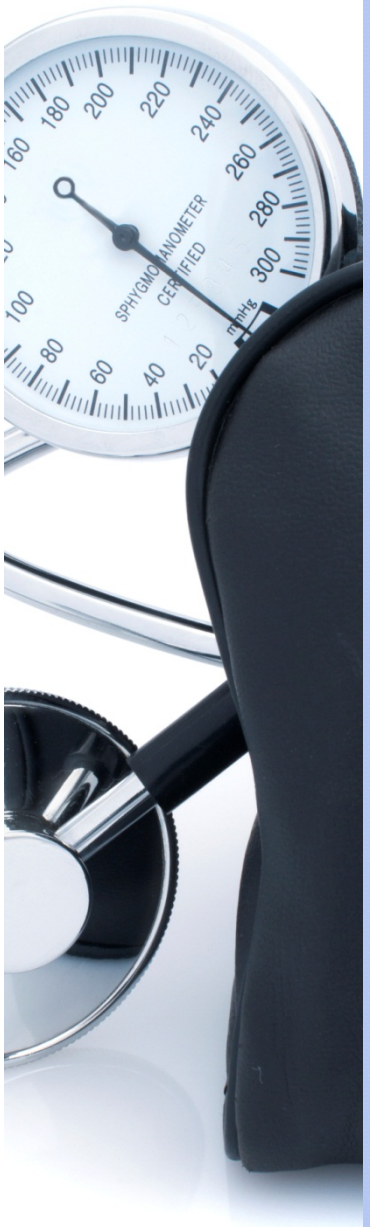
How to Write an Abstract & Make a Great Poster

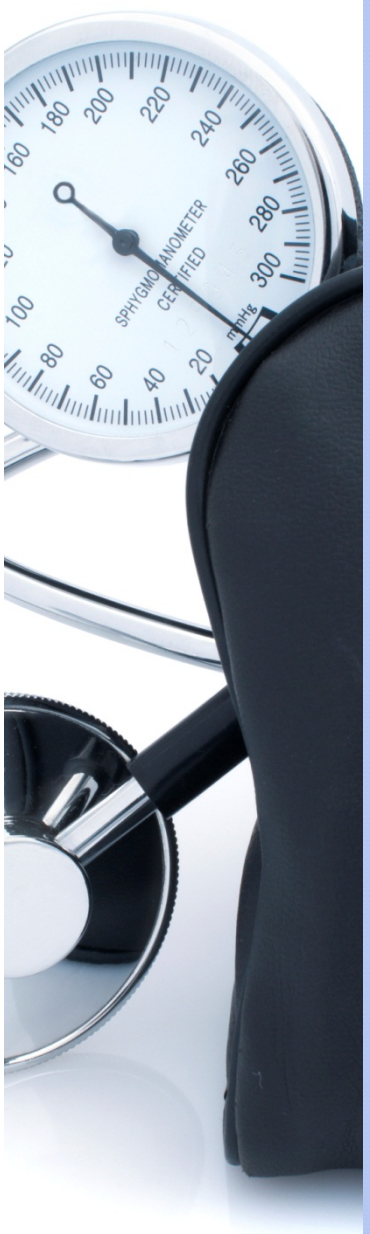
Hamed Abbaszadegan, MD, MBA
ACP AZ Poster/Abstracts Chair

Chief of Health Informatics Officer
Phoenix VA Health Care System
Assistant Professor of Internal Medicine & Biomedical Informatics
University of Arizona College of Medicine-Phoenix



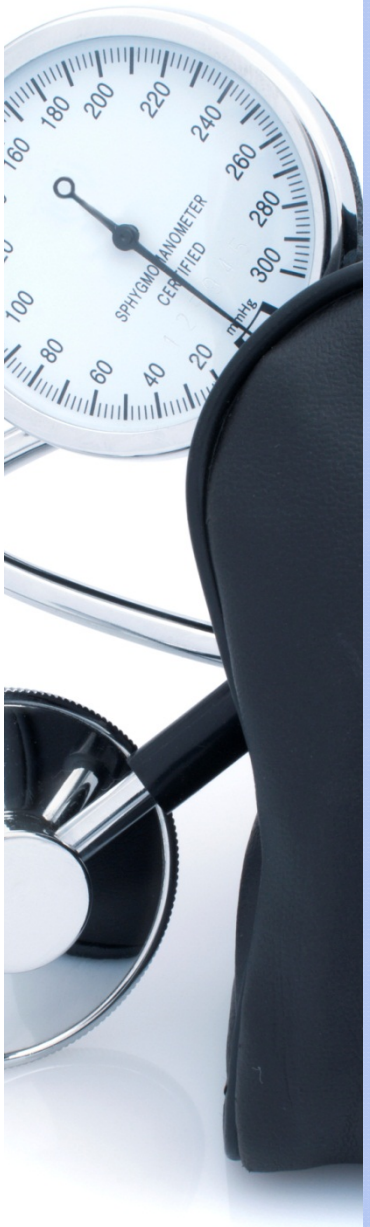
Overview

- Abstract
- Types of Posters
  - Research Poster
  - Case Presentation Poster
  - Quality Improvement Poster
  - Patient Safety Poster
- Construction
- Examples
- Presentation
- Judging/Evaluation



Purpose of a Poster

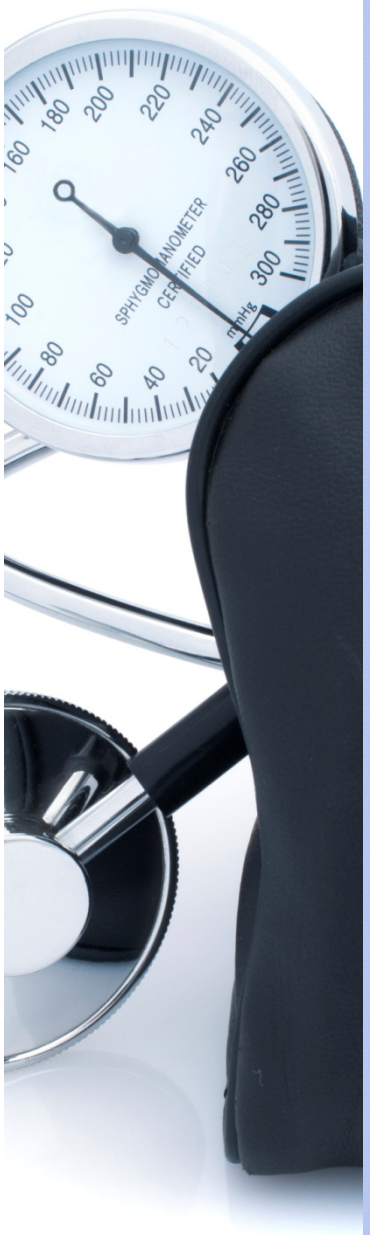
- Communicate research
- To illustrate key points in a visually stimulating manner
- To represent yourself and your work to peers and colleagues
- To network with leaders in your field of interest



Abstract

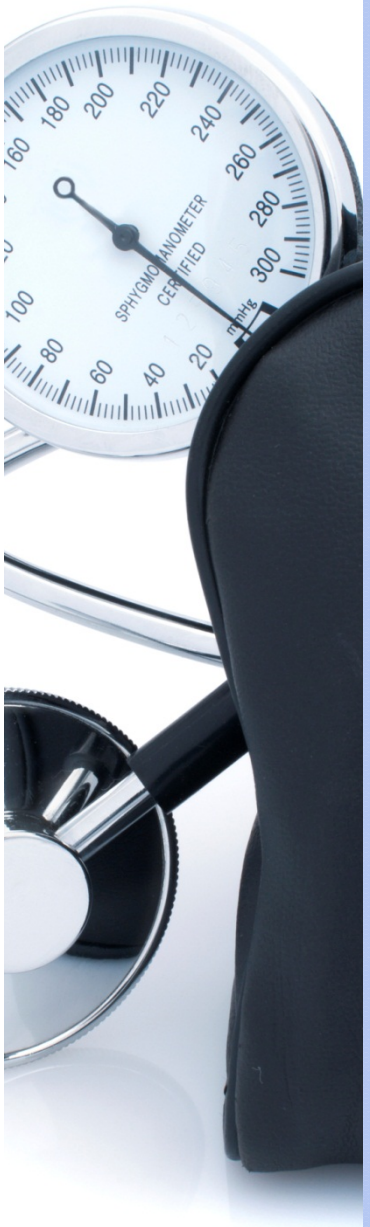
- An Abstract is a brief summary of a research article, thesis, case….quickly allowing the reader to ascertain the purpose.

