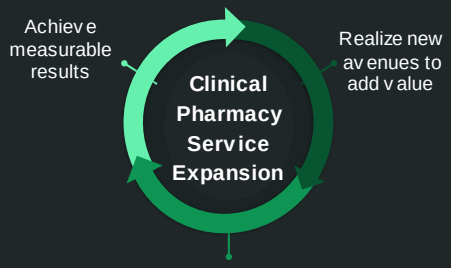
Methods

52 Meds • Total anesthesia tray contents

18 Excluded • Confounders • Low use items

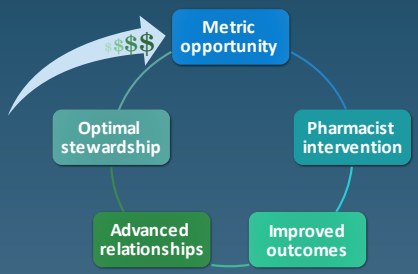
34 Meds • **Primary analysis**

Step 5: Repeat cycle to expand services!

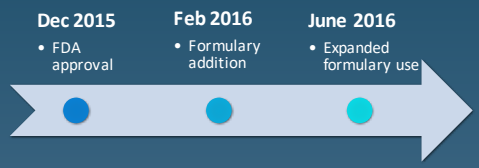


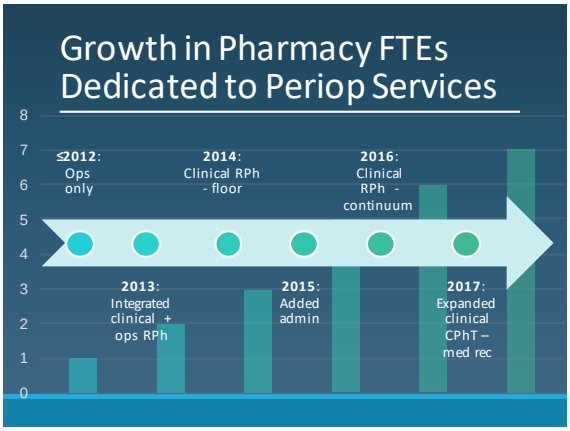
Build rapport and demand for services → Justify resources

