

UTILIZATION OF CELL PHONES AND EMAILS IN THE MEDICAL CONSULTATION

10th Annual Family Medicine Conference

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Email Communication



FACTS- EMAIL YOUR DOCTOR

9000 email user surveyed

85% reported daily use of email

YET

only 6% have even sent an email to their provider

Int J Med Inform 2001; 61(1):71-80

University based clinic patients

Two thirds access their emails almost daily at home or work

YET

Only 10% have ever used email communication with their
physician

Am J Manag Care 2002; 8(5):427-433

FACTS- EMAIL YOUR DOCTOR

Membership survey of the American College of physician -
American Society of Internal medicine

Two thirds had access to computers and used Internet from home
for email use

YET

Less than 7% of internists (15,375 respondents)
exchanged email communication with their patients
on weekly or daily basis

Proc AMIA Symp 2000;453-456

FACTS- EMAIL YOUR DOCTOR

Even more recent studies

4203 physicians

16.6% had personally used email to communicate with patients

2.9% used email with patients frequently.

J Med Internet Res. 2006 Jan-Mar, 8(1):e2

So what are their barriers

2/3 physicians
using the email on
daily basis at home
and work



85% of patients use
the email on daily
basis

ATTITUDE AND BARRIERS- PATIENT PERSPECTIVE

Attitude

65% of patients wanted to send messages to their providers

Barriers

- Lack of knowledge of their physician's email. ¹
- Lack of knowledge whether their provider uses email. ¹
- Concerns about the effectiveness and efficiency of the email communication ²

1. *Int J Med Inform* 2001; 61(1):71-80
2. *Am J Manag Care* 2002; 8(5):427-433

ATTITUDE AND BARRIERS- PHYSICIAN PERSPECTIVE

Attitude

- Agreement with its potential for enhancing access to patients
- Restricted used of email communication
- Could be helpful for administrative issues

Am J Manag Care 2002; 8(5):427-433

Barriers

- Lack of time
- Fear of increase in workload
- Reimbursement issues

J Am Board Fam Pract 2005; 18(3):180-188

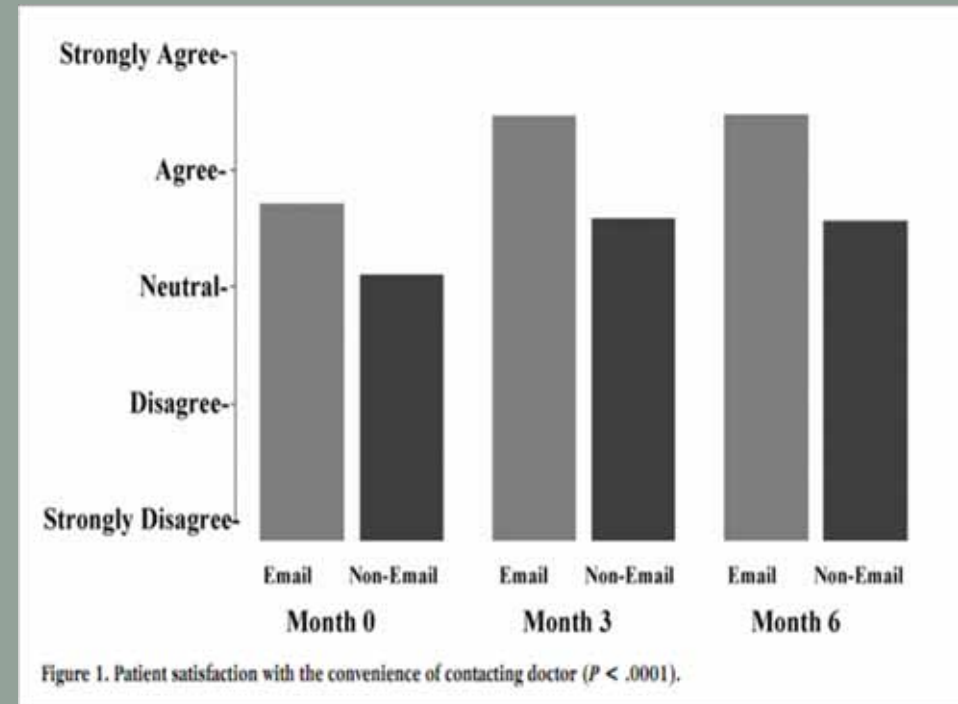
FEAR OF INCREASE IN WORKLOAD

4 physicians offered e-mail
communication to participating
patients and 4 did not.

