



## L2: Patient Use of the Web to Support Self-Care

<p><b>Institute for Health Care Improvement</b></p>	<p><b>Steven R. Flier, M.D.</b> <b>Chief, Division of Community Medicine</b> <b>Beth Israel Deaconess Medical Center</b></p> <p><b>Personal Physicians HealthCare LLC</b></p>
<p><b>National Forum</b></p>	<hr/> <p><b>Patient Use of the Web to Support Self-Care</b></p>
<p><b>December 9, 2001</b></p> <p> </p>	<p><b>HARVARD MEDICAL SCHOOL</b></p> <p><b>BETH ISRAEL DEACONESS MEDICAL CENTER</b> <small>A member of CAREGROUP</small></p>

### Major Features

- Clinical e-mail
- Office transactions
- Access to information
- Access to the medical record



HARVARD MEDICAL  
SCHOOL



BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP

## L2: Patient Use of the Web to Support Self-Care

### PatientSite Clinical E-mail

- The advantages of e-mail
  - ◆ Convenience
  - ◆ Efficiency
  - ◆ Asynchrony
- Plus:
  - ◆ Secure
  - ◆ Archived
  - ◆ Forwardable



HARVARD MEDICAL  
SCHOOL



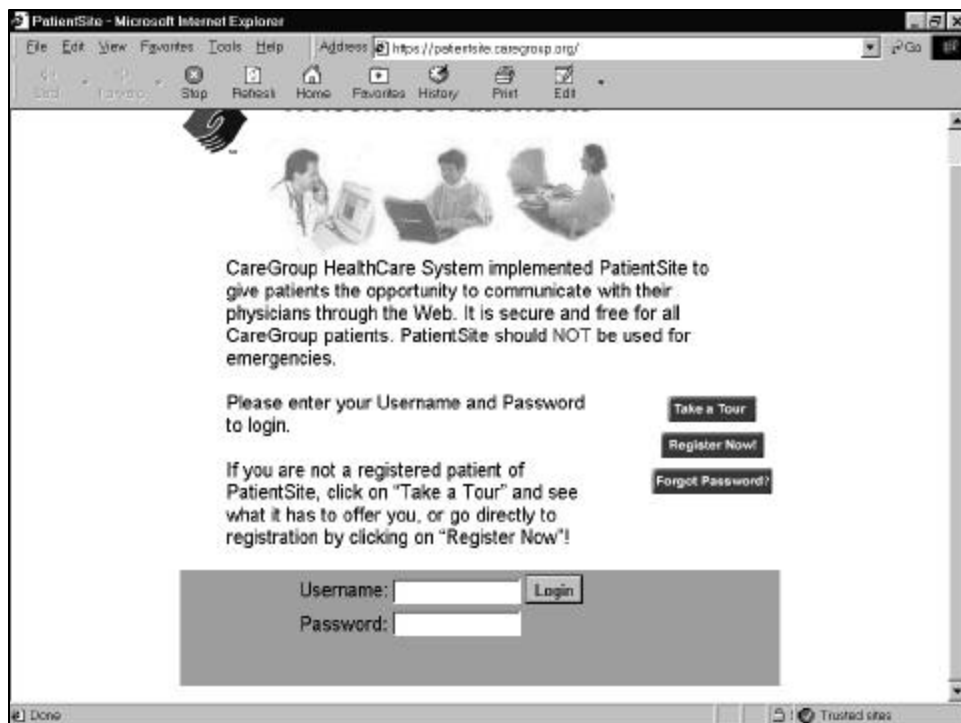
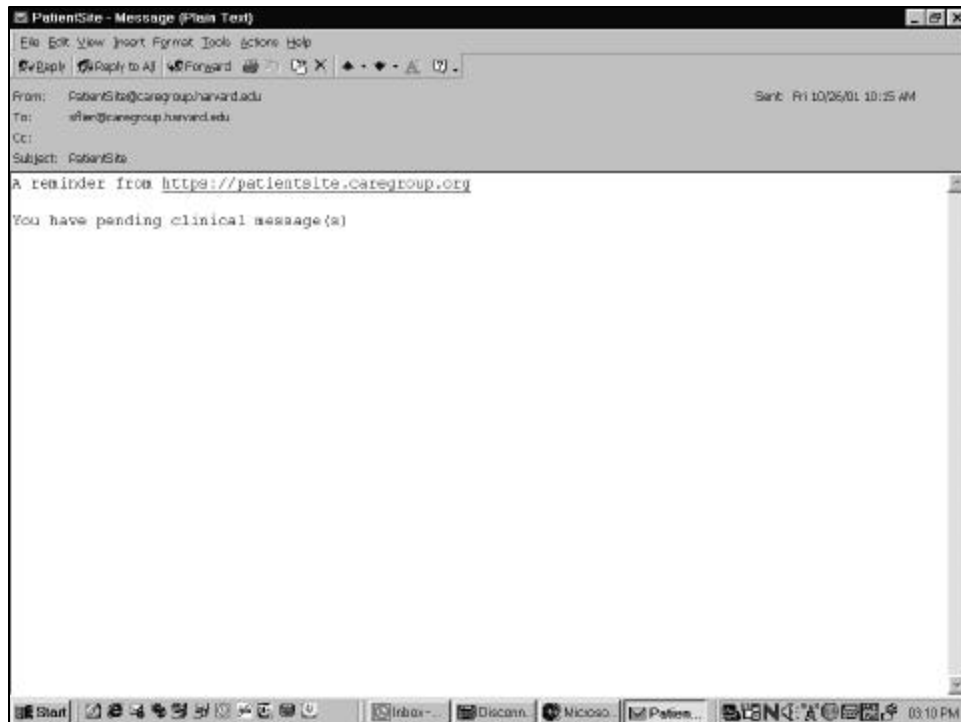
BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP



Your have requested a Secure Page  
Please enter your SecurID user name and password to enter the site:

Name:   
Password:

## L2: Patient Use of the Web to Support Self-Care



## L2: Patient Use of the Web to Support Self-Care

MyHealth MyMail MyRecord MyServices Search MyProfile

Set Forwarding Preferences

Form type	Forward to	Notify me of forwarding
Change demographics	<input type="text" value="Flaherty, Joan"/> <input type="button" value="Search"/>	<input type="button" value="N"/>
Clinical email	<input type="text" value="Levine, Dr James L"/> <input type="button" value="Search"/>	<input checked="" type="button" value="Y"/>
Forgot password	<input type="text" value="Flaherty, Joan"/> <input type="button" value="Search"/>	<input type="button" value="Y"/>
New lab/rad notification	<input type="text"/> <input type="button" value="Search"/>	<input type="button" value="N"/>
Patient annotation	<input type="text"/> <input type="button" value="Search"/>	<input type="button" value="N"/>
Patient self-registration	<input type="text" value="Flaherty, Joan"/> <input type="button" value="Search"/>	<input type="button" value="Y"/>
Refill a prescription	<input type="text" value="~Flier, Steven Prescriptio"/> <input type="button" value="Search"/>	<input type="button" value="N"/>
Request a referral	<input type="text" value="~Flier, Steven Referral St"/> <input type="button" value="Search"/>	<input type="button" value="N"/>
Request/Confirm/Cancel an appointment	<input type="text" value="~Flier, Steven Appointme"/> <input type="button" value="Search"/>	<input type="button" value="N"/>

## Health Care Transactions

- Prescription refills
- Referrals
  - ◆ Recommendations
  - ◆ Managed care
- Appointments
  - ◆ Appointment confirmations



HARVARD MEDICAL  
SCHOOL



BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP

## L2: Patient Use of the Web to Support Self-Care

### Access to Information

- General information libraries
- Customized links to disease and medication information
- Broadcast information



HARVARD MEDICAL  
SCHOOL



BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP

**From:** Flier, Dr Steven  
**Date:** 7/21/00 12:05:42 PM  
**Read:** 7/21/00 12:07:30 PM **Replied:** 7/27/00 11:43:07 AM  
**To:** ~Dr Flier's Patient Group ~  
**Cc:** Penaton, Dianne  
**Subject:** Colonoscopy in the News

