Patient Care Beyond the Office
Visit: eCommunication

Get Connected Knowledge Forum
June 28, 2005
Keith MacDonald
Agenda for Today’s Session

During today’s session, we will cover the following topics:

- The backdrop: what’s happening in ambulatory practices?
- E-communication:
  - Definitions
  - Examples
  - Considerations
  - Benefits
  - Adoption
  - Barriers
  - Influencing factors
  - Resources
The Backdrop
Patient volumes (and costs) are up – while overall practice revenue is down.

- The ambulatory market is projected to grow…
  - Research from Solucient predicted that total ambulatory volumes would increase 6 to 21 percent between 2002 and 2007.

- …but there may be a potential primary care physician shortage.
  - Although the US population has increased 24% since 1980, there has been no increase in the number of people graduating medical school.

- Physician reimbursement has generally been declining.
  - On average, physicians are receiving less revenue from Medicare than they did three years ago. ("The State of Outpatient Physician Practice", Physicians Practice, 2004)

- Despite a slight decline in operating costs, physician practices have not been able to offset the decline in revenue.
  - Pediatric practices reported a decline in total operating cost of 2.39 percent, which helped offset a 4.29 percent reduction in medical revenue. (MGMA, October 4, 2004)
  - Family medicine practices reported similar declines. (MGMA, October 4, 2004)

- …and practices face many administrative challenges.

<table>
<thead>
<tr>
<th>Physician Practice Challenges</th>
<th>% Reporting as Problematic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining diagnostic reports from other organizations</td>
<td>51%</td>
</tr>
<tr>
<td>Obtaining medical records from other physicians</td>
<td>48%</td>
</tr>
<tr>
<td>Following up with patient (next visit, lab results, etc.)</td>
<td>45%</td>
</tr>
<tr>
<td>Scheduling patient referrals and admissions</td>
<td>45%</td>
</tr>
<tr>
<td>Filling prescriptions and refills</td>
<td>33%</td>
</tr>
<tr>
<td>Outpatient records unavailable</td>
<td>15%</td>
</tr>
<tr>
<td>Patient records missing information</td>
<td>15%</td>
</tr>
</tbody>
</table>

AMA Study of Physician Office Practices
Meanwhile, empowered patients are demanding improved service.

- **With patients paying more for their healthcare…**
  - As consumer-directed health plans become more widespread, patients will inherit more financial responsibility for their healthcare decisions and will expect more control.

- **…and the Internet helping to empower more educated consumers…**
  - 63% of employers have introduced information and tools to help employees become better consumers of healthcare services. (Success With Consumer Driven Health Care Strategies Linked to Overcoming Disconnects With Employee, Towers Perrin, July 2004)
  - 80% of adult Internet users (93 million Americans) have searched for health or medical information online. (Harris Interactive, April 2004)
  - Up to 90% of online adults would like to e-mail their doctors – and 56% say that e-mail access would influence their choice in doctors. (Harris Interactive, December 2003)

- **…patients are no longer willing to accept inferior service.**
  - From 1997 to 2001, the percentage of people reporting an inability to obtain a timely appointment rose from 23% to 33%. (Strunk BC, Cunningham PJ. “Treading Water: Americans’ Access to Needed Medical Care, 1997-2001”, Center for Studying Health System Change, March 2002)

- **Indeed, a increased focus on service excellence has found its way from other industries into medicine.**

**Implication**

Physician practices must provide better service with fewer resources and respond to competitive forces or risk declining market share.
A number of new approaches are being adopted to improve care delivery, physician practice efficiency, and the service provided to patients.

<table>
<thead>
<tr>
<th>Emerging Physician Practice Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>“Open access” scheduling</strong></td>
</tr>
<tr>
<td><strong>Online health information</strong></td>
</tr>
<tr>
<td><strong>Group visits</strong></td>
</tr>
<tr>
<td><strong>Disease registries</strong></td>
</tr>
<tr>
<td><strong>Patient EHR portals</strong></td>
</tr>
<tr>
<td><strong>E-communication</strong></td>
</tr>
<tr>
<td><strong>E-consultation</strong></td>
</tr>
</tbody>
</table>

**Implication**

Each of these initiatives requires more advanced forms of information technology.
e-Communication
E-communication tools offer patients more involvement in and control over their own care – providing a convenient alternative to face-to-face visits.

