# The Shared Medical Appointment: An opportunity for DNP's to meet the triple aim of ACA

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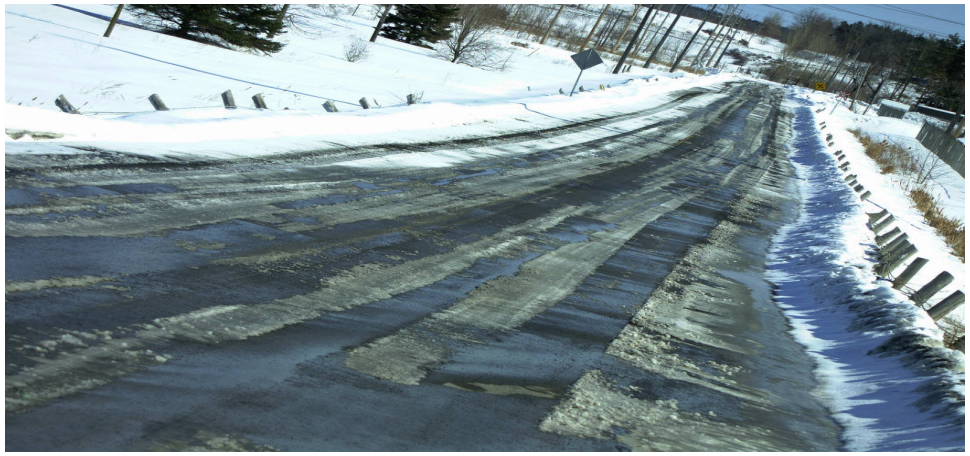
# The Road to Change

- In 1977, George Engel published a paper stating the need for change in the biomedical approach to disease management. He called for a shift in thinking to create a new delivery system in medicine that focused on the biopsychosocial realm. His premise was that such a framework would foster education and allow for treating all domains of illness.



# Is the US system broken?

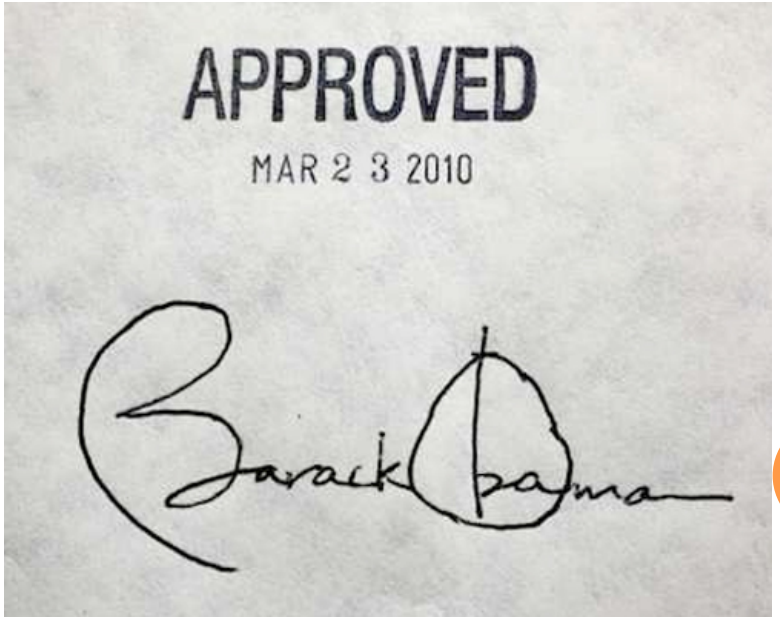
- The IOM established the need for change in it's sentinel works:

1. To Err is Human (1999): 44,000-98,000 die annually in US secondary to hospital error
2. Crossing the Quality Chasm: Outlines specific steps for improving patient care in the US

- WHO ranked the US health system 37th in the world
- Total cost on health care spending in 2010: $2.6 trillion, 17.6% of GDP and predicted to be 19.8% by 2020 (in 1960 6% GDP was healthcare)

