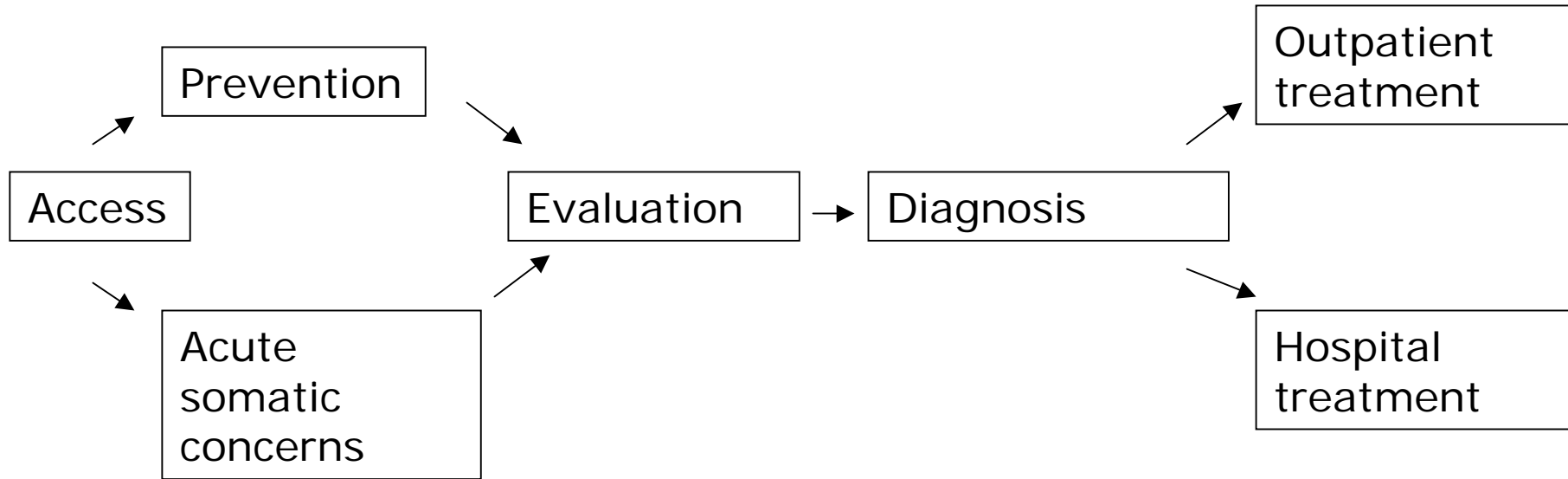


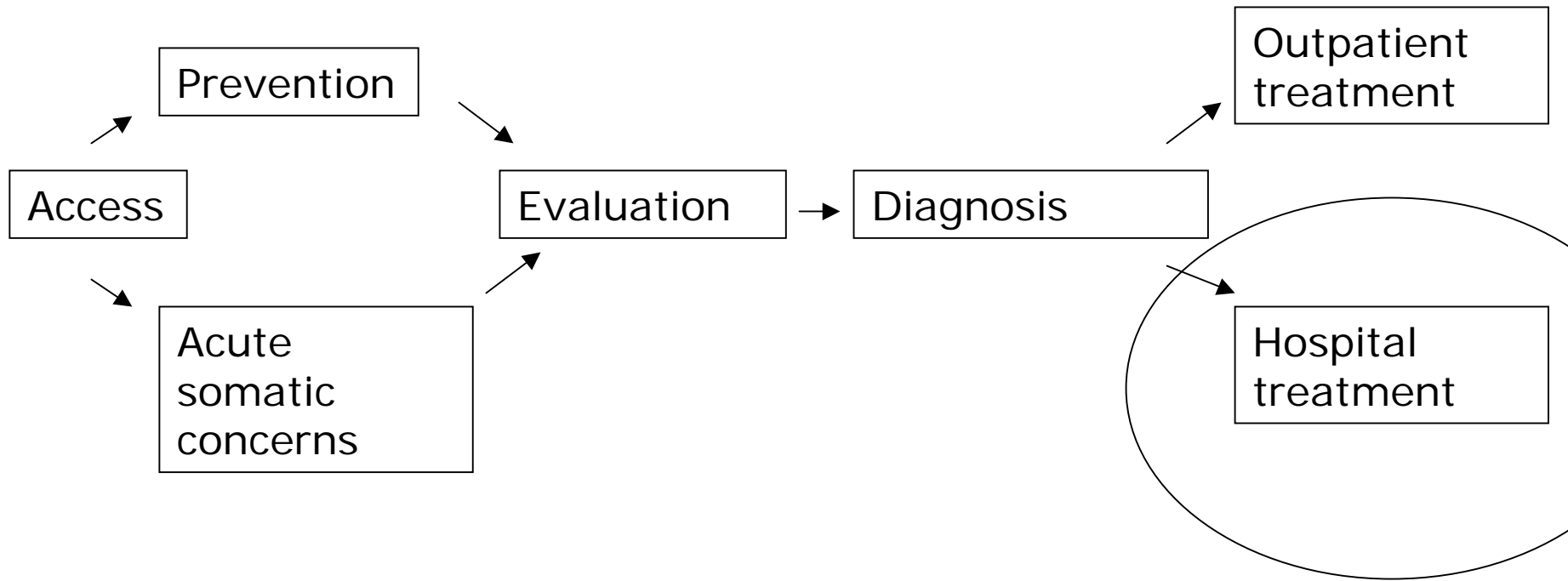
# Approaches to error reduction in a teaching family practice