6 months trial

Patient satisfaction
significantly increased
in the areas of **convenience** ($P < .0001$)

and the **amount of time spent**
contacting their physician ($P < .0001$)



FEAR OF INCREASE IN WORKLOAD

Physicians in the e-mail group increased their satisfaction in the areas of convenience, amount of time spent on messages, volume of messages.

Table 3. Physician Self-Reported Log on Non-E-Mail and E-mail Messages from Patients

Log Entries	Week	E-mail Physician				Average	Control Physician				Average
		E-1	E-2	E-3	E-4		C-1	C-2	C-3	C-4	
Number of non-e-mail messages	1	15	41	79	51		52		33	72	
	2	46	47	80	60		45	28	31	52	
	3	32	28	103	31		21		57		
	Average	31	38.6	87.3	47.3	51.1	39.3		40.3		
Average time/day spent addressing messages (in minutes)	1	11	29	36.2	60		20	27.4	28	85	
	2	15	35	63.4	56		20.4	19	29.2	50	
	3	10	29	40.6	62		7.6	8.7	55	50	
	Average	12	31	46.7	59.3	37.3	22.5	18.3	37.4	61.7	35
Average time per message (in minutes)	1	3.7	3.5	2.3	5.9		1.9	2.8	4.2	5.9	
	2	1.6	3.7	3.9	4.7		2.3	3.4	4.7	5.0	
	3	1.56	5.1	1.9	6.0		1.8		4.8	3.8	
	Average	2.3	4.1	2.7	5.5	3.7	2.0		4.6	4.9	3.8
Number of e-mails in 6 months		80	121	28	70						
Number of e-mails per week		0 to 1	1 to 4	0 to 5	0 to 1						
Approximate time per e-mail (in minutes)		1 to 3	1 to 3	1 to 2	1 to 5						

REIMBURSEMENT- PATIENTS' OPINIONS

9000 surveyed email user

47%

Not willing to pay for
email communication

38%

Willing to pay 5-10 USD

**AMA Guidelines
for proper
use of emails**



- Educate your patient about privacy issues- and sensitivity of subject matter (HIV, mental health, etc.) over e-mail
- Inform if your nurse will have access to the emails
- Use encrypted messages



- **Establish a turnaround time for messages**
- **Caution when use email for urgent matters**
- **Expected time 1-2 days in most studies**