# The Patient Protection & Accountable Care Act

- 2,400 page document attempting to change health care delivery in the US
- Phased implementation



# Triple Aim

- Access
- Cost
- Quality

# Volume Secondary to Access

**Title I: Quality, Affordable Health Care for All**

- Health insurance exchanges
- Bans pre-existing medical conditions
- Individual responsibility

**Title II: The role of public programs**

- Medicaid expansion
- Preserves CHIP
- Subsidizes care for uninsured Americans

# Title III. Improving the Quality and Efficiency of Health Care

- Medicare payments will be linked to quality outcomes
- Value purchased health care
- National Quality Strategy

# National Quality Strategy

1. Health outcomes and functional status of patients
2. Management and coordination of health care
3. Use of information for treatment options
4. Use of health information technology
5. Timeliness of care
6. Efficiency of care
7. Equity of care
8. Patient satisfaction

# Innovation

- A better solution to providing required services

# DNP Essential Two

- AACN DNP Essential II: Organizational & Systems Leadership for Quality Improvement & Systems Thinking

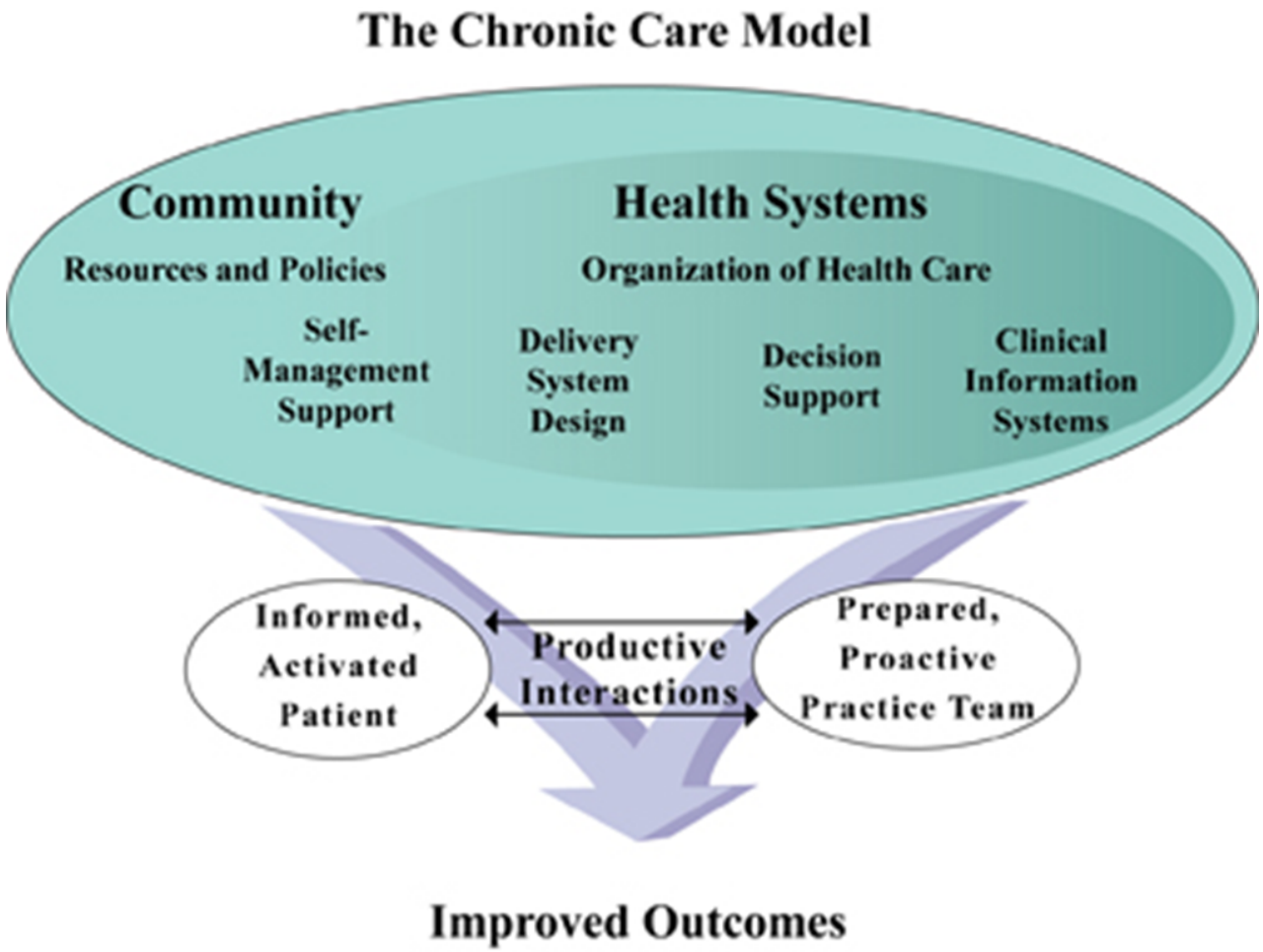
*"…graduates are distinguished by their abilities to conceptualize new care delivery models…*