Lawrence R. Wu MD  
Associate Clinical Professor  
Duke Community and Family  
Medicine

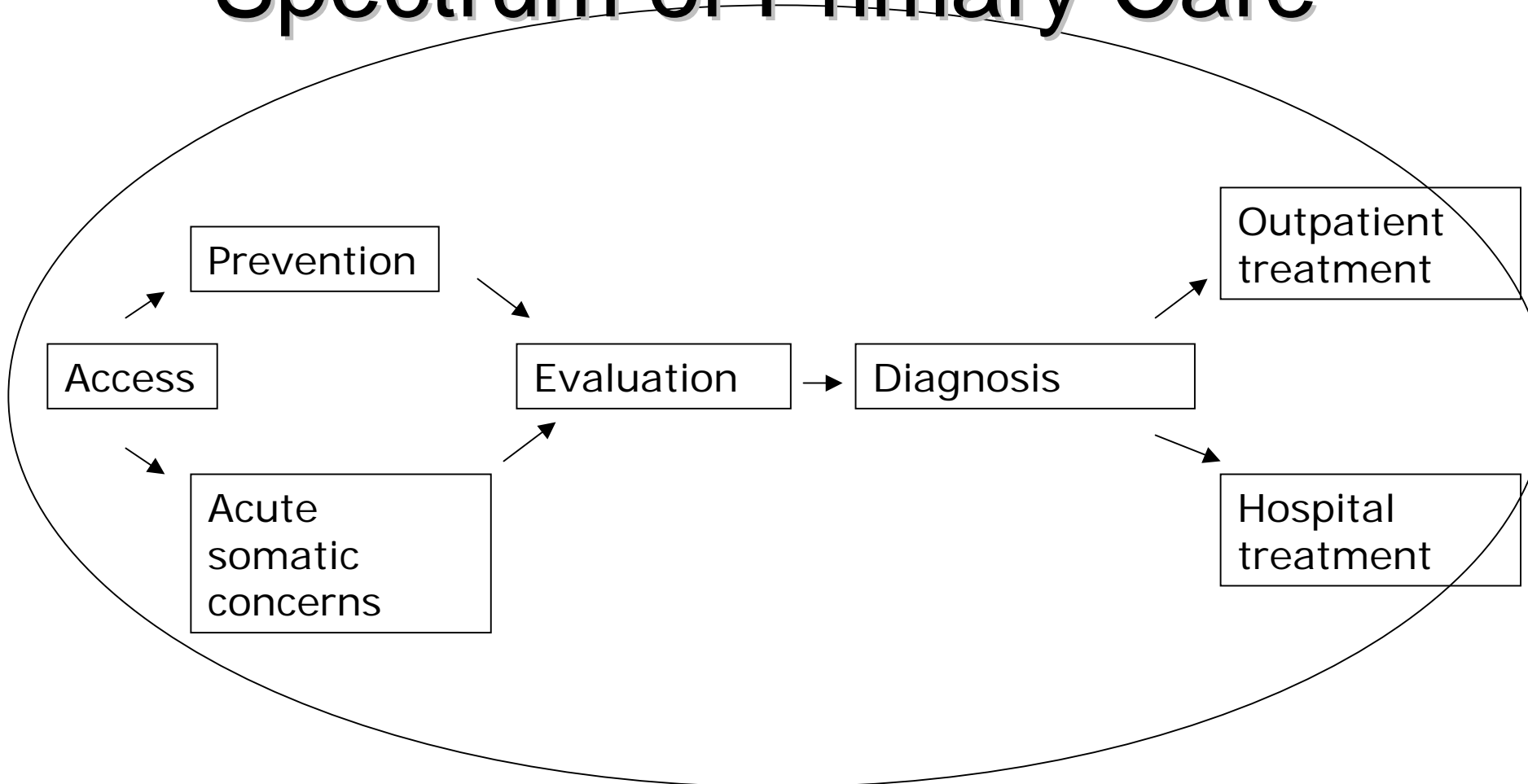
# Spectrum of Primary Care



# Spectrum of Primary Care



# Spectrum of Primary Care



# Vulnerability in teaching settings

- Fatigue
- Inadequate faculty supervision
- Discontinuity & hand-offs of care
- Less experience in prescriptions & dosing
- Less experience in informed consent/refusal
- Learning experiences delaying needed care

