



# Email Communication with Patients: Problems, Pitfalls and a Plausible Solution

Family Medicine Forum  
November 10, 2016

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**Sunnybrook**

HEALTH SCIENCES CENTRE

when it matters  
**MOST**



# Faculty/Presenter Disclosure

Grants/Research Support: none

Speakers Bureau/Honoraria: none

Consulting Fees: none

Other: none



# Disclosure of Commercial Support

This program has not received external financial support

This program has not received in-kind support

Potential for conflict(s) of interest: none



# Mitigating Potential Bias

Not applicable



# Objectives

1. Understand the potential challenges of using email to communicate with patients
2. Review the current recommendations from regulatory bodies re: emailing patients
3. Learn about a current innovation used to electronically collect consent from patients for electronic communication



# The Problem



# Advantages of Email

## Efficiency

- 75% more efficient than by phone
- Easier to reach patients

## Respect

- Patients use email appropriately

## Communication

- brief, formal and medically relevant
- Patients chose to arrange face to face if they perceived questions were more serious

## Satisfaction

- Patient satisfaction generally high



# Background

## 1. Health care industry is behind

Many other industries (banking, restaurants, airlines, etc...) use electronic communications extensively

## 2. Canadian health care is really behind

2015 Commonwealth Fund International Health Policy Survey of Primary Care Physicians showed that Canada ranked LAST of 11 countries of primary care practices offering email access





# Email Use in Primary Care 2015

“Please indicate whether your practice offers patients the option to email about a medical question or concern”





# Potential Pitfalls



# Disadvantages of Email

Cochrane review of 9 RCTs found no difference in outcomes

- Patient understanding, health status, behaviours

Patient Safety Concerns

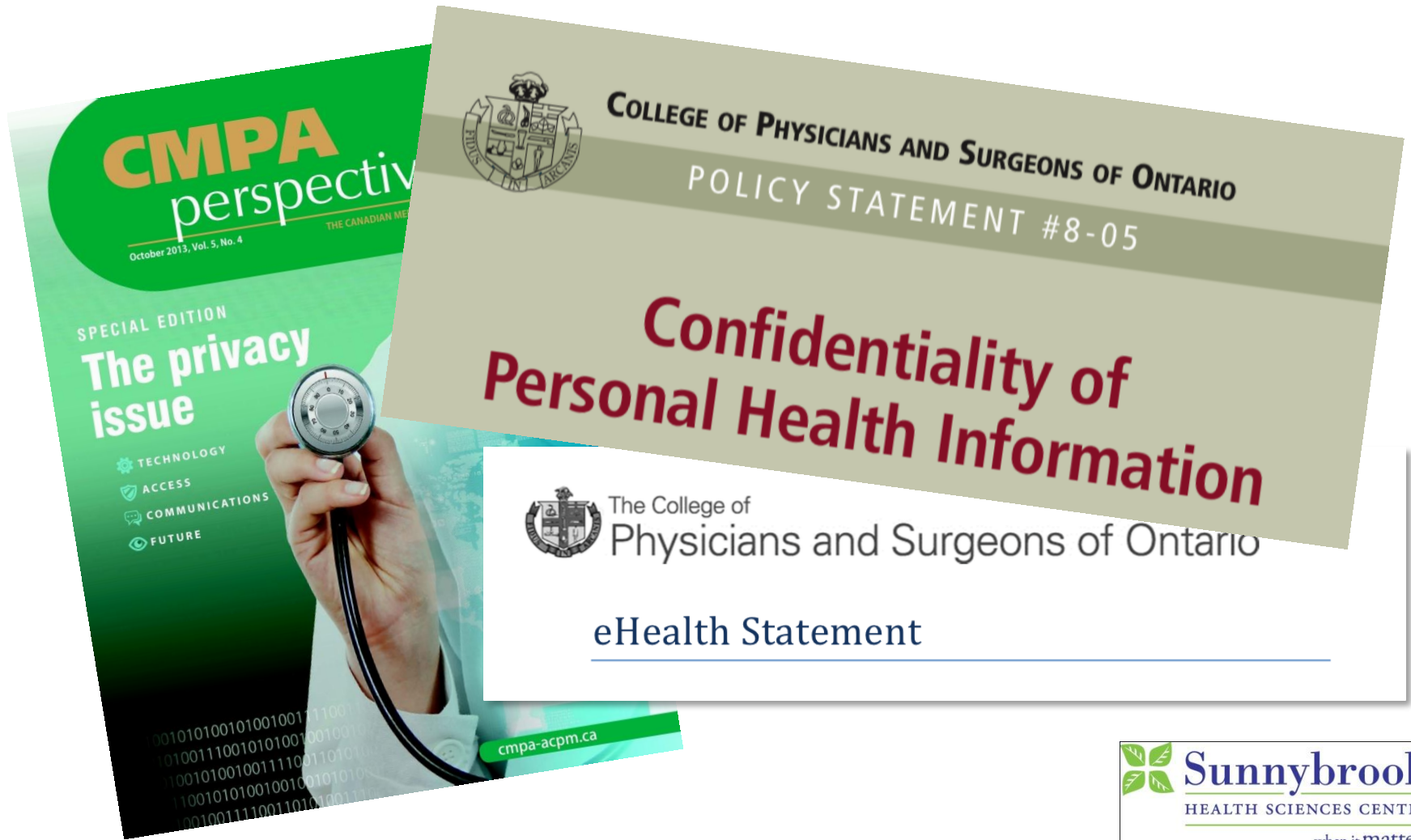
- Confidentiality and security of system
- Request emergency service?