*including conceptual and practical strategies for balancing productivity with quality of care…"*

# SMA an Opportunity

- Innovative care delivery style that allows for efficiency and quality
- DNP is well suited for implementation
- SMA meets goals of ACA

# THEORETICAL FRAMEWORK FOR SMA



# SMA Format

- A group of patients meet together with their provider
- There is not one standard model for the SMA
- Each patient receives one- to-one time with the provider in addition to participating in the group model.
- The goal is to provide patients with the benefits of a traditional one-to-one appointment while creating a group dynamic to enhance patient care
- ( Noffsinger, 2009; Noffsinger & Scott, 2000)

# Review of Literature

**What does the evidence say?**

# ROL Shared Medical Appointment

- Systematic review using terms: “group visit,” “shared medical appointment” and “cluster visit”
- MEDLINE, CINAHL, Web of Science, Google Scholar and ProQuest and ancestry search
- 8,000 results

# Identified Themes

- Safe Delivery Model (no adverse event)
- Feasible, cost-effective
- Trended toward increased self-efficacy
- High patient satisfaction
- Limited patient education studies, but showed trends in improvement
- No published studies in otolaryngology

# ROL: SAFE

- Physiologic markers did not show detrimental effect
- BP control improved (Edelman et al., 2010; Sanchez, 2011; Westheimer et al., 2009)
- HgbA1C no change (Culhane-Pera et al., 2005; Edelman et al., 2010; Sanchez, 2011)
- Reduced hospitalizations & ER utilization (Lin et al., 2008 & Maizels et al., 2003)