- In the broadest sense, e-communication or “online patient-provider communication” is defined as the electronic exchange of information between the patient and members of his or her physician practice.
  - Communication can reflect content that is both administrative…
    - Patient appointment requests, demographic changes, registration, billing issues
  - …as well as clinical.
    - Interactions related to test results, prescription request, health questionnaires, clinical questions, online consultations that take the place of face to face encounters

- Two types of online communication tools are in general use:
  1) **Standalone communication tools** – which are not integrated into the practice’s other administrative and clinical information systems; and
  2) **Integrated communication tools** – which are often built into comprehensive practice information systems, including EMR and practice management systems.

- **Standalone communication tools are typically of three varieties:**
  - Unencrypted e-mail;
  - Encrypted e-mail; and
  - Secure messaging services via a hosted Web site – which may or may not include:
    - Direct online access to third-party health information content, news, and other resources;
    - Structured tools for an patient assessment of symptoms;
    - Patient-focused disease management programs with online reminders; and
    - Structured online clinical consultations (“e-consultations”).
Example: Online Secure Messaging

Your Online Consultation™ request has been sent to your doctor’s office.

Your physician will usually reply in appx. 3 business days. You will receive an e-mail notification to:

important.patient@medem.com

The transaction number for this Online Consultation is: 1234567

Your credit card account will not be charged until the physician approves your request and replies to you.
The amount your card may be charged would be: $25

VeriSign has routed, processed, and secured your payment information. More information about VeriSign.

Return to Mailbox
Return to Physician’s Web Site
Example: Online Secure Messaging

**OC Response**

- **To:** Matilda Lee
- **From:** J.D. Daly, M.D.
- **Patient Name:** Max Lee
- **Patient SSN:** 123-45-6789
- **New Medications:** Yes
- **New Medical Conditions/Problems:** Ear Infection
- **Charge:** $25

**Physician Reply**

- **Subject:** Re: Max's Feeding Schedule
- **Message:**
  
  Every baby has a different schedule. Max should probably be eating every 3 - 4 hours, and you should avoid having him sleep through feedings. If he is sleeping for a couple of hours after eating, though, that's a good sign that he is getting enough to eat. Please check out the listed links, and give my office a call if his schedule doesn't become "normal" again in a week.

---previous message---------

I'm not sure if Max is eating enough. His schedule has been off since the holidays, and sometimes he wants to eat every 2 hours. But then sometimes he sleeps right through regular feedings. Is that normal?

**Recommended Reading:**

- Baby's First Month: Feeding and Nutrition, AAP
- Infant Feeding, Immunizations, and Patient Education, LSU
- Welcome Addition Club, Ross Pediatrics
Example: Online Secure Messaging

The webVisit is an easy, secure way to build a RelayHealth message that requests advice about non-urgent medical needs when it's convenient for you.

The webVisit will guide you through a quick interactive interview, building a succinct message that's relayed to your doctor. The interview helps assure that your doctor receives key information about your symptoms reducing back and forth communication. You can add comments or ask questions — in your own words, on your own time — for your doctor's review.

RelayHealth

Interview - Allergic Symptoms

To help me understand your current medical problem and symptoms, please complete the following questionnaire.

In a few words, please describe your condition and how I can help you today.

[Online Office Screenshot]

How long have you been having allergy or hay fever symptoms?

- Less than 1 day
- 1-7 days
- 1-2 weeks
- 2-4 weeks
- More than 1 month
Example: Online Secure Messaging

Hello Anne
Your personal home page gives you easy access to your waiting messages, your participating doctors, your family's health records, and convenient tools for communicating with your doctor's office. Please remember that this service is for non-urgent communications.

New Messages
You can view all messages in your Message Center.

