I Raise the Rates: Initiative to Raise the Adult Immunization Rates in Primary Care
An ACP Quality Connect Program
Acknowledgements

Support for this program has been from Pfizer, Inc.
ACP Quality Connect Mission

To create and sustain a learning community of empowered physicians and other health care professionals, patients and caregivers, to improve health, care delivery and outcomes.

• Create QI network of internists and other physicians and their health care teams
• Partner with state chapters and health care systems
• Highlight patient engagement as part of health care team
• Add value and joy to clinicians in everyday practice
# Adult Vaccination Rates = POOR!

Data: NFS 2014, NHIS 2013

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Influenza</strong></td>
<td></td>
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</tr>
<tr>
<td>Influenza [Early Season 2014– 2015] – All Adults</td>
<td>39.0%</td>
<td>39.7%</td>
</tr>
<tr>
<td>[All] 18 – 49 years</td>
<td>31.4%</td>
<td>30.6%</td>
</tr>
<tr>
<td>[All] 50 – 64 years</td>
<td>39.1%</td>
<td>43.7%</td>
</tr>
<tr>
<td>≥ 65 years</td>
<td>61.8%</td>
<td>61.3%</td>
</tr>
<tr>
<td>HCW [19 – 64 years]</td>
<td>62.9%</td>
<td>Not asked</td>
</tr>
<tr>
<td><strong>PPS23 &amp; PCV13</strong></td>
<td>Rate 2012</td>
<td>Rate 2013</td>
</tr>
<tr>
<td>High risk 19 – 49 years</td>
<td>20.0%</td>
<td>21.2%</td>
</tr>
<tr>
<td>≥ 65 years</td>
<td>59.9%</td>
<td>59.7%</td>
</tr>
<tr>
<td><strong>Tetanus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[19 – 49 years, received past 10 years]</td>
<td>64.2%</td>
<td>62.9%</td>
</tr>
<tr>
<td><strong>Tetanus/Pertussis</strong></td>
<td></td>
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</tr>
<tr>
<td>[19+, received in past 8 yrs]</td>
<td>14.3%</td>
<td>17.2%</td>
</tr>
<tr>
<td><strong>Shingles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[Zoster] age 60+</td>
<td>20.1%</td>
<td>24.2%</td>
</tr>
<tr>
<td><strong>Hepatitis B Vaccine</strong></td>
<td>High risk 19 – 49 years</td>
<td>35.3%</td>
</tr>
<tr>
<td><strong>HPV Vaccine</strong> [women 19 – 26 years]</td>
<td>34.5%</td>
<td>36.9%</td>
</tr>
</tbody>
</table>

http://www.cdc.gov/flu/fluvaxview/nifs-estimates-nov2014.htm#place
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a4.htm
Disparities and Adult Vaccination Rates = EVEN WORSE!

Data: NIS-Flu and BRFSS

<table>
<thead>
<tr>
<th>Vaccine [Population] 2013-2014</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza [&gt; 18 years]</strong></td>
<td></td>
</tr>
<tr>
<td>All Adults</td>
<td>42.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>33.1%</td>
</tr>
<tr>
<td>White</td>
<td>45.4%</td>
</tr>
<tr>
<td>Black</td>
<td>35.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>43.6%</td>
</tr>
<tr>
<td><strong>Pneumococcal [&gt;65 years]</strong></td>
<td></td>
</tr>
<tr>
<td>All Adults</td>
<td>59.7%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>39.2%</td>
</tr>
<tr>
<td>White</td>
<td>63.6%</td>
</tr>
<tr>
<td>Black</td>
<td>48.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>45.3%</td>
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</table>

<table>
<thead>
<tr>
<th>Vaccine [Population] 2013-14</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zoster [&gt;60 years]</strong></td>
<td></td>
</tr>
<tr>
<td>All Adults</td>
<td>24.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9.5%</td>
</tr>
<tr>
<td>White</td>
<td>27.4%</td>
</tr>
<tr>
<td>Black</td>
<td>10.7%</td>
</tr>
<tr>
<td>Asian</td>
<td>22.6%</td>
</tr>
<tr>
<td><strong>Tdap [&gt;19 years]</strong></td>
<td></td>
</tr>
<tr>
<td>All Adults</td>
<td>17.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.2%</td>
</tr>
<tr>
<td>White</td>
<td>19.7%</td>
</tr>
<tr>
<td>Black</td>
<td>12.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>15.5%</td>
</tr>
</tbody>
</table>
I Raise the Rates Approaches

- Training and practice coaching
- Communications Campaign
- Performance measure feedback

Increased adult immunizations
Improvement Tools

- Champion Training
- Performance Monitor and Learning Platform
- Practice Coaching Calls
- Webinars
- Focus on Topics Important to Practices (costs, team-based approaches, referral tools, recommendation)
- PDSA Library
- Resident Training Modules
Medconcert: Performance Monitoring Dashboard

View your performance based on vaccine measure and against established benchmarks and peer comparators.
Champion Role and Responsibilities

- Lead your practice setting in QI project aimed at increasing immunization rates among your patience
- Engage peers in promoting the importance of immunizations
- Teach colleagues about strategies that can promote immunizations
- Promote immunizations in your organization or community
- Become future coaches and QI leaders
Following Today’s Webinar

- Champion training videos (available online)
  - Required:
    - Adult Immunization – The Big Five! What Every Primary care Physician Should Own – Dr. Sandra Adamson Fryhofer
  - Optional training videos
    - MedConcert training

- Complete the PDSA Worksheet
- Follow-up coaching call in two weeks
PRACTICING WISELY

AND SAVE TWO HOURS A DAY
PRACTICING WISELY ATTENDING TO PHYSICIANS

MBROWN@MBROWNMD.NET
708 826 0361
Rush University
Immediate Past Governor
American College of Physicians
Dr Brown has no conflicts of interest to disclose
Learning objectives

Learn and execute strategies to improve provider satisfaction and provider experience

Share approaches used by "high-functioning primary care practices" and ways to implement them in your practice
The most refined, most expensive, and most important clinical “instrument” in our health system continues to be the physician.

I can’t ask my Internists to do one more thing without taking something off their desk.

Stanford Dean’s report 2015

A Chairman Dept of Internal Medicine
WHAT BRINGS JOY TO A PHYSICIAN’S WORK?

PRIDE IN THEIR WORK
Develop a time efficient approaches to patients with numerous comorbidities in order to....

implement a team based approach to address population management
Mrs Hennessey  10:20-10:40

65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills. Had shingles 3 years ago. New grandchild.

Problem list:
T2DM
Depression
Obesity
HTN
Hypothyroidism
Osteoarthritis of both knees
Low back pain
Asthma

Meds:
Metformin
Glyburide
Sitagliptin
Chlorthalidone
Lisinopril
metoprolol
Paroxetine
lorazepam
Estrogen
Atorvastatin
Levothyroxine
Pantoprozole
Vit D,E,A
Albuterol
fluticasone

1. You are 35 min behind schedule
2. Received notice health maintenance levels were not at goal*
3. Her A1c was 8.0% 6 months ago, no record of TSH or BMP
4. BP today is 170/100
5. She has gained 5 lbs since last visit 6 months ago
6. You don’t know which vaccines she needs *
7. She is not sure which blood pressure medicines she is taking
65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills.

**Problem list:**
- T2DM
- Depression
- Obesity
- HTN
- Hypothyroidism
- Osteoarthritis of both knees
- Low back pain
- Asthma

As you leave the room she remembers that she needs a mammogram, a handicapped parking sticker, eye referral, and something more to help her sleep. She asks when she is due for another colonoscopy and cannot afford her spacer.
65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills.

