Systems Issues and Health Literacy: Assessing Problems and Generating Solutions

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Low Health Literacy: Patient Outcomes, Self-Care, and Safety

• We have previously discussed the impact of low health literacy on:
  – Outcomes
  – Behaviors
  – Knowledge

• Low health literacy has also been recognized as a risk factor for medical errors
  – Communication problems are the most common cause of medical errors

• The health care system recognizes this, but has not adopted techniques to address the problem

Health Literacy and Patient Safety. AMA Foundation. 2007
The System and the Patient
The Health Care System is Becoming More Complex

- The elderly population is growing
- The minority population is growing
- The number of Americans with limited English proficiency is growing
- The number of medications prescribed has increased
- Hospital stays are shorter
- More self-management occurs in the home
The Truth About Systems

“Every system is perfectly designed to get the results it gets”

“The definition of insanity is continuing to do the same thing over and over again and expecting a different result”

–Benjamin Franklin
We Have a Problem and Must Alter Systems of Care

• The complexity of the care system exacerbates literacy vulnerabilities

• All aspects of our system can raise barriers
  – Appointments and referrals
  – Getting tests done
  – Paying for medicine or treatment
  – Understanding bills and insurance
The Health Care System and the Swiss Cheese Model

Health care is complex
No single stage is foolproof

Reason J. BMJ. 2000;320:768-770
A Better System Must be a Reliable System

- Reliable processes, procedures, and strategies are required to attain and maintain improvement
- Key features of a high-reliability organization are:
  - Acknowledgement of the high-risk, error prone nature of the organization
  - A blame-free and shame-free environment where individuals can report problems and errors
  - An expectation of collaboration across ranks
  - A willingness of the organization to direct resources
Begin the Improvement Process: Gain Insight Through Knowledge
Assess your Practice

• Know your patients
• Know your providers and staff
• Know your processes
• Know your patterns
• Use tools to help
  – ‘The Green Book’, Dartmouth
  – The Physician Practice Safety Assessment
  – The Health Literacy Environment Review

References:
Health Literacy and Patient Safety. AMA Foundation. 2007
Literacy Alberta. ‘The Literacy Audit Kit’ Devins et al.
The Health Literacy Environment of Hospitals and Health Centers. Rudd and Anderson.
How do Patients Experience Your Practice: Evaluate the Environment

- How will you be greeted by the front desk staff?
- What paperwork will you have to complete?
- What procedure will they ask you to follow?
- Will assistance be offered?
- Will you receive handouts or consent forms?
- Did you receive enough education to understand your own care?
- Will you get the same message from provider to provider, staff to staff, etc.?
How do Patients Experience Your Practice: The Walk Through

- Perform a walk-through
  - Determine a start and stop point
    - May be on the phone
  - Consider a ‘real’ visit
  - Document your findings
  - Share what you learn

The Continuum of Confusion: “Now go home and safely manage your care”

Pre-visit
Scheduling the appointment

Pre-visit
Visit reason, obtain records, directions

In office, PP
Registration, new forms, insurance

In office, PP
Problem, health status, history

See Provider
Med list, sources of care

With Provider
Adjust/Add med, new Tests or referrals

See Educator
Pamphlets, charts, videos

Checkout
New tests, samples, instructions

Checkout Schedule f/u, referrals, insurance, billing

Patient’s continuum of confusion

PP=Prior to seeing physician

Health Literacy and Patient Safety. AMA Foundation. 2007
Now That You Have Data, Look for Opportunities

- Are the right services being provided?
- Are there new services that patients could benefit from?
- Are the right people doing the right things?
- Do we need to develop new roles?
- Are there any processes that can be eliminated?

Implement Change: The Keys for Transformation

• To transform a practice you need to:
  – Assess the current state of the environment
  – Increase awareness of the problem
  – Build a sense of accountability for change
  – Train staff
  – Take action with new skill sets once they are developed
  – Assess progress of your actions

Health Literacy and Patient Safety. AMA Foundation. 2007
Full Transformation Requires Improved Communication: Universal Precautions for Low-literacy

- Interpersonal communication
- Communication aids
- System-wide communication strategies
  - Train your staff after hiring practices
  - Simplify paperwork demands on the patient
  - Ensure medication review & reconciliation
  - Schedule adequate time for education

Health Literacy and Patient Safety. AMA Foundation. 2007
Effective Chronic Illness Care

