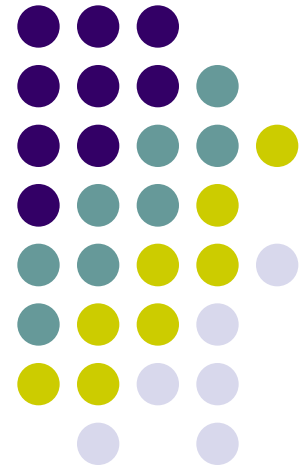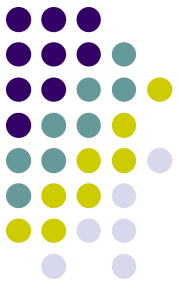# Introduction to Quality Improvement
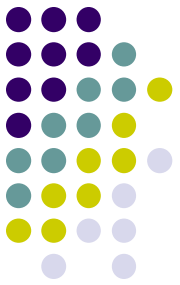
Essentials II

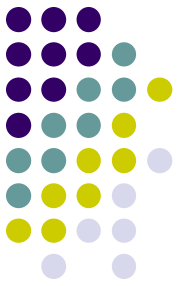August - September 2012

QI: What does it mean to you?

QI: Plan for today

- What is QI, and why is it important?
- Review basic concepts (based on IHI "Model of Improvement")
- Brainstorm a PDSA cycle about a problem
- List of resources
- Begin to generate a measurable AIM statement for a month-long mock QI project
- Introduce METRIC, a helpful tool that you may be able to use to help you reach your goals

Resources

"First Steps" article from Family Practice Management:
http://www.aafp.org/fpm/990300fm/23.html

IHI Model for Improvement:
http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/

AAFP resources: http://www.aafp.org/online/en/home/practicemgt/quality.html
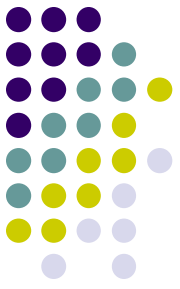METRIC: http://www.aafp.org/online/en/home/cme/selfstudy/metric.html

Department resources:
http://www.medicine.virginia.edu/clinical/departments/familymed/residency/curriculum/carepath-page
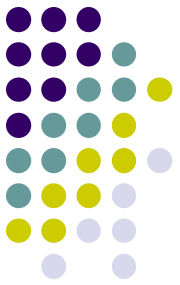
TransforMED website:
http://www.transformed.com/

What is QI?

- NOT looking for the "bad apples"
- IS a method of continuously examining *processes* and making them more effective
- 4 core principles (Deming)
  - Strong focus on "customers"
  - Continuous improvement of processes
  - Involvement of the entire organization
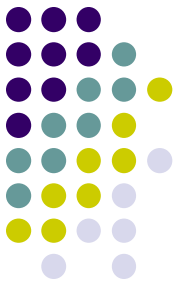 - Using data and team knowledge to improve decision making

QI in the office

- Do YOU know how each process in your office works? (scheduling, triage, what happens in the waiting room, patient rooming, lab, checkout, notification of results, followup)
- Since you don't (no one person does), you need the staff to work as a team.
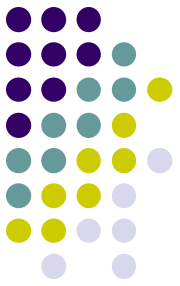
QI Model in a nutshell

- Identify an AIM (what do you want to accomplish?)
- Identify criteria for success
- Implement the change using the PDSA cycle.
  - Plan
  - Do
  - Study
  - Act

How to pick a problem?

- Put yourself in your patients' shoes
- Put yourself in your staff's shoes
- Internal data (patient complaints, chart audits)
- External data (insurance companies)
- Where have others been successful?

Put yourself in your patient's shoes

Why is quality important?