- An abstract is used as the basis for selecting research proposed for presentation



Abstract Continued…

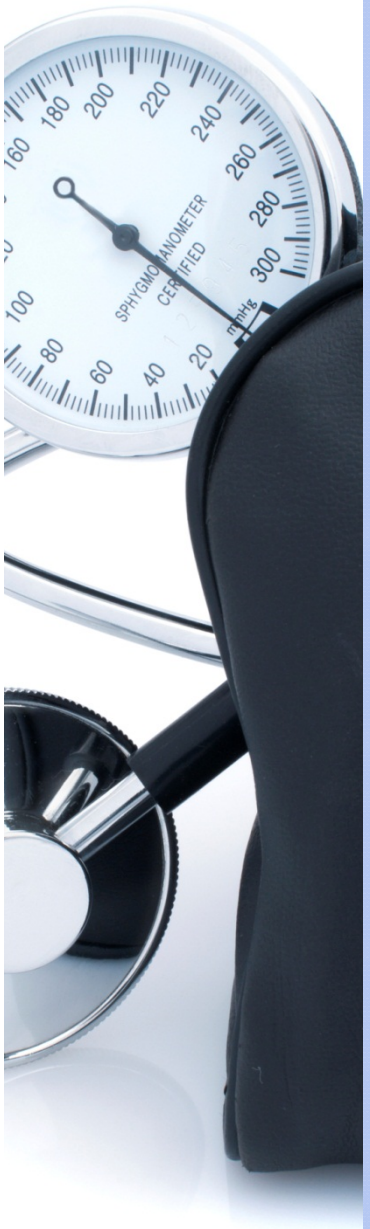
- Abstract will form the body of your poster
- Take already concise description of your work (*abstract*) and transition it into an exciting, interesting, accurate work of art (*poster*)
- After you have selected your case or completed your research/project, review examples
  - Program research department
  - ACP website – link to "winning" abstracts
  - Friends/colleagues



Developing an Abstract

- Purpose:
  - Application for poster presentations
  - Making selections for oral presentations
  - Briefly summarize work, allowing reader to quickly ascertain purpose

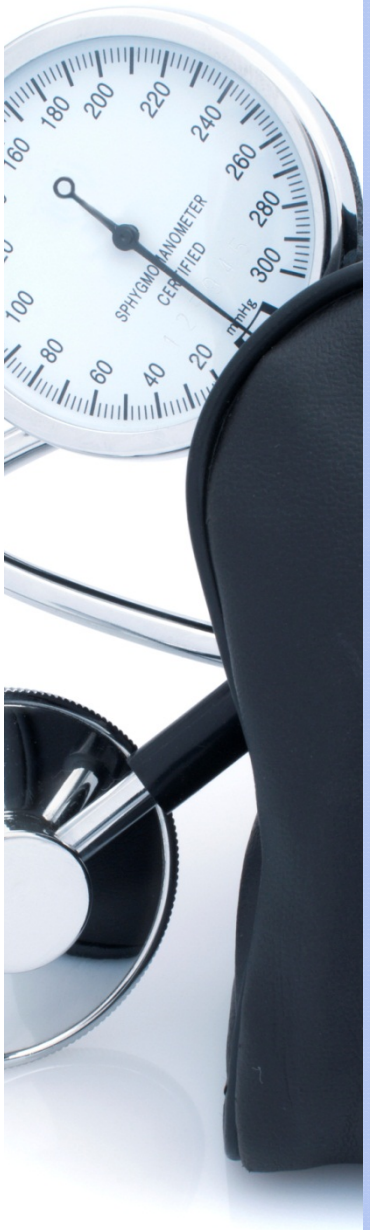
- Challenges:
  - Months/years of work into ~300-400 words
  - Deciding if work is worth entering



Research Abstract

- Title and Author Information
- Introduction
- Methods
- Results
- Conclusion
- 250 words

- "Writing a Research Abstract" on the ACP website under "Residents and Fellows"
- http://www.acponline.org/residents_fellows/competitions/abstract/prepare/



Looking at Examples as we go…

Resolution of Co morbidities and Diabetes Mellitus Type II in Native Americans Following Bariatric Surgery

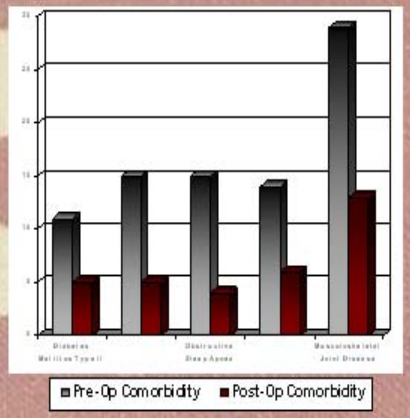
Hamed Abbaszadegan, MD; Melisa Celaya Cortes, MA; Robin Blackstone, MD

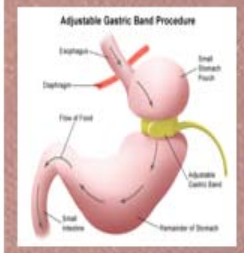
Scottsdale Bariatric Center; Scottsdale, AZ

Banner Good Samaritan Medical Center Department of Internal Medicine; Phoenix, AZ

Background

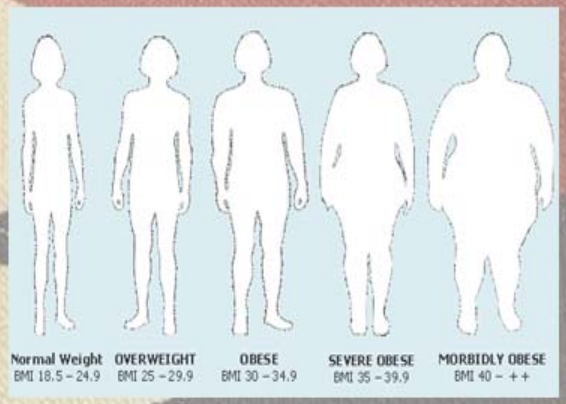
Roux-en-Y gastric bypass (RYGB) has been shown to improve health in obese patients. Of note, studies have shown improvements of HbA1c values, insulin resistance, beta-cell function, attenuation of peripheral insulin resistance, improvement of glucose control within 1 month postoperatively, and decrease diabetic medication requirements (1, 2, 3, 4, 5). Factors associated with remission were the preoperative insulin dose and the percentage of excess weight loss (1). One study showed that RYGB improves diabetes resolution by early increase in beta cell function at 1 month, and attenuation of peripheral insulin resistance at 6 months (2).





Introduction

The unique predispositions and prevalence of obesity makes the Native American population a high priority for intervention. Weight loss has been shown in other populations to influence the development and course of diabetes. Recent recommendations by the ADA have suggested that surgery may be an important treatment in the control of diabetes. This study reviews surgical treatment of obesity in a cohort of Native American patients from Arizona including surgical preoperative co morbidities (especially diabetes) and postoperative outcomes.



Methods

A retrospective analysis of prospectively collected data from November 2001 to November 2008 was performed in Native Americans that underwent gastric bypass (N=22; 75.9%) and laparoscopic adjustable gastric band surgery (N=7; 24.1%) in a community hospital. Descriptive analyses were executed to assess preoperative factors and comorbidities, postoperative complications, and improvement or resolution of disease.

Pre-Operative Comorbidities (Total Patients studied = 29)	Patients with Comorbidities	Percent Resolution of Comorbidities
Diabetes Mellitus Type II	11	45.5%
Hypertension	15	33.3%
Obstructive Sleep Apnea	15	26.7%
Dyslipidemia	14	42.9%
Musculoskeletal Joint Disease	29	46.4%

Results

Among the 29 participants, 86.2% patients are female, median age at surgery is 37.4 years, with the initial consultation median weight at 274 lbs. and BMI of 48.5. Preoperative comorbidities include Type II Diabetes (N=11, 37.9%), hypertension (N=15, 51.7%), obstructive sleep apnea (N=15, 51.7%), musculoskeletal joint disease (N=29, 96.6%), and dyslipidemia (N=14, 48.3%). Resolution of comorbidities consists of Type II Diabetes (45.5%) confirmed by serial fasting glucose and HbA1C, hypertension (33.3%) confirmed after PCP stopped HTN medications, obstructive sleep apnea (26.7%) confirmed by repeat sleep study, musculoskeletal joint disease (46.4%) confirmed by subjective history, and dyslipidemia (42.9%) confirmed by fasting lipid panel. A significant difference in percent excess weight loss at 12 months between preoperative Type II Diabetics and normoglycemic patients was not confirmed.

Conclusion

The prevalence and severity of obesity and diabetes in Native Americans is amongst the highest in a population group in the world. Post operative comparison with non-Native Americans showed the effects of long term weight loss and resolution of comorbid disease as somewhat less. Unique cultural characteristics may be partly responsible for the lower response rate. Use of gastric bypass and laparoscopic gastric band surgery can aid in achieving long term weight loss and the resolution of comorbid disease.

References

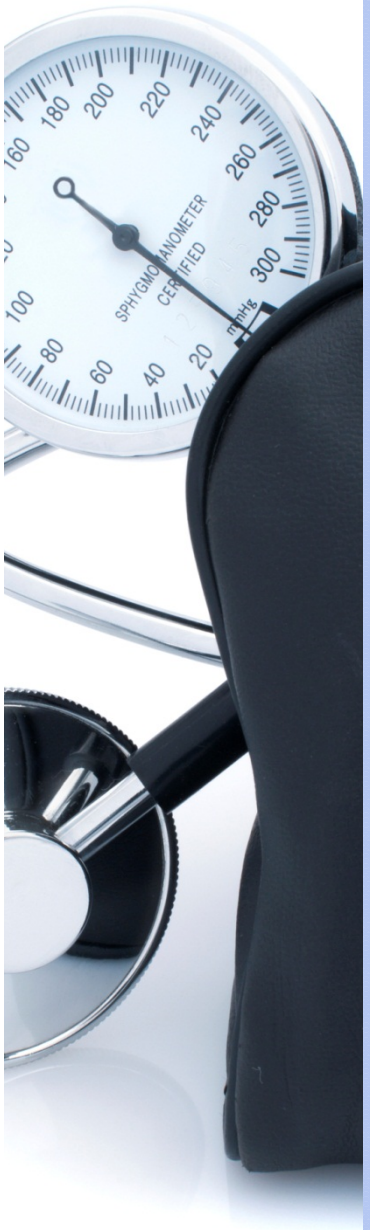
(1) Kashyap, S., Lum, K., Grant, J., Pryor, A., Portenier, D., et al. Remission of Type 2 Diabetes after Roux-en-Y Gastric Bypass is Associated with Greater Weight Loss. *Surgery for Obesity & Related Diseases*. 2009; 5(3): 305-9.