RE: Test Result Request
Daniel Field, MD
Jun 10, 2003

Reminders
- Do you need to update Health Records for Chris Peters?
- Do you need to update Health Records for Charlotte Peters?
- Add a Doctor to your list of doctors
- Remember to fill your prescription for Allegra

Health Records
Last Updated
- Mrs. Anne Peters
  anne.peters@hotmail.com
  Jun 19, 2003
- Chris Peters
  anne.peters@hotmail.com
  Dec 12, 2002
- Charlotte Peters
  anne.peters@hotmail.com
  Dec 12, 2002

Introduction
Page 1 of 3
There are increasing examples of larger, IT-savvy practices using integrated e-communication tools.

- Integrated e-communication tools typically offer advanced capabilities…
  - Direct online access to third-party health information content, news, and other resources;
  - Structured tools for an patient assessment of symptoms;
  - Patient-focused disease management programs with online reminders; and
  - Structured online clinical consultations (“e-consultations”).

- …with the advantage of being integrated with the practice-based tools that physicians use every day.

- Because these tools are typically associated with EHRs, practice management and other similar products, the infrastructure and costs associated with them are more extensive

- Examples of leading organizations using integrated e-communication tools include:
  - Beth Israel Deaconess Medical Center – Boston, MA (custom application)
  - Eastern Maine Medical Center – Bangor, ME (Cerner)
  - Geisinger Health System – Danville, PA (Epic)
  - Henry Ford Health System – Detroit, MI (MedSeek)
  - Memorial Hermann Health System – Houston, TX (Healthvision)
  - Peace Health Medical Group – Portland, OR (IDX)
  - Sutter Health’s Palo Alto Medical Foundation – Palo Alto, CA (Epic)
Example: Integrated Tools

Request an e-Consultation with my Doctor

About: Myself
To the Office of: Tia A. Caminoti at Internal Medicine Associates/Main
Topic: Back pain

WAIT! If you need urgent medical care, call your doctor right away, go to the nearest Emergency Room or call 911.

Before using this service, you must read and agree to the terms of use:

TERMS OF USE FOR TIA A. C. AMINITI
1. I must have seen you (or the person you care for) in person within the previous 6 months.
2. The message may be routed to my clinical staff before I see it.
3. The message and its response will become part of your medical record (or the medical record of the person you care for).
4. I or my clinical staff may reject the request for e-Consultation. If the request is rejected, we will supply a reason for the rejection.
5. For a limited time only, this service is being offered free of charge. Thank you for participating in our trial of this service, and please let us know what you think about it.

I agree to the above terms

Please answer ALL of the following questions and be as specific as you can:

1. What is the problem you are having? (Be as specific as possible. If it affects a particular part of your body, describe that specifically).
   I spent a lot of time gardening and doing yard work this weekend, and now I'm having terrible back spasms.

2. How long have you been having this problem?
   On and off for about a year.
Example: Integrated Tools

Secure Message Center

<table>
<thead>
<tr>
<th>Sent</th>
<th>From</th>
<th>About</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/10/05 10:27AM</td>
<td>SHAW, AMANDA</td>
<td>SHAW, AMANDA</td>
<td>e-Consult: Back pain</td>
</tr>
<tr>
<td>🔄 06/10/05 09:22AM</td>
<td>SKATES, JESSIE</td>
<td>SKATES, JESSIE</td>
<td>e-Consult: Back Pain</td>
</tr>
<tr>
<td>✓ 02/22/05 12:09AM</td>
<td>SKATES, JESSIE</td>
<td>SKATES, JESSIE</td>
<td>e-Consult: Back Pain</td>
</tr>
</tbody>
</table>

Messages 1 to 3 of 3

To the office of: Tia Caminiti at Internal Medicine Associates/Main

Topics: e-Consult: Back pain

Priority: NORMAL

1. What is the problem you are having? (Be as specific as possible. If it affects a particular part of your body, describe that specifically).
   I spent a lot of time gardening and doing yard work this weekend, and now I'm having terrible back spasms.