# ROL: FEASIBILITY

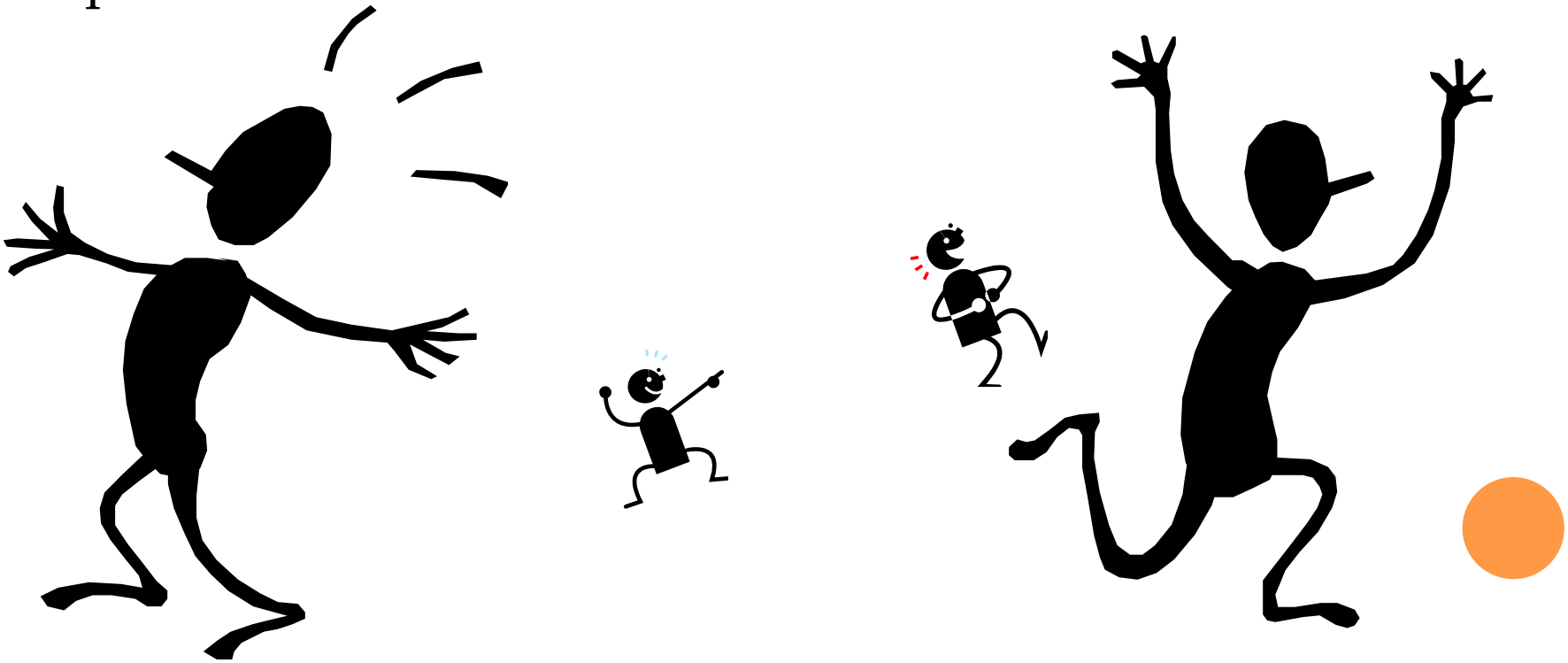
- Feasibility measures effects on cost and value of programs
- Four studies concluded that SMA is feasible option (Culhane-Pera et al, 2005; Dorsety et al., 2011; Miller et al., 2004 & Yehel et al., 2009)
- Five studies reported a decrease in ER utilization (Clancy, et al., 2008; Edelman, et al., 2010; Maizels et al., 2003 & Scott et al., 2004)

# ROL: Self efficacy

- Perceived ability to care for self
- Three studies measured improvement in efficacy scores (Sadur et al., 1999a; Scott et al., 2004; Westhiemer et al., 2009)

# ROL: SATISFACTION

- Five showed high levels of satisfaction (Levine et al., 2010; Miller et al., 2004; Sadur et al.,1999a; Scott et al., 2004; Shojania & Ratzlaff, 2010)
- Anecdotally, Maizels et al (2003) reported high provider satisfaction



# ROL: EDUCATION

- Two pilot studies showed improvement in patient knowledge of disease (Shojania & Ratzlaff, 2010; Yehle et al., 2009)
- Lin et al (2008) noted an improvement in self care measures

# ROL Limitations

- Selection bias was threat to external validity
- Convenience sampling
- Pilot studies
- Variable disease states
- Tools lacked reliability (self created)