Many of you have heard or read about the important papers published in this week's issue of the New England Journal of Medicine. Two studies and an accompanying editorial discuss the choice of the best test to screen for colon cancer. In these studies, individuals over the age of 50 without symptoms (bleeding, change in bowel habits, etc.) and with a normal family history (no first order relatives with colon cancer or colon polyps) who underwent colonoscopy had a significant number of important findings (cancers and polyps) that would have been missed had they only undergone sigmoidoscopy. The studies confirm that sigmoidoscopic screening is not the best test to detect a substantial proportion of asymptomatic colorectal cancers

## L2: Patient Use of the Web to Support Self-Care

Notify me by regular email when PatientSite messages are received:

☐ Never  
☐ Once a day  
☒ Twice a day  
☐ Four times a day  
☐ Hourly

Application	Identifier	
CCC	0170378	Lookup
Logician at Chestnut Hill	16329-022500	Lookup
Managed Care Warehouse		Lookup
None		Lookup
None		Lookup

**My Health Topics**

Children and Child Development

Healthwise

Patient Education

Womens Health

**My Web links**

Link1: BIDMC

http://home.caregroup.org

Link2:

http://

Link3:

http://

MyHealth MyMail MyRecord MyServices Search MyProfile

Review my Meds X Exit Drug Interactions-Step 1 ? Help X Sign Out

Search

The following is a listing of your current medications from the electronic medical record in your doctor's office. Your doctor can answer any questions you may have about this list.

Patient Entered Medications		
Medication	Instructions	Start Date
<b>Physician Entered Medications</b>		
Medication	Instructions	Start Date
TOPROL XL TAB 100MG	1 PO QD	7/27/00 <a href="#">Refill</a>
HYTRIN CAP 10MG	1 PO HS	7/19/99 <a href="#">Refill</a>
HALCION TAB 0.125MG	1 PO HS PRN SLEEP/TRAVEL	5/11/98 <a href="#">Refill</a>
ZESTRIL TAB 40MG	1 PO QD	10/17/96 <a href="#">Refill</a>
HYDROCHLOROT TAB 25MG	scored tabs, 1/2 tab PO QD	10/17/96 <a href="#">Refill</a>
LIPITOR TAB 20MG	1 PO QD	10/17/96 <a href="#">Refill</a>
ALLOPURINOL TAB 300MG	1 PO QD	8/16/96 <a href="#">Refill</a>

## L2: Patient Use of the Web to Support Self-Care



[MyHealth](#) [MyMail](#) [MyRecord](#) [MyServices](#) [Search](#) [MyProfile](#)

Medication Information [Return to Medication List](#) [Help](#) [Sign Out](#)

### lisinopril

Pronunciation: lyse IN oh pril  
Brand: Prinivil, Zestril

**What is the most important information I should know about lisinopril?**

-  Do not stop taking this medication unless your doctor approves. If you stop taking your medication, your condition could become much worse.
-  Use caution when driving, operating machinery, performing other hazardous activities. Lisinopril may cause dizziness or drowsiness. If you experience dizziness or drowsiness, avoid these activities and notify your doctor. Also use caution when rising from a sitting or lying position.
- Heavy sweating, vomiting, diarrhea, or other causes of fluid loss may lead to very low blood pressure, dizziness, and fainting during therapy with lisinopril. Maintain proper fluid intake to prevent dehydration and related side effects.

**What is lisinopril?**

- Lisinopril is in a class of drugs called angiotensin-converting-enzyme (ACE) inhibitors.
- Lisinopril is used to lower blood pressure, to treat congestive heart failure, and to improve the survival rate after a heart attack.
- Lisinopril may also be used for purposes other than those listed in this medication guide.

[MyHealth](#) [MyMail](#) [MyRecord](#) [MyServices](#) [Search](#) [MyProfile](#)

Review my Meds [Exit](#) [Drug Interactions-Step 1](#) [Help](#) [Sign Out](#)

[Search](#)

The following is a listing of your current medications from the electronic medical record in your doctor's office. Your doctor can answer any questions you may have about this list.