Lack of emotional cues that may exist in face to face or phone interactions

Some studies show increased workload

- ALSO: Email addresses change
- No record in the chart unless added
- No tracking mechanism for minors who come of age

# Existing Recommendations





# Numerous Guidelines

## NATIONAL

CMPPA

CFPC

RCPSC

CMA

## PROVINCIAL

College of Physicians and Surgeons

Privacy laws/ commissioners

Provincial medical associations

## LOCAL

Health care institutions

Employers

... often with conflicting advice



# CMPA 2013

“Physicians considering using unsecured or unencrypted email or text messaging should do so only for information that does not include identifiable personal health information. For example, emails may be used to request and confirm appointments with the patient’s consent. Physicians wanting to make limited use of unencrypted email and text messages should advise their patients of how these messages will be used, the type of information that will be sent, and how the emails or texts will be processed”



# CMPA 2013

“Patients should also be informed about the risks of using email or text messages, and their agreement and the discussion should be documented in the record. Physicians should consider using a written consent form to document the patient’s consent to using email communication and to acknowledge the associated risks”

# CMPA Consent Form

## Consent to use electronic communications

### PHYSICIAN INFORMATION:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Email (if applicable): \_\_\_\_\_

Phone (as required for Service(s)): \_\_\_\_\_

Website (if applicable): \_\_\_\_\_

The Physician has offered to communicate using the following means of electronic communication ("the Services") [check all that apply]:

☐ Email ☐ Videoconferencing (including \_\_\_\_\_)

☐ Text messaging (including instant messaging) ☐ Website/Portal

☐ Social media (specify): \_\_\_\_\_

☐ Other (specify): \_\_\_\_\_

### PATIENT ACKNOWLEDGMENT AND AGREEMENT:

I acknowledge that I have read and fully understand the risks, limitations, conditions of use and the privacy policy of the selected electronic communication Services more fully described in the Appendix to this consent form, associated with the use of the Services and the Physician's staff. I consent to the conditions and will follow the instructions as well as any other conditions that the Physician may impose on communications with the Physician or the Physician's staff.

I acknowledge and understand that despite recommendations that encryption software be used for electronic communications, it is possible that communications with the Physician or the Physician's staff may not be encrypted. Despite this, I agree to communicate with the Physician or the Physician's staff with a full understanding of the risk.

I acknowledge that either I or the Physician may, at any time, withdraw the option of using the Services upon providing written notice. Any questions I had have been answered.

Patient name: \_\_\_\_\_

Patient address: \_\_\_\_\_

Patient home phone: \_\_\_\_\_

Patient mobile phone: \_\_\_\_\_

Patient email (if applicable): \_\_\_\_\_

Other account information required to communicate via the Services (if applicable): \_\_\_\_\_

Patient signature: \_\_\_\_\_

Witness signature: \_\_\_\_\_

## APPENDIX CONTINUED

### Instructions for communication

You must:  
\_\_\_\_\_

\_\_\_\_\_ in the patient's  
\_\_\_\_\_ or, other account  
\_\_\_\_\_ via the Services.