# Traditional focus on educating the individual provider

- Precepting
- Morning report
- Work rounds
- Sign out rounds
- Review & cosign notes, call slips, hospital summaries
- Socratic test of the memory
- Lectures

# Core Competencies of Health Professionals

- Provide patient centered care
  - Work in interdisciplinary teams
  - Employ evidence based medicine
  - Apply quality improvement
  - Use informatics
- 
- Reference: Institute of Medicine. Health professions education: A bridge to quality. 2003 National Academy of Sciences

# Patient centered care: Orientation

- Access
- Punctuality
- Empathic approach
- Patient service
- Orientation manual
- Assess patient preferences and shared decision-making

1st year  
resident

# Patient centered care: other venues

- Communication: behavioral medicine (2<sup>nd</sup> year)
- Cultural diversity: community medicine (2<sup>nd</sup> year)
- Prevention & health promotion: clinic experience (all years)

# Lecture on patient safety to residents

- Objectives: common errors in primary care, systems design, reporting of errors
- Not well attended
- Didactics should not be the only strategy for learning about patient safety
- Consider interactive, required web based curriculum, post-test

# Training in interdisciplinary teams

- Community medicine rotation:  
Learner team consisting of PA student, resident and PharmD student
- Practice meetings: decisions on role delegation in the clinic
- Role of nurses

2nd year  
resident

Patient's Name \_\_\_\_\_

Date \_\_\_\_\_

### Living with Asthma ---How is it going?

Please fill out this form while you wait to see your doctor. This form will help your doctor take better care of you and your asthma. For questions 1-3, circle or check the choice in each column that best describes your health **in the past month**. After you complete the questions, be sure to give this to the doctor. Thank you.

**During the past month:**

	<b>1. How often have you had coughing, wheezing or shortness of breath?</b>	<b>2. How often have you had coughing, wheezing, or shortness of breath at night?</b>	<b>3. How much has asthma kept you from physical activities?</b>
* * * * Severe persistent	All the time.	Frequent.	Bothers me with any physical activity.
* * * Moderate persistent	Every day.	More than five times a month.	Interferes with moderate activities, such as bike riding or walking to school.
* * Mild persistent	Three to six times a week.	Three to four times a month.	Only with a great deal of activity -- such as playing a sport or vigorous exercise.
* Mild intermittent	Twice a week or less	Twice a month or less	Not at all unless having an asthma attack.

**4. Have you missed any school or work days because of asthma in the last 30 days?**

- No  
 Yes Number of days missed: \_\_\_\_\_

**5. Have you had any emergency room visits or hospitalizations due to asthma in the past 6 months?**

- No  
 Yes If yes, describe what happened: \_\_\_\_\_

**6. Is there a time of year when your asthma symptoms (cough, wheezing, or shortness of breath) are worse or interfere more with activities?**

- No  
 Yes Time of year: \_\_\_\_\_

**7. Do you know what triggered your asthma symptoms today?**

- Don't know  
 Yes. If yes, please describe triggers \_\_\_\_\_

**8. How many times a week do you need to take quick relief medicine (albuterol, proventil, ventolin, Maxair™)?** \_\_\_\_\_ times per week.

**9. Do you need refills for any of your medicines?**

- No  Yes Which ones? \_\_\_\_\_

# Role of nurse & asthma

# Evidence – based medicine: Big 5 guidelines

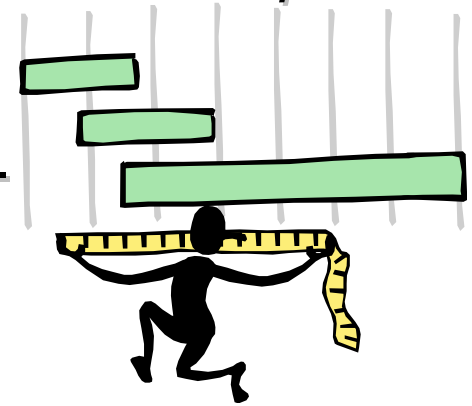
- US Preventive Services Task Force
- Joint National Commission 7
- American Diabetic Association
- Centers for Disease Control  
childhood immunizations
- National Heart Blood Lung Institute  
guidelines for asthma

All  
providers

# Quality Improvement

- Tracks and reviews medical errors, complaints
- Peer review, remedies, non-discoverable
- Outcomes:

- changes in systems
- teachable moments, feedback to individuals
- morbidity & mortality conferences
- collaboration with other departments



3rd  
year  
resident

Duke University Health System  
**Patient Safety Action Task Force**



**Confidential and Protected Peer Review/Quality Process Under NCGS Section 131E-95**

**INSTRUCTIONS:**

1. Fold the completed form (3-way fold, in business-letter format), and staple it.
2. The address (**DUHS Patient Safety Action Task Force, DUHS Box 3929**) is already printed on the blank side of this form.
3. Send this form via the Duke inter-office mail system.