**Problem list:**
T2DM
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**Problem list:**
- T2DM
- Depression
- Obesity
- HTN
- Hypothyroidism
- Osteoarthritis of both knees
- Low back pain
- Asthma

It is now 10:55 and you are 50 min behind schedule.
Mrs Hennessey between this visit and next

65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills.

Problem list:
T2DM
Depression
Obesity
HTN
Hypothyroidism
Osteoarthritis of both knees
Low back pain
Asthma

1. She calls for a refill on her metformin as soon as she gets home
2. She calls for something for her knee pain
3. She calls for lab results and you note her TSH is high
4. You increase her levothyroxine and order repeat TSH in 6 weeks
5. You note her A1c is 8.2 and you increase her metformin and send in refill
6. She calls for a new rx for her lisinopril as you increased it
7. She would like an xray of her back
Mrs. Hennessey between this visit and next
(Unplanned and not reimbursed)

1. Phones for a refill on her metformin as soon as she gets home
2. She calls asking for medication for her knee pain
3. She calls for lab results and you note her TSH is high
4. You increase her levothyroxine and order repeat TSH in 6 weeks
5. You note her A1c is 8.2, you increase her metformin and send in refill
6. She calls for a new rx for her lisinopril as you increased it
7. She would like an x ray of her back
8. She calls for her TSH result in 6 weeks
9. She calls for her mammogram result which is normal
10. She asks if she should get a shingles shot
11. Quality metrics report shows she has not had colonoscopy, Tdap, influenza, PCV, PPSV, zoster, foot exam, urine protein.
12. BP and A1c not at goal-tied to evaluation/bonus
13. Patient satisfaction is low due to 1-2 hours behind schedule

<table>
<thead>
<tr>
<th>Staff</th>
<th>Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
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<tr>
<td>3</td>
<td>10</td>
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<tr>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

1 hr 20 min x 3 (between visits) = 4 hours/year
Lost time is never found again

1 hr 20 min x 3 (between visits) = 4 hours/year for 1 patient
200 patients = 800 hours/yr or 100 work days - not reimbursed
Over 3 months
Mrs. Hennessey 4 months later  4:20-4:40

65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills. She is traveling to see her grandbaby.

Problem list:
T2DM
Depression
Obesity
HTN
Hypothyroidism
Osteoarthritis of both knees
Low back pain
Asthma

1. You are already 45 min behind schedule
2. Her A1c was 8.2% 4 months ago
3. BP today is 165/100
4. Your health maintenance records are all “red”*
5. You don’t know which vaccines she needs.*** AGAIN!
6. She is not sure which blood pressure medicines she is taking

Meds:
Metformin
Glyburide
Sitagliptin
Chlorthalidone
Lisinopril
metoprolol
Paroxetine
lorazepam
Estrogen
Atorvastatin
Levothyroxine
Pantoprazole
Vit D,E,A
Albuterol
fluticasone
1600 guidelines in 17 minutes

The Information Tsunami

To personally keep up with progress:
1980: Read 1 RCT daily
2010: Read 100 RCT daily

Since the last Scientific Meeting:
>30,000 RCTs published

Adapted from: Medline Trend: http://dan.corlan.net/medline-trend.html (accessed Jan 4 2013)
Competence and caring in relation to building trust

![Diagram showing the relationship between competence and caring in building trust]

Creative Solutions
Expanding Primary Care Capacity By Reducing Waste And Improving The Efficiency Of Care

Train more

Lose fewer

Improve efficiency

New models that enhance patient – provider experience

Create greater capacity with the existing workforce.

In Search of Joy in Practice: A Report of 23 High-Functioning Primary Care Practices

Time Saving Solutions
• 50% day EHR/desk
• < 1/3 F2F
• 1 hr F2F: 2 hr EHR
• 1-2 hr EHR at night

“Pajama time”
Transformation Toolkits

• Teams
  – Expanded rooming
  – Team documentation
  – Prescription management
  – Pre-visit planning/lab
  – Team meetings
  – Daily huddles

• Value
  – Panel management
  – Medication adherence
  – Burnout Prevention
  – Diabetes prevention
  – Hypertension

• Culture
  – Preventing Burnout
  – Resiliency
  – wellness in Residency
  – Transforming culture

• Technology
  – Telemedicine
  – EHR implementation

www.stepsforward.org
CHAOTIC VISITS

Patient and team not prepared
No agenda
Impossible schedule
Urgent not important
Medications unmanaged
No access

Solutions
Previsit Labs
Previsit Planning
Schedule efficiency
Medication Management
Practice Redesign

Challenge

Chaos

Solutions

Previsit Labs
Previsit Planning
Schedule efficiency
Medication Adherence
Medication sync³
  90 x 4 refill 1x/yr
One stop shop
Indication based

Actions

Insurers/pharmacy plans/regulatory
  One copay for lab/visit
  Refill for 15 months

Administration
  Flexible schedule
  Provide time
  Imbed PDSA cycle in the office

Team
  Shared tasks
  Build trust

Patient
  Engaged
Previsit planning/labs*
Schedule efficiency
Team based care/Workflow
Staffing/team documentation
Intervisit team based care
# Rooming Checklist

<table>
<thead>
<tr>
<th>Preventive screening</th>
<th>Due</th>
<th>Up-to-date</th>
<th>N/A</th>
<th>Target population and recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP</td>
<td></td>
<td></td>
<td></td>
<td>Age 21 to 65 years&lt;br&gt;Every 3 years if no history of abnormal PAPs (or every 5 years if over 30 and most recent PAP negative and HPV-negative)</td>
</tr>
<tr>
<td>Mammogram</td>
<td></td>
<td></td>
<td></td>
<td>Age 50 to 75 years&lt;br&gt;Every 1 to 2 years; or for those 40 to 50 and &gt;75 screening is optional</td>
</tr>
<tr>
<td>Colonoscopy</td>
<td></td>
<td></td>
<td></td>
<td>Age 50 to 75 years&lt;br&gt;Every 10 years (more frequent if history of colon polyp or family history of colon cancer)</td>
</tr>
<tr>
<td>Bone density scan (DEXA)</td>
<td></td>
<td></td>
<td></td>
<td>Age 65 years&lt;br&gt;Every 10 years for women if previous results were normal; every 5 years if symptoms of osteopenia exist</td>
</tr>
<tr>
<td>Abdominal aortic aneurysm</td>
<td></td>
<td></td>
<td></td>
<td>Age 65 to 75 years&lt;br&gt;One-time screening for men who have ever smoked</td>
</tr>
<tr>
<td>Visual acuity</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;65 years (new Medicare enrollees) Can be completed during the “Welcome to Medicare” visit</td>
</tr>
<tr>
<td>Glaucoma screen</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;65 years&lt;br&gt;Annually</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Immunization</th>
<th>Due</th>
<th>Up-to-date</th>
<th>N/A</th>
<th>Target population and recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdap vaccine</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;19 years&lt;br&gt;Administer Tdap once; boost with Td every 10 years</td>
</tr>
<tr>
<td>Influenza vaccine</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;6 months&lt;br&gt;Annually</td>
</tr>
<tr>
<td>Shingles vaccine</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;60 years&lt;br&gt;Annually</td>
</tr>
<tr>
<td>Pneumococcal vaccine (PCV13 or PPSV23)</td>
<td></td>
<td></td>
<td></td>
<td>Age &gt;65 years&lt;br&gt;- PCV13 now, followed by PPSV23 six to 12 months later&lt;br&gt;- If already received PPSV23, wait at least one year before giving PCV13&lt;br&gt;Patients age 18 to 65 with a chronic* or immunocompromising condition may also need a pneumococcal vaccine.</td>
</tr>
</tbody>
</table>
Previsit planning

Don’t let perfection be the enemy of the good

Maximize staff ‘down time’

What is your staff doing now?