\_\_\_\_\_ messaging and/or

\_\_\_\_\_ line an appropriate  
\_\_\_\_\_ unimunication (e.g.,  
\_\_\_\_\_ ill name in the body

\_\_\_\_\_ ns to ensure they are  
\_\_\_\_\_ on is provided before

\_\_\_\_\_ you receive an  
\_\_\_\_\_ Physician, such as by  
\_\_\_\_\_ receipts" to be sent.  
\_\_\_\_\_ nfidentiality of  
\_\_\_\_\_ using screen savers  
\_\_\_\_\_ rds.  
\_\_\_\_\_ written

I acknowledge that I have read and fully understand the risks, conditions, and instructions described in this Appendix.

## APPENDIX

### Risks of using electronic communication

The Physician will use reasonable means to protect the security and confidentiality of information sent and received using the Services ("Services" is defined in the attached Consent to use electronic communications). However, because of the risks outlined below, the Physician cannot guarantee the security and confidentiality of electronic communications:

- Use of electronic communications to discuss sensitive information can increase the risk of such information being disclosed to third parties.
- Despite reasonable efforts to protect the privacy and security of electronic communication, it is not possible to completely secure the information.
- Employers and online services may have a legal right to inspect and keep electronic communications that pass through their system.

- Electronic communications can introduce malware into a computer system, and potentially damage or disrupt the computer, networks, and security settings.
- Electronic communications can be forwarded, intercepted, circulated, stored or even changed without the knowledge or permission of the Physician or the patient.
- Even after the sender and recipient have deleted copies of electronic communications, back-up copies may exist on a computer system.
- Electronic communications may be disclosed in accordance with a duty to report or a court order.
- Videoconferencing using services such as Skype or FaceTime may be more open to interception than other forms of videoconferencing.

- If the email or text is used as an e-communication tool, the following are additional risks:
  - Email, text messages, and instant messages can more easily be misdirected, resulting in increased risk of being received by unintended and unknown recipients.
  - Email, text messages, and instant messages can be easier to falsify than handwritten or signed hard copies. It is not feasible to verify the true identity of the sender, or to ensure that only the recipient can read the message once it has been sent.

### Conditions of using the Services

- While the Physician will attempt to review and respond in a timely fashion to your electronic communication, the Physician cannot guarantee that all electronic communications will be reviewed and responded to within any specific period of time. The Services will not be used for medical emergencies or other time-sensitive matters.

- If your electronic communication requires or invites a response from the Physician and you have not received a response within a reasonable time period, it is your responsibility to follow up to determine whether the intended recipient received the electronic communication and when the recipient will respond.

- Electronic communication is not an appropriate substitute for in-person or over-the-telephone communication or clinical examinations, where appropriate, or for attending the Emergency Department when needed. You are responsible for following up on the Physician's electronic communication and for scheduling appointments where warranted.

- Electronic communications concerning diagnosis or treatment may be printed or transcribed in full and made part of your medical record. Other individuals authorized to access the medical record, such as staff and billing personnel, may have access to those communications.

- The Physician may forward electronic communications to staff and those involved in the delivery and administration of your care. The Physician might use one or more of the Services to communicate with those involved in your care. The Physician will not forward electronic communications to third parties, including family members, without your prior written consent, except as authorized or required by law.

- The Services will not be used to communicate sensitive medical information about matters such as sexually transmitted disease, AIDS/HIV, mental health, developmental disability, or substance abuse. Similarly, the Physician will not discuss such matters via the Services.

- Some Services might not be used for therapeutic purposes or to communicate clinical information. Where applicable, the use of these Services will be limited to education, information, and administrative purposes.

- You agree to inform the Physician of any types of information you do not want sent via the Services, in addition to those set out above, including:

\_\_\_\_\_

You can add to or modify this list at any time by notifying the Physician in writing.

- The Physician is not responsible for information loss due to technical failures associated with your software or internet service provider.