**Your feedback is important to us!**

The safety of our patients is our utmost concern. This site provides information and allows you to describe **anonymously** in detail your patient safety issue, concern, or suggestion.

Your **identity is protected** unless you choose to provide contact information. All data collected via this form is **ANONYMOUS**. Your identity cannot be linked with your response.

You may complete this on-line Patient Safety Concern form, or you may choose to print a copy of the form and complete it at your convenience.

Confidential and Protected  
Peer Review/Quality Process  
Under NCGS Section 131E-95

Date: \_\_\_\_\_

**Your Concerns or Feedback:**

Please describe in detail your patient safety issue, concern, or suggestion. Include as much information as you can. Consider times, locations, services, equipment, etc., in your description.

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**Have you notified your supervisor/chairman of this concern?**

Yes \_\_\_ No \_\_\_

**May we contact you regarding your concern?** If so, please provide your contact info. **Your privacy will be protected.**

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Email Address: \_\_\_\_\_ Phone or Beeper Number: \_\_\_\_\_

# Morbidity and Mortality conference

<b>Subject</b>	<b>Systems issues</b>
Abnormal pap smears	Develop standard pap smear review process
Pelvic Abscess	Specialty consults in the middle of the night
Sepsis	Reviewing vital signs at each morning report
Hypertension	Nurses circle all BPs > 140/90

3rd year  
resident

# Rotations with QI projects

- Community Medicine
- Resident Clinical Director
- Research project

2<sup>nd</sup>-3<sup>rd</sup>  
year  
resident

# QI Projects: FADE approach for shots

- Focus: childhood immunizations
- Analyze: providers forgetting shots
- Develop solution: nurse reminders
- Evaluate: increase in immunizations rate from 62 to 82%

# QI Projects

<b>Learner Project</b>	<b>System changes</b>
Childhood immunizations	Reminders to providers of required shots
Abnormal Pap Smears	Women's health team provides advice, colposcopy & follow up
Asthma	PDA guidelines

# Informatics

- Review medication and drug allergies on all visits
- Use registries of patients with diabetes, asthma
- Electronic audits
- Electronic review of results

All  
providers

Report Type	Date/Time	Status
Family Med Clinic Note	07/22/2003 00:00	Preliminary
Family Med Clinic Note	06/24/2003 00:00	Preliminary
<a href="#">Family Med Clinic Note</a>	05/29/2003 00:00	Preliminary
MAMMOGRAPHY-SCREENING EXAM	05/28/2003 10:23	
CAD MAMMO SCREENING	05/28/2003 10:23	
Family Med Clinic Note	05/13/2003 00:00	Preliminary
OP4 (TBILI,AST,ALKPHOS,ALT)	05/09/2003 10:00	
AUTOMATED BLOOD COUNT	05/09/2003 10:00	
Family Med Clinic Note	05/09/2003 00:00	Preliminary
ULTRASOUND-LIVER	05/08/2003 12:30	
OP4 (TBILI,AST,ALKPHOS,ALT)	05/05/2003 12:23	
Family Med Clinic Note	05/05/2003 00:00	Preliminary
AUTOMATED BLOOD COUNT	05/02/2003 10:01	
OP7 (CO2,CL,K,NA,BUN,GLU,CR)	05/02/2003 10:01	
OP4 (TBILI,AST,ALKPHOS,ALT)	05/02/2003 10:01	
ROCKY MTN SPOT FEV AB-STATE LB	05/02/2003 10:00	
Family Med Clinic Note	05/02/2003 00:00	Preliminary
HEPATITIS B SURFACE ANTIGEN	04/30/2003 08:18	
HEPATITIS A IGM, ANTIBODY	04/30/2003 08:18	
HEPATITIS B SURFACE ANTIBODY	04/30/2003 08:18	
AUTOMATED BLOOD COUNT	04/30/2003 08:18	
LIPASE	04/30/2003 08:18	
AMYLASE	04/30/2003 08:18	
GI PANEL	04/30/2003 08:18	
CHEM CS-CO2,CL,K,NA,BUN,GLU,CR	04/30/2003 08:18	
MONONUCLEOSIS SPOT TEST	04/30/2003 08:06	
HIV-1 ANTIBODY TEST	04/30/2003 06:30	
Discharge Summary	04/30/2003 00:00	Preliminary
ROCKY MTN SPOT FEV AB-STATE LB	04/29/2003 14:30	
AMYLASE	04/29/2003 14:30	
LIPASE	04/29/2003 14:30	

1-50

Family Med Clinic Note

Problem List (including past medical history):

1. Abnormal Pap smear and cryo surgery of cervix age 15.
2. Seasonal allergic rhinitis.
3. History of hypothyroidism.
4. Contraception by Depo-Provera - switching to IUD 9-02.
5. Ehrlichiosis 2003.