• Effective interventions usually fall into five areas:
  – The use of evidence-based planned care
  – Reorganization of systems and provider roles
  – Improved patient self-management support
  – Increased access to expertise
  – Greater availability of clinical information

• The challenge is to organize these into an integrated system of care

The Chronic Care Model


NC Program on Health Literacy
Planned Care Components

• Multidisciplinary teams
• Defined follow-up procedures
• Treatment algorithms based on best available evidence
• Information systems for tracking patients
• Patient education for self-care
New Designs for Planned Care

• Many planned care programs focus on the management of chronic illnesses

• The principles and knowledge gained from these planned care models may be used as a template for many types of patients

• An appropriately designed planned care system may improve self-care, particularly for low literacy patients

[Institute for Healthcare Improvement], accessed 4.17.08
Why Would Planned Care Work for a Patient with Low Health Literacy?

- SES
  - Educational opportunity
  - Literacy
  - Learning potential

- Health-related knowledge
- Self-efficacy/health behavior
- Quality of care
- Access to providers/therapy

- Health Outcome
Planned Care: A UNC Example
Diabetes Planned Care

• Patient registry
• Prompting
• Treatment and monitoring algorithms
• Patient education
• Care coordination
Educational Strategies

- Patient centered learning
- Focus on behaviors rather than knowledge
- Repetition/reinforcement
- Survival skills
- Teach-back method
Care Coordination

- Call at-risk patients at least once a month
- Review self-care skills
- Help to navigate health care system
- Address barriers of medication access, transportation, and communication
The RCT

One Time Management Session

Planned Care compared to Usual Care

112 patients

106 patients

Outcome Measures

- **Primary Measures**
  - A1C
  - Blood pressure
  - Aspirin use

- **Secondary Measures**
  - Diabetes knowledge
  - Treatment satisfaction
  - Medical visits
  - Potential harms
## Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control (n=105)</th>
<th>Intervention (n=112)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD), y</td>
<td>56.7 (10.8)</td>
<td>53.5 (12.5)*</td>
</tr>
<tr>
<td>Female, No. (%)</td>
<td>59 (56%)</td>
<td>63 (56%)</td>
</tr>
<tr>
<td>African American, No. (%)</td>
<td>62 (59%)</td>
<td>78 (70%)</td>
</tr>
<tr>
<td>Household Income $\leq$ $20,000$, No. (%)</td>
<td>78 (76%)</td>
<td>77 (69%)</td>
</tr>
<tr>
<td>Less than HS education, No. (%)</td>
<td>46 (44%)</td>
<td>40 (36%)</td>
</tr>
<tr>
<td>REALM Score, median (IQR)</td>
<td>57 (32-64)</td>
<td>55 (31-62)</td>
</tr>
<tr>
<td>Low Literacy, No. (%)**</td>
<td>34 (32%)</td>
<td>49 (44%)</td>
</tr>
</tbody>
</table>

** Defined as $\leq$ 6th Grade Literacy Level on REALM
Improvement in A1C

![Graph showing improvement in A1C with time. The graph compares control and intervention groups. The control group shows a decrease in A1C from 11 to 9, while the intervention group shows a decrease from 11 to 8.5. There is a statistically significant difference between the groups at 6 and 12 months, with a difference of 0.7% and 0.8%, respectively.]

* Difference 0.7%, 95% CI (-0.08, 1.51)
** Difference 0.8%, 95% CI (-0.09, 1.73)

Results According to Literacy Status
Diabetes Control: Results for Patients with Literacy at or Below 6th Grade Level

![Graph showing A1C levels over time for control and intervention low literacy groups](image)

- Control Low Literacy
- Intervention Low Literacy

Difference = 1.4  (p=0.052)

Tools for Your Practice: Prepare for the Day, the Huddle
One Simple Tool of Planned Care: Clinic Huddles

• Proactively anticipate and plan for the work at hand
  – At the beginning of the day,
    • follow-up issues from the day before
    • review the work for the day
  – wrap up at end-of-day
    • plan for tomorrow
• Keep focused and short
• Include a variety of staff

## How Does a Huddle Work?

### Huddle Sheet

**Practice:** Cedars Family Practice  
**Date:** October 31, 2002

**Aim:** Enable the practice to proactively anticipate and plan actions based on patient need and available resources, and contingency planning.