\_\_\_\_\_ Patient initials

- If you require immediate assistance, or if your condition appears serious or rapidly worsens, you should not rely on the Services. Rather, you should call the Physician's office or take other measures as appropriate, such as going to the nearest Emergency Department or urgent care clinic.
- Other conditions of use in addition to those set out above: (patient to initial)

\_\_\_\_\_

I acknowledge that I have read and fully understand the risks, conditions, and instructions described in this Appendix.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Patient initials





# CMPA Consent Form Highlights

Physicians cannot guarantee security and confidentiality of electronic communications.

Can be misdirected, forwarded, intercepted, etc.

Email communications may be included in the patient's record

Patient's responsibility to advise of change in email address

Not to be used for urgent issues



# CPSO

1. eHealth Statement 2013 - Physician's Role
  - “Use eHealth for the benefit of patients... in a way that ensures patient confidentiality, protects the doctor-patient relationship and maintains public trust in the profession”
2. Confidentiality of Personal Health Information
  - “The College strongly advises that physicians obtain patient consent to use electronic means for communicating personal health information...As a way of recording the patient's express consent, the CMPA has provided a written consent form that can be used whenever possible. Completed consent forms should be included in the patient's medical record”



# A Plausible Solution



# Ocean Software in Sunnybrook Family Practice

Introduced in December 2014

Academic FHO:

- 13 staff physicians on 3 teams
- 25+ residents/medical students,
- 20+ allied health staff,
- 9300 patients

Initial Pilot involved one team of 4 staff physicians

Using Practice Solutions EMR

Using Samsung Galaxy 10.1" tablets



# Ocean Software

Secure, encrypted, PHIPA-compliant, cloud-based health communication platform

Patients can complete surveys on tablets or via web-based invitation

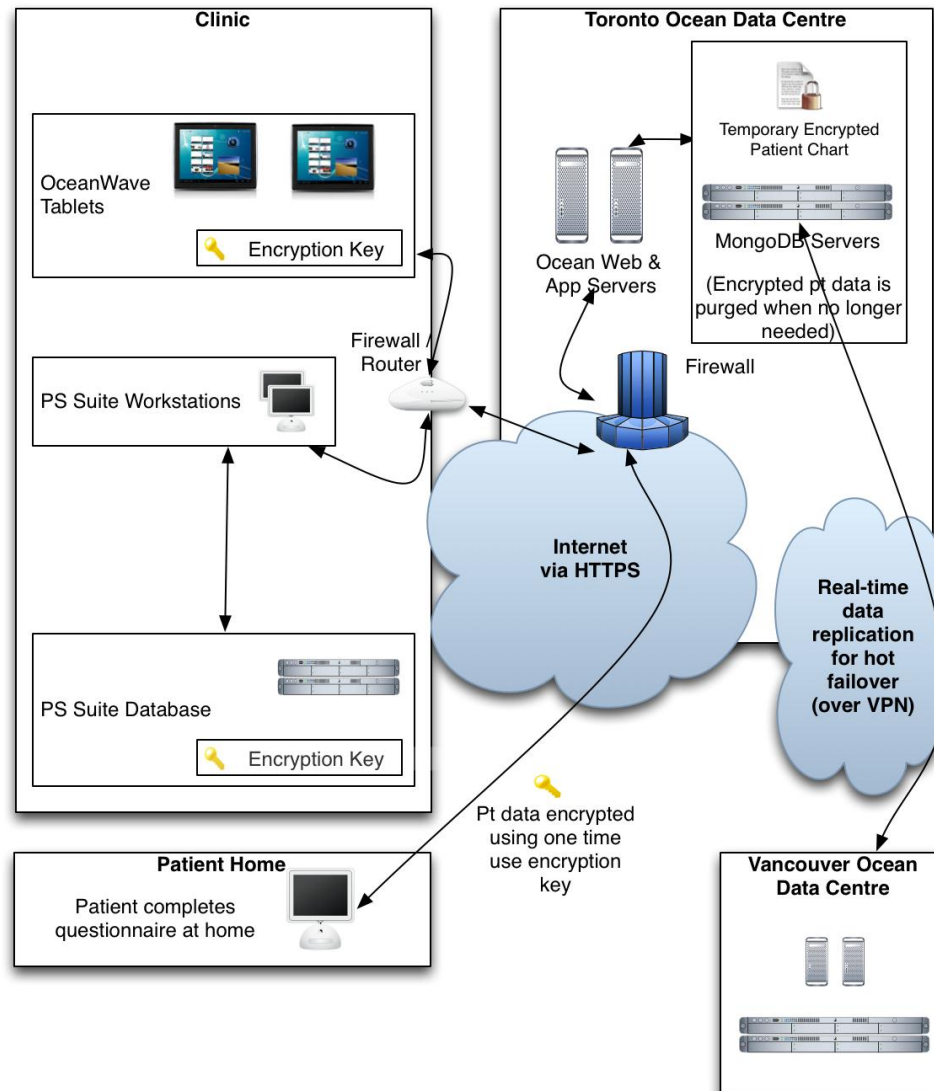
Directly integrated with Practice Solutions EMR