Panel management
Agenda setting
Med review
Preventive care
Ten steps to pre-visit planning

During the current visit

1. Re-appoint the patient at the conclusion of the visit
2. Use a visit planner checklist to arrange the next appointment(s)
3. Arrange for laboratory tests to be completed before the next visit

Before the next visit

4. Perform visit preparations
5. Use a visit prep checklist to identify gaps in care
6. Send patients appointment reminders
7. Consider a pre-visit phone call or email

During the next visit

8. Hold a pre-clinic care team huddle
9. Use a pre-appointment questionnaire
10. Hand off patients to the physician
The **WHAT** and the **WHY** of pre-visit planning

*Pre-visit planning* includes scheduling patients for future appoints at the conclusion of each visit, arranging for pre-visit lab testing, gathering the necessary information for upcoming visits and spending a few minutes to huddle and handoff patients.

Pre-visit planning can mean the difference between a clinic where physician and staff are floundering and frustrated, and *a clinic that runs smoothly* with the capacity to handle any unanticipated issues that arise.

Don’t start all of this at once! Pick one aspect and once your team accomplishes this, add another.
Incorporating pre-visit laboratory testing

- Lab tests are ordered for completion **before upcoming appointments**
- Allows for better interaction with patients
  - In-person, shared decision making
- **Efficiency**
  - Closes the loop of care
  - Eliminates the need to review results later
  - Also eliminates the need for follow-up calls
- **Safety**
  - **Less** missing/overlooked information
  - **Better** patient/family access
Previsit labs
Six steps to pre-visit laboratory testing

1. Re-appoint the patient at the conclusion of each visit
2. Pre-order labs and other needed tests
3. Use a visit planner checklist to arrange the patient's next appointment(s)
4. Arrange for tests to be completed *before* the next visit
5. Delegate computerized order entry
6. Empower staff to manage the inbox
Pre-visit Labs

✦ 89% ↓ phone calls ($p<0.001$)
✦ 85% ↓ letters ($p<0.0001$)
✦ 61% ↓ additional visits ($p<0.001$)
✦ ↑ patient satisfaction

• Save $24 per visit


also [http://ajcp.ascpjournals.org/content/142/5/640.abstract](http://ajcp.ascpjournals.org/content/142/5/640.abstract)
[http://ajcp.ascpjournals.org/content/142/5/640.full](http://ajcp.ascpjournals.org/content/142/5/640.full)
**Your practice**

- **Cost of physician's time**: $3/min
- **Cost of staff time**: $1/min
- **Clinic days per year**: 220 days/year

**Estimate savings**

- **Physician time on results reporting**: 30 min/day
- **Staff time on results reporting**: 30 min/day
  - **Time saved**: 1 hr/day
  - **Annual savings with no visit physician**: $26,400

**Q&A**

- **Will there be more “no-shows” if we schedule patients six or 12 months in advance?**

  Experience suggests that pre-visit laboratory testing, especially when coupled with an automated reminder, will decrease the rate of no-shows in a practice. Implementing an automated or manual...
Practice Redesign

Challenge
- Chaos

Solutions
- Previsit Labs
- Previsit Planning
- Schedule efficiency
- Medication Adherence
- Medication sync\(^3\)
  - 90 x 4 refill 1x/yr
  - One stop shop
  - Indication based

Actions
- Insurers/pharmacy plans/regulated
  - One copay for lab/visit
  - Hold future lab orders
  - Refill for 15 months
  - Refill sync (90 days +/- 5)

Administration
- Flexible schedule
- Provide time for previsit planning
- Provide ‘desk time’
- Imbed PDSA cycle in the office
- Develop metrics for inefficiency
- Train team based practice
Goals Setting

✧ After you have identified your treatment gap you wish to work on
  – Establish a **goal**
  – Establish a **time frame**

**Example:** Increase the number of patients that have a Tdap 10% to 30% by March of next year
Plan-Do-Study-Act (PDSA)

- Who is the team?
- When will we meet?
  - On the clock
  - Uninterrupted
- What’s in it for me?
  - Cycle continues if you are away

- What will we measure?
  - Improves patient care
  - Resources easily available
  - Time saver or neutral
  - Easy to measure
    - Who will measure?
    - How much time will it take?
    - How will we display it?
- How often will we measure?
- How many weeks will we measure?
- What is our goal?
  - Be specific
  - We will double ‘x’ in 6 weeks
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs
(week 1: 0/10 = 0%)

Doctor reminds staff to give Tdap
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs
(week 2: 1/10= 10%)

Doctor reminds staff to give Tdap
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs

Doctor reminds staff give tdap
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs

Staff reviews video of Child with pertussis
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs

Weeks

%
Simple Run Chart
Count how many patients each Friday have had Tdap within 10 yrs

- Staff reviews video of Child with pertussis
- Staff receives Tdap
- Staff institutes standing Orders
Previsit planning/labs
Team based care/Workflow/scheduling
Staffing/team documentation
Intervisit team based care
Front desk staff

First impression/Sets the tone
Engages the patient
Starts the visit in the waiting room *****
(or earlier)
Provides VIS (vaccine info)*** (previsit plan)
Yesterday staff pulled VIS and put pt’s name on it for front desk staff to hand out at check in.

Other ideas: (start with one)
PHQ-9, GAD (patient health questionnaire)
Med rec and Ask me 3
Provides patient education
Administers adherence questionnaire
Agenda and Medication Review process starts on the phone, days prior or in the waiting room.
The visit begins during a previsit plan and/or continues in the waiting room and in the exam room while waiting for the provider.

Which 3 things would you like to handle today?

List any doctors or procedures (ex: x-rays, mammograms, immunizations) you have seen or had since last visit:
YOUR MEDICATIONS

For your Doctors and Nurses to better care for you we need your help.

Please review your medication list that has been handed to you at each and every visit. Then look at it carefully and make some notes.

1. Circle the medications you need refills for (you should leave the office today with enough refills to last until your next visit)

2. Cross out any medications you are not taking

3. Put a ‘?’ next to medicine you don’t think you need or have questions about

4. Add medications other doctors are giving you (this includes eye drops, creams and especially other pills)

5. Add supplements or vitamins that you are taking (this is very important)
11 am flight

- Book and pay for flight
- Prepare for trip pack bring ticket
- Travel to airport
- Park at airport
- Check in
- Enter security
- Find gate
- Board

Plane leaves gate at 11 am

Pilot relies on others to have the plane ready for take off
Practice Redesign

Challenge: Chaos

Solutions:

Previsit Labs
Previsit Planning

Workflow:
Medication Adherence
Medication sync:
90 x 4 refill 1x/yr
One stop shop
Indication based

Actions:
Insurers/pharmacy plans/regulatory
One copay for lab/visit
Hold future lab orders
Refill for 15 months
Refill synch (90 days +/- 5)
Administration/institution
Insurance verified when appt made
Provide parking and navigation
Provide ‘desk time’
Educate patient and family
Develop metric: on time boarding
Save 2-3 hours each day
Improving medication adherence
Streamlining prescription renewals
Renew Chronic Meds
Once a Year (#90 x 4)

Physician time saved > 1 hour/day
Nursing time saved > 2 hours/day
40 million primary care visits each year
Weekend/night calls
Medication errors
Patient satisfaction
Continue to see patients every 1-3 months*
Renew chronic meds for 12-15 months
Use 3 month supply or longer
Fill 365 pills once/year

Do not use every 6 month refills to hold patient hostage

Pharmacies must transfer prescriptions directly to another pharmacy when patient makes request.