(2) Lim, E., Davis, S., Srinivasan, U., Sweeney, J., Ziegler, T., et al. Gut Mechanism for Type-2 Diabetes Resolution after Roux-en-Y Gastric Bypass. *American Surgeon*. 2009; 75(6):498-502.

(3) Mummie, D., Mathiason, M., Kallies, K., Kothari, S. Effect of Laparoscopic Roux-en-Y Gastric Bypass Surgery on Hemoglobin A1c Levels in Diabetic Patients: a Matched-cohort Analysis. *Surgery for Obesity & Related Diseases*. 2009; 5(1): 4-10.

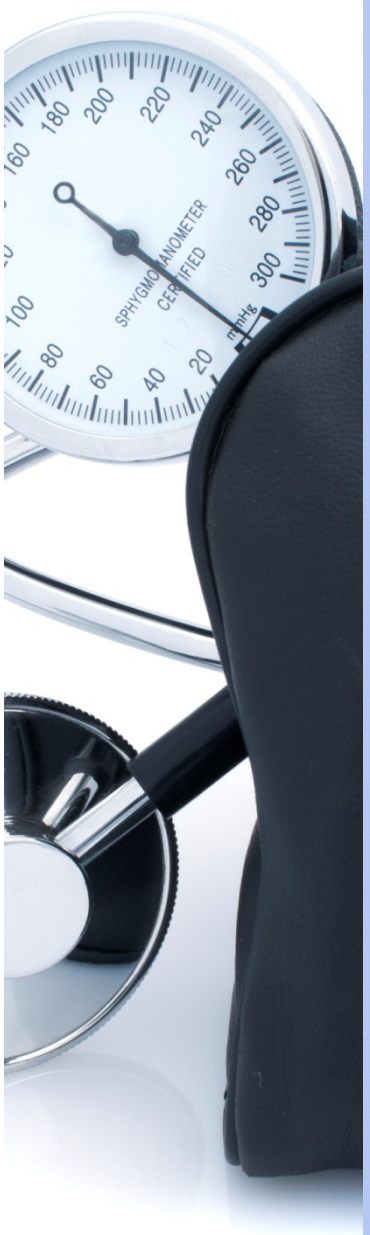
(4) Inge, T., Miyano, G., Bean, J., Helmrath, M., Courcoulas, A., et al. Reversal of Type 2 Diabetes Mellitus and Improvements in Cardiovascular Risk Factors after Surgical Weight Loss in Adolescents. *Pediatrics*. 2009; 123 (1): 214-22.

(5) Smith, B., Hinojosa, M., Rosario, K., Nguyen, N. Remission of Diabetes after Laparoscopic Gastric Bypass. Department of Surgery University of California Irvine. Presented at the American College of Surgeons in Santa Barbara, CA January 18-20, 2008.



Pros & Cons of Prior Poster

- Background
- Text
- Color scheme
- Abstract



Clinical Vignette Abstract

- Title and Author Information
- Introduction
- Case Description
- Discussion
- 300 words

- A case worth reporting?
  - Classic example of unusual process
  - Unusual presentation common condition
  - New diagnostic strategy
  - Cost effective approach
  - Interest of others is mainly determined by ***your*** interest

Cryptogenic Stroke in the Presence of an Atrial Myxoma

Hamed Abbaszadegan, MD; Jeremy Payne, MD, PhD
Banner Good Samaritan Medical Center Department of Internal Medicine, Phoenix, AZ

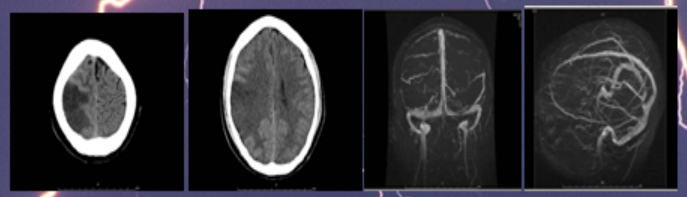
Introduction:

Strokes are often thought of as an occurrence in patients with risk factors such as long-standing hypertension, hypercholesterolemia, diabetes mellitus, "older" age, smoking, and genetic factors to name a few. It is not as common to see strokes in the younger age population (less than 40 years old), especially in the absence of cardiac/brain anomalies, right to left shunting, trauma, or endocarditis. When stroke occurs in this age group, the work up is often exhaustive to exclude clotting disorders, autoimmune conditions, and structural defects.

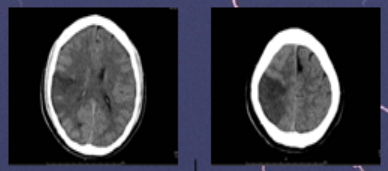
Case Report:

The patient is a 32 year old African American male with no known PMH who presented to the hospital with sudden onset of mild headache, left-sided weakness, and left spatial neglect. During the patient's admission, it was determined that he had an acute right parietal lobe ischemic infarct. Extensive work up did not find a definitive cause, but a right atrial myxoma was incidentally found. There was no clearly visualized patent foramen ovale, however a bubble study suggested a small degree of right to left shunting. No vascular anomaly on MRA imaging was found. Extensive lab work up which included coagulation studies, comprehensive drug screening, cultures, autoimmune etiologies, and lipid studies was unremarkable. The patient was discharged to acute rehab with a potentially cryptogenic stroke. Follow up is to include a repeat transesophageal echo to confirm the myxoma is still present which would then require surgical evaluation for excision.

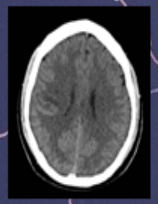
Initial CT & MRA



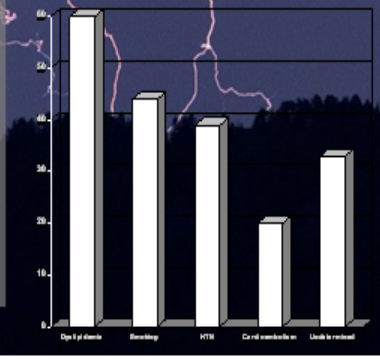
2nd CT



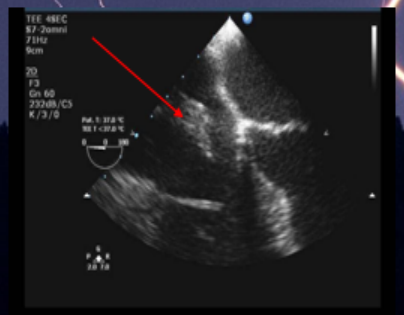
3rd CT, Day 9



Risk Factors for Ischemic Stroke Age 15-49



Transesophageal Echocardiogram

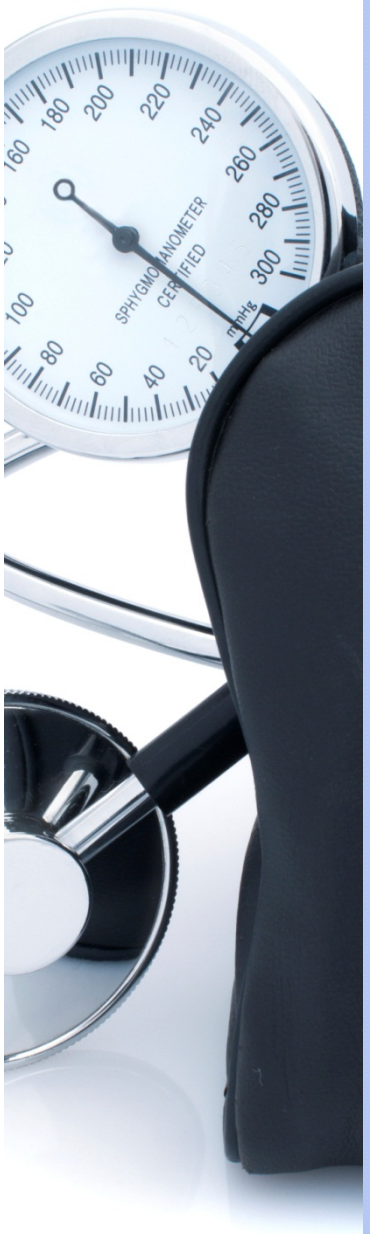


Discussion:

Often co-morbid disease, drug use, smoking, and other high risk activities can predispose patients to pro-thrombotic events. This was not the case in our patient. Etiologies to rule out before tagging a patient with a "cryptogenic" title should include: structural anomalies of the brain (CT + MR imaging), lipid profile, coagulation studies (factor V leiden mutation, anti-thrombin III, lupus anticoagulant, cardiolipin, prothrombogenic gene mutations, homocysteine), infectious etiologies, and auto-immune etiologies (Anti-nuclear antibody, rheumatoid factor). An embolic particle no larger than 1mm is sufficient to cause a clinically significant stroke. Despite no definitive R→L shunt, it is not impossible to imagine a small piece of the myxoma dislodging from an unseen small shunt.