2. How long have you been having this problem?
   On and off for about a year.

3. How often does the problem occur?
   After strenuous physical activity.

4. When you are having this problem, how long does it typically last?
   Usually a few weeks.

5. Would you say that the problem is staying the same, getting better or getting worse?
   Getting worse.

6. Do you have any other symptoms that are associated with this problem?
   Tingling down my left leg.
Example: Integrated Tools

Secure Message Center - Write an e Consultation

From the Office Of: Caminiti, Tia A
To Physician or Other Staff:
To Patient:  
Send message to patient named below, or to patient's family caregiver(s)
About Patient: SHAW, AMANDA
Priority: Normal
Topic: RE: e-Consult: Back pain

e-Consult Request From: AMANDA SHAW
Patient: AMANDA SHAW
DOB: 01/20/1940  65y  Female  MRN: HV12600074

Thank you for your request for this e-Consultation.

My assessment is this:

We'll give you a prescription for the pain, but I think it's time to take a closer look at what's going on, since your problem seems to be getting worse with each episode.

I recommend the following:

We'll call in a prescription. Also, we'll call in a referral to Northeast MRI, as we've discussed in the past. Please call them to schedule.

You need do not need a prescription. If yes:
Example: Integrated Tools

My Secure Health Messages

<table>
<thead>
<tr>
<th>Sent</th>
<th>From</th>
<th>About</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/10/05 10:43AM</td>
<td>Caminiti, Tia A</td>
<td>Myself</td>
<td>Re: e-Consult: Low back pain</td>
</tr>
</tbody>
</table>

Message 1 of 1

To: SHAW, AMANDA (patient)

About: SHAW, AMANDA

Topic: Re: e-Consult: Low back pain

From: Caminiti, Tia A

Patient DOB: DOB: 01/20/1940

Patient MRN: HV12600074

Thank you for your request for this e-Consultation.

My assessment is this:
We'll give you a prescription for the pain, but I think it's time to take a closer look at what's going on, since your problem seems to be getting worse with each episode.

I recommend the following:
We'll call in a prescription. Also, we'll call in a referral to Northeast MRI, as we've discussed in the past. Please call them to schedule.

You need a prescription

The medication you need is this:
naproxen 500 mg four times a day for 10 days.

The prescription has been called in to your pharmacy.
There are a number of crucial trade-off considerations when purchasing and using e-communication tools.

1. Complexity of infrastructure
   - Relatively little start-up effort
   - Major software/hardware infrastructure

2. Degree of integration
   - Standalone
   - Integrated with the practice’s day-to-day applications (and sometimes PHRs)

3. Message structure
   - Unstructured
   - Structured

4. Cost
   - Little-to-no start-up costs, monthly user fee
   - More extensive start-up costs, annual licensing fees

5. Security
   - Unencrypted
   - Encrypted or other secure communication

6. Potential for reimbursement
   - Available
   - Unavailable
Patients, payers and even providers can benefit from e-communication.

- Studies have demonstrated cost savings through the use of e-communication.
  - In one health plan-based study, each patient user of a secure, Web-based messaging and online consultation tool experienced a statistically significant reduction in overall healthcare claims of $3.69 per member month.
  - In addition, patient users were half as likely to report having missed work due to illness.  
    (The RelayHealth webVisit Study: Final Report, October 24, 2002)

- Patient-physician e-communication positively impacts physician office productivity.
  - Physicians who use web-based communication perceive it more positively than those who don’t (Am. Journal of Managed Care September 2004)
  - One study showed physicians using web messaging were more productive (11% more visits and 10% more RVUs per day) than physicians who didn’t (JHIM Vol. 19. No. 2)

- Patients participating in e-communication pilots report high levels of satisfaction.
  - 95% of patients in one study reported e-mail as more efficient than the telephone (Am. Journal of Managed Care September 2004)
  - One pediatric study showed 98% of parents were “very satisfied” with their e-mail correspondences (Pediatrics, May 2005)

Patient Satisfaction with “webVisits”

The bad news: adoption of e-communication tools still appears low.