Meds:

1. ParaGard IUD.
2. Xanax po prn anxiety, #30, no refill without appointment.
3. Propranolol.

Allergies:

No known drug allergies.

Social History:

A 44-year-old married white female, mother of three, currently in her second marriage. She is a benefits manager for Blue Cross Blue Shield of North Carolina. Nonsmoker, nondrinker. Exercise, jogging 30 to 40 miles per week.

Health Maintenance:

1. Pap normal September 2002.
2. Mammogram ordered 2003.
3. Total cholesterol 2002 204.

Family History:

Positive for hypertension in Mother and maternal aunt. Positive for

# Guidelines for providers

**DFM PRACTICE GUIDELINES:** □ Update these elements at every visit regardless of the chief complaint. Respond if patient is deficient. Document patient refusals. These are extremely important & audited regularly.

**Health Maintenance** - these are minimum requirements, and not inclusive

1. Pap yearly in child-bearing age women (every 2-3 years in low risk women). If abnormal, query browser for last pap smear and determine need for follow up. Include month/year.
2. Mammogram yearly in women over 50
3. Cholesterol every 5 years (if normal) in adults over 35
4. Tetanus every 10 years
5. (BP already part of vital signs each visit)  
Recommended –  
Colon cancer screening in all patients 50+

**Diabetes:**

1. Should be seen 2x year, 4x year if Hb A1C > 7.9
2. Referred to ophthalmology for dilated fundoscopic exam yearly
3. HbA1C measurements 2x year, 4x year if not meeting goals
4. Lipid panel yearly
5. Micro albumin testing yearly (Spot MALB/CR) if patient not on ACE inhibitors or ARBs
6. Blood pressure must be managed to <130/80
7. LDL must be managed to <100
8. yearly monofilament test to feet
9. yearly flu shot Pneumovax once

**Asthma:**

1. Stage asthma, if on problem list or assessment. Frequency of sx's to be addressed at each visit.
2. Mild persistent asthma or more severe must be on an anti-inflammatory medication. (mild persistent= wheezing 2 or + times a week or 2 nighttime wheezings/month) & written action plans encouraged
3. Yearly Flu shot

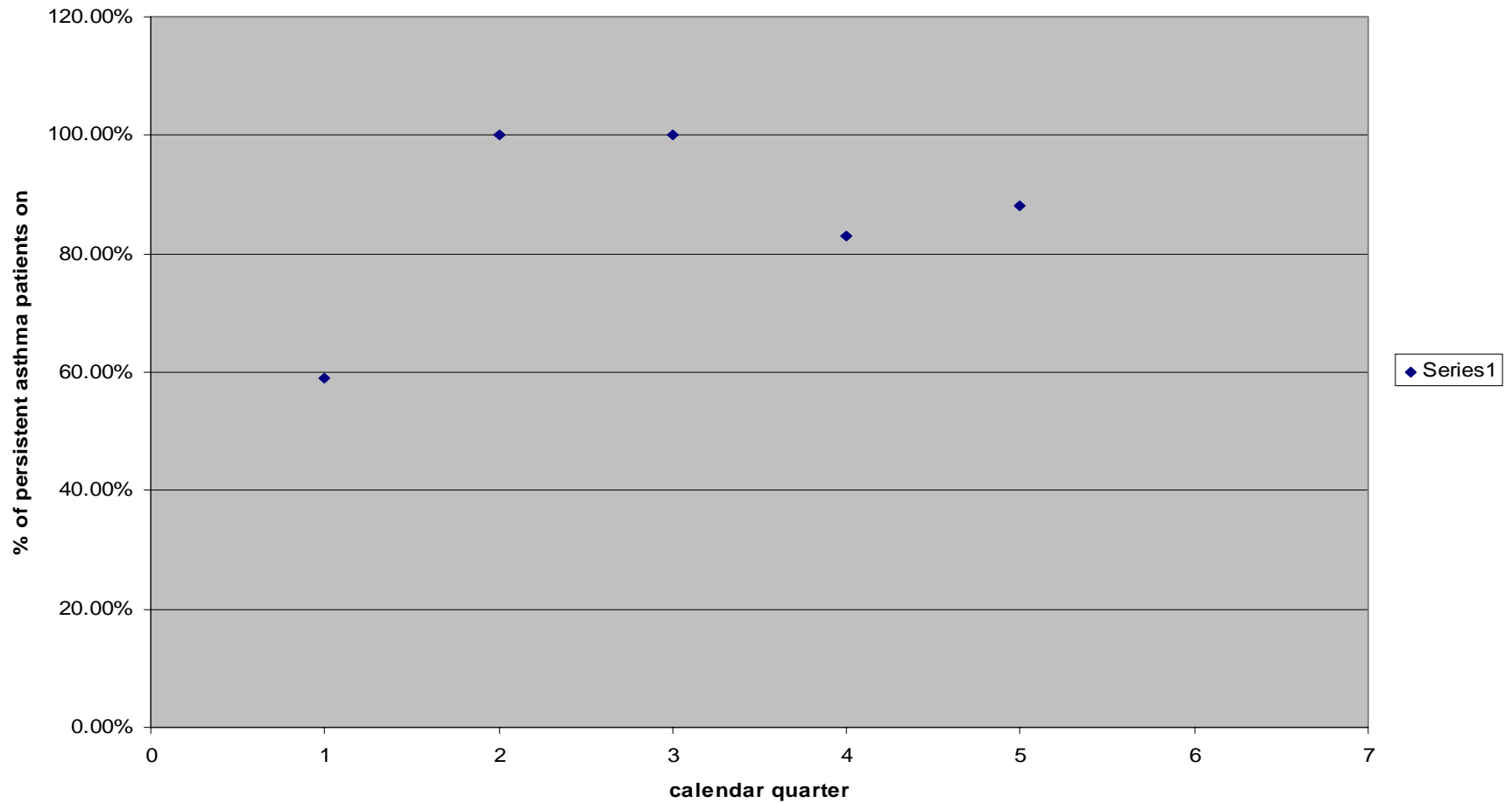
**Hypertension:** Goal of therapy is BP < 140/90. If any portion of BP > 140/90, there must be an action plan in the chart, regardless of the reason for visit. If patient has risk factors such as known CAD or DM, goal is <130/80.