# Nasal Symptoms SMA: A Pilot Program

# Pilot SMA

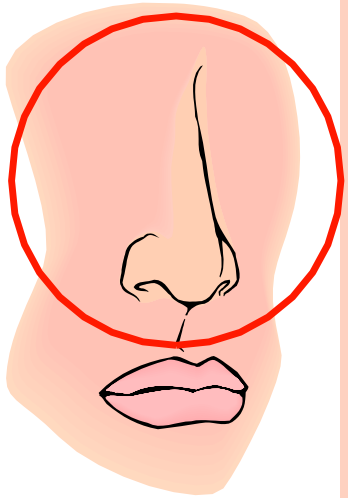
- Focused on patients with rhinosinusitis as this is a chronic illness for many ENT patients

# Pilot SMA Model

## Noffsinger's Physical SMA

- Provides same level of medical care as individual visits
- Two segments:
  - Physical Exam
  - Group Segment
- Generally held weekly for 90 minutes
- Medically necessary visits (require a physical exam)
- Typically between 10-13 patients
- Specialties often utilize homogenous subtype (grouping by diagnosis)

# Nasal Symptoms SMA (NSSMA) Protocol



The Nose

- Format based on Noffsinger's physical exam model with some variation
- Every Tuesday AM 60-90 minutes depending on the number of scheduled patients
- Patients are given the option of participating in NSSMA versus individual appointment
- Care team: LPN, NP and MD

# NSSMA Appointment Format

- Warm-up (15 mins) NP welcomes pts and reviews confidentiality. Forms are reviewed and completed.
- Physical exam (30 mins) Individual face to face ENT exams conducted by NP and MD
- Group (30 mins) Live endoscopic exams and teaching by MD, questions, interaction

# NSSMA FORMS

- Knowledge test: Self developed 5 question T/F
- SNOT-20: Validated QOL instrument for nasal symptoms (Piccirillo et al, 2002)
- Satisfaction survey: Harvard Vanguard's Yes/No questionnaire (Wall-Haas et al, 2012)
- Knowledge & SNOT re-administered at follow up

# NSSMA Pilot Purpose

- The study examined the utility of SMA as an educational program for the understanding and management of nasal symptoms in an otolaryngology practice.

- Data was collected from the medical records of patients who participated in nasal symptoms SMA.

# Hypothesis

1. Patients who have participated in SMA will have improved their knowledge and have improved symptom control from pre-intervention to post-intervention.
2. Patients will be satisfied with SMA

# Measures

- SNOT-20: Validated tool used to measure quality of life in patients with rhinosinusitis symptoms
- Knowledge assessment: Investigator developed T/F questionnaire for NSSMA at Richmond ENT
- Satisfaction: Modeled after Harvard Vanguard's satisfaction questionnaire (modeled after Noffsinger's text)

# KNOWLEDGE TEST

As part of our care, we like to assess your learning needs regarding nasal symptoms by asking you to answer the following True or False questions. This helps us to know how to tailor our teaching to our patients. We may also use this data to help us evaluate our program.

1. If my mucous becomes yellow in color, I need to be treated with an antibiotic.

True ◯ False ◯

2. It is OK to use my nasal steroid spray as needed.

True ◯ False ◯

3. Reducing exposure to allergens can improve my symptom control.

True ◯ False ◯

4. Being treated with allergy shots can cure my allergies.

True ◯ False ◯

5. Oral medications for nasal symptoms are better than the nasal sprays.

True ◯ False ◯

# SNOT-20

The following chart is used to assess the impact of your allergy symptoms on the quality of your life. Consider how severe the problem is when you have it and how frequently it happens, please rate each symptom according to how you feel.

0=No Problem 1=Very Mild Problem 2=Mild Problem 3=Moderate Problem 4=Severe problem 5=Problem at its worst

Use the last column to indicate 5 most important items affecting your health by filling in the circles that apply

| Need to blow nose | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
|---|---|---|---|---|---|---|---|
| Sneezing | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Runny nose | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Cough | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Post-nasal drip | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Thick nasal discharge | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Ear fullness | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Dizziness | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Ear pain | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Facial pain/pressure | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Difficulty falling asleep | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Wake up at night | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Lack of sleep | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Wake up tired | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Fatigue | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Reduced productivity | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Reduced concentration | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Frustrated/restless/irritable | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Sad | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |
| Embarrassed | 0 | 1 | 2 | 3 | 4 | 5 | ◯ |