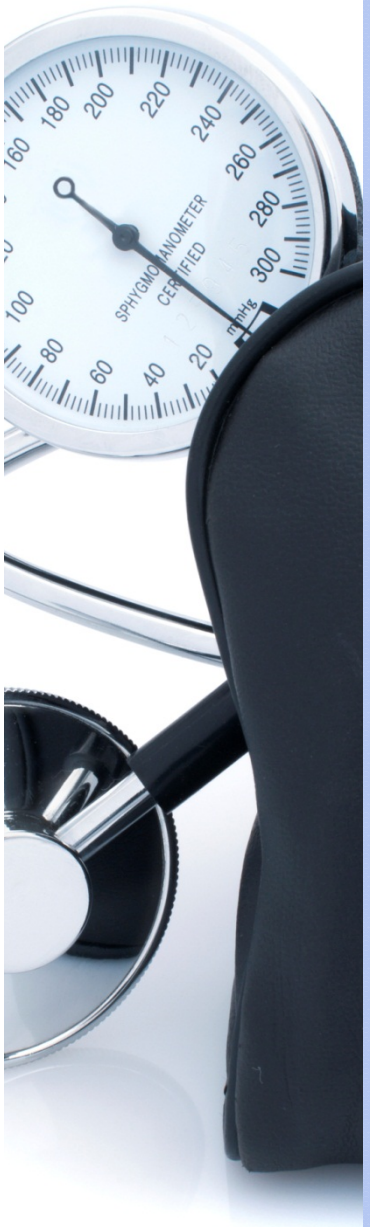
- Annual Stroke rate for ages 15-49 = 10.8/100,000

References:
1. Kizer, Jorge. Evaluation of the Patient with Unexplained Stroke. *Coronary Artery Disease*. 2008; 19(7): 535-40.
2. Putaala, J, Metso, A, Metso, T, et. al. Analysis of 1008 Consecutive Patients Aged 15 to 49 With First-Ever Ischemic Stroke. *Stroke*. 2009; 40;1195-1203.



Pros & Cons of Prior Poster

- Color scheme
- Photos
- Little Text
- Visual Impact



Patient Safety & Quality Improvement Abstract

- Title and Author Information
- Introduction of topic
- Methods
- Results
- Conclusion
- 300 words

- Category focusing on improving patient safety, quality & evaluating patient satisfaction.

Creating an Inpatient Clinic, the Future of Inpatient Medicine

Hamed Abbaszadegan, MD, Ruth Franks, MD, Jordan Coulston, MD, Cheryl O'Malley, MD

Banner Good Samaritan/Phoenix VA Health Care System Internal Medicine Residency Program

INTRODUCTION

With the advent of electronic medical records, bedside rounds have decreased in frequency on teaching services. Recent data suggests that multidisciplinary bedside rounds take similar or less time, and lead to improved patient satisfaction when compared to other forms of rounding.[1,2] Furthermore, the application of computerized rounding and Lean Six Sigma principles may increase value-added (e.g. physician face time) and decrease resident work hour violations.[3-5] Based on techniques developed at Virginia Mason Medical Center (Seattle, WA), we conducted Flow Rounds and operated an Inpatient Clinic, in an attempt to limit discharge delays and resident work hour violations.

Traditional Rounds

Flow Rounds

METHODS

- ☐ A "team" is comprised of an attending, resident, 1-2 interns, pharmacist, case manager, and medical student(s) using 3-4 mobile computer workstations.
- ☐ Average appointment times were calculated through initial timing studies.
- ☐ Daily rounding schedules were generated before rounds based on patient priority:
  - 1st Priority: Unstable patients, 40 minutes
  - 2nd Priority: Discharges, 30 minutes
  - 3rd Priority: Follow-ups/Overnight admits, 20 minutes
- ☐ House staff were encouraged not to pre-round, with specific guidelines limiting what pre-rounding was acceptable.
- ☐ Flow rounds proceeded according to schedule, with presentations, notes, orders, and consults entered at each bedside.
- ☐ Ancillary staff, patients, and family were updated on the daily care plan in real time.
- ☐ Arrival and departure times were collected on rounds, while discharge times and resident duty hour violations were monitored electronically.
- ☐ Team discharge order entry times and discharge times were compiled monthly, with comparisons of flow and non-flow teams using independent two-sample t-test.

RESULTS

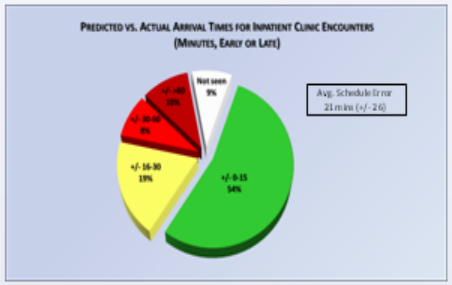


Figure 1. 14 days of Inpatient Clinic Flow Rounds are compiled above (N = 130 encounters). Most inpatient clinic encounters began within 15 minutes of scheduled time (75/130, 58%), with an average absolute schedule error of 21 minutes (SD = 26 min). The majority of encounters began before scheduled time (80/130, 58%). Some patients were not seen during flow rounds (12/130, 9%).

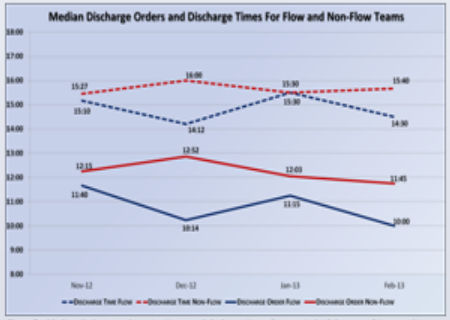


Figure 2. Median discharge order entry times and discharge times (i.e. empty bed) from medicine ward teams are shown above (N = 916 patients). Teams rounding in flow completed discharge orders earlier in the day (median discharge order time 10:30 vs. 12:07, $p < 0.0001$). This resulted in significantly earlier discharge times (median discharge times 14:47 vs. 15:30, $p < 0.01$).

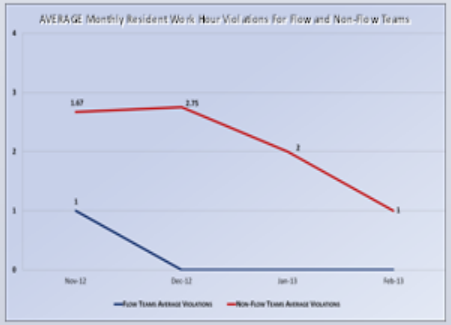


Figure 3. Averaged monthly resident work hour violations are shown above. These include aggregate violations from 8, 10, 16, 28-hour rules as they apply to intern and resident trainees. No 80-hour violations occurred during the period of investigation.

DISCUSSION/BARRIERS

Flow rounds are an effective tool to rationalize the workload of a ward teaching service, resulting in earlier discharges and fewer resident work hour violations compared to traditional rounding methods. Similarly, the development of an Inpatient Clinic appears feasible, with over half of clinic visits occurring within 15 minutes of predicted start time. While resident buy-in was initially limited, this improved as residents incidentally noticed fewer pages from ancillary staff. However, the interns continue to struggle to break the habit of pre-rounding. Dissemination of the daily schedule remains challenging, but we see promise in utilization of an electronic bed board. Our data is limited by the absence of balancing measures (e.g. length-of-stay), lack of patient satisfaction data, small sample size, and high inter-operator variance among attendings.

Barriers limiting hospital-wide participation include:

- ☐ Emergency clinical situations
- ☐ Confidence in ancillary staff to communicate urgent needs
- ☐ Teaching conferences/scheduling
- ☐ Role of pre-rounding
- ☐ Resident/Attending buy-in
- ☐ Quality of bedside education
- ☐ Dissemination of schedule to patients/staff
- ☐ Physical ward space for mobile computer workstations

CONCLUSION

The inpatient clinic is a bold and innovative idea that may drastically reshape bedside rounds and improve the quality of inpatient care. Transforming team rounds in this manner returns the work of medicine to the bedside, allowing for mindful, patient-centered care.

REFERENCES

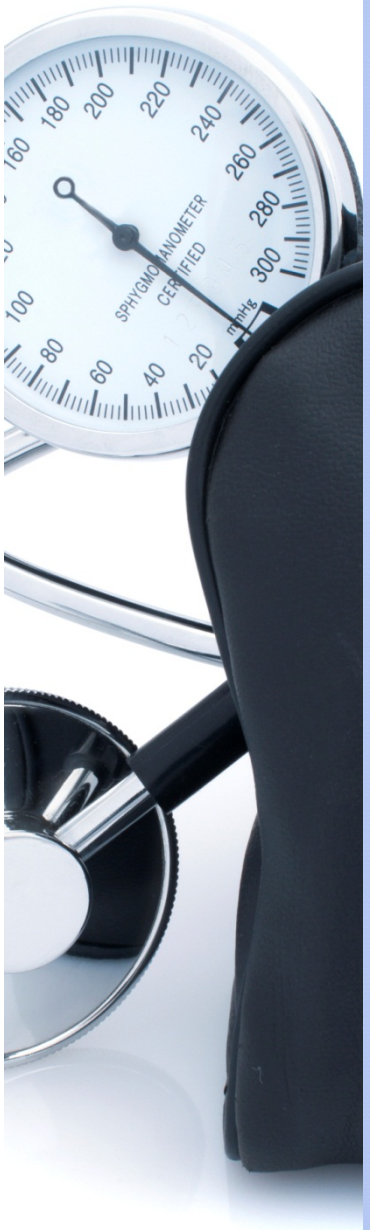
1. Gonzalo, J, Chuang, C, Huang, G, Smith, C. The return of bedside rounds: an educational intervention. *J Gen Internal Medicine*. 2010 Aug; 25(8):792-8.