No need for MD to resend rx to a different pharmacy
Synchronized prescription renewal

Save physician and staff time by renewing prescriptions until the next annual visit.

Three steps to synchronized prescription renewals

Calculate time saved per year:

**Estimate savings**

\[
1000 \times 5 \times 2 \times 2 = 333\text{H}20\text{m} \\
\text{Time saved}
\]
Synchronized prescription renewal

Save physician and staff time by renewing prescriptions until the next annual visit.

Calculate money saved per year:

Your practice

$3/min
Cost of physician's time

$1/min
Cost of staff time

220 days/year
Clinic days per year

Estimate savings

30 min/day + 30 min/day = 1h0m/day
Rx time for Physician Rx time for Staff

= $26,400
Time saved
Annual savings with Synchronized Prescription Management

Source: AMA. Practice transformation series: synchronized prescription renewal. 2014.
Eight steps to improve medication adherence

1. Consider medication nonadherence first as the reason a patient’s condition is not under control
2. Develop a process for routinely asking about medication adherence
3. Create a blame-free environment to discuss medications with the patient
4. Identify why the patient is not taking their medicine
5. Respond positively and thank the patient for sharing their behavior
6. Tailor the adherence solution to the individual patient
7. Involve the patient in developing their treatment plan
8. Set patients up for success
Medication Adherence
World Health Organization:

Increasing adherence may have a far greater impact on the health of the population than any improvement in specific medical treatments.

Adherence to immunization recommendations
TREATMENT

ADHERENCE

OUTCOMES
OBSTACLES

UNINTENTIONAL vs INTENTIONAL

♦ FORGETTING
♦ SHIFT WORK
♦ COST
♦ CONFUSION
♦ WORK RESTRICTIONS
♦ ACCESS/TIME

♦ MISTRUST
♦ FEAR OF SIDE EFFECTS
♦ MENTAL ILLNESS
♦ LACK OF BELIEF IN BENEFIT
♦ FEAR OF DEPENDENCY
♦ FEAR IT IS DANGEROUS
♦ LACK OF DESIRE
♦ NO APPARENT BENEFIT
♦ ALTRUISM
Practice Redesign

Challenge

Chaos

Solutions

Previsit Labs
Previsit Planning
Schedule efficiency
Medication Adherence
Medication sync\(^3\)
90 x 4 refill 1x/yr
One stop shop
Indication based

Actions

Insurers/pharmacy plans/regulatory
One copay for lab/visit
Refill for 15 months

Administration
Flexible schedule
Provide time*
Imbed PDSA cycle in the office

Team
Build blame-free environment
Build trust

Patient
Brown bag review
Previsit planning/labs
Schedule efficiency
Team based care/Workflow
Staffing/team documentation*
Intervisit team based care
  (panel management)
Practice Redesign

Challenge

Inadequate Support

Solutions

Share the care among the team
2:1 or 3:1 staffing
Rooming protocol
Between visit
  Health coaching
  Care coordination
  Panel management

Actions

Educators
  MA’s, Nurse, PA, APN

Institutions
  Staffing
  Team documentation*
  Staff order entry

Team
  Cross train
  Share tasks

Payers
  Fund non-MD Service
## Why Does Time Matter?

- PCPs have **10.7-18.7 min per patient**
  - Log in: 0.5 min
  - Navigating to lab: 2 min
  - Navigating to notes: 3 min
  - Download summary: 0.5 min
  - Enter FH/SH: 2 min
  - CPOE: 2 min
  - Structured assess.: 1 min
  - Documentation: 4 min

Total clerical time: **15 min**

*O’Malley, A. Arch Intern Med Jan 10, 2011*
Flow station at North Shore Physicians Group
HP: Saves 30 min/day/physician
Printer in every room
Saves 20 min/day

Tap and Go
Saves 17 min/MD/day

100 Doctors save 28 hours/each day Over 3 days!
Sign On
“Tap and Go”

🔹 Dean Clinic
  – 102 signs to 2 sign ins per day
  – Saved 17 min/d

Happiness minutes
  60 hours/yr/
  1 doctor > 1 week

100 Doctors
  save
  28 hours/each day
  Over 3 days!
  >300 days
The **WHAT** and **WHY** of expanded rooming and discharge protocols

Physicians alone cannot do all of the work needed for most office visits. With expanded rooming and discharge protocols, the nurse, medical assistant (MA) or other clinical support staff are able to fully use their skills to create a smooth visit for the patient and a satisfying clinic session for the entire team.

Creating standard work routines enables staff to take on additional responsibilities that give physicians more time to spend on work for which they were uniquely trained.
**Five** steps to effectively incorporate staff in rooming and discharge activities in *your* practice

1. Identify current workflows

2. Create a rooming checklist

3. Refining the rooming checklist
Five steps to effectively incorporate staff in rooming and discharge activities in your practice

4. Create a discharge list

5. Provide ongoing staff training
Estimate your savings in time and money

Your practice

Start here!

$ 3.00 /min
Cost of physician's time

220 days/year
Clinic days per year

Estimate savings

20 /day x 5 min/visit = 1.40 hours/day
Total visits per day
Physician time on standard tasks/visit

= $66,000
Time saved
Annual savings with expanded rooming and discharge

MONEY

TIME

$66,000

AMA

American Medical Association

73
Assess where staff can assist in team documentation

Select a step to see more details

Areas where staff could assist in the team documentation process while they are with the physician and patient in the exam room
Expanded rooming and discharge protocols tools available to your team:

### Sample Rooming Checklist

#### Prior to the visit

- **Review the last clinic note and completed pre-appointment questionnaire.**
  This will help staff prepare the patient and physician for the visit.

- **Gather test results obtained prior to the visit.**
  If the patient had pre-visit laboratory tests completed, prepare the results for the visit. Some clinics print the results to share with the patient.

- **Compile relevant data specific to the visit.**
  Gather emergency room notes, hospital discharge summaries, consultations, etc. if relevant to the visit. Use a [visit prep checklist] to identify what care gaps can be closed during the upcoming appointment.

#### During rooming

- **Greet the patient in the waiting room.**
  Introduce yourself by providing your name and role (e.g., “Hello Mr. Smith, I’m Ron, the medical assistant working with Dr. Rodgers. I’ll be helping you during your appointment”).

- **Establish the patient’s agenda and priorities.**
  Ask the patient, “What is the main goal of your visit?” or “I see that you are here for a follow-up on your arthritis and diabetes. Is there anything else you would like to cover today?” If there are multiple issues, help the patient identify their top priorities.

- **Reconcile medications.**
  If a new patient is uncertain about their current medications or doses, contact the patient’s pharmacy. If the patient was recently discharged from the hospital, obtain the discharge medication list.

- **Review any allergies.**
  Document any new allergies and the nature of the patient’s reaction.

- **Update health maintenance screenings and immunizations.**
  Using standing orders, administer immunizations and schedule screenings, e.g., cancer and osteoporosis.
We developed a greater role for our medical assistants so the physicians don’t have to shoulder all of the work.

