Benedict C. Nwomeh, MD, MPH
Associate Professor of Surgery
Co-Chair, ANPA IT Committee
Objectives

1. Who is using e-mail?
2. Guidelines on electronic methods of physician-patient communication
3. Pros and Cons of e-mail communication with patients
4. Other tools for electronic communication
Patients who e-mail with doctors see health improvements

Doctors debate use of email for communicating with patients

5 Ways to Instantly Connect With Doctors

Doctor-Patient E-Mails Can Help Heal

Electrons in Flight — E-Mail between Doctors and Patients
Who Is Currently Using Email? Which Patients? Which Physicians?
<table>
<thead>
<tr>
<th>Activity</th>
<th>% of adult internet users in the U.S. who do this online</th>
<th>Survey month/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a search engine to find information</td>
<td>91</td>
<td>2/1/2012</td>
</tr>
<tr>
<td>Send or read e-mail</td>
<td>91</td>
<td>8/1/2011</td>
</tr>
<tr>
<td>Look for info on a hobby or interest</td>
<td>84</td>
<td>8/1/2011</td>
</tr>
<tr>
<td>Search for a map or driving directions</td>
<td>84</td>
<td>8/1/2011</td>
</tr>
<tr>
<td>Check the weather</td>
<td>81</td>
<td>5/1/2010</td>
</tr>
<tr>
<td>Look for health/medical info~</td>
<td>80</td>
<td>9/1/2010</td>
</tr>
<tr>
<td>Look for information online about a service or product you are thinking of buying*</td>
<td>78</td>
<td>9/1/2010</td>
</tr>
<tr>
<td>Get news</td>
<td>76</td>
<td>5/1/2011</td>
</tr>
</tbody>
</table>
Use of the Internet and E-mail for Health Care Information
Results From a National Survey

Laurence Baker, PhD
Todd H. Wagner, PhD
Sara Singer, MBA
M. Kate Bundorf, PhD, MBA, MPH

Context: The Internet has attracted considerable attention as a means to improve health and health care delivery, but it is not clear how prevalent Internet use for health care really is or what impact it has on health care utilization. Available estimates of use and impact vary widely. Without accurate estimates of use and effects, it is difficult to focus policy discussions or design appropriate policy activities.
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Search for Health Information on the Internet</th>
<th>E-mail Physician</th>
<th>E-mail Family/Friends</th>
<th>E-mail Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio (95% Confidence Interval)</td>
<td>Odds Ratio (95% Confidence Interval)</td>
<td>Odds Ratio (95% Confidence Interval)</td>
<td>Odds Ratio (95% Confidence Interval)</td>
</tr>
<tr>
<td></td>
<td>P Value</td>
<td>P Value</td>
<td>P Value</td>
<td>P Value</td>
</tr>
<tr>
<td>No. of observations</td>
<td>4274</td>
<td>4259</td>
<td>4256</td>
<td>4247</td>
</tr>
<tr>
<td>Age, y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-49</td>
<td>1.1 (0.8-1.4)</td>
<td>0.8 (0.5-1.2)</td>
<td>0.9 (0.6-1.2)</td>
<td>1.0 (0.6-1.5)</td>
</tr>
<tr>
<td>50-64</td>
<td>1.1 (0.8-1.4)</td>
<td>0.7 (0.5-1.2)</td>
<td>0.9 (0.6-1.2)</td>
<td>0.9 (0.6-1.4)</td>
</tr>
<tr>
<td>65-74</td>
<td>1.2 (0.8-1.6)</td>
<td>0.5 (0.3-1.0)</td>
<td>0.8 (0.5-1.2)</td>
<td>0.8 (0.5-1.4)</td>
</tr>
<tr>
<td>≥75</td>
<td>0.6 (0.4-1.0)</td>
<td>0.7 (0.3-1.6)</td>
<td>0.9 (0.5-1.6)</td>
<td>1.3 (0.6-2.7)</td>
</tr>
<tr>
<td>Male sex</td>
<td>0.5 (0.4-0.6)</td>
<td>1.1 (0.7-1.7)</td>
<td>0.6 (0.5-0.8)</td>
<td>0.7 (0.5-1.0)</td>
</tr>
<tr>
<td>Household income, $</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;25 000</td>
<td>1.0 (0.7-1.4)</td>
<td>0.7 (0.4-1.2)</td>
<td>0.8 (0.6-1.1)</td>
<td>0.7 (0.5-1.2)</td>
</tr>
<tr>
<td>25 000-49 999</td>
<td>0.9 (0.7-1.2)</td>
<td>0.5 (0.3-1.0)</td>
<td>0.8 (0.5-1.1)</td>
<td>0.4 (0.2-0.6)</td>
</tr>
<tr>
<td>≥50 000</td>
<td>1.1 (0.8-1.5)</td>
<td>0.7 (0.4-1.3)</td>
<td>0.9 (0.6-1.3)</td>
<td>1.1 (0.5-2.1)</td>
</tr>
<tr>
<td>Education, y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-16</td>
<td>2.0 (1.6-2.5)</td>
<td>1.2 (0.8-2.0)</td>
<td>1.4 (1.1-1.8)</td>
<td>1.4 (1.1-1.8)</td>
</tr>
<tr>
<td>≥17</td>
<td>2.8 (2.0-3.8)</td>
<td>1.4 (0.8-2.5)</td>
<td>2.5 (1.7-3.5)</td>
<td>2.6 (1.7-3.5)</td>
</tr>
<tr>
<td>Resident of MSA</td>
<td>1.2 (0.9-1.6)</td>
<td>1.0 (0.5-1.7)</td>
<td>0.9 (0.6-1.2)</td>
<td>0.9 (0.6-1.4)</td>
</tr>
<tr>
<td>Health status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>1.1 (0.9-1.4)</td>
<td>1.4 (0.9-2.2)</td>
<td>1.5 (1.1-1.8)</td>
<td>1.3 (0.9-1.9)</td>
</tr>
<tr>
<td>Fair/poor</td>
<td>1.8 (1.3-2.5)</td>
<td>1.4 (0.8-2.6)</td>
<td>2.3 (1.6-3.2)</td>
<td>2.1 (1.3-3.4)</td>
</tr>
</tbody>
</table>