2. Rappaport D, Ketterer, T, Nilforoshan, V, Shariff, I. Family-centered rounds: views of families, nurses, trainees, and attending physicians. *Clinical Pediatrics*. 2012 Mar; 51(3): 260-6.

3. Chand, D. Observational study using the tools of lean six sigma to improve the efficiency of the resident rounding process. *J Grad Med Educ*. 2011 June;3(2):144-50.

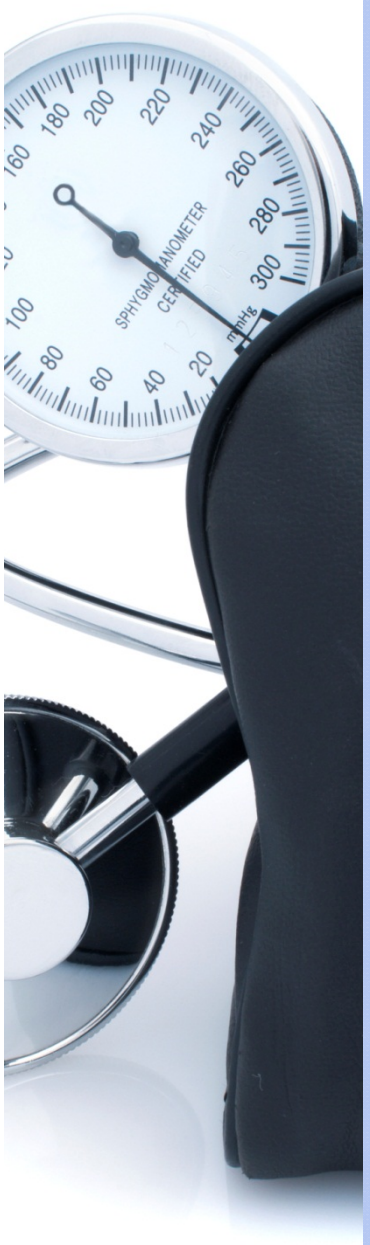
4. Van Eaton E, McDonough, K, Lober, W, Johnson, E, Pellegrini, C, Horvath, D. Safety of using a computerized rounding and sign-out system to reduce resident duty hours. *Acad Med*. 2010 Jul;85(7):1189-95.

5. Van Eaton, E, Horvath, K, Lober, W, Rossini, A Pellegrini, C. A randomized, controlled trial evaluating the impact of a computerized rounding and sign-out system on continuity of care and resident work hours. *J Am College of Surgeons*. 2005 Apr;200(4):538-45.



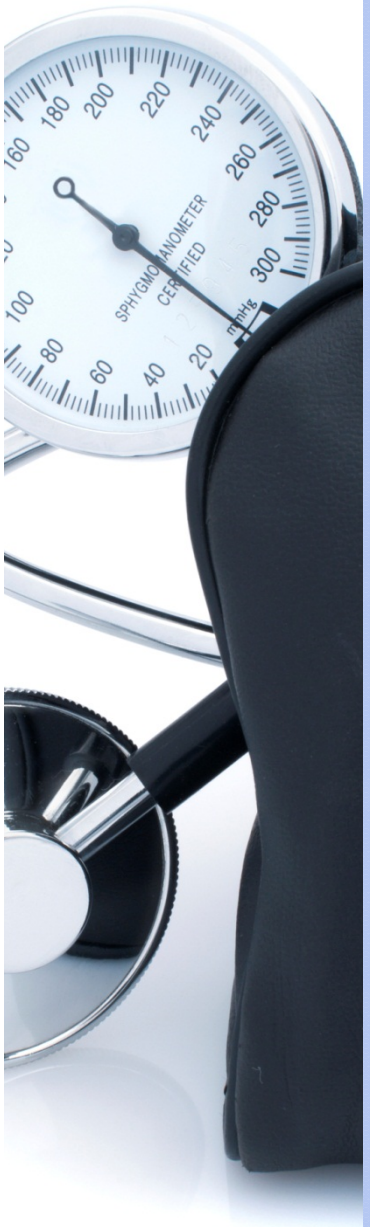
Pros & Cons of Prior Poster

- Clean
- Lots of graphs
- Little text
- Organized texts



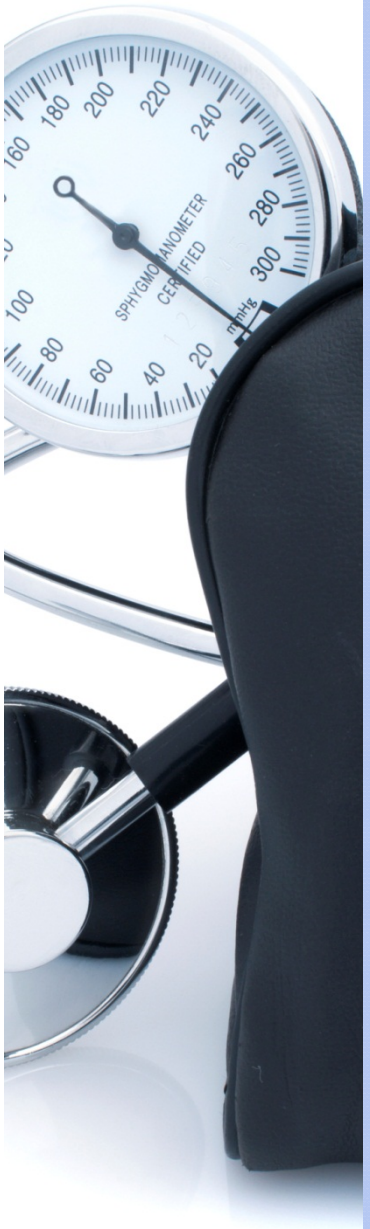
Recap…

- Types/Categories of Posters:
  - Research Poster
  - Case Presentation Poster
  - Quality Improvement Poster
  - Patient Safety/Satisfaction Poster



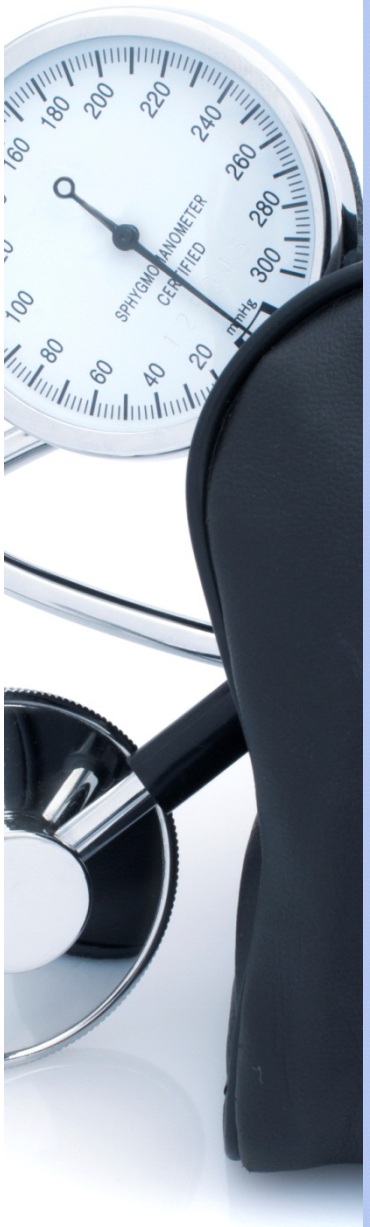
Great Poster Elements

- Easy to read/follow
- Attracts viewer's attention
- Communicates results of investigation