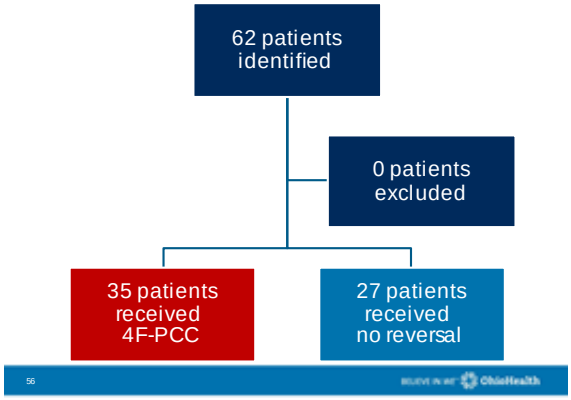
Ortho Clinical PharmD Service



Sugammadex – Background





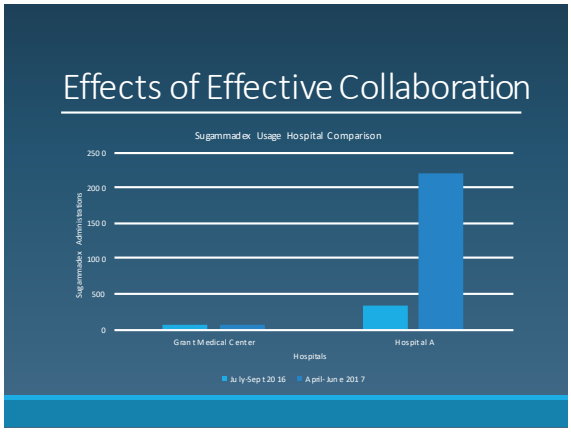


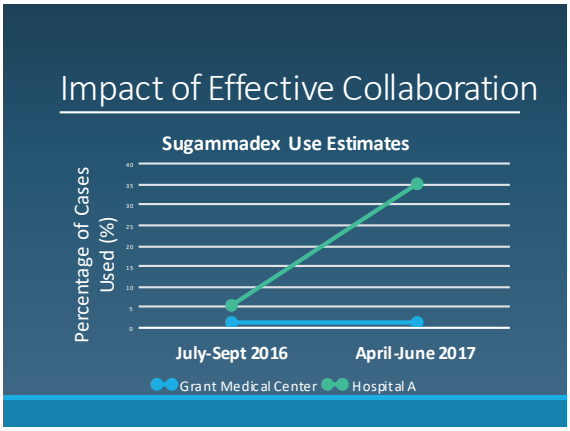
Study Population

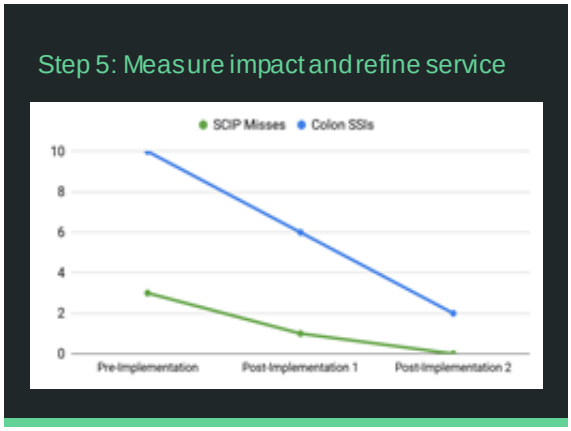
Baseline Characteristics	4F-PCC (n=35)	No Reversal (n=27)	p-value
Age, mean (SD)	78.9 (8.86)	79.4 (11.52)	0.84
Female, n (%)	22 (62.9)	18 (66.7)	0.76
GCS, mean (SD)	13.1 (3.83)	14.3 (1.59)	0.27
ISS, mean (SD)	17.6 (8.89)	12.1 (6.4)	0.019
Antiplatelet use, n (%)	18 (51.4)	9 (33.3)	0.15