Operated by CognisantMD

([www.cognisantmd.com](http://www.cognisantmd.com))

Currently used by over 2000 clinicians in Ontario

# Ocean Software Architecture



# Ocean Software Integration with Practice Solutions

P5 Sharon Domb - PSS

File Edit Style Settings Patient View Data Letter Health Portal

**Test, Domb Judith**  
 2075 Bayview Ave. Suite A112  
 Toronto ON M4N 3M5  
 416-480-4939(H) 416-480-6100 x 3930(B) 416-987-6543(M)  
 \*NA14\*

Birthdate: Dec 23, 1967 Sex: F  
 Health #: unknown, FHO Enrolled  
 Last Billed: Dec 8, 2011  
 MD: S.B. Domb

next visit: not booked age 47 yr 21681

MOM - breast Ca, age 70  
 Father - DM2 age 50  
 Appendectomy, Age: 17

Gastroesophageal reflux  
 HTN  
 Thyroid cancer...  
 COPD  
 Diabetes type 2

Amoxicillin 500 mg capsule 1 tab bid for 10 d  
 Atenolol 25 mg Tablet 1 tab po daily  
 hydrochlorothiazide 1 tab po daily  
 Lamisil 1% Cream with 1% hydrocortisone powder apply bid to affected areas  
 Losec 20 mg capsule 1 tab od  
 massage therapy  
 Miconazole powder in 15 g bactroban 2% ung and 15 g 0.1% betamethasone ung to final conce...

PENICILLIN G SODIUM-> Angioedema...  
 Sulfu (sulfonamides)

Adacel Jan 1, 2004 Married, 2 kids  
 Pevnar 13 May 22, 2012 Next colonoscopy: 2021  
 flu shot Oct 1, 2012

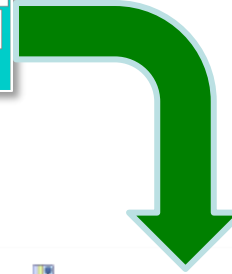
HbA1C  
 never smoked  
 2-4 alcoholic drinks per week

ccan Lab Req SOAP ODB Meds CMA DynaMed Guidelines Google Images

Email consent: Oct 29, 2014 Deny Grant Email: s Next of Kin: steve @ (416) 523-1253 @ Spouse/Partner @ PoA:Y

Last CPX: Last Flu Shot Oct 1, 2012 Last FOBT Jun 30, 2014 Last Colonoscopy Dec 16, 2011 Last Pap Jul 5, 2013 Last BMD no data Last Mammo Jul 2, 2013

Diabetes Visit CDM Diabetes Form Diabetes Report Card Graph HbA1C Flowsheet DM Lab Req Lab Req CCAC Ref Bill K030 Last Q040



ccan Lab Req SOAP ODB Meds CMA DynaMed Guidelines Google Images

Email consent: **None** Oct 29, 2014 Deny Grant Email: Next of Kin: steve @ (416) 523-1253 @ Spouse/Partner @ PoA:Y

Options are:

- None** – before consent process undertaken
- Granted** – if patient agrees
- Refused** – if patient refuses