### Follow ups from Yesterday

- Green, Yoder, Wheeler, Foster - check labs and do follow up per Dr. Martin (Carol)
- Need to plot phone volume on data wall and check to see if any trends are obvious (Susie)

### "Heads Up" for Today: (include special patient needs, sick calls, staff flexibility, contingency plans)

- Mrs. Smith coming in today - usually brings her husband for blood pressure check (add 10 minutes to appointment time); Be sure they both receive flu shot
- If Mrs. Walker calls, Dr. Orzo wants to be interrupted

### Review of Tomorrow and Proactive Planning

- Call Mrs. Jones... She has missed 2 appointments
- Since we mailed out lab tests on Mr. Wood - call lab if results are not received today
- Nancy Bacon was seen yesterday - cancel this appointment

### Meetings:

- Patrick at Manager’s Meeting from 8-9:30 am

### Staff:

- Mary leaving early for Halloween, John can cover her evening hours.
- George can be on call this evening if more patients due to Halloween.

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More tools for your practice:
Create an environment of continuous improvement, the Model for Improvement (MFI) and use of Plan-Do-Study-Act (PDSA) cycles
Model for Improvement

What are we trying to accomplish?

How will we know that changes are an improvement?

What changes can we make that will result in an improvement?

• Aim

• Measures

• Changes/Evidence-based strategies
PDSA: Plan-Do-Study-Act Cycles for Testing Change

• Plan
  • What’s your aim for this cycle?
  • Predictions/Hypothesis
  • Develop your plan to test the change
  • What will your measures be?

• Do
  • Perform your test/change
  • Collect data
PDSA: Plan-Do-Study-Act Cycles for Testing Change

• Study:
  – Analyze your data
  – Did they fit your predictions?
  – Did you encounter problems?
  – What did you learn?

• Act:
  – Should you expand size/scope of test or are you ready to implement the change?
  – If not, what changes are needed for next PDSA cycle
Where do you Start?

**Example Strategizing Office Improvements Using Patient, Provider, and Process Knowledge**

You have collected data about your patients, your people and the processes of patient care. This worksheet will help you put all your new information together to analyze your practice to identify opportunities for improvements and then plan PDSA cycles to test your new changes.

<table>
<thead>
<tr>
<th>Patient Improvements (Satisfaction, Walk Through)</th>
<th>Specific Cause</th>
<th>Provider Improvements (Unplanned Activity Cards)</th>
<th>Specific Cause</th>
<th>People Improvements (Activity Survey Sheets)</th>
<th>Specific Cause</th>
<th>Process Improvements (Cycle Time, Process Assessment Tool)</th>
<th>Specific Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Staff Variation in office/phone procedure</td>
<td>Staff not trained</td>
<td>5. Waiting for supplies</td>
<td>Room not stocked</td>
<td>9. Data Management</td>
<td>EMR: Staff Compliance with Input</td>
<td>13. Long check-in time</td>
<td></td>
</tr>
<tr>
<td>2. No scheduled time for staff communication</td>
<td>No start meetings to discuss pts</td>
<td>6. Missing forms</td>
<td>Not stocked anticipated</td>
<td>10. Staff have fixed roles</td>
<td></td>
<td>14. Messaging</td>
<td></td>
</tr>
<tr>
<td>3. Exam rooms dirty</td>
<td>No one assigned to cleaning</td>
<td>7. Phone Interruptions</td>
<td>Necessary/ Unnecessary</td>
<td>11. Staff Communication</td>
<td></td>
<td>15. Test Reporting</td>
<td></td>
</tr>
<tr>
<td>4. Poor pt. education about processes</td>
<td>No time for education</td>
<td>8. Too much e-mail</td>
<td>Communication vs info</td>
<td>12. Interpretation of info</td>
<td></td>
<td>16. No standardization</td>
<td></td>
</tr>
</tbody>
</table>

**Step #4: From the above, Identify importance of waste and ease to change**

Using this graph, plot each of the above waste/delays by number. 
Consider where the waste/delay falls on the continuum of importance of waste and the ease to change. Those numbers that fall in the upper right hand quadrant will be the important waste issues and the easiest to change. Start with these first as you roll out PDSA cycles.

**Upon review of Step #4, we decide to flow chart #5. “Waiting for Supplies”. See steps 5 and 6.**
Small group Discussion: Identify Systems Issues

• Reflection/Discussion:
  – Where do your patients get health information?
  – How can you be an effective agent of change?
  – How do you ensure that your patients get all the information they need?

• Activity:
  – Develop a PDSA action plan to be implemented
The End

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