Patient Entered Medications		
Medication	Instructions	Start Date
Physician Entered Medications		
Medication	Instructions	Start Date
<a href="#">TOPROL XL TAB 100MG</a>	1 PO QD	7/27/00 <a href="#">Refill</a>
<a href="#">HYTRIN CAP 10MG</a>	1 PO HS	7/19/99 <a href="#">Refill</a>
<a href="#">HALCION TAB 0.125MG</a>	1 PO HS PRN SLEEP/TRAVEL	5/11/98 <a href="#">Refill</a>
<a href="#">ZESTRIL TAB 40MG</a>	1 PO QD	10/17/96 <a href="#">Refill</a>
<a href="#">HYDROCHLOROT TAB 25MG</a>	scored tabs, 1/2 tab PO QD	10/17/96 <a href="#">Refill</a>
<a href="#">LIPITOR TAB 20MG</a>	1 PO QD	10/17/96 <a href="#">Refill</a>
<a href="#">ALLOPURINOL TAB 300MG</a>	1 PO QD	8/16/96 <a href="#">Refill</a>

## L2: Patient Use of the Web to Support Self-Care

MyHealth MyMail MyRecord MyServices Search MyProfile

Request a Prescription

Clinician:

Medication:

Strength:

I have been taking this medication as follows: 1 PO QD  
(i.e. 3 times per day by mouth)

Quantity Desired:

Delivery: ☐ Mail the prescription to me  
☐ Mail it to my pharmacy  
☐ Call it in to my pharmacy  
☐ Hold the prescription for pickup

Pharmacy:

Address:

City:

State:

Zip:

Phone:

### Access to the Medical Record

- Integrated access to multiple systems
  - ◆ Hospital based information system
  - ◆ Office based EMR



HARVARD MEDICAL  
SCHOOL



BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP



## L2: Patient Use of the Web to Support Self-Care

### Access to the Medical Record

- Customized for each provider
  - ◆ Problem lists
  - ◆ Med lists
  - ◆ Allergy lists
  - ◆ Lab look-ups
  - ◆ Radiology look-ups



HARVARD MEDICAL  
SCHOOL



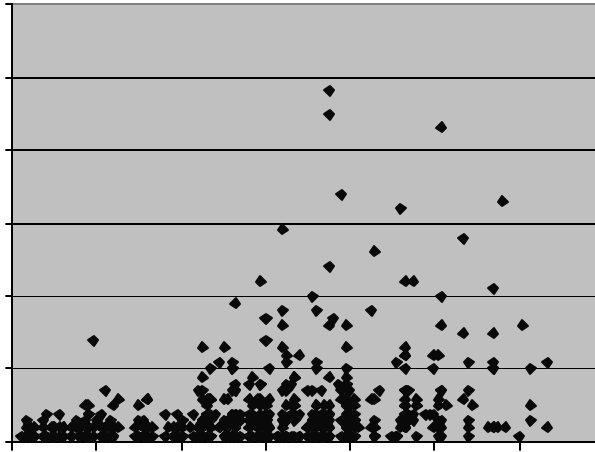
BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CAREGROUP

**Set Practice Options**

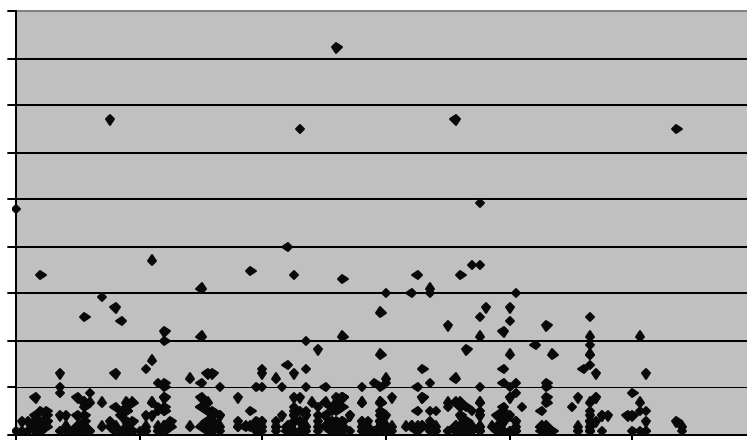
Option	Setting
Allow patients to annotate their records	<input type="text" value="Y"/>
Allow patients to check drug/drug interactions	<input type="text" value="Y"/>
Allow patients to request appointments	<input type="text" value="Y"/>
Allow patients to request referrals	<input type="text" value="Y"/>
Allow patients to request rx renewals	<input type="text" value="Y"/>
Allow patients to see provider schedules	<input type="text" value="N"/>
Allow patients to see their bills	<input type="text" value="N"/>
Allow patients to see their lab detail	<input type="text" value="Y"/>
Allow patients to see their radiology reports	<input type="text" value="Y"/>