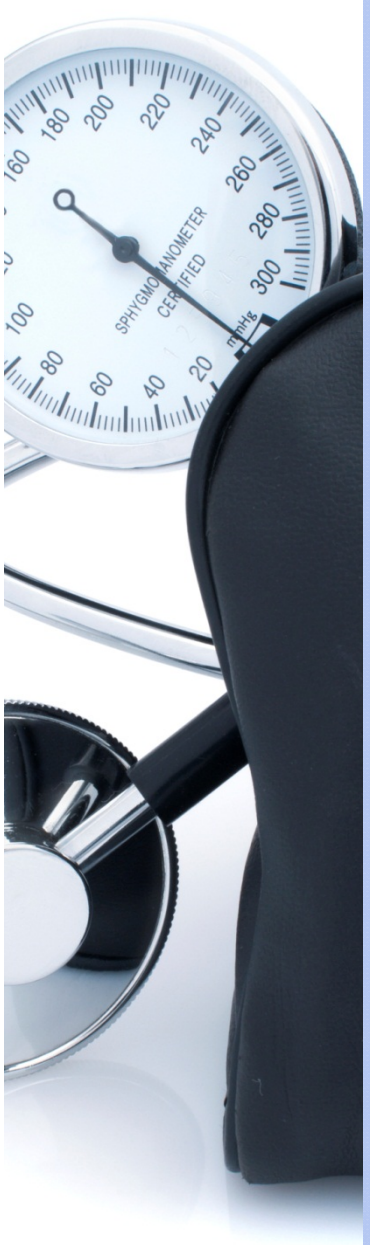
Quick Response Code

- QR Code



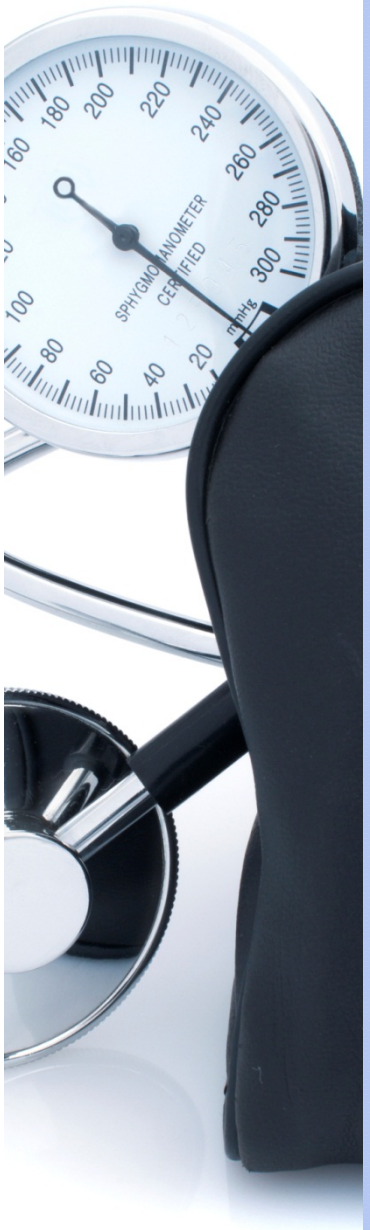
Poster Arrangement

- Timing:
  - Viewer able to glean message in 3-5 minutes
  - Viewer able to read text in 10 minutes
- Organization
  - Organization similar to scientific article
  - Poster describes findings of research project



How to Construct

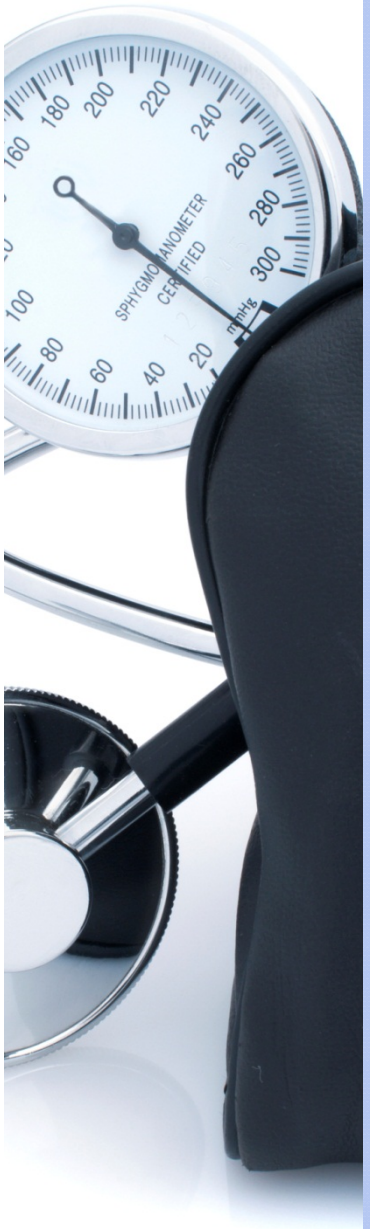
- A single PowerPoint slide…
- Set size of single slide (not to exceed 46 inches X 46 inches)
- Use large font for text
- **BOLD** font (always)
- Check poster in zoom view to see true arrangement



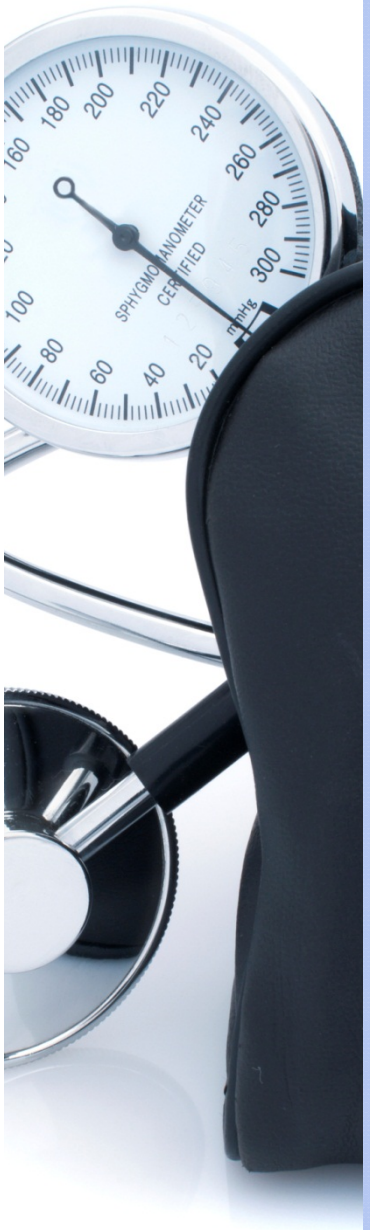
Other points for Construction…

- **Use a template/software program**
  - Internet search "poster template"
  - Power Point format
  - Old poster – delete text, play with background, box/text sizes, format, images, color

- **The rough draft process**
  - 1st draft one month prior to conference
  - Considerations
    - Word count, prose style, grammar, fluidity, figure clarity, spelling, aesthetic appeal
  - Print on letter sized paper to assess layout challenges

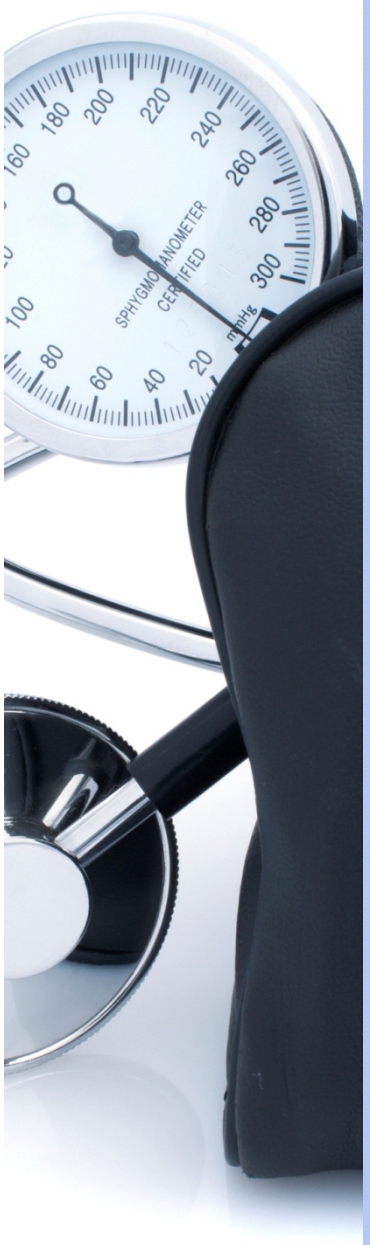


Details on Poster Content



Research Poster

- **Title**; 2 lines or less
  - ≥ 72 pt. type, legible at 25 feet
  - Clear, concise, direct
- **Intro**; 200 words or less
  - ≥ 20 pt. type
  - Define the issue
  - Establish the purpose of your work
  - Justify your experimental approach
  - Provide a clear hypothesis
- **Materials and Methods**; approximately 200 words
  - Use figures and tables to illustrate experimental design
  - Use flowcharts to summarize timing of events
  - Include photograph or labeled drawing
  - Outline statistical plan



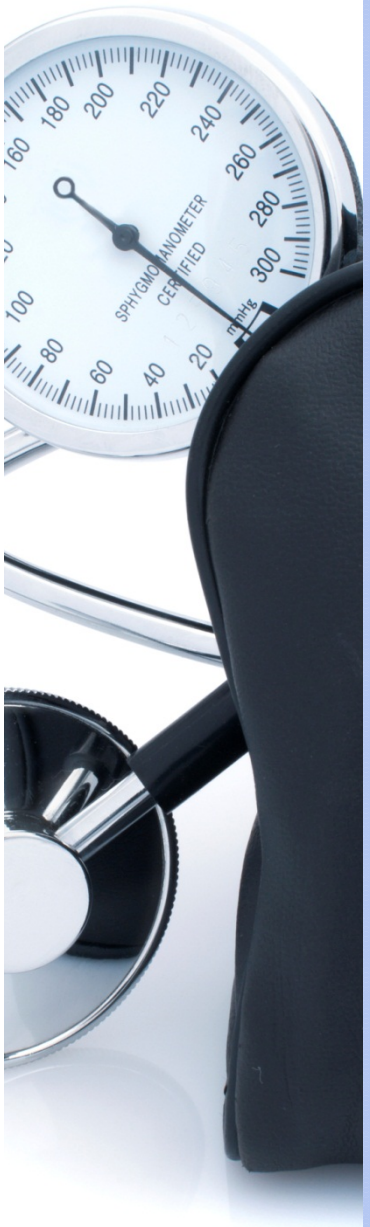
Research Poster, continued

Results; approximately 200 words

- Provide qualitative/descriptive results
- Present analyses that specifically address the hypothesis
- Refer to charts or images

Discussion; approximately 300 words

- Remind the viewer of the hypothesis
- Discuss if/why results were conclusive
- Point out relevance of findings to other published work
- Discuss limitations of the work
- Highlight future directions of the research