In a study of patients
in family practice
clinics in central Texas

More demanding of
a very
short response time

J Fam Pract 2001; 50(5):414-418

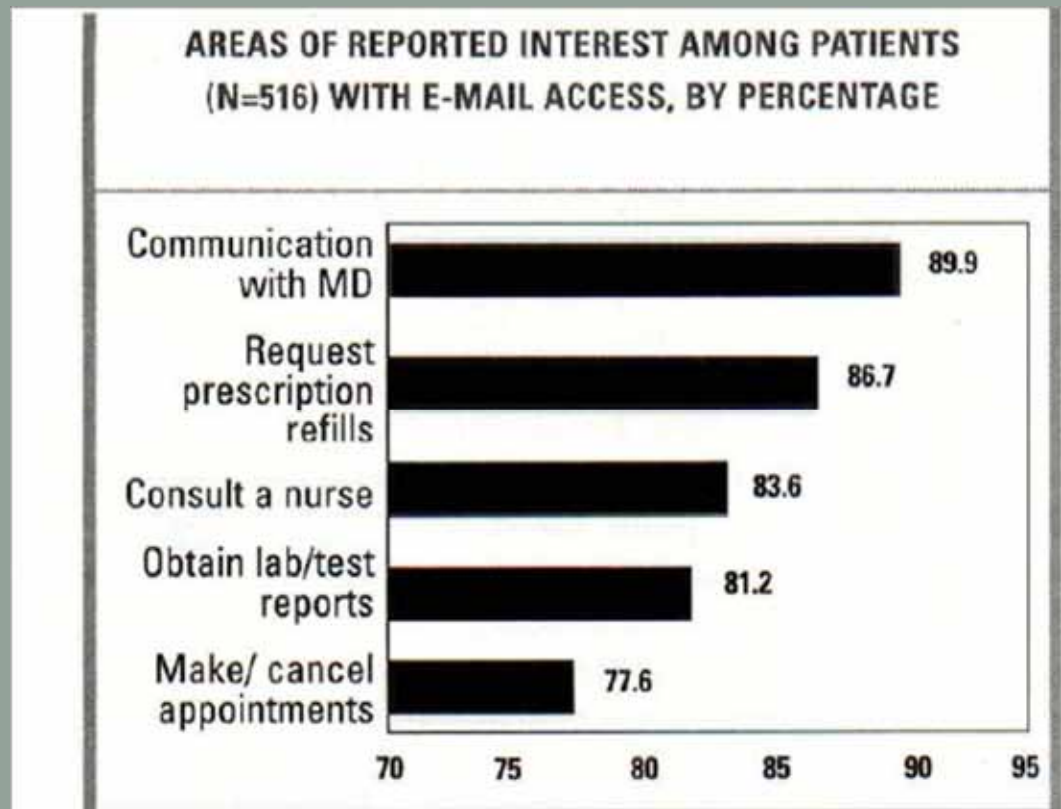
REPORTED EXPECTATIONS OF TIMELINESS FOR RESPONSES TO QUERIES ON SELECTED SERVICES
AMONG PATIENTS (N=516) WITH E-MAIL ACCESS

Expected Time, Hours*	% of Patients Expecting Routine Laboratory Results	% of Patients Expecting to Obtain Prescription Refills	% of Patients Expecting Answers to Medical Questions
<8	21	44	59
9-24	53	43	33
25-48	20	11	7
>48	6	2	1

STRUCTURE OF THE EMAIL

- Establish types of transactions (prescription refill, appointment scheduling, etc.)
- Instruct patients to put the category of transaction in the subject line of the message for filtering: prescription, appointment, medical advice, billing question.
- Request that patients put their name and patient identification number in the body of the message.

CONTENT OF EMAILS PREFERRED BY PATIENTS



CONTENT OF EMAILS PREFERRED BY PATIENTS

E-mail messages in one study included





KEEP A RECORD

Retain electronic and/or paper copies
of e-mails communications with patients



TECHNICAL TIPS

- Configure automatic reply to acknowledge receipt of messages
- Send a new message to inform patient of completion of request
- Request that patients use autoreply feature to acknowledge reading clinicians message
- Develop a patient-clinician agreement for the informed consent for the use of e-mail
- Hold harmless the health care institution for information to technical failures



Phone Communication

FACTS

- **57.5% of family physicians did not give their phone number to patients**
- **38% gave them only to a small percentage**

FACTS

- **25% of patient physician communication occur by phone**

International Journal of occupational and environmental medicine April 2006, 16, 1, 41-42

- **Only 6% of residency programs teach any aspect of telephone medicine**

J Gen Intern Med. 2005;20:959-963

- **Plays a key role in medical errors**

Acad Med. 2004;79:186-94

PHONE CONSULTATION AND MEDICAL ERRORS

Using simulated patients

Less than one half

of resident and attending pediatricians
took an adequate history

More than one third

made inappropriate management decisions

Pediatrics. 1992;89:701-6

PHONE CONSULTATION AND MEDICAL ERRORS

“INAPPROPRIATE” LATE NIGHT CALLS

3:30 a.m.:

Mr. W.: Doc, I can't sleep ... my back hurts ...

Dr. R.: Have you had back pain before? Is this different?