Adoption estimates vary, however:

- Less than 25% of physicians were using email to communicate with patients in 2003 – roughly the same percentage as in 2002. (Manhattan Research, April 2003)
  - Only 9% of physicians e-mail patients more than 5 times a week. (Jupiter Research, October 2003)
  - One e-communication vendor (Medem) reports 11,000 physicians using its secure messaging system (WSJ September 2, 2004)

- Between 65 and 80 percent of surveyed consumers expressed interest in communication online with physicians, only 3% of adult Internet users held online consultations with physicians during 2003. (WSJ Online/Harris Interactive February 2005; Jupiter Research October 2003)
  - This compares with more than 17% of patients who used renew prescriptions or seek drug or disease information online. (Jupiter Research October 2003)

Types of “webVisits” people conduct with their doctors:

- To report low-severity symptoms (52%)
- Consultation about a procedure, visit, or test result (17%)
- Medication management issues (21%)
- Management of chronic condition (10%)

(Source: WSJ, September 2, 2004)
One of the biggest barrier to increased physician adoption of e-communication is the lack of reimbursement for non visit-based care.

- Since physicians don’t principally reap the benefits, they want to be reimbursed...
  - In one webVisit study, three-out-of-four physicians rated reimbursement as an important motivator for communicating online with patients. (The RelayHealth webVisit Study: Final Report, October 24, 2002)
  - Six of eight primary care providers surveyed in another study felt it was “important” or “very important” to be reimbursed for online communication with patients. They expect an average of $33. (JAMIA, 10[3], 2003)

- Physicians also fear that there will be a workload increase associated with online communication – including clinically inappropriate and rambling e-mails.
  - Most anecdotal evidence, however, does not bear that out. (“Online Patient-Provider Communication Tools”, California HealthCare Foundation, November 2003)
  - Some of the physician impacts can be minimized through effective workflow design – by routing administrative e-mails to support staff and triaging clinical e-mails.

“The problem with physicians and technology now is that doctors are being squeezed every which way, we are very eager to promote technology but our biggest concern is unfunded mandates. We want to avoid a situation where doctors spend lots of money on technology and have no way to be reimbursed for their expenses.” (Dr. Joseph Heyman, AMA board member, quoted in the WSJ, July 9, 2003.)
Unfortunately patients don’t want to pay.

- Only 36% of surveyed online adults would be willing to pay something for online communication with physicians. (WSJ Online/Harris Interactive March 2005)
- Another pediatric study reported that 63% of patients would be unwilling to pay for e-mail exchanges with physicians. (Pediatrics May 2005)
- Ninety-two percent of surveyed consumers were unwilling to pay more than $10 for an online consultation – even after taking into account the time and cost associated with a face-to-face visit. (JupiterResearch 2002)

Amount consumers would be willing to pay per session for online clinical consultations

- $0: 31%
- $5: 30%
- $10: 31%
- >$10: 8%

This “would ultimately have to be a co-pay because the doctors are not going to be willing to take $10 as a fee for service” payment for patient e-mails. (Monique Levy, Jupiter Research Analyst, Healthcare Informatics October 2004)

- A minority of patients is concerned about confidentiality issues (JAMIA Nov/Dec 2004)
What Factors Will Affect Adoption?

Reimbursement appears to be key to physician adoption – but who pays?

- The AMA has added a new CPT code (0074T) for online medical communications.
- A number of health plans are moving forward with pilots or implementations of reimbursement programs for e-communication and/or e-consultations.
  - These include: Anthem BCBS (CO, NH), BCBS-MA, BCBS-TN, Blue Shield of CA, Cigna, Empire BCBS (NY), Group Health NY, the Florida Blues; Harvard Pilgrim and Kaiser Permanente. (WSJ, September 4, 2004 and NYTimes March 2, 2005)
- According to one health-care analyst, once insurers “regularly reimburse for online consultations”, adoption will increase to between 40 and 50 percent of physicians within two to three years. (Mark Bard, Manhattan Research, in the Wall Street Journal September 4, 2004)

In parallel developments:
- Foundations are also helping to support IT pilots and new reimbursement models for e-prescribing and other IT adoption pilots…

- …and ambulatory pay-for-performance programs have been introduced by both health plans and employers – many of which are focused on improving clinical performance among physician practices and some of which pay physicians bonuses for use of IT.

“In the next five to ten years, pay-for-performance based compensation could account for 20 to 30 percent of what the federal programs pay providers.” (Mark McClellan, CMS Administrator, The Wall Street Journal, September 17, 2004)
A number of publications are available containing additional information about e-communication.