## L2: Patient Use of the Web to Support Self-Care

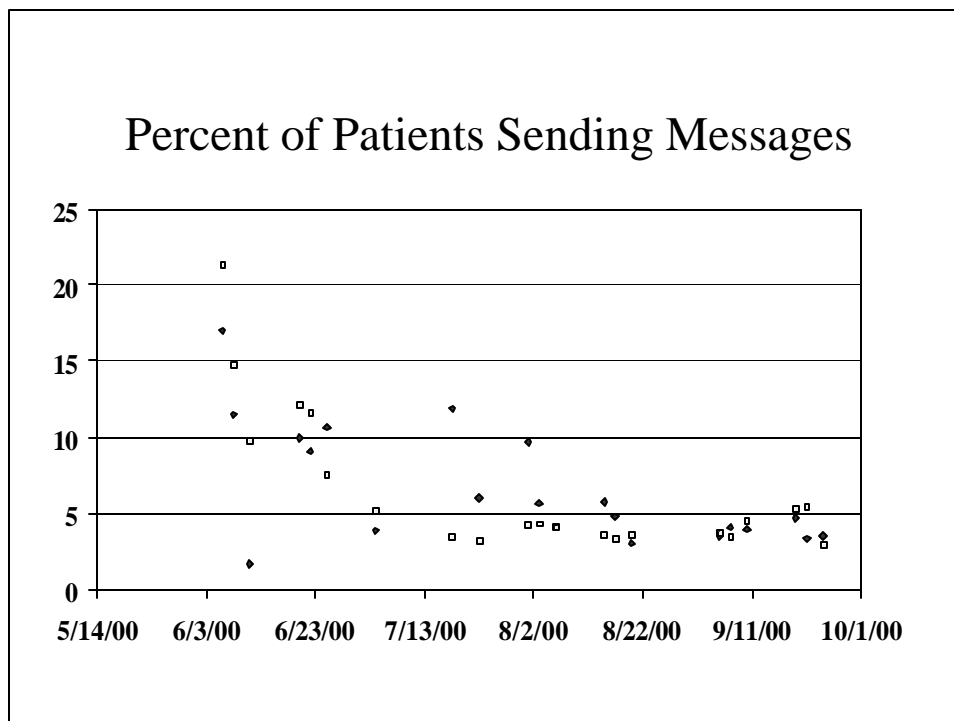
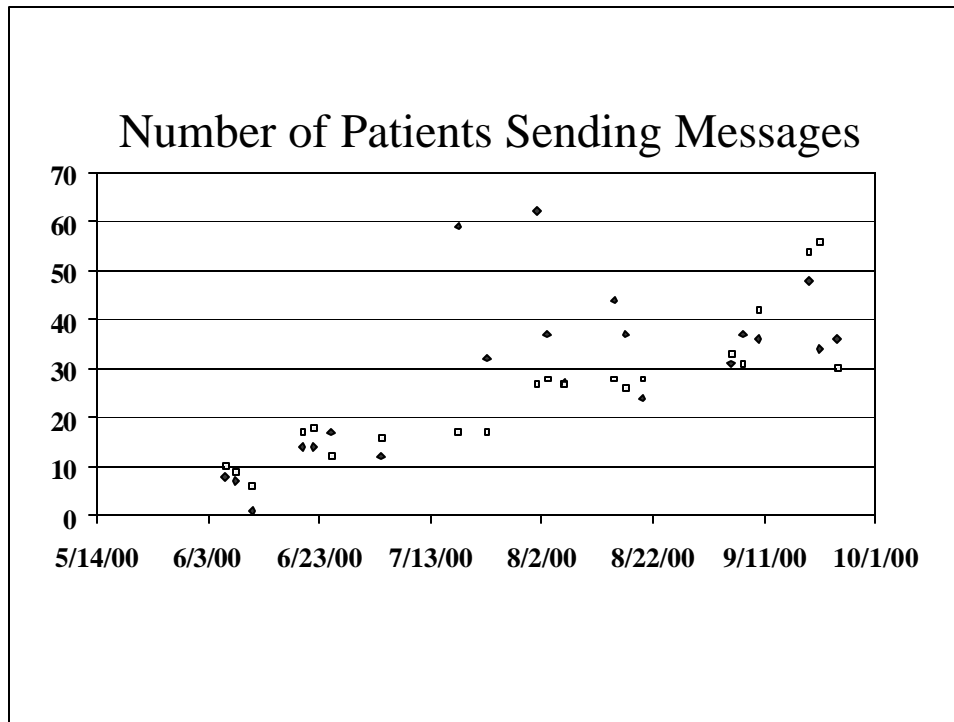
Messages to clinicians vs. time