- IOM reports from early 2000s

- "Serious and widespread quality problems exist throughout American medicine"

- "Quality Chasm"- we repeatedly fail to translate knowledge and capacity into clinical practice

- Improving quality is an important component of the Patient-Centered Medical Home…

TransforMED℠

The TransforMED Patient-Centered Model
A Medical Home for All

Access to Care and Information
- Health care for all
- Same-day appointments
- After-hours access coverage
- Lab results highly accessible
- Online patient services
- e-Visits
- Group visits

Practice Management
- Disciplined financial management
- Cost-Benefit decision-making
- Revenue enhancement
- Optimized coding & billing
- Personnel/HR management
- Facilities management
- Optimized office design/redesign
- Change management

Practice Services
- Comprehensive care for both acute & chronic conditions
- Prevention screening and services
- Surgical procedures
- Ancillary therapeutic and support services
- Ancillary diagnostic services

Health Information Technology
- Electronic medical record
- Electronic orders and reporting
- Electronic prescribing
- Evidence-based decision support
- Population management registry
- Practice Web site
- Patient portal

Care Management
- Population management
- Wellness promotion
- Disease prevention
- Chronic disease management
- Care coordination
- Patient engagement and education
- Leverages automated technologies

A continuous relationship with a personal physician coordinating care for both wellness and illness

- Mindful clinician-patient communication: *trust, respect, shared decision-making*
  - Patient engagement
  - Provider/patient partnership
  - Culturally sensitive care
  - Continuous relationship
  - Whole person care

Quality and Safety
- Evidence-based best practices
- Medication management
- Patient satisfaction feedback
- Clinical outcomes analysis
- Quality improvement
- Risk management
- Regulatory compliance

Continuity of Care Services
- Community-based resources
- Collaborative relationships
  - Hospital care
  - Behavioral health care
  - Maternity care
  - Specialist care
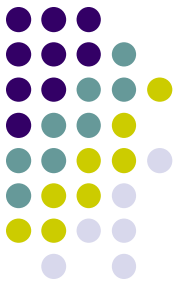 - Pharmacy
  - Physical Therapy
  - Case Management

Practice-Based Care Team
- Provider leadership
- Shared mission and vision
- Effective communication
- Task designation by skill set
- Nurse Practitioner / Physician Assistant
- Patient participation
- Family involvement options

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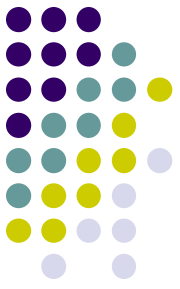
Find out more at www.TransforMED.com

- Whew! Questions?

IHI Model for Improvement

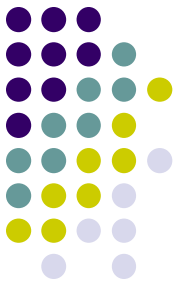- IHI = Institute for Healthcare Improvement

Model for Improvement

- **Forming the Team**
- **Setting Aims** Time-specific and measurable
- **Establishing Measures**
  Quantitative-- determine if a specific change actually leads to an improvement.
- **Selecting Changes**
  Identify the changes that are most likely to result in improvement.
- **Testing Changes**
  The Plan-Do-Study-Act (PDSA) cycle
- **Implementing Changes**
  After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team can implement the change on a broader scale — for example, for an entire pilot population or on an entire unit.
- **Spreading Changes**
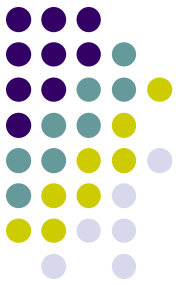
Forming the team

- Right people
  - Team Leader (Medical Director?)
  - Technical Expert (practicing MD?)
  - Day-to-day leader (nurse supervisor?)
  - Stakeholders in other key areas
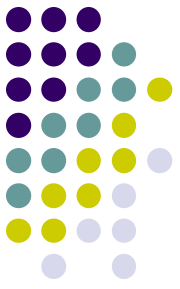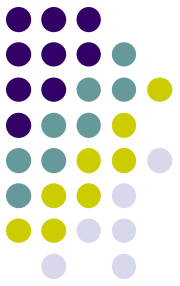- Small project may = small team