Beverly Loudin, MD, MPH
Medical Director, Patient Safety & Risk Management, Atrius Health
Boston, MA
Matching Work to Worker

- Bio/psycho/social integration
- Shared decision making
- Chronic illness care
- E/M acute sx
- Trust building
- Prevent admission

Allows greater MD focus on high complexity tasks

- Med rec
- Script renewals
- Data entry
- Data gathering
- Prior authorization
- Sign for hearing a

Modified from A. Mulley
Courtesy of C. Sinsky MD FACP
We wouldn’t think of asking lawyers to record the legal proceedings of the courtroom at the same time they are doing their job.

So why do we expect doctors to multi-task and be distracted from both doing a good job interacting with their patients as well as simultaneously documenting.
“In few other sectors of the economy is the highest-level professional responsible for the majority of production, customer service, and clerical work.”

Stage 2
Eligible Professional
Meaningful Use Core Measures
Measure 1 of 17
Date issued: October, 2012

order as it becomes part of the patient’s medical record, these orders would count in the numerator of the CPOE measure.

Any licensed healthcare professionals and credentialed medical assistants, can enter orders into the medical record for purposes of including the order in the numerator for the objective of CPOE if they can originate the order per state, local and professional guidelines. Credentialing for a medical assistant must come from an organization other than the organization employing the medical assistant.

Making the business case

**YOUR PRACTICE**

- Cost of physician's time: $3.00 per minute
- Work day: 8 hours
- Clinic days per year: 220 days/year

**PHYSICIAN**

- Total visits per day: 20/day
- Physician documentation time: 10 minutes/visit

**FULL-TIME DOCUMENTATION SPECIALIST**

- Documentation specialist hourly rate (including benefits): $23.00 per hour

**TOTAL TIME SAVINGS**

- Physician documentation time saved: 3 hours, 20 minutes/day

**TOTAL FINANCIAL SAVINGS**

- Gross annual savings with team documentation: $132,000
- Annual cost of dedicated documentation specialist: $(40,480)

Net practice savings with team documentation: $91,520
Team Documentation
Cleveland Clinic

- **Pre-visit** (nurse)
  - Med Rec
  - Agenda, HPI

- **Visit** (nurse + MD)
  - med, lab, x-ray orders
  - followup

- **Post-visit** (nurse)
  - Reviews visit summary
  - Health coaching

- **MD → next patient**

Courtesy C. Sinsky MD FACP
Team Documentation
Stonebridge

New Model
- 2 MA: 1 MD
- 2 pt/d cover cost
- 21 → 28 visits/d
- 30% ↑ revenue
- Spread to others
- We’re having FUN

Courtesy C. Sinsky MD FACP
Team Documentation

✦ Six sites
✦ Similar results
  – Access 20-30% ↑
  – Costs covered
  – Satisfaction ↑
  – Quality metrics ↑
  – Physician
    • home hour earlier
    • no work at home

Courtesy C. Sinsky MD FACP
Mrs. Hennessey  10:20-10:40 with practice redesign*

65 yo woman retired teacher here for follow up. She notes fatigue, insomnia, back and knee pain. Unsure if she needs refills. PHQ-9 = 12 completed while waiting.

**Problem list:**

- T2DM
- Depression
- Obesity
- Asthma
- HTN
- Hypothyroidism
- Osteoarthritis of knees
- Low back pain

1. Your staff called her yesterday, set the agenda + documented flu vac given at pharm*
2. Staff chart prep: diabetes educator, eye/GI referral, vaccines. Labs, cscope, mammo ordered. Physical therapy form completed. **Needs 2 vaccines** **10 min-15 min**
3. All refills for 1 year were handled last visit. Meds dc’d: PPI, Vits, lorazepam, estrogen
4. She had labs drawn 2 days ago and they are ready for review

1. She had previsit labs and these are reviewed with her and meds adjusted
2. Her A1c was 8.2 3 days ago, annual TSH is normal, annual ACR normal
3. BP today is 150/90
4. You increase her metformin and switch her from paroxetine to bupropion
5. **Your staff follows standing orders for Prevnar and Tdap**
6. You received notice your health maintenance levels were at goal
7. You leave on time!
Mrs. Hennessey between this visit and next 3 months later
After practice redesign*

1. She calls for a refill on her metformin as soon as she gets home
2. She calls for something for her knee pain
3. She calls for lab results and you note her TSH is high
4. You increase her levothyroxine and order repeat TSH in 6 weeks
5. You note her A1c is 8.2 and you increase her metformin and send in refill
6. She calls for a new rx for her lisinopril as you increased it
7. She would like an xray of her back
8. She call for her mammogram result
9. She calls for her TSH result in 6 week
10. She asks if she should get a shingles shot
11. Quality metrics report shows she has not had colonoscopy, Tdap, influenza, zoster, foot exam, urine test. BP and A1c not at goal-tied to evaluation/bonus
12. Patient satisfaction is low due to 1-2 hours behind schedule

Mammogram result is normal and staff calls to tell her and shows her how to use patient portal. Asks how exercise classes are going and reviews her sugar and blood pressure readings. 10 min
Mrs. Hennessey  4:20-4:40
After practice redesign*

65 yo woman retired teacher here for follow up. She notes more energy and less pain. She brings in her meds and does not need refills. PHQ in waiting room=4 (was 12)

**Problem list:**
- HTN
- Hypothyroidism
- Osteoarthritis of knees
- Low back pain

**Meds:**
- Metformin
- Sitagliptin
- Chlorthalidone
- Lisinopril
- Bupropion
- Atorvastatin
- Vit D,B12

1. Diabetes educator 2x since last visit and meds, diet exercise were reviewed
2. Physical therapist 3x/week and has lost 3 #.
3. Your staff called her yesterday and set the agenda 5 min
4. Staff chart prep: health maintenance up to date, diabetes educator,vaccines 5 min
5. No refills needed

1. She had previsit labs and these are reviewed with her and med adjustments made
2. Her A1c was 7.0 2 days ago, annual TSH is normal, annual ACR up to date
3. BP today is 150/90
4. You received notice your health maintenance levels were at goal
5. You leave on time! *(No calls between this visit and next visit!)*
The influence of each human being on others in this life is a kind of immortality.

Winston Churchill
Linking Small Steps of Change

✦ People are far more willing to test a change when they know that changes can and will be modified as needed

✦ Linking small tests of change helps overcome a practice’s/organization’s natural resistance to change and ensure physician buy-in
Take home points

Practice redesign, medication management and team documentation can save hours each day.

50% of patients are non-adherent and often hidden.

Your vaccine recommendation is powerful

Trust takes time to develop.

Our patients deserve our expertise and our time.
“Medical care must be provided with utmost efficiency. To do less is a disservice to those we treat, and an injustice to those we might have treated.”

Sir William Osler, 1893
Join us every Tuesday night 8pm central time for MKSAP Live Study Hall

Designed for practicing physicians who want to stay on top of medicine
And prepare for boards in a very fun and collegial way.