Lab look-ups vs. time



## L2: Patient Use of the Web to Support Self-Care



## L2: Patient Use of the Web to Support Self-Care

### Doctor – Patient Communication

- Factors shown to build relationships\*
  - ◆ Open ended inquiry
  - ◆ Reflective listening
  - ◆ Expression of empathy
  - ◆ Support of autonomy
  - ◆ Exploration of ambivalence
  - ◆ Building of self-efficacy

\*Bayer Institute for Patient Communication



HARVARD MEDICAL  
SCHOOL



BETH ISRAEL DEACONESS  
MEDICAL CENTER  
A member of CareGroup

**Subject:** Stress Test

Good news. It is normal! Here is the text of the report:

INTERPRETATION: This 49 year old man was referred to the lab for an evaluation. The patient exercised for 10 minutes of a Bruce protocol and stopped for fatigue. This represents an average exercise tolerance. There were no neck, arm, chest, or back discomforts reported by the patient throughout the study. There were no significant ST segment changes noted during exercise or recovery periods. The rhythm was sinus with rare isolated VPB's. Appropriate hemodynamic response to exercise.

IMPRESSION: No anginal type symptoms or significant arrhythmia. No ischemic ECG changes.

-----Original Message-----

From: [redacted]  
To: Flier, Dr Steven  
Steve,

I took my cardiac stress test last  
Wednesday. Any results?

## L2: Patient Use of the Web to Support Self-Care

**From:** Flier, Dr Steven  
**Date:** 9/25/00 9:40:12 AM  
**Read:** 9/25/00 10:11:08 AM  
**To:**   
**Cc:**  
**Subject:** mammogram

The order has been placed. you must call ext 667-2514 for a booking.