Setting aims

- Time-specific
- Measurable
- Does your team agree?
- Allocation of people and resources
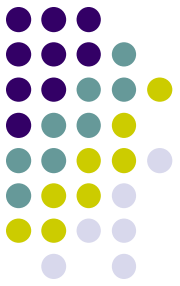
Overarching aims…

- **Safe:** Avoid injuries to patients from the care that is intended to help them.
- **Effective:** Match care to science; avoid overuse of ineffective care and underuse of effective care.
- **Patient-Centered:** Honor the individual and respect choice.
- **Timely:** Reduce waiting for both patients and those who give care.
- **Efficient:** Reduce waste.
- **Equitable:** Close racial and ethnic gaps in health status.

Crossing the Quality Chasm: A New Health System for the 21st Century (2001)
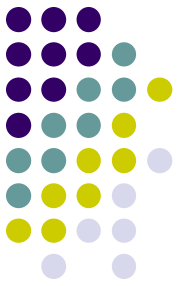
Tips for setting aims

- **State the aim clearly.**
- **Include numerical goals that require fundamental change to the system**
  - unambiguous, focused
- **Set stretch goals**
  - make it clear that the goal cannot be met by tweaking the existing system
- **Avoid aim drift**
- **Be prepared to refocus the aim**
  - by working on a smaller part of the system first
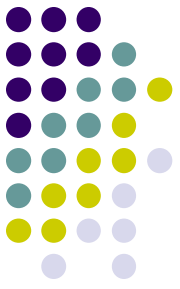
Measurement

- Tells you if you are actually improving
- Different from measurement for research
  - Doing small tests of your changes as you go keeps the ball rolling
  - Gather "just enough" to tell you what you need to know

Tips for effective measures

- **Plot data over time**
  - Length of stay, time in waiting room, volume, patient satisfaction
- **Seek usefulness, not perfection**
  - Get just enough data
- **Sampling**
  - For example, all of your charts one day per week or month
- **Integrate measurement into the daily routine.**
  - Our information systems are SLOOOWWWW. Develop a simple data collection form, a few simple measures will yield all the information you need
- **Use qualitative and quantitative data.**
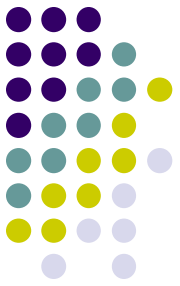
3 Types of measures: (1)

- **Outcome Measures (voice of the customer or patient):** How is the system performing? What is the result?

  - For diabetes: Average hemoglobin A1c level for population of patients with diabetes

  - For access: Number of days to appointment

  - For critical care: Intensive Care Unit (ICU) mortality
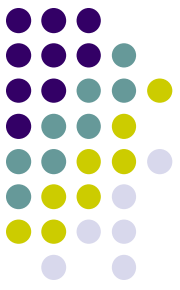
3 Types of Measures (2)

- **Process Measures (voice of the workings of the system):** Are the parts/steps in the system performing as planned?
  - For diabetes: Percentage of patients with hemoglobin A1c level measured twice in the past year
  - For access: Average daily clinician hours available for appointments
  - For critical care: Use of adverse drug event chart review
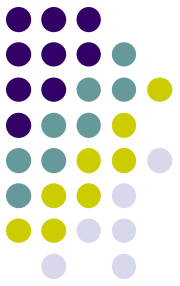
3 Types of Measures (3)

- **Balancing Measures (looking at a system from different directions/dimensions):** Are changes designed to improve one part of the system causing new problems in other parts of the system?