# Ocean Software

## Clerical Staff Experience

1. Opens patient's chart and clicks on "Ocean" in Ocean toolbar. Unique 3 digit number appears in chart automatically.



2. Enters 3 digit number in Ocean tablet



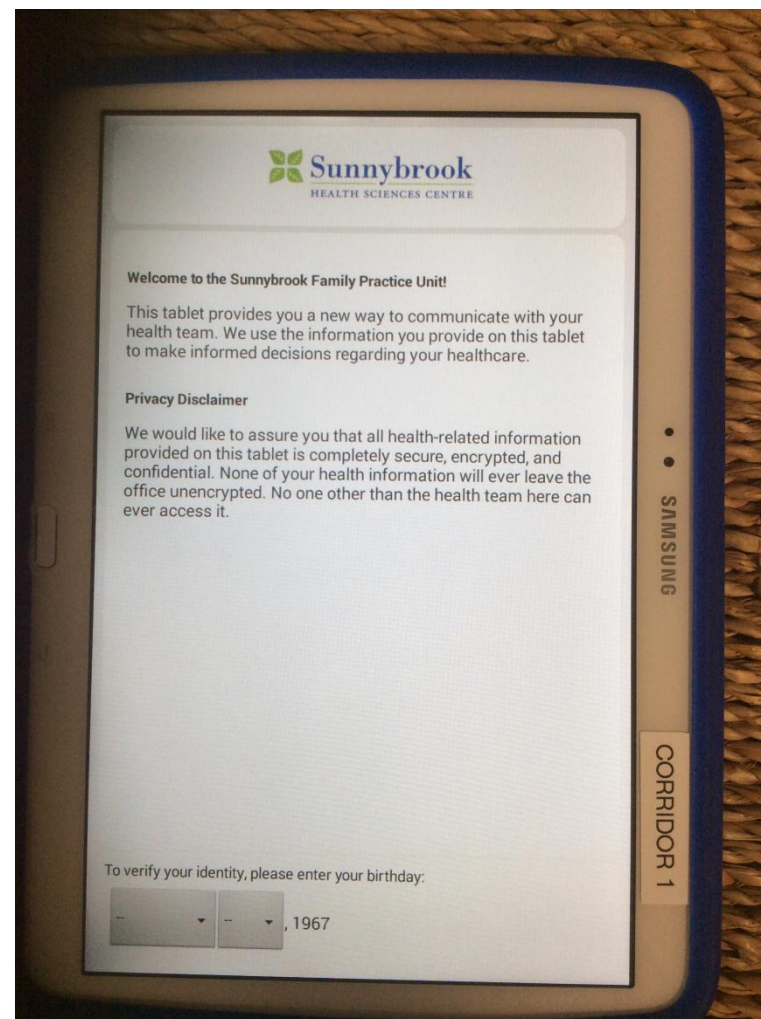
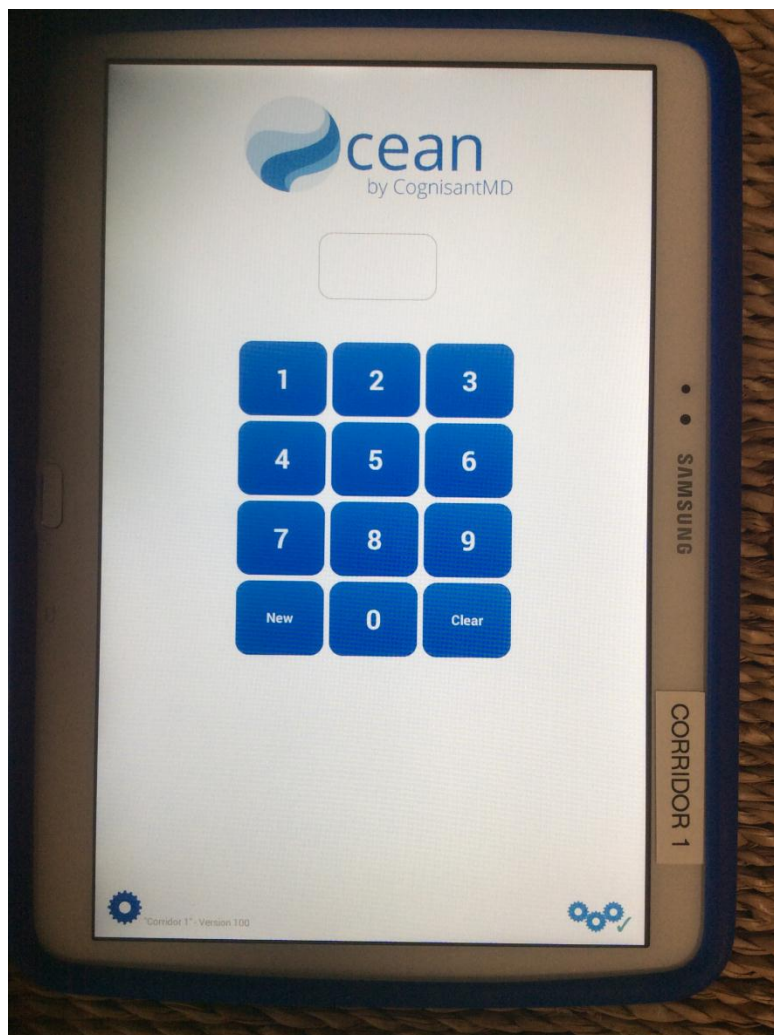
3. Give tablet to patient