# NSSMA Pilot Study Design

- A retrospective descriptive study

# Human Subjects Protection

- Approval was sought from the Institutional Review Board (IRB) at the University of Virginia. The IRB granted an expedited review with a subsequent approval

# Data Collection

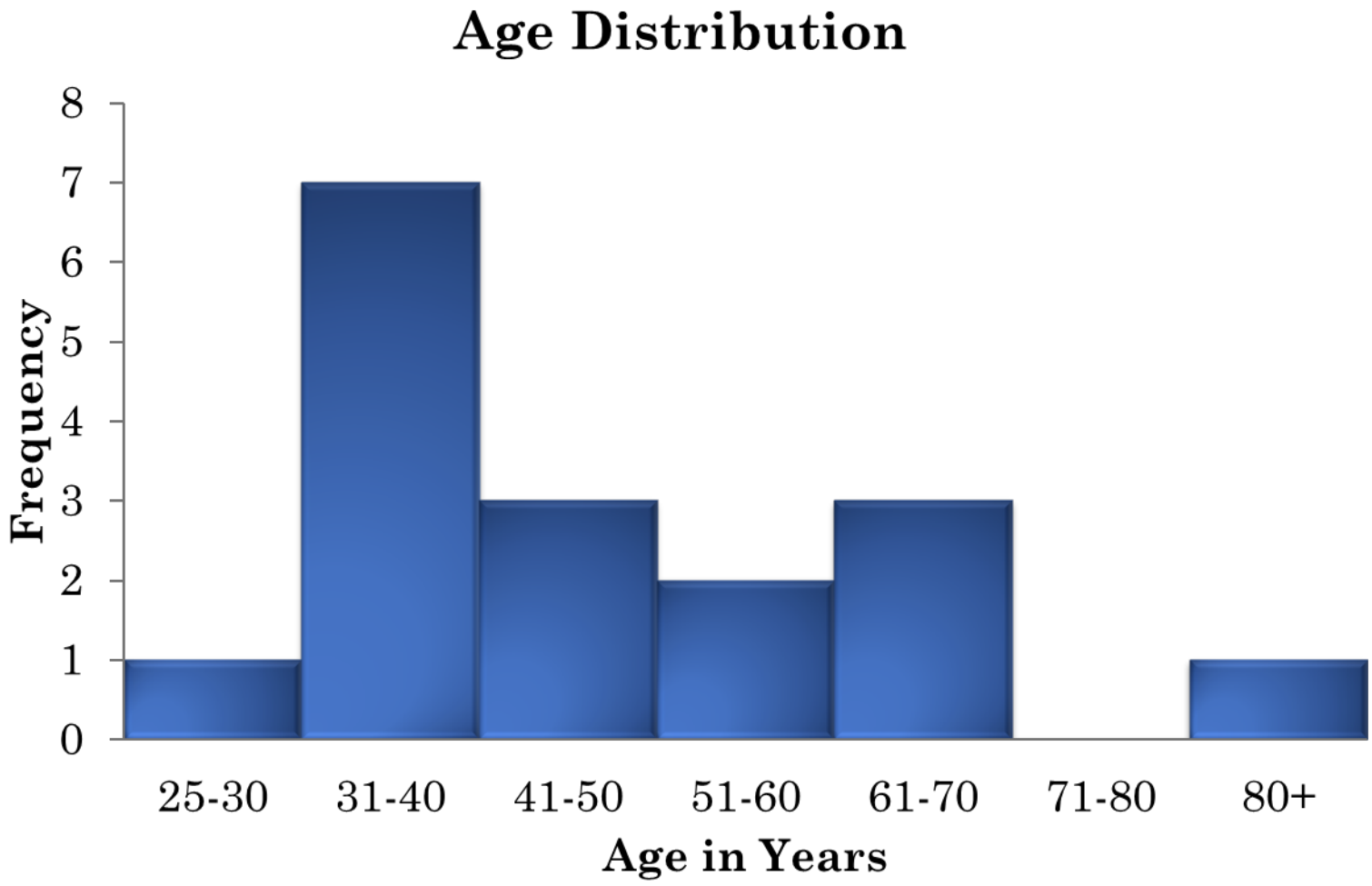
- Retroactive chart review from NSSMA patients at Richmond ENT from March-July 2012
- EHR identified eligible charts by identifying SMA code
- PI conducted audit of eligible charts to ensure they met inclusion criteria
- Data from eligible charts was recorded on an Excel spreadsheet on the PI's password protected computer