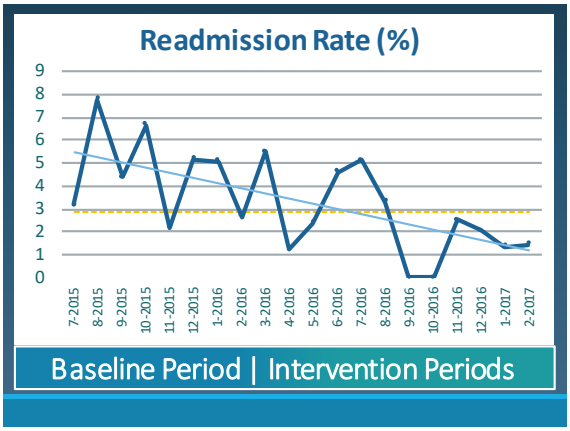
GCS: Glasgow Coma Score

57 ChioHealth

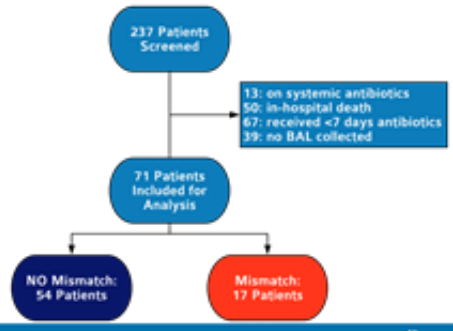




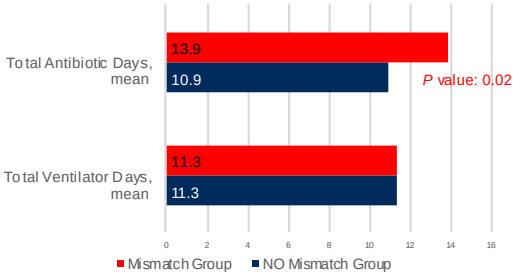




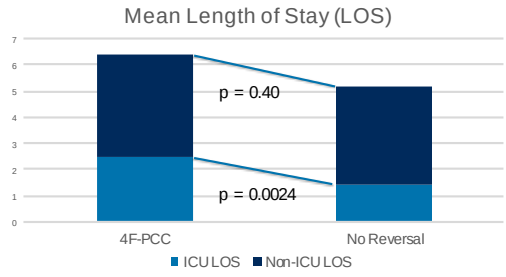
Study Population



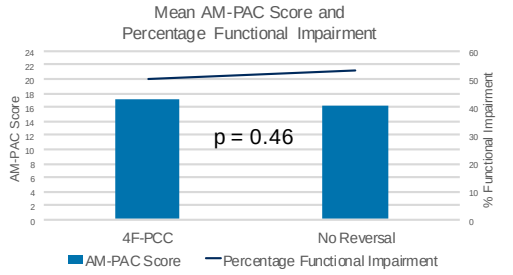
Secondary Outcomes



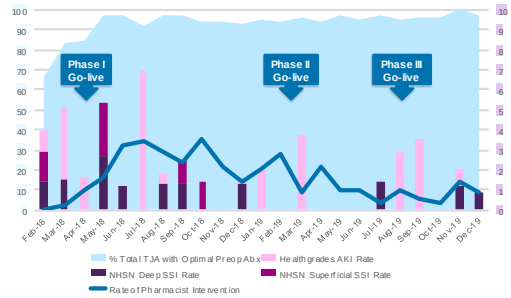
Length of Stay



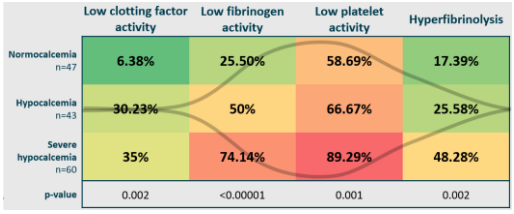
AM-PAC Score



Ortho ASP Results

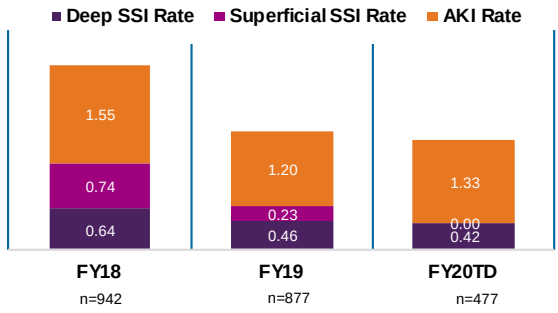


Heat Map

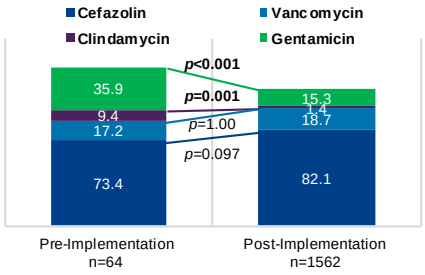


	Low clotting factor activity	Low fibrinogen activity	Low platelet activity	Hyperfibrinolysis
Normocalcemia n=47	6.38%	25.50%	58.69%	17.39%
Hypocalcemia n=43	30.23%	50%	66.67%	25.58%
Severe hypocalcemia n=60	35%	74.14%	89.29%	48.28%
p-value	0.002	<0.00001	0.001	0.002