Abbreviation: MSA, Metropolitan Statistical Area.

*Models contain an intercept. Referent categories are as follows: age 21 to 34 years; female sex; household income under $25 000; 12 or fewer years of education; nonresidence in an MSA; and excellent/very good health status.

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Patient-Physician E-Mail Communication: The Kaiser Permanente Experience

By David Baer, MD

JOURNAL OF ONCOLOGY PRACTICE • Vol. 7, Issue 4

Kaiser Permanente Oakland, Oakland, CA

Figure 1. Age distribution of Kaiser Permanente Web site users, April 2011.
64% of the 3.6 million KP members in northern California signed up for access.

7,000 physicians received 5.8 million secure messages.

Secure messaging associated with:

- ↓ office visits
- ↑ quality outcomes
- ↑ patient satisfaction
E-Health

E-mail in patient–provider communication: A systematic review

Jiali Ye\textsuperscript{a,*}, George Rust\textsuperscript{a}, Yvonne Fry-Johnson\textsuperscript{a}, Harry Strothers\textsuperscript{b}

\textsuperscript{a}National Center for Primary Care, Morehouse School of Medicine, Atlanta, GA, USA
\textsuperscript{b}Department of Family Medicine, Morehouse School of Medicine, Atlanta, GA, USA

• 21 studies – patients and providers
• 3 studies – parents and pediatricians
E-Health

E-mail in patient–provider communication: A systematic review

Jiali Ye a,*, George Rust a, Yvonne Fry-Johnson a, Harry Strothers b

a National Center for Primary Care, Morehouse School of Medicine, Atlanta, GA, USA
b Department of Family Medicine, Morehouse School of Medicine, Atlanta, GA, USA

• Email enhances communication with physicians
• Concerns about confidentiality and security
A Different Experience…..