For more information contact  ACP Ill Northern Executive Director:
colleenkeekuacp@gmail.com
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ATTENDING TO PHYSICIANS

MBROWN@MBROWNMD.NET
708 826 0361
Past ACP Governor Illinois-N
Rush University
www.drmariebrown.com
Plan-Do-Study-Act (PDSA)

- Who is the team?
- When will we meet?
  - On the clock
  - Uninterrupted
- What’s in it for me?
  - Cycle continues if you are away

- What will we measure?
  - Improves patient care
  - Resources easily available
  - Time saver or neutral
  - Easy to measure
    - Who will measure?
    - How much time will it take?
    - How will we display it?
- How often will we measure?
- How many weeks will we measure?
- What is our goal?
  - Be specific
  - We will double ‘x’ in 6 weeks
Example: patients will bring in all their medicines at every visit

- Who is the team?
- When will we meet?
  - On the clock
  - Uninterrupted
- What’s in it for me?
  - Cycle continues if you are away
- What will we measure?
  - Improves patient care
  - Resources easily available
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  - Easy to measure
    - Who will measure?
    - How much time will it take?
    - How will we display it?

- How often will we measure?
- How many weeks will we measure?
- What is our goal?
  - Be specific
  - We will double ‘x’ in 6 weeks

- In 8 weeks 30% of patients will bring in their meds each visit
Make measurement easy – as you walk in the room, move the penny

2 brought in their meds

10 patients this morning

20% of patients brought in their meds during Week 1
Simple run chart
Count how many patients brought in their medicine each Thursday morning

(week 8: 0/10= 50%)

Doctor reminds staff to tell patients to bring in all their Medicine at their next visit

Front desk/robocall reminds patient of appt and to bring in all their medicine
Creating change....

Doron Schneider, MD
We just heard about possible changes to Your Practice

• Previsit planning,
• Synchronization of med refills,
• Medication adherence
• Expanded rooming protocols
• Expanded discharge protocols
• Other changes and tools...

How do we actually create the change (or know what change to make)?!!
### PCMH: The Vision

<table>
<thead>
<tr>
<th>Todays Care</th>
<th>Medical Home Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>My patients are those that come in</td>
<td>My patients are those that are registered with me</td>
</tr>
<tr>
<td>Patients complaints define what is done</td>
<td>Systematically assess all health needs to plan care</td>
</tr>
<tr>
<td>Care is determined by time available today</td>
<td>Care determined by a proactive plan without visits</td>
</tr>
<tr>
<td>Patients responsible for coordinating care</td>
<td>We help patient coordinate care</td>
</tr>
<tr>
<td>Care varies by skill/memory of the doctor</td>
<td>Care is standardized by EBM</td>
</tr>
<tr>
<td>Of course we deliver high quality</td>
<td>We measure our quality</td>
</tr>
<tr>
<td>Its up to the patient to tell us what happened to them</td>
<td>We track tests, consults, ED + hospital visits</td>
</tr>
<tr>
<td>Care centered around the doctors needs</td>
<td>Team works at top of license to serve patients</td>
</tr>
</tbody>
</table>
Transformation

- Requires leadership!

Building Your Team Worksheet

<table>
<thead>
<tr>
<th>Question</th>
<th>Your Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who will be part of your change team? Be sure to include individuals with clinical expertise related to the project aim, relevant practice workflow/technical expertise, and someone who can manage the project day-to-day. (Example: You will be working on a project to increase hepatitis B vaccination among your diabetic patients. You will serve as the clinical lead. Your technical lead will be your nurse who generally vaccinates patients and keeps track of vaccine stock, and can generate the list of diabetic patients without a hepatitis B vaccine from the EHR. The day-to-day project manager will be your medical assistant who can help generate the patient list during the project and can keep track of the results.)</td>
<td>1. Clinical Lead(s):</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why Change? To Close the Gaps!

• **Poor Patient Outcomes**
  – **Quality:** % at A1C goal, % immunized for flu, % on opioids that have pain contracts
  – **Satisfaction:** % of patients who (CAHPS)
  – **Access:** Days to next available appointment
  – **Efficiency:** % of patients with MRI for LBP

• **Poor Provider In-Office Workflows**
  – Number of staff touches to refill medications
  – Number of process steps used to administer flu vaccine
<table>
<thead>
<tr>
<th>Question</th>
<th>Your Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>What data sources did you use to identify a performance gap in your</td>
<td>The data I used to identify a performance gap were:</td>
</tr>
<tr>
<td>practice? (Examples: performance measure data in a registry, PQRS</td>
<td></td>
</tr>
<tr>
<td>report, performance measure calculated from a chart pull, practice</td>
<td></td>
</tr>
<tr>
<td>assessment survey data)</td>
<td></td>
</tr>
<tr>
<td>What were your performance gap[s]? (Examples: 20% of my diabetic</td>
<td>My performance gaps are:</td>
</tr>
<tr>
<td>patients have a documented foot exam; 20% of my patients over sixty</td>
<td></td>
</tr>
<tr>
<td>years of age have received a vaccine for shingles; I do not</td>
<td></td>
</tr>
<tr>
<td>systematically screen my patients with chronic pain for depression.)</td>
<td></td>
</tr>
<tr>
<td>Based on the performance gap, what is your practice transformation</td>
<td>I want to accomplish:</td>
</tr>
<tr>
<td>target/aim? (Examples: Increasing diabetic foot exams; increasing</td>
<td></td>
</tr>
<tr>
<td>shingles vaccination among my patients over 60; implementing a</td>
<td></td>
</tr>
<tr>
<td>depression screening tool for chronic pain patients.)</td>
<td></td>
</tr>
<tr>
<td>What are your specific practice transformation goals? (Example: I</td>
<td>Level of change =</td>
</tr>
<tr>
<td>will increase documented foot exams among my diabetic patients to</td>
<td>Timeline for change =</td>
</tr>
<tr>
<td>50% over the next three months.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Patient population with whom I will work =</td>
</tr>
</tbody>
</table>
Engaging the Staff
Need a Shared Mental Model
Chronic Care Model

• **Self management support:**
  - Goal: Assist patients to develop knowledge, skills and motivation to make the optimal daily decisions and actions to manage their condition and encourage them to utilize the time with the clinician for coaching and guidance.

• **Delivery system redesign**
  - Goal: Set up office visit to allow *team based* care where every staff member has clear cut activities that will lead to best clinical outcome (relieves the burden of all falling to the physician)
Chronic Care Model

• **Decision Support**
  - Goal: Provides access to clear care pathways, order sets, references, decision making tools that are based on best evidence/guidelines all within clinician workflow

• **Information Systems**
  - Goal: Have clinical and demographic information entered into electronic systems with aim to easily identify and reach out to patients who are not at clinical targets / goals or who have other care gaps (missed preventive health care etc)
Chronic Care Model

• **Community Health Resources**
  – Identify non clinical ancillary services
    • (i.e. DPP offered at the local YMCA)
  – Increase utilization of non clinical ancillary services
    • Refer patients to DDP offered at local YMCA
  – Systematically do so!
    • Systematically refer at risk patients
Front Line Ownership (FLO)

- Create direct alignment between current state and future state goals for all staff
- Provide all staff a voice in creating change
- Recognize that all staff have the ability to provide energies, ideas, solutions, positivity!
Unleash the Energy!