- California HealthCare Foundation – [www.chcf.org](http://www.chcf.org)

Also: The Institute for Healthcare Improvement’s idealized design of the clinical office practice (IDCOP) initiative provides more information on the latest physician practice improvement approaches: [www.ihi.org/IHI/Topics/OfficePractices](http://www.ihi.org/IHI/Topics/OfficePractices)
There are also a number of sources for professional guidelines regarding physician use of e-mail and online consultations.

<table>
<thead>
<tr>
<th>Organization and Source</th>
<th>Topic/Focus</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The American Medical Association (AMA)</strong></td>
<td>Use of e-mail</td>
<td>Issued June 2003; adopted December 2002</td>
</tr>
<tr>
<td><a href="http://www.ama-assn.org/ama/pub/category/10828.html">www.ama-assn.org/ama/pub/category/10828.html</a> and</td>
<td></td>
<td></td>
</tr>
<tr>
<td><a href="http://www.ama-assn.org/ama/pub/category/2386.html">www.ama-assn.org/ama/pub/category/2386.html</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The American Medical Informatics Association (AMIA)</strong></td>
<td>“Guidelines for the Clinical Use of Electronic Mail with Patients”</td>
<td>Released Jan./Feb. 1998</td>
</tr>
<tr>
<td><a href="http://www.amia.org/pubs/fpubl.html">http://www.amia.org/pubs/fpubl.html</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>eRisk Working Group for Healthcare</strong></td>
<td>Consortium of professional liability carriers who developed e-risk guidelines to provide physicians information related to online communication</td>
<td>Last revised November 2002</td>
</tr>
<tr>
<td><a href="http://www.medem.com/phy/phy_eriskguidelines.cfm">www.medem.com/phy/phy_eriskguidelines.cfm</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Federation of State Medical Boards</strong></td>
<td>“Model Guidelines for the Appropriate Use of the Internet in Medical Practice”</td>
<td>Adopted and released April 2002</td>
</tr>
<tr>
<td><a href="http://www.fsmb.org">www.fsmb.org</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The Internet Healthcare Coalition</strong></td>
<td>International Code of Ethics for health care sites and services on the Internet</td>
<td>Released May 2000</td>
</tr>
<tr>
<td><a href="http://www.ihealthcoalition.org/ethics/ehcode.html">www.ihealthcoalition.org/ethics/ehcode.html</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Daniel Sands, MD</strong></td>
<td>Electronic Patient-Centered Communication Resource Center, published by physician at Beth Israel Deaconess Medical Center, Harvard Medical School</td>
<td></td>
</tr>
<tr>
<td><a href="http://134.174.100.34/">http://134.174.100.34/</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SCPIE (a medical professional liability insurer)</strong></td>
<td>“New Guidelines Minimize Risk in Doctor-Patient Online Communications”</td>
<td>Released December 2002</td>
</tr>
</tbody>
</table>
Wrap-Up
What Does the Future Hold?

While e-communication and other patient-focused technologies hold much promise for improving our healthcare system...

- When patients are given the knowledge and technological resources to manage their health, studies have shown a significant improvement in health and a decrease in costs for the institution.

- A recent study estimated that Massachusetts would save $710 million per year if disease management tools were widely adopted. ("Advanced Technologies to Lower Health Care Costs and Improve Quality," Mass. Technology Collaborative, Fall 2003)

"VA hospital systems in Connecticut, Florida, Ohio, and the Rocky Mountain region of the Midwest have deployed the Health Hero Health Buddy home monitoring device to help control costs and improve outcomes for VA patients with chronic --- and expensive – conditions like CHF, COPD, diabetes, and mental illness.” (Hospitals & Health Networks, September 2004)
What Does the Future Hold?

...a number of factors need to be aligned in order to make their long-term adoption more certain.

Initial and ongoing funding

Fit with practice workflow

Integration with other systems and information

Patient interest and benefit

Adoption
What Does the Future Hold?

Otherwise...

“We have lots of information technology. We just don’t have any information.”
Questions?

Thank you!
Keith MacDonald
kmacdonald@fcg.com
(800) 250-1546