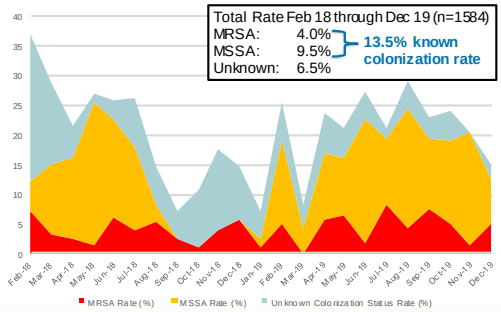
Fiscal Year Clinical Outcomes



Periop Antibiotic Use Rates



S. Aureus Colonization Rate



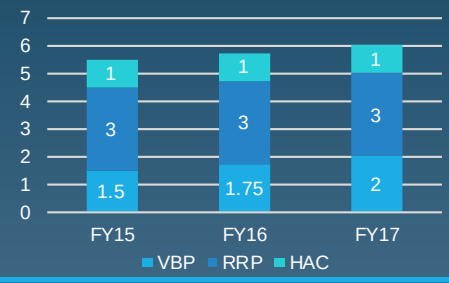
Step 5: Measure impact and refine service

CMS Pay for Performance

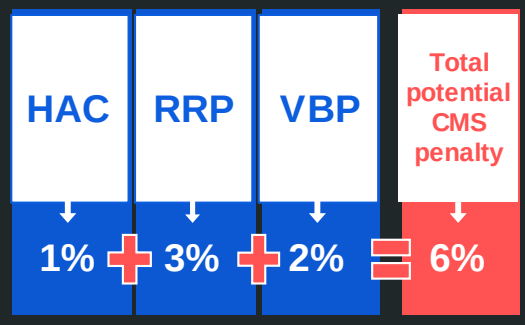
Year	Value Based Purchasing (VBP)	Readmission Reduction Program (RRP)	Hospital Acquired Conditions (HAC)	**Total Possible Penalty Influenced by TJA Outcomes**
FY15	1.5%	3%	1%	5.5%
FY16	1.75%	3%	1%	5.75%
FY17	2.0%	3%	1%	**6%**

www.qualitynet.org, file:///C:/Users/SEJ755/Downloads/VBP_FY18_DomainWeighting_0227 17.pdf

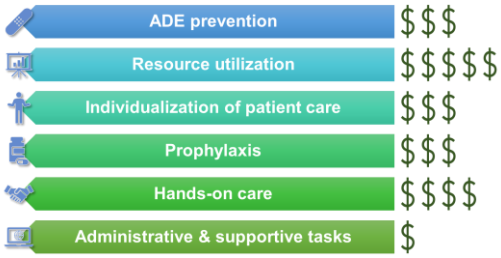
CMS Pay for Performance



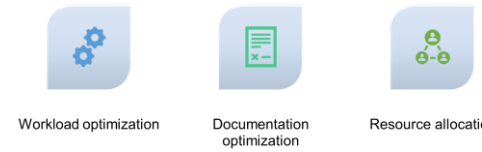
Additive CMS Reimbursement Penalties



Scoping Review



Future Directions



Key Concepts Examples follow -->

-How to create visual effects across multiple slides to avoid need for animations

Avoid Animations

Disappoint vs. disrupt

Prolong cadence

Achieve same result more reliably by utilizing multiple slides

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Disappoint vs. disrupt

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Achieve same result more reliably by utilizing multiple slides

Avoid Animations

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4F-PCC for DOACs

Retrospective Study	Population	Anticoagulants
Senger, et al	**n=17 patients** Traumatic or spontaneous ICH	Dabigatran Rivaroxaban
Hedges, et al	n=193 patients 4F-PCC or three-factor PCC **18 patients were on a DOAC**	Warfarin Dabigatran Rivaroxaban Apixaban Unknown
Grandhi, et al	**n=18 patients** Traumatic or spontaneous ICH	Rivaroxaban Apixaban

DOAC: Direct Oral Anticoagulant
ICH: Intracranial Hemorrhage

Senger S, et al. *World Neurosurg*. 2016;88:132-139.
Hedges A, et al. *J Thromb Thrombolysis*. 2015:1-5.
Grandhi R, et al. *World Neurosurg*. 2015;84(6):1956-1961.