The Use of Physician-Patient Email: A Follow-up Examination of Adoption and Best-Practice Adherence 2005-2008

Reviewed by Helen Atherton

Nir Menachemi, PhD MPH, Charles T Pickett, MPH, and Robert G Brooks, MD MBA MPH

Survey of Florida physicians in 2005 and 2008
Predictors of E-mail Use Among Physicians

- Female
- Specialists
- Self-reported “sophisticated” computer users
- No sig diff on multivariate analysis
  - Size of practice
  - Physician age
After 3 years, some physicians soured on E-mail.

Table 2
Physician’s self-reported email use with patients and other entities

<table>
<thead>
<tr>
<th>would you like to email with patients in the future</th>
<th>n (%) of Physicians</th>
<th>χ²</th>
<th>DF</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2005 (n = 4148)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>463 (13.4%)</td>
<td>2008 (n = 2001)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1823 (52.8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>869 (58.4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do not know yet</td>
<td>1166 (33.8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>468 (31.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses email from office practice with entities other than patients</td>
<td>2593 (63.0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1272 (63.8%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If so, with which groups (check all that apply)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family member or caregiver of patients</td>
<td>435 (16.8%)</td>
<td></td>
<td></td>
<td>.75</td>
</tr>
<tr>
<td>217 (17.2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other doctors</td>
<td>1652 (63.8%)</td>
<td></td>
<td></td>
<td>.033</td>
</tr>
<tr>
<td>761 (60.2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business-related communications</td>
<td>1298 (50.1%)</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
<tr>
<td>664 (52.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>757 (29.2%)</td>
<td></td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>445 (35.3%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>531 (20.5%)</td>
<td></td>
<td></td>
<td>.012</td>
</tr>
<tr>
<td>304 (24.1%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal friends or family members</td>
<td>1923 (74.2%)</td>
<td></td>
<td></td>
<td>.24</td>
</tr>
<tr>
<td>916 (72.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>333 (12.9%)</td>
<td></td>
<td></td>
<td>.026</td>
</tr>
<tr>
<td>130 (10.4%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Guidelines on Electronic Methods of Physician-Patient Communication
REPORT OF THE COUNCIL ON ETHICAL AND JUDICIAL AFFAIRS

Ethical Guidelines for the Use of Electronic Mail between Patients and Physicians

Adopted 2002

http://goo.gl/9Ju3Y
AMA Guidelines

- E-mail should not be used to establish new patient-physician relationship
- Same code of ethics
- Patients should be aware of inherent limitations and give consent prior to the communication of privileged information; disclaimers alone insufficient.
Do Physicians Follow Guidelines?

Only 6 of 408 respondents (1.5%) reported adherence to all (13) AMA/AMIA guidelines.
Security

- Avoid unencrypted communication
- Encrypt both ways
- HIPAA implications
- Use secure portal that forces encryption (e.g. Online Banking)
  - Kaiser Permanente - password-protected, encrypted, HIPAA-compliant, e-mail system (“secure messaging”)
- Adds significant layer of expense
PROS AND CONS
Pros

- Makes doctors more accessible
- Decompress phone lines
- Eliminate need for phone menu system and relieve patients of agonizing ‘hold’ listening to elevator music
- Allow office staff to efficiently respond to patients’ inquiries at scheduled times
- Eliminate phone tags
- Valuable tool for building physician-patient relationship
Pros

- Facilitate documentation of patients’ inquiries, which is not reliably accomplished with phone calls
- Permit staff and physicians to access patients’ e-mails from remote locations
- Allow for e-mails to be forwarded to other staff and physicians with a keystroke
- Available 24/7
Physicians’ Use of and Attitudes Toward Electronic Mail for Patient Communication

Barak Gaster, MD, Christopher L. Knight, MD, Dawn E. DeWitt, MD, MSc, John V. L. Sheffield, MD, Nassim P. Assefi, MD, Dedra Buchwald, MD

To assess physicians’ use of and attitudes toward electronic mail (e-mail) for patient communication, we conducted a mail-in survey of physicians who see patients in outpatient clinics at Washington and its affiliated community-based primary care clinics. These physicians practice in a wide range of clinical settings including: a university hospital, which...
56% of physicians >60 yrs used e-mail with patients