Research Poster, continued

Conclusion; approximately two sentences

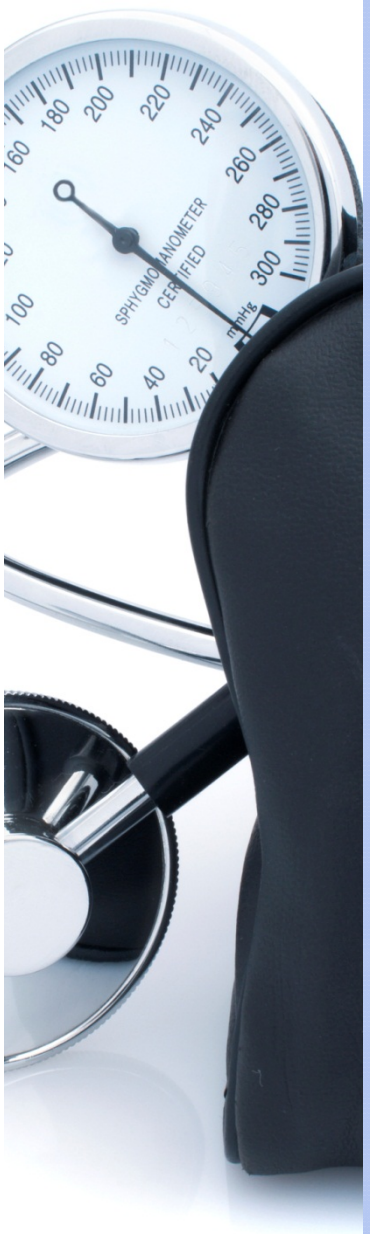
- Concise summary
- Reminds viewer of relevance

References

- Approximately 5-10 citations
- Standard format

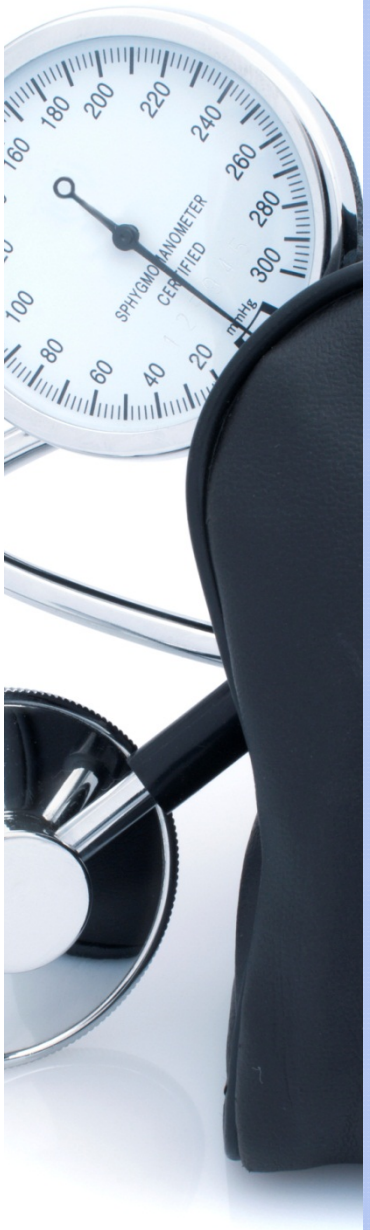
Acknowledgement

- Assistance and financial support



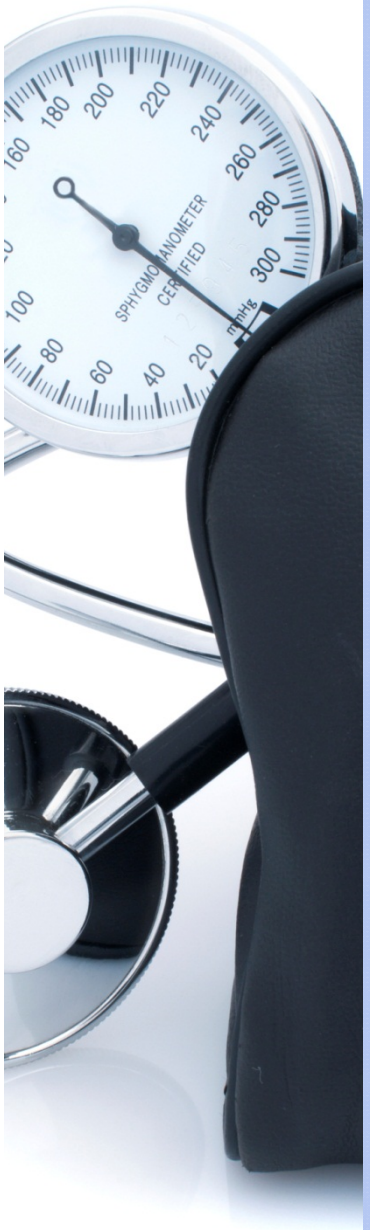
Case Presentation Poster

- Title
- Introduction
- Case Presentation:
  - History of Present Illness
  - Hospital Course
  - Family History
  - Social History
  - Labs, Images, Studies
- Discussion
- References



Case Presentation Poster

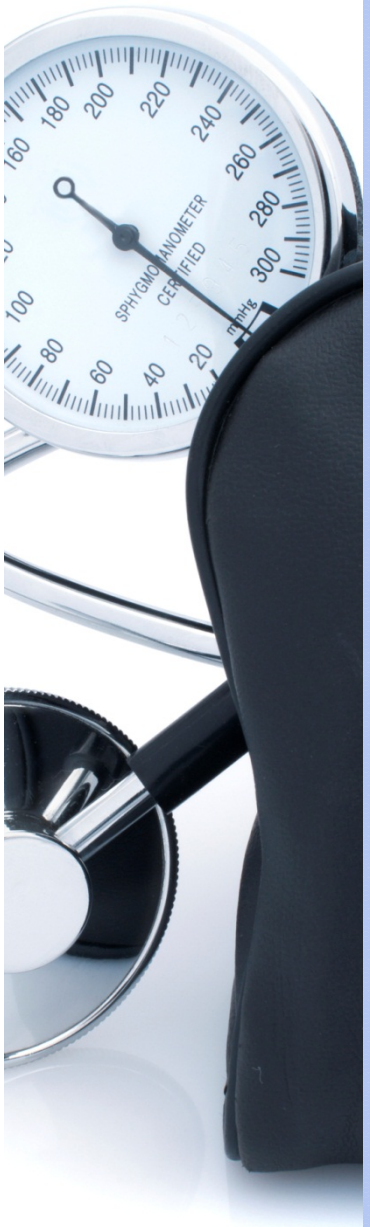
- **Introduction** – briefly introduce type of condition/disease process – pathogenesis, etiology, microbiology, epidemiology if relevant
- **HPI** – classic academic history and physical. Age of patient, important past medical history, presenting complaint, events leading to presentation
- **Hospital Course** - pertinent (+) and (-) findings on physical exam, work up and treatment plan, involvement of consultants, clinical progress



Case Poster Continued…

- **Family History**
- **Social History**
- **Pertinent Labs**

- **Images**
  - Visual additions attract and inform viewers more effectively than text
  - Details on graphs and photos viewed from 6 ft away
  - Thin gray or black border around photos
  - Digital, high quality photographs - web images have poor printing resolution



Patient Safety & Quality Improvement Poster

- If an intervention/poll was performed on a group – research format
- If attention is being drawn to an issue or concern – vignette format
- Same general guidelines, room for creativity…see example from earlier

Replace with logo

Team Approach to Palliation: Do No Harm!

Hamed Abbaszadegan, MD; Mona Amini, MD; Masood Kisana, MD
Banner Good Samaritan Medical Center/Carl T. Hayden Veterans Affairs Medical Center

Replace with logo

Introduction

Palliation involves easing the severity of pain, non-pain physical symptoms, and improving overall quality of life when the disease process cannot be reversed. The fine line between knowing when to allow natural death, and when to continue aggressive interventions is often skewed. The palliative care team at the Phoenix VA Medical Center has vastly changed the approach to end of life care utilization in the last year by improving utilization by 213%.

Higher health care expenses are utilized during the last year of life and are found to be mostly incurred in the last month of life. The utilization of palliative medicine is an important topic not just regarding health care expense, but is also significant when discussing patient safety when interventions will not change the [illegible] natural illness.

Health Care (per capita) Cost Inversely Correlated with Quality of Life Score

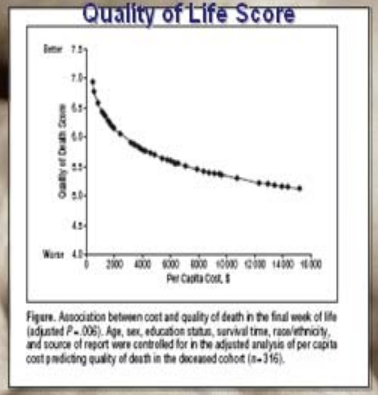


Figure. Association between cost and quality of death in the final week of life (adjusted $P = .006$). Age, sex, education status, survival time, race/ethnicity, and source of report were controlled for in the adjusted analysis of per capita cost predicting quality of death in the deceased cohort ($n = 316$).