4F-PCC for DOACs

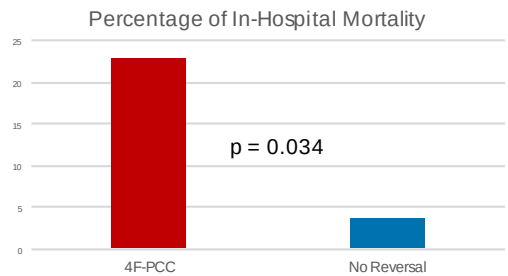
Limitations:

- Retrospective studies
- 53 total patients on DOACs
- No control groups
- Included spontaneous and traumatic ICH

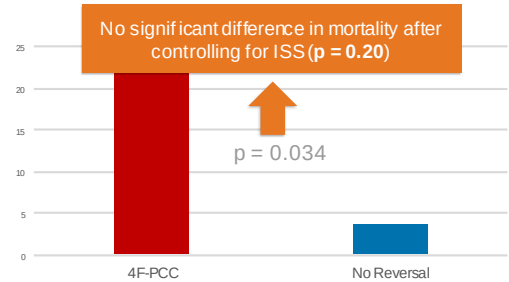
DOAC: Direct Oral Anticoagulant
ICH: Intracranial Hemorrhage

Senger S, et al. *World Neurosurg*. 2016;88:132-139.
Hedges A, et al. *J Thromb Thrombolysis*. 2015:1-5.
Grandhi R, et al. *World Neurosurg*. 2015;84(6):1956-1961.

Primary Outcome



Primary Outcome



Demographic Variables

Baseline Characteristics	4F-PCC (n=35)	No Reversal (n=27)	p-value
Age, mean (SD)	78.9 (8.86)	79.4 (11.52)	0.84
Female, n (%)	22 (62.9)	18 (66.7)	0.76
GCS, mean (SD)	13.1 (3.83)	14.3 (1.59)	0.27
ISS, mean (SD)	17.6 (8.89)	12.1 (6.4)	0.019
Antiplatelet use, n (%)	18 (51.4)	9 (33.3)	0.15

GCS: Glasgow Coma Score

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PowerPoint® Design Tools

Arrange

Ruler, Guide, Gridlines

Duplicate Slide

Convert to Shapes

Designer

Easy Alignment with Arrange

Align Top

Distribute Horizontally

Align Center

Distribute Vertically

Easy Alignment with Arrange

Align Top

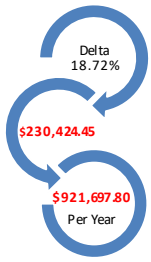
Distribute Horizontally

Much Better!

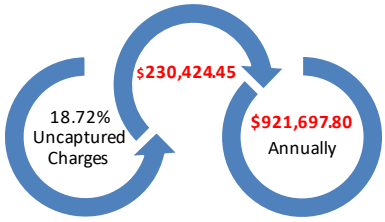
Align Center

Distribute Vertically

Optimize Size and Spacing with Convert to Shapes



Optimize Size and Spacing with Convert to Shapes



PowerPoint® Design Tools

- Slide Master
- Slide Sorter
- Speaker Notes
- Presenter View

SJ's Personal Process

1) Build theme using Slide Master
2) Build outline based on timeframe
3) Use Slide Sorter to validate flow/timing
4) Outline content points for each slide
5) Move bullet point to Speaker Notes
6) Replace with visuals
7) Peer review
8) Refine/Finalize slides
9) Practice-Refine-Practice-Present-Celebrate

Non-PowerPoint® Tools

- Prezi®
- LucidChart®
- Poll Everywhere®
- Slido®
- Google Slides®

A Podium Presentation Primer for the Pharmacy Resident - Developing Effective Presentation Slides

OhioHealth Pharmacy Resident Workshop Series

Sara J. Hyland, PharmD, BCCCP | Keaton S. Smetana, PharmD, MBA, BCCCP, FNCS, FCCM | Lisa G. Mostafavifar, PharmD, MS, BCPS, BCCCP

Dec 2023 | OhioHealth | Columbus, OH

Group Exercise

1. Review your recent slide deck
2. Pick one slide that you would change and describe how to optimize it for effectiveness
3. Pick one slide that showcases one of these concepts well

References

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https://www.presentationguru.com | http://haikudeck/