**Pediatrics:** Follow attached grid of immunizations for DFM

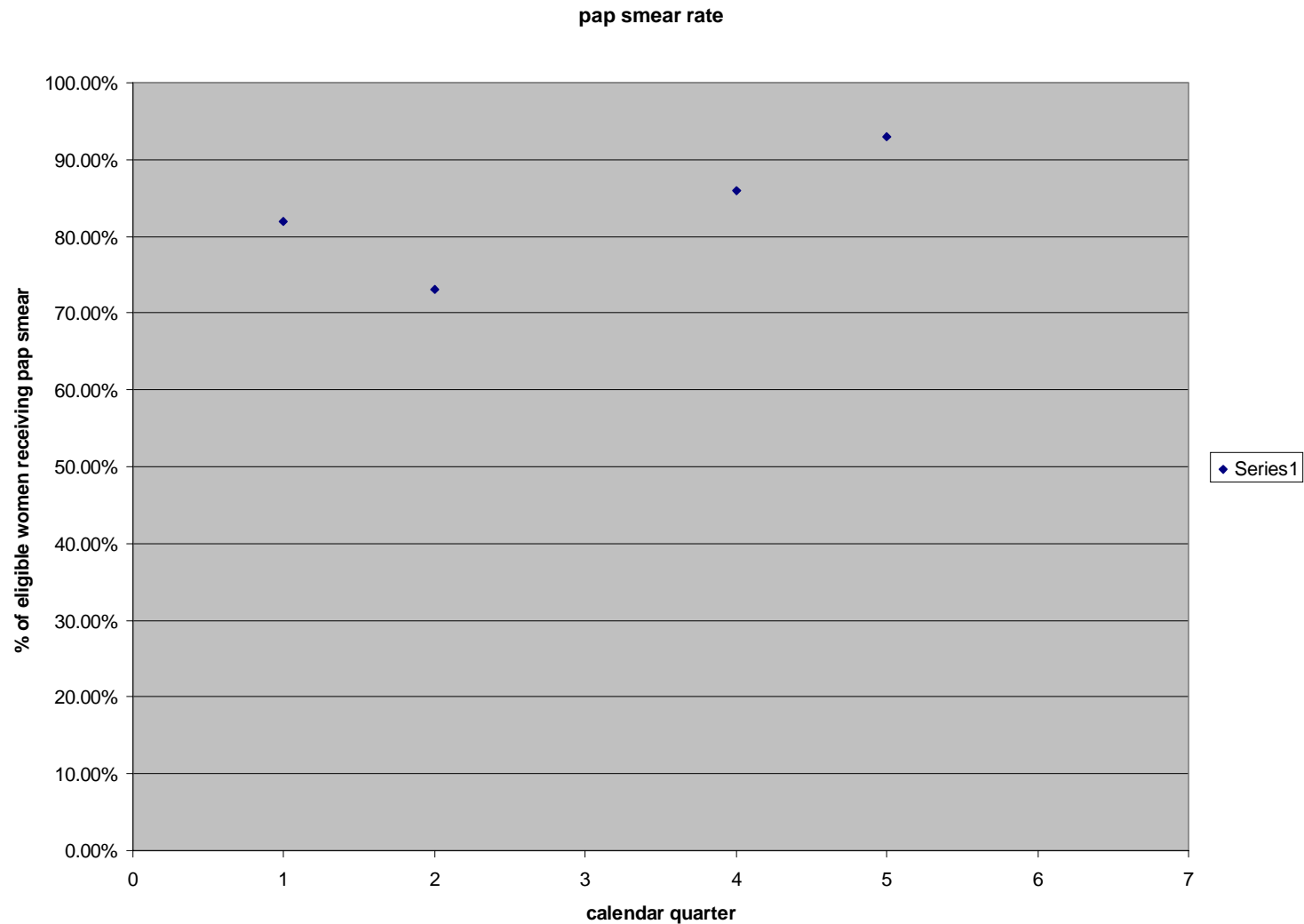
1. Immunization status must be documented on all encounters with patients under 18. If documented in heading of note, include date or pt's age of assessment of immunizations
2. Children late to their appointment must receive necessary immunizations at a minimum
3. Order delinquent immunizations at any visit, unless there is high fever or adverse rxn to shot
4. Refer no-show kids deficient in shots to CA II