# Ocean Software Patient Experience

1. Enters birth date as second point of verification
2. Reads email consent and accepts or declines, enters email address if accepting
3. Gives tablet back to clerical staff





First, please take a moment to confirm your demographic information. Tap anything that needs to be fixed and use the on-screen keyboard.

First Name	Domb
Second Name	Judith
Last Name	Test
Preferred Name	
Address	2075 Bayview Ave.
Address Line 2	Suite A112
City	Toronto
Province	ON
Postal Code	M4N 3M5
Home Phone	416-480-4939
Business Phone	416-480-6100
Business Extension	3930
Mobile Phone	416-987-6543

Emergency Contact

Name	steve
Phone	(416) 523-1253
Relationship	Spouse/Partner
Has Power-of-Attorney for Personal Care?	Yes

Back Next

SAMSUNG  
CORRIDOR 1

Thank you for using our new tablet technology. We would be interested to hear how you liked it.

Would you be willing to complete an anonymous survey on the tablet's usability?

Yes No

Back Next

SAMSUNG  
CORRIDOR 1





**Sunnybrook**  
HEALTH SCIENCES CENTRE

Dear Patient

Sunnybrook Family Practice and Sunnybrook Academic Family Health Team (SFP/SAFHT) support the use of email for the purpose of communicating with our patients regarding their clinical care. A SFP/SAFHT care provider may agree to communicate with you using email but is not required to do so. You may choose to communicate with SFP/SAFHT using email but you are not required to do so. If you choose to do so, signing this consent form provides SFP/SAFHT with your permission to communicate with you via email and is required before we will respond to your email or send you email for the first time. This consent can be withdrawn at any time by contacting SFP/SAFHT's Privacy Office as indicated below.

A parent or guardian who is a substitute decision maker may consent on behalf of a person who is under the age of 14 years, but not if the person withholds or withdraws consent for the Parent/Guardian to send/receive email to/from SFP/SAFHT on their behalf. The consent of the Parent/Guardian will become void when the person reaches 14 years of age. Capable persons over the age of 14 years who wish to communicate with SFP/SAFHT using email must themselves expressly consent to the sending/receiving of email to/from SFP/SAFHT using this form.

If you choose to communicate with SFP/SAFHT using email, you should be aware that email messages you send to or receive from SFP/SAFHT:

- may not be secure. SFP/SAFHT cannot guarantee the security of any email message transmitted outside of Sunnybrook's email system;
- may exist as an electronic or paper record within SFP/SAFHT and/or Sunnybrook indefinitely.

For these reasons, you should not use email to communicate any information, including personal health information, to SFP/SAFHT, or to receive any information which, in your opinion, could be harmful to you if read by an unintended recipient.

SFP/SAFHT CANNOT GUARANTEE THAT YOUR EMAIL WILL BE RECEIVED, READ OR RESPONDED TO WITHIN ANY PARTICULAR PERIOD OF TIME. YOU MUST NOT COMMUNICATE WITH SFP/SAFHT VIA EMAIL

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SAMSUNG CORRIDOR 1

I understand that SFP/SAFHT cannot guarantee the security of email messages that I send to or receive from SFP/SAFHT.

I agree not to use email to communicate emergency or urgent information about myself and understand that SFP/SAFHT does not guarantee the receipt or review of any email messages that I may send to SFP/SAFHT.

I understand and agree that individual SFP/SAFHT care providers may make decisions about my treatment based on information I provide through email and that this information may form part of my health record.