Mr. W.: I always have it to some degree ... it's about the same.

Dr. R.: This couldn't wait? It's the middle of the night!

Mr. W.: I'm sorry, doc. I'll wait until the morning.

The next day, Dr. R. learns that Mr. W. had been hospitalized with a mild myocardial infarction. Dr. R. realizes that he never gave the patient the chance to mention his concurrent chest pain.

PHONE CONSULTATION AND MEDICAL ERRORS

GETTING INFORMATION FROM FAMILY MEMBERS

Dr. X. receives a call on Saturday.

Mrs. D.: Doctor, since my husband came home from the hospital yesterday, he's not himself. He's tired, not eating that much. But I don't think he needs to go back to the hospital—we have an appointment Monday with Dr. M.

Dr. X.: Why don't you put him on the phone.

Mrs. D.: Oh, he wouldn't want me to be bothering you. I think he's just worn out, but it could be me ...

Dr. X.: I'd still like to talk to him.

Mrs. D. returns to the phone a minute later.

Mrs. D.: He's sleeping. I'd rather not wake him.

Dr. X.: Well, I suppose he's still recuperating. Call back if anything changes.

Later, Dr. X. learns that the patient was admitted the next day with urosepsis and delirium.

CHALLENGES WITH PHONE CONSULTATION

- Lack of non-verbal clues
- No direct observations
- No direct examination
- No diagnostic tests
- Active listening
- Third party consultations

TIPS FOR PHONE CONSULTATION

- Set your time preferences
- Inform the patient of your policy on answering phones
- Document in the medical record
- Send medication names by text messages
- Listen actively
- Think if the medical question is appropriate to be solved on the phone

THE FUTURE

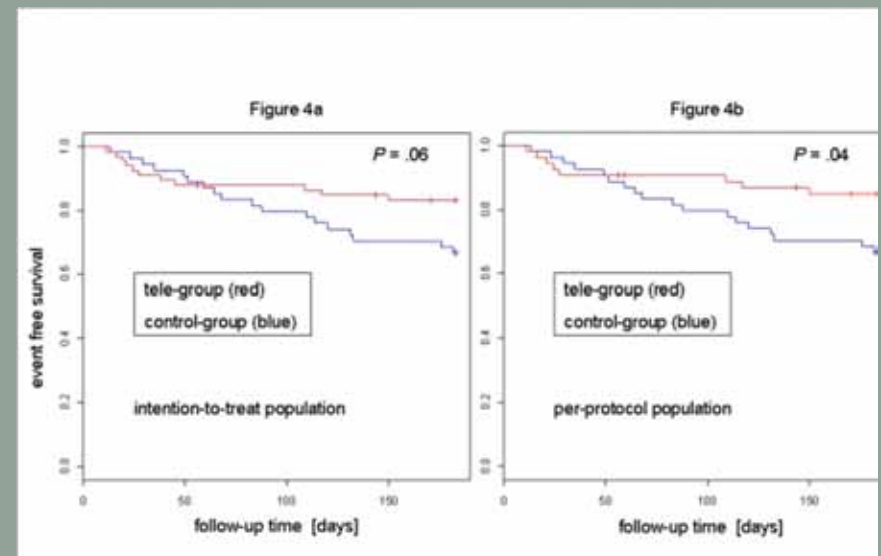
Teleradiology

Intention-to-treat analysis

8 control group patients (33%) reached the primary endpoint (**1 death, 17 hospitalizations**)

11 tele group patients (17%, **0 deaths, 11 hospitalizations**; relative risk reduction 50%, 95% CI 3-74%, $P = .06$).

NYHA class improved by one class in tele group patients only ($P < .001$).



THE FUTURE

Cyberjacket, a wearable mobile computer system for telemedicine purposes.

It contains a cellular phone, an mp3 player, headphones, a microphone and a water-tight and impact-resistant sleeve keypad as well as an emergency call button

Other scientists augmented it with three purpose built sensors: an ECG, an Oxygen Saturation Monitor and a temperature sensor.

**Thank you for
your attention**