SRF

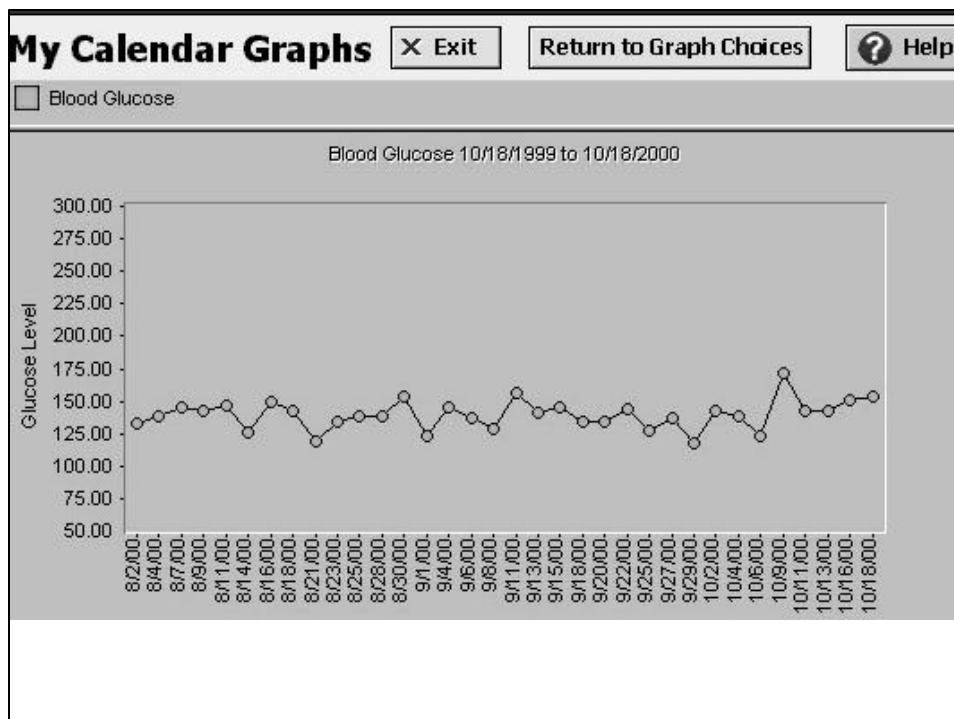
-----Original Message-----  
**From:**   
**To:** Flier, Dr Steven  
Hi Steve,  
Would you be kind enough to initiate an order for a mammogram. I need to have one in Dec at BI and need to make the appt. now.

Hi Steven,  
Hope you and your family are well. I'm felling terrific but having a bit of a problem with gout. I've had about four attacks since I saw you in June. I catch them early with colchicine before they become an overwhelming issue, but it's becoming a nuisance, especially for my GI tract. I am in superb physical/cardio-vascular condition and swimming one hour continously six days per week. And, I continue to be strikingly handsome. The gout, then, is an unwanted and painful annoyance. Is there any alternative to allopurinol? I'm already taking Zestril and Lipitor.  
Thanks.  
Nick

## L2: Patient Use of the Web to Support Self-Care

<b>From:</b>	Flier, Dr Steven
<b>Date:</b>	9/20/00 6:35:39 PM
<b>Read:</b>	9/20/00 10:53:13 PM
<b>To:</b>	<input type="text"/>
<b>Cc:</b>	
<b>Subject:</b>	gout

Nick - there are 2 drugs available to prevent gout-  
allopurinol and probenecid. Allopurinol works by decreasing  
the production of uric acid. Probenecid works by dumping  
more uric acid into the urine, so that the blood level  
drops. The problem with this latter approach is that it  
causes a higher chance of uric acid kidney stones and  
kidney damage, particularly in people like you who make too  
much uric acid (as indicated by the amount of uric acid in  
your urine). The bottom line is that allopurinol is the  
drug for you. And episodes this frequent need to be treated.



## L2: Patient Use of the Web to Support Self-Care

<b>inbox &gt; Re: Medication change</b>	
<div>« Reply   « Reply to All   Forward »</div> <div>Archive   ✓ Accept Task   Next Msg »</div>	
<b>From:</b>	<input type="text"/>
<b>Date:</b>	10/18/00 10:42:25 AM <b>Read:</b> 10/18/00 11:33:11 AM
<b>To:</b>	Flier, Dr Steven
<b>Cc:</b>	
<b>Subject:</b>	Medication change
<p>Seems my suggestion to complement the glipizide with glucophage (500mg with bkfst, 500mg with dinner, 5mg glipizide at bedtime) did not result in a reduction in blood sugar. I appear to run in the high 140mg/dl ( once in a while higher ) with an occasional reading in the low 120's. I am trying to get the opposite i.e. run in the 120's with an occasional 140.</p> <p>Ergo,I'm going to go back to all glipizide i.e. 5mg in the am (20 minutes before bkfst) and 5mg at bedtime. I plan to do this for two weeks and then reevaluate. If the results are unsatisfactory following that exercise I will then try to lose an additional 7-10 lbs and check the results of a weight loss.</p> <p>OK???</p>	