- **First Drive:**
  Food, Security, Sex

- **Second Drive:**
  Transactional –
  Reward / Punishment

- **Third Drive:**
  Mastery / Autonomy
  Purpose
Techniques to Engage Staff

• Be transparent
• Help staff understand how you are being measured for quality
• Hold learning sessions – to teach them – and not force change on them
• Hold Brainstorming Sessions
• Formally changing job descriptions
• Publically recognize employee of the month
• Publically recognize ‘idea of the month’
• Learn the science of ‘Positive Deviance’
Meeting Ground Rules

• Arrive on time, end on time
• Everyone has something to contribute and participate
• ‘No idea is a bad idea’
• Avoid making assumptions
• Discuss un-discussable items
• Leave cell phones and other distractors at the door
• Focus on progress towards goal, not individual positions
• Embrace positive conflict and dissent as a way to improve decision making
• Adopt a curiosity mindset, not fault finding
### Sample meeting template

**DATE AND TIME**

**LOCATION**

<table>
<thead>
<tr>
<th>Participants:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOPIC</strong></td>
</tr>
<tr>
<td>Introduction and welcome</td>
</tr>
</tbody>
</table>
| Review of meeting goals and purpose  
(Who/Time) | |
| Review and discussion of recent performance data  
(Who/Time) | |
| Review of PDSAs  
(Who/Time) | |
| Discussion of plan for coming week  
(Who/Time) | |
| Assignment and review of action items  
(Who/Time) | |
| Wrap-up and next meeting  
(Who/Time) | |
| PARKING LOT ISSUES  
(Topics brought up during the meeting that need further discussion at a later date) | |
| Action items, deadlines, and responsible parties | |
Ways to solicit ‘ideas for change’

Engage the Team

7 Ways

1. Identify specific element where creative ideas are needed
2. Have team work individually or in pairs
   - Generate at least seven different ways the step could be accomplished, or the experience improved, etc.
   - Practical isn’t needed, just variety of ways to do things differently
   - One idea per Post-it note
3. Give people 5 minutes
   - Time pressure helps them move more quickly past the typical solutions
4. Encourage more than 7 ways if possible (make it a fun competition to see who can come up with the most)
5. Have team members share ideas while posting them on wall
   - Group similar ones and look for themes
   - Take some of the seemingly impractical ideas and play with them as a group—these are the creative lot that break free of current mental valleys and could lead to innovation

From Virginia Mason
Patient Centered Improvement

DESIGN *WITH* PATIENTS

- What do you do *to* patients
- What do you do *for* patients
- What do you do *with* patients

Examples —
- Involve on design teams,
- Develop a patient council
- Hold focus groups on particular issues
- Ask patients at each encounter — what went well/did not
Goals Setting

• Identify your gap then....
  – Establish a **goal**
  – Establish a **time frame**

**Example:** Increase the number of diabetic patients whose blood pressure is less than 140/80 from 50% to 80% by January 1, 2017

**Example:** Increase the number of patients with influenza vaccination from 70% to 90% by March 2017
Next Step: 
Exploring Possible Root Causes

• Brainstorm!

• Ask all members of the group to participate.

• **Ask** - *Why are we getting the results that we are seeing?*

• Consider all 5 elements of the Chronic Care Model
Idea Wall
Consider Using a Fishbone

Fishbone Chart

- Management
  - Primary Cause
    - Sub Cause
    - Sub Cause
- Equipment
  - Primary Cause
    - Sub Cause
    - Sub Cause
- Material
  - Primary Cause
    - Sub Cause
    - Sub Cause
- People
  - Primary Cause
    - Sub Cause
    - Sub Cause
- Process
  - Primary Cause
    - Sub Cause
    - Sub Cause
- Environment
  - Primary Cause
    - Sub Cause
    - Sub Cause

Problem
In exploring the root causes – 
Consider STRUCTURE AND PROCESS:

Structure + Processes = Outcomes of Care

**Inputs**
- Patients
- Equipment
- Supplies
- Training
- Environment

**Steps**
- Inventory methods
- Coordination
- Physician orders
- Nursing care
- Ancillary staff
- Housekeeping
- Transport

**Outputs**
- Physiologic parameters
- Functional status
- Satisfaction
- Cost
Example #1: Results of Brainstorming

*(Why our patients are not getting to BP targets)*

- Lack of attention to medication adherence
- Lack in intensification of therapy
- Lack of educating patients on salt intake
- Lack of educating patients on self monitoring
- Lack of educating patients on DASH diet
- Lack of educating patients on
- Lack of looking for NSAID use in patients
- Lack of looking for Sleep Apnea in patients
- Lack of looking for secondary causes (Renovascular
- Etc!}
Example #1: Results of Brainstorming

(Why our patients not getting their flu shots)

• Patients do not understand the need
• Patients are concerned about getting the flu
• The practice is reacting only to acute issues
• Patients are not offered the flu shot
• The practice usually runs behind schedule and there is no time allotted for this
• Etc
Focus on identifying **key processes** to improve

- What are the key processes that impact your **outcome** (*your identified gap*) the most?
- Which one of these processes are most important – that if fixed – will have the highest yield?
- Pick one to try to change – using PDSA – that’s next!
PDSA Overview

• **Step 1- Plan**
  – State the objective, make predictions of what may happen, and develop a plan to test the change

• **Step 2- Do**
  – Carry out the test, check for problems

• **Step 3- Study**
  – *Sample* charts of patients seen that week.
  – Analyze the data, compare to predictions and reflect

• **Step 4- Act**
  – Decision: Abandon/Adapt/Adopt /Again
  – With the decision move to next step
<table>
<thead>
<tr>
<th>Question</th>
<th>Your Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your planned change? [Example: Your PDSA aim and goal is to increase the number of diabetic patients receiving foot exams from 20 to 30% in the next three months. Your plan involves having the nurse who roams the diabetic patient to ask them to remove their shoes and socks.]</td>
<td>Our planned change is:</td>
</tr>
<tr>
<td>What outcome do you predict? [Example: We predict that every diabetic patient seen during the timeframe of this cycle will receive a foot exam.]</td>
<td>Our predicted outcome is:</td>
</tr>
<tr>
<td>When will you implement the change? [Example: The change will be implemented over the month of September.]</td>
<td>We will implement the change in the following timeframe:</td>
</tr>
<tr>
<td>Where will you implement the change? [Example: We will implement this change in one of our clinics.]</td>
<td>We will implement the change in the following location:</td>
</tr>
<tr>
<td>Which patients will be involved? [Example: My patients with a known diagnosis of diabetes and scheduled appointments in the next month.]</td>
<td>We will involve the following patient population:</td>
</tr>
<tr>
<td>Who will implement the change? [Example: the medical assistant, who pulls the charts for next day appointments, will tag the charts of diabetic patients with a sticky note reminder about foot exams; my nurse will be responsible for asking diabetic patients to remove their shoes and socks.]</td>
<td>The following members of the team will implement the change:</td>
</tr>
<tr>
<td>How will you measure the change? [Example: The physician will give the sticky note reminder to the medical assistant with a plus written on it if the shoes and socks were removed and a minus if they were not.]</td>
<td>The following members of the team will be involved in measuring the change by:</td>
</tr>
<tr>
<td>How will you help the team track the change? [Example: The medical assistant will provide a verbal update every week and create a run chart that is displayed in the staff conference room.]</td>
<td>We will track and communicate the results of our planned change by:</td>
</tr>
</tbody>
</table>
PDSA Detail

• **Step 1 – Plan** (Pick something easy to get some ‘wins’)
  – Plan the *test* (change in process)
  – Plan for collecting data
    • Make predictions of what will happen and why
    • Develop a plan to test the change (Who? What? When? Where? What data need to be collected?)