Case Report

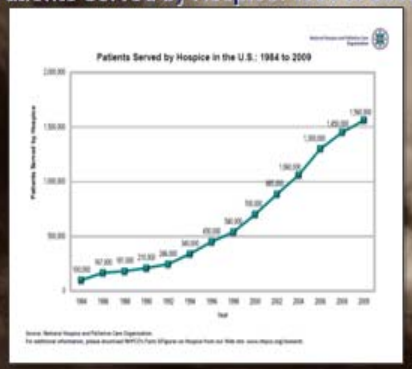
Patient is a 66 y/o Male with a 3 month history of progressive dysphagia to solids/liquids, and an associated significant weight loss. He was diagnosed with a metastatic esophageal adenocarcinoma with diffuse bony metastases confirmed by PET imaging. His symptom control became unmanageable at home secondary to recurrent hematemesis, fatigue, and anorexia to a point where a decision had to be made between aggressive interventions and allowing for natural death with dignity and comfort. Goals were established to control symptoms as a priority, as the metastatic cancer could not be reversed. By providing optimal pain relief, and relief of non-pain physical symptoms, aggressive agonizing interventions were avoided.

Conclusion

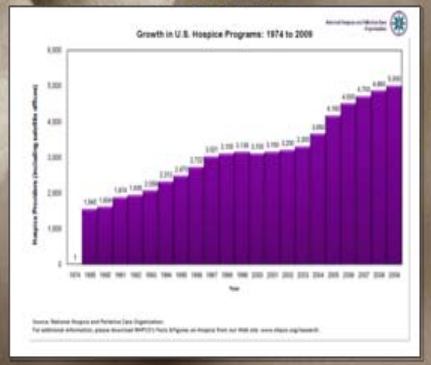
Terminal illness cannot be reversed. Once functional status declines to a point of irreversibility, palliation is an appropriate option for patient safety. Utilization through early involvement of palliative care improves quality of life, leads to less aggressive care, and results in longer survival. Resaerch has shown that palliative medicine interventions not only improve survival, but are more effective than active treatment in many situations.

Advanced heart failure with recurrent exacerbations, advanced COPD, as well as cancers should be considered for palliation approaches as symptom management becomes the forefront of care. Families are often most satisfied with the care when they know their loved one has not been allowed to suffer needlessly.

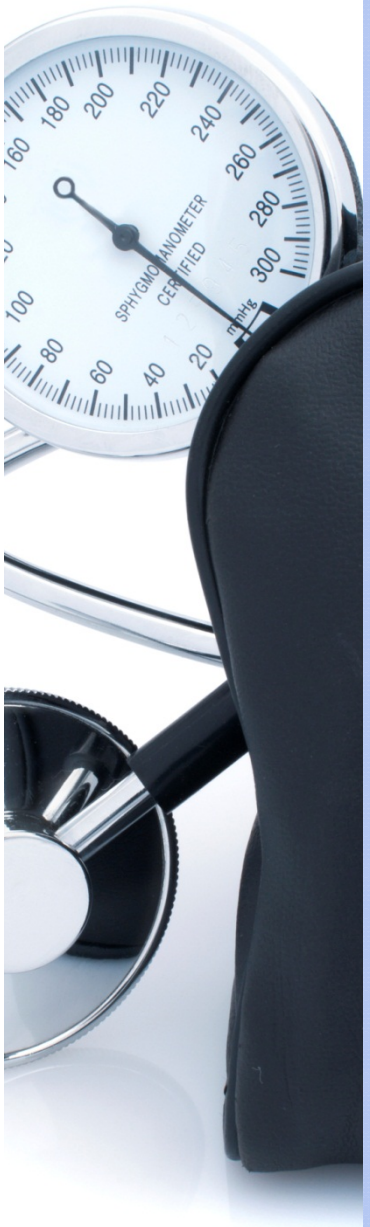
Patients Served by Hospice: 1984 to 2009



Growth of Hospice Programs in U.S. 1974 to 2009

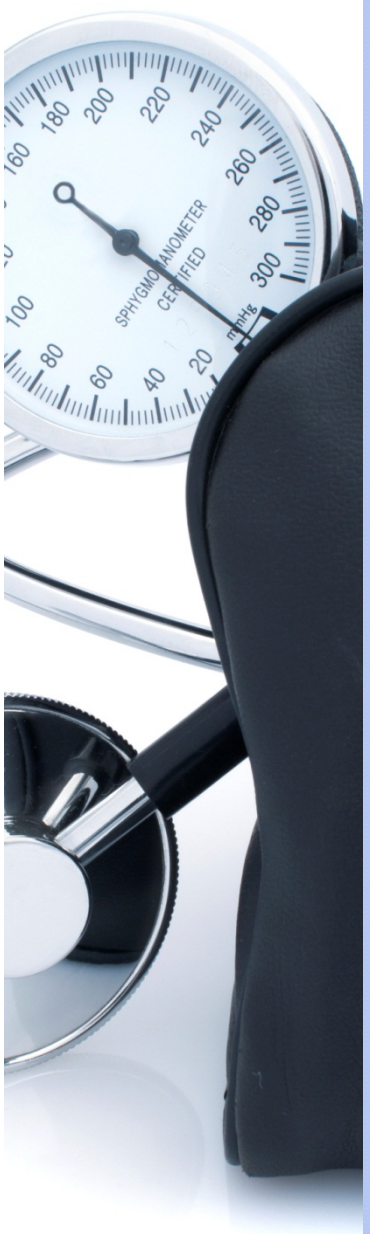


References



Judging

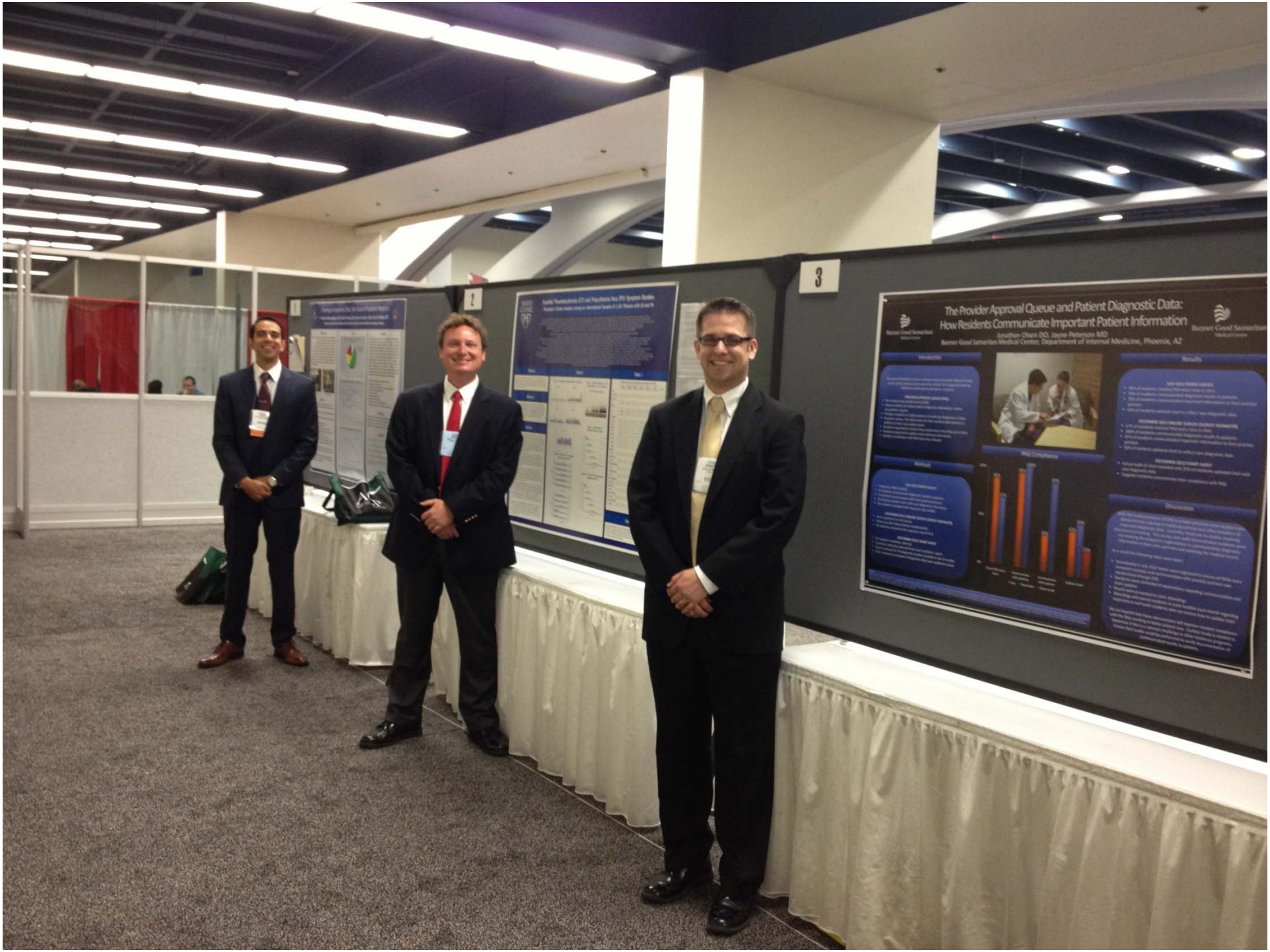
- Originality
- Case Presentation Methodology
- Visual Impact
- Interview (presentation)



THANK YOU!

- Contact information:

Hamed.Abbaszadegan@va.gov


3
The Provider Approval Queue and Patient Diagnostic Data:
How Residents Communicate Important Patient Information
Jonathan Olsen DO, Jayne Peterson MD
Banner Good Samaritan Medical Center, Department of Internal Medicine, Phoenix, AZ
Introduction
Results
Methods
Discussion