  - For reducing time patients spend on a ventilator after surgery: Make sure reintubation rates are not increasing
  - For reducing patients' length of stay in the hospital: Make sure readmission rates are not increasing
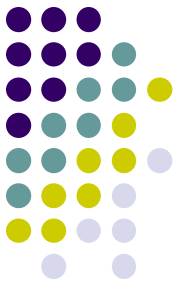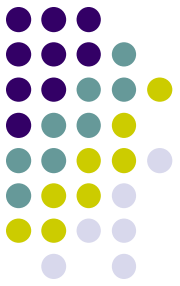
Testing Changes: PDSA
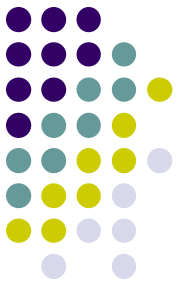
Testing Changes: PDSA

- **Step 1: Plan**

- **Step 2: Do**

- **Step 3: Study**

- **Step 4: Act**
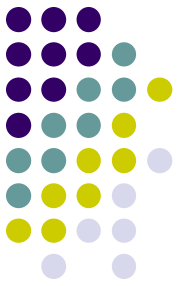
Testing Changes: PDSA

- **Step 1: Plan**
  Plan the test, including a plan for collecting data.

- **Step 2: Do**   Try out the test on a small scale.
  Document problems and unexpected observations.
  Begin analysis of the data.

- **Step 3: Study** Set aside time to analyze data and study results.

  Complete the analysis of the data.
  Compare the data to your predictions.
  Summarize and reflect on what was learned.

- **Step 4: Act** Refine the change, based on what was learned from the test.

  Determine what modifications should be made.
  Prepare a plan for the next test.

Tips for testing changes

- **Stay a cycle ahead.** When designing a test, imagine at the start what the subsequent test or two might be
- **Scale down the scope of tests.** Sample 10 rather than 200. Use one physician's patients rather than the whole practice.
- **Don't reinvent the wheel.** Can you modify rather than invent?
- **PICK EASY CHANGES TO TRY.** Look for the concepts that seem most feasible and will have the greatest impact.
- **Avoid technical slowdowns.** Don't wait for the new EHR to arrive!
- **Reflect on the results of every change.** After making a change, a team should ask: What did we expect to happen? What did happen? Were there unintended consequences? What was the best thing about this change? The worst? What might we do next? Too often, people avoid reflecting on failure. Remember that teams often learn very important lessons from failed tests of change.
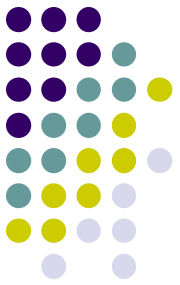
Implementing/Spreading change

- After testing a change on a small scale, learning from each test, and refining the change through several PDSA cycles, implement on a broader scale
- A permanent change to the way work is done
- Still requires the use of the PDSA cycle.

- **Example**

  - *Testing a change:* Two nurses use a new medication reconciliation form.
  - *Implementing a change:* All nurses in the clinic begin using the new medication reconciliation form.

  - *Spreading a change:* All nurses in the UVA health system use the new medication reconciliation form
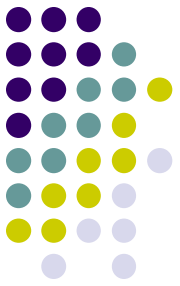
BREAK

- METRIC demonstration:

  http://www.cecity.com/aafp/walkthrough/flash.htm
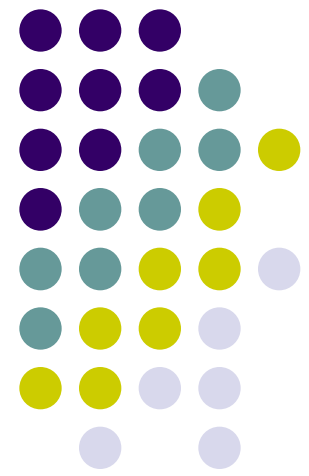
METRIC

- Baseline measurements of practice systems (based on Chronic Care Model) and chart review

- Build and implement action plan (many suggestions, links to resources)

- Remeasure practice systems and chart review, compare results with yourself and other practices

- Reflect