• **Step 2 – Do** (WITH WILLING VOLUNTEERS FIRST)
  – Implement the new process during a trial period (try out the *test* on a small scale)
    • Document problems and unexpected observations
PDSA Detail, continued

- **Step 3 - Study**
  - Sample charts (5-10 per week)
  - Set aside time to analyze the data and study the results
    - Complete the analysis of the data
    - Compare the data to your predictions
    - Summarize and reflect on what was learned

- **Step 4 - Act**
  - Decision time – (pick one)
    - *Abandon the change* – consider entirely new design
    - *Adapt the change* – modify the design slightly and retest for further (get more data) – go back to Plan
    - *Adopt* – change is working well. Will continue as part of the practice
    - *Again* – you may not have enough data so you elect to run the test for another period of time
<table>
<thead>
<tr>
<th>Question and Guide</th>
<th>Your Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your PDSA plan?</td>
<td>My Plan is:</td>
</tr>
<tr>
<td></td>
<td>I will have the MA flag patients as being hypertensive 140/90 by using a the STICKY NOTE function in my EMR to communicate with the doctor to see. I will ask the MA to ask the patient if they have been taking their medications (if they are on them). If the patient is not taking their medication I will have the sticky note say NOT ADHERANT. If they ARE taking the medications I will have the sticky note say INTENSIFY.</td>
</tr>
<tr>
<td>What we will Do is:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I will start this with only my patients next Monday</td>
</tr>
<tr>
<td>How we will Study our effort is:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I will ask the office staff who prepares the patient chart to make a notation on our printed patient schedule for the day of everyone who has hypertension. I will then ask our MA at the end of the day to see 1) was a sticky note created, 2) was adherence addressed in the record or therapy intensified.</td>
</tr>
<tr>
<td>Based on our assumed success, we will Act by:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Once we can get beyond the adapt and assess phase, we will adopt the new standard work and move on to a parallel PDSA cycle of engaging the patient with education sheets and worksheets. I don't believe that this idea will be abandoned given the national data on lack of intensification (clinical inertia)</td>
</tr>
</tbody>
</table>
Testing changes is an iterative process: the completion of each Plan-Do-Study-Act (PDSA) cycle leads directly into the start of the next cycle.
Linking Small Steps of Change

• People are far more willing to test a change when they know that changes can and will be modified as needed

• Linking small tests of change helps overcome a practice’s/organization’s natural resistance to change and ensure physician buy-in
A sample goal....

• Your practice decides on the goal:

*Increase diabetic patients at goal HTN from 30% to 75% in the next 3 months.*

• You decide that the two primary reasons patients are not at goal are
  – Patients are not educated about lifestyle (salt intake)
  – Providers are not intensifying treatment in the office

• You decide to try to improve the process of educating patients. That is PDSA #1
PDSA #1: Increasing the provision of HTN education sheets to patients

Aim(s): To improve education around dietary choices (salt intake) in diabetic hypertensives

**What** change – All patients with HTN will have the sheet provided to them and reviewed

**Who** will do it – Medical Assistant will take vitals. Dr will provide education sheet and document that it was given. Physician will inquire about questions and make dose adjustments etc...

**Where** – To start with only Dr Jones’ patients

**When** – Starting next Tuesday

**What Measurement** - % of patients with HTN that have had the education sheet provided documented in chart

**When/How/By Whom** will measurement be done – 10 charts a week of Dr Jones’ patients abstracted by the office manager when she is re-filing the charts after the visit.

**What/Where** will be Run-Chart – Conference room, updated by Medical Assistant
PDSA Cycle #1
(an example of what could happen)

• **Plan**: Dr Jones will give the education sheet out to patients with diabetes and hypertension

• **Do**: Dr Jones gives out the education sheets

• **Study**: Low success rate 30% the first week (3/10) and 20% (2/10) the next.

• **Act** – Current design will be *adapted (modified)* as upon further review it was found that the doctor forgot to print it out as was overburdened by other issues
PDSA Cycle #2

- **Plan** – MA prints out sheet to all hypertensive patients that are not at goal
- **Do** – give sheet out for 3 weeks
- **Study** – 40% (4/10) on week 1 and 60% week 2
- **Act** – things seem to be improving. The practice decides to continue the current design for several more weeks
Now the same PDSA with **EMR**

- **Cycle 1**
  - **P**: MD Clicks ‘print’ for education sheet’
  - **D**: Run the test
  - **S**: Look at 10 charts
    - 3/10
  - **A**: Adapt

- **Cycle 2**
  - **P**: MOA Clicks ‘print’ for education sheet’
  - **D**: Run the test
  - **S**: Look at 10 charts
    - 7/10
  - **A**: Again

- **Cycle 3**: 9/10
  - **A**: Adopt
Testing Multiple Changes
adapted from Institute for Healthcare Improvement

• Change One – the education sheet
• Change Two – the necessary changes to intensify treatment when patients are in the office
• Change Three – to be decided by the team.
QI is....

Measure baseline performance (20-30 charts)

– Have multiple cycles of change with measurement every week

Measure effect of QI (another 20-30 charts)
QI is not...

Measure baseline performance (20-30 charts)

– Implement a single process change
– Wait several months

Measure effect of QI (another 20-30 charts)
Sampling - For easiest data collection:
Integrate data collection for measures in daily work

• Include the collection of data with another current work activity ...
  – When calling for appt reminders
  – When re-filing charts
  – When rooming patients
  – When preparing charts for visits
  – When filing lab results in the chart
  – Etc...

• Use existing data whenever possible
  – If you have an EMR – Query it (if possible)!
RUN CHARTS

Plot key measures in time order throughout the improvement effort

• The usual way to present data is in a table or bar graph comparing pre/post intervention
• However, this often does not answer the question, “What were the effects over time of making this change?”
• Summary statistics hide information such as outliers and patterns
• Best way to collect and display data is to use a run chart
So for Smithville...

PDSA #1 = Providing Education Sheet to HTN Pts

• Remember
  – X = # of patients receiving sheet
  – Y = # of HTN patients in sample
  – Performance = X/Y = %

• Sample each week is 5 patients
  – Week 1 results 2/5
  – Week 2 results 3/5
  – Week 3 results 4/5

Week | Goal 100%
A CAVEAT: EMRs

• If you have an EMR you
  – May be able to do 100% sampling for certain processes by query / report writing
    • Most EMRs are limited as they are unable to easily give you data for those patients that were actually seen during the interval that a PDSA was active
  – Worth a try! For process measures (like ordering labs)
    • Remember to set the filters to only look at patients that were seen the week(s) that you piloted a change
Run Chart Worksheet

Performance Data Specifications

Example: Your PDSA involves the nurse having every diabetic patient remove their shoes and socks upon rooming. The change will be measured by having the physician mark a reminder note on the chart and giving it to the MA to tally.

Performance Data:

Frequency of Calculation:

Performance data? Percent of diabetic patients seen during the PDSA who had their shoes and socks removed.

Frequency of calculation? Daily over two weeks.

Run Chart and Notes

Sample Run Chart Data:

<table>
<thead>
<tr>
<th>Day (X axis)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of diabetic patients seen with shoes and socks removed (Y axis)</td>
<td>0 %</td>
<td>10 %</td>
<td>20 %</td>
<td>10 %</td>
<td>30 %</td>
<td>30 %</td>
<td>50 %</td>
<td>60 %</td>
<td>60 %</td>
<td>70 %</td>
</tr>
</tbody>
</table>

Sample Run Chart:

% of diabetic patients with shoes and socks removed each day

Sample Notes: We discussed the modest increase over the 1st week at our Monday team meeting. It was noted that the nurse sometimes missed the note reminder on the patient chart. So the MA created a bigger and more visible reminder note for the charts and, when possible, reminded the nurse that this was a diabetic patient who should have a foot exam. Performance grew through the second week, exceeding expectations of reaching 50%.
Questions?