# Outcomes: Asthma

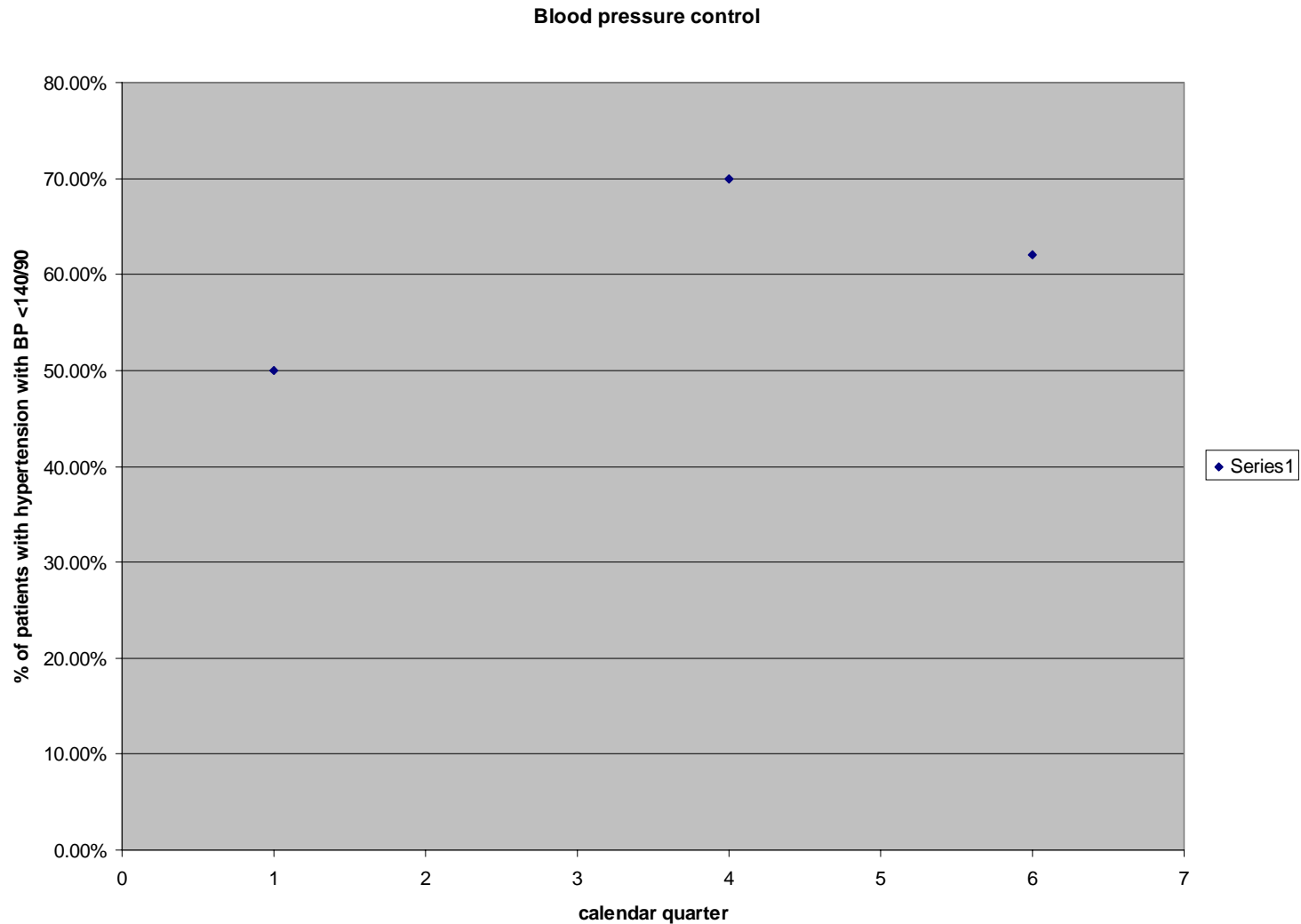
Persistent asthma on inhaled corticosteroids