Table 1. Physicians’ Use of E-mail with Patients (N = 249)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
<th>Physicians Who Use E-mail with Patients, n (%)</th>
<th>E-mails per Month, Mean†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>93 (37)</td>
<td>63 (68)</td>
<td>8.4</td>
</tr>
<tr>
<td>Male</td>
<td>153 (61)</td>
<td>112 (73)</td>
<td>7.4</td>
</tr>
<tr>
<td>Age, y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30–40</td>
<td>80 (32)</td>
<td>58 (73)</td>
<td>6.8</td>
</tr>
<tr>
<td>41–50</td>
<td>103 (41)</td>
<td>73 (71)</td>
<td>7.3</td>
</tr>
<tr>
<td>51–60</td>
<td>42 (17)</td>
<td>31 (74)</td>
<td>9.2</td>
</tr>
<tr>
<td>&gt;60</td>
<td>18 (7)</td>
<td>10 (56)</td>
<td>7.4</td>
</tr>
<tr>
<td>Practice location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University hospital–based clinics</td>
<td>131 (53)</td>
<td>107 (82)</td>
<td>9.8</td>
</tr>
<tr>
<td>County hospital–based clinics</td>
<td>71 (29)</td>
<td>47 (66)</td>
<td>5.4§</td>
</tr>
<tr>
<td>Community-based primary care clinics</td>
<td>47 (19)</td>
<td>24 (51)</td>
<td>2.8†</td>
</tr>
</tbody>
</table>

* Percentages may not add up to 100 due to rounding and missing responses.
† Mean e-mails received from patients per month among physicians who reported using e-mail with patients.
‡ P = .014 compared to university hospital–based clinics.
§ P = .023 compared to university hospital–based clinics.
‖ P = .001 compared to hospital-based clinics combined.
¶ P < .001 compared to hospital-based clinics combined.
Physicians Perceived Advantages of E-mail over Phone Calls

Compared to telephone calls, e-mailing with a patient:

- Decreases "phone tag":
  - Strongly agree or agree: 83%
  - Neutral: 55%
  - Strongly disagree or disagree: 12%

- Saves time:
  - Strongly agree or agree: 21%
  - Neutral: 51%
  - Strongly disagree or disagree: 24%

- Increases patient satisfaction:
  - Strongly agree or agree: 37%
  - Neutral: 51%
  - Strongly disagree or disagree: 12%

- Enhances documentation for medico-legal purposes:
  - Strongly agree or agree: 29%
  - Neutral: 40%
  - Strongly disagree or disagree: 32%

- Leads to fewer misunderstandings:
  - Strongly agree or agree: 43%
  - Neutral: 29%
  - Strongly disagree or disagree: 27%
Why don't physicians answer email?

It seems that the rest of the world communicates by email, why won't my physician?
Cons

- Limited real-time interactivity
- Accurate assessment of patient’s condition difficult
  - Important signals can be missed
  - Patients' facial expressions, tone of voice, body language
- Care can suffer as a result
Another Freebie?

- Costs $$$
- Pro bono, but legally liable
- Email errors increase liability
- HIPAA
- Time: "the patient who emails a 12-page, 100 bullet-pointed diatribe"?
Should doctors be paid to e-mail their patients?

by Michael Kirsch, MD
CPT Codes

Telephone Services—Physician

- **99441** phone call 5 to 10 minutes of medical discussion
- **99442** phone call 11 to 20 minutes of medical discussion
- **99443** phone call 21 to 31 minutes of medical discussion

Telephone Services—Non-Physician Healthcare Provider

Non-physician refers to a nurse, nurse practitioner or physician assistant

- **98966** phone call 5 to 10 minutes of medical discussion
- **98967** phone call 11 to 20 minutes of medical discussion
- **98968** phone call 21 to 30 minutes of medical discussion

Online Services – Physician

- **99444** Email or some other online service to discuss a medical problem
Other Tools

- SMS
- Online chat
- Facebook
- Twitter
- Skype
- Google Hangout
Will Health Reform Finally Push Doctors To Email And Skype?

“Alexander Graham Bell: “When one door closes another door opens; but we often look so long and so regretfully upon the closed door, that we do not see the ones which open for us.”
Thank You!