# INCLUSION CRITERIA

- Adult (>18 years old)
- Participated in the NSSMA
- Carried a diagnosis of either allergic rhinitis and/ or chronic rhinosinusitis.
- NSSMA questionnaire completed

# Sample Demographics (N=17)

| Characteristic | Number | Percent |
|---|---|---|
| Female | 11 | 65% |
| Male | 6 | 35% |
| Caucasian | 12 | 71% |
| African American | 4 | 24% |
| Hispanic | 1 | 5% |
| ICD-9 Rhinitis | 7 | 41% |
| ICD-9 Sinusitis | 10 | 59% |
| Co morbidity Deviated Septum | 7 | 41% |
| New Patient | 15 | 88% |
| Follow up Patient | 2 | 12% |


Age Distribution
Frequency
0
1
2
3
4
5
6
7
8
25-30
31-40
41-50
51-60
61-70
71-80
80+
Age in Years

# Data Analysis

- Pre and Post Test Scores
- Mean and Standard Deviation Reported
- Recorded in Excel
- Computed Wilcoxon Signed Rank Test

# Satisfaction Survey Results (N=17)

| | Yes | No | Not Sure |
|---|---|---|---|
| Did you hear answers to questions you did not think to ask? | 9 (53%) | 6 (35%) | 2 (12%) |
| Were you comfortable with the handling of confidentiality and privacy? | 15 (88%) | 2 (12%) | 0 |
| Would you schedule a shared appointment again? | 13 (76%) | 2 (12%) | 2 (12%) |
| Would you have preferred today's visit to have been an individual visit? | 4 (24%) | 9 (53%) | 4 (24%) |
| Would you recommend a shared appointment to your friends/family? | 12 (71%) | 2 (12%) | 3 (18%) |

# Wilcoxon Signed Rank Test

## Knowledge

- The post-test knowledge scores were higher than the pre-test scores

(T = 1.667, p = 0.048)

## Symptoms

- The post-test SNOT scores were lower than the pre-test SNOT scores

(T = -2.073, p = 0.019).

# Billing

- CMS does not specify delivery system for outpatient E & M codes
- Medicare Reimbursement
  - 99204:$120
  - 31231:$175 (modifier 25)

# Cost Projection

## NSSMA

- 6 new patients in 90 minutes
- 99204: $720
- 31231: $1050
  - Total: $1770

## Traditional OV

- 4 new patients in 90 minutes
- 99204: $480
- 31231: $700
  - Total: $1180

Projection of $590 gain; does not account for follow up pts

# Limitations


- Impact of extraneous variables
- Individual provider performance

# Organizational barriers

- Scheduling
- Physical Space
- Staff Buy In
- Lack of process evaluation
- Incentive based pay
- Loss of provider

# Practice Implications

- AACN DNP Essential II: Organizational & Systems Leadership for Quality Improvement & Systems Thinking

- As part of practice research, advanced practice nurses look beyond their clinical expertise to employ effective and innovative care to meet the complex needs of the chronically ill. The results of this pilot suggest that the SMA may be an ideal opportunity for advanced practice nurses to do so.

# Now the tough part, Questions?

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