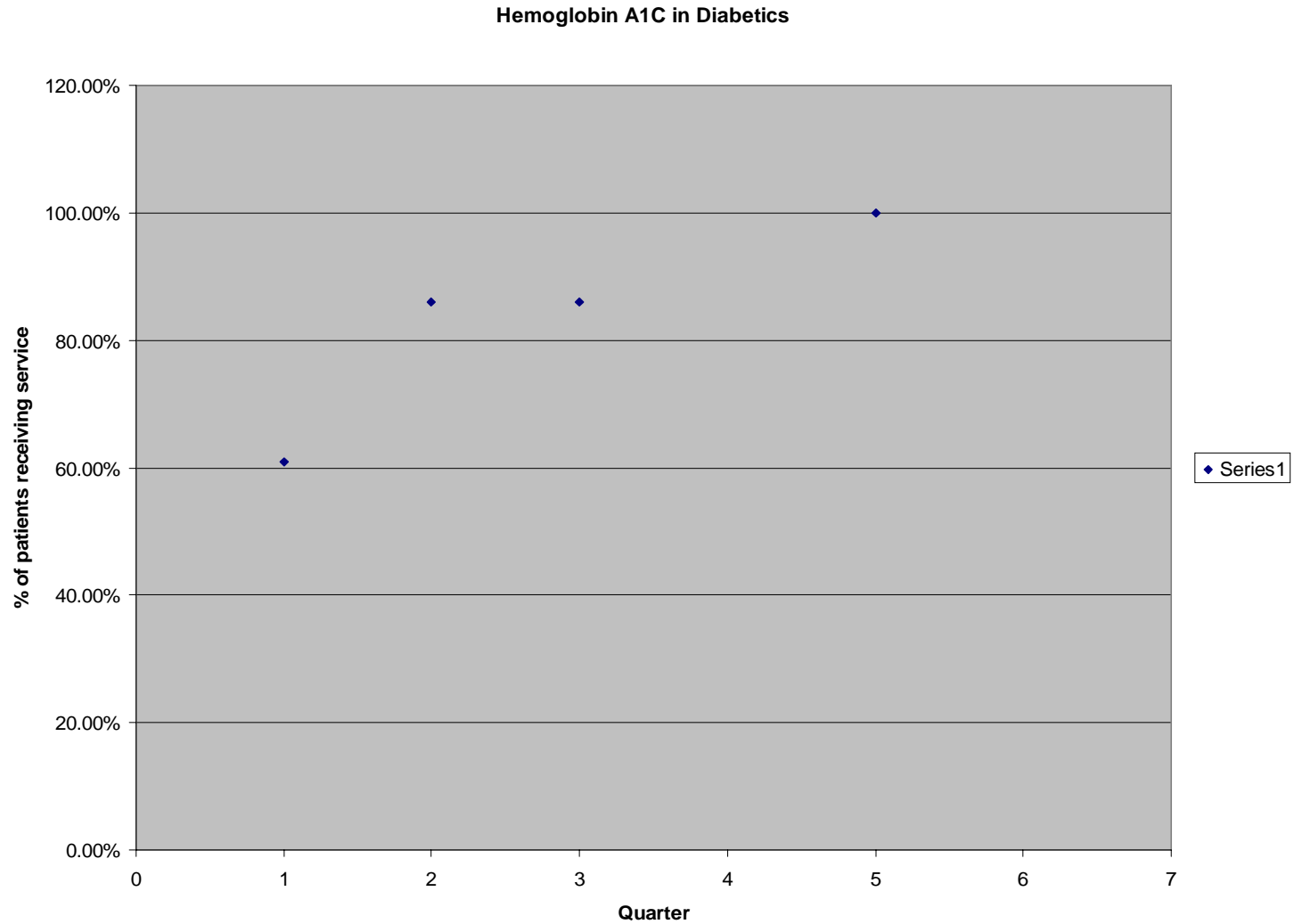
# Outcomes: pap smear rates



# Outcomes: Blood pressure control



# Outcomes: diabetes



# Summary

- Process for reporting errors keystone of any health care system including primary care
- Experiential experiences for residents include: Reporting of errors, M & M, QI projects, checklists, guidelines, systems design
- Practice culture must support safety and must not tolerate deviance

# Present & future challenges for outpatient practices

- Need error prevention systems for outpatient prescribing (Outpatient CPOE?)
- Need to develop other measures of patient safety
- QI Partnership & reporting systems with pharmacies, hospitals and other caretakers
- Education: To develop measurable provider competencies in patient safety