I understand that I may stop using email for clinical communication purposes at any time, at which point I will notify SFP/SAFHT in writing of my decision to stop using email for these purposes. I understand that this consent remains effective unless and until it is withdrawn.

I understand that individual SFP/SAFHT care providers may stop using email for clinical communication purposes at any time, at which point s/he will inform me in writing or notify me about this decision at the time of my next appointment.

**Consent for Patients Under Age 14**

My name:

My relationship with Domb Two Test

On behalf of Domb Two Test, I confirm that I have read and agree to these terms and I wish to communicate with SFP/SAFHT for the purposes of clinical care of Domb Two Test

Yes No

Enquiries regarding SFP/SAFHT's privacy policies and procedures as they affect email communications should be directed to the SFP/SAFHT Privacy Office at (416) 480-6183.

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SAMSUNG CORRIDOR 1



# Ocean Software Automatic Process

1. Patient's email address entered in PSS demographics
2. Email consent status updated on toolbar, along with email address if accepted, and date of consent
3. Searchable note entered in chart on date of consent

Oct 29, 2014

SD/Ocn

Consent: @EmailConsent: Granted - The patient provides informed consent to communicate with the care team using email.  
The email address to use is: sharon.domb@sunnybrook.ca

**NOTE:** Consent is automatically revoked when patient turns 14 years of age

# Ocean Software Integration with Practice Solutions

PS Sharon Domb - PSS

File Edit Style Settings Patient View Data Letter Health Portal

Test, Domb Judith  
2075 Bayview Ave. Suite A112  
Toronto ON M4N 3M5  
416-480-4939(h) 416-480-6100 x 3930(B) 416-987-6543(M)  
"NA14"

Birthdate: Dec 23, 1967 Sex: F  
Health #: unknown, FHO Enrolled  
Last Billed: Dec 8, 2011  
MD: S.B. Domb

next visit: not booked age 47 yr 21681

MGM - breast Ca, age 70  
Father - DM2 age 50  
Appendectomy, Age: 17

Gastroesophageal reflux  
HTN  
Thyroid cancer...  
COPD...  
Diabetes type 2  
Amoxicillin 500 mg capsule 1 tab bid for 10 d  
Atenolol 25 mg Tablet 1 tab po daily  
hydrochlorothiazide 1 tab po daily  
Lamisil 1% Cream with 1% hydrocortisone powder apply bid to affected areas  
Losec 20 mg capsule 1 tab od  
massage therapy  
Miconazole powder in 15 g bactroban 2% ung and 15 g 0.1% betamethasone ung to final conce.

PENICILLIN G SODIUM -> Angioedema...  
Sulfa (sulfonamides)  
Adacel Jan 1, 2004 Married, 2 kids  
Prevmar 13 May 22, 2012 Next colonoscopy: 2021  
flu shot Oct 1, 2012

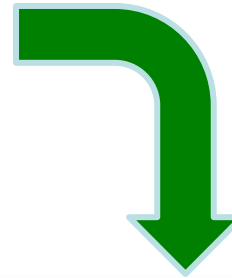
HBATC  
never smoked  
3 - 4 alcoholic drinks per week

ccan Lab Req SOAP ODB Meds CMA DynaMed Guidelines Google Images

Email consent: Granted - Oct 29, 2014 Deny Grant Email: sbd1234@yahoo.ca Next of Kin: steve @ (416) 523-1253 @ Spouse/Partner @ PoA:Y

Last CPX: Last Flu Shot: Oct 1, 2012 Last FOBT: Jun 30, 2014 Last Colonoscopy: Dec 16, 2011 Last Pap: Jul 5, 2013 Last BMD no data Last Mammogram: Jul 2, 2013

Diabetes Visit CDM Diabetes Form Diabetes Report Card Graph HbA1C Flowsheet DM Lab Req Lab Req CCAC Ref Bill K030 Last Q040



ccan Lab Req SOAP ODB Meds CMA DynaMed Guidelines Google Images

Email consent: **Granted** - Oct 29, 2014 **Deny** **Grant**

Email: sbd1234@yahoo.ca

Next of Kin: steve @ (416) 523-1253 @ Spouse/Partner @ PoA:Y

Options are:

**None** – before consent process undertaken

**Granted** – if patient agrees

**Refused** – if patient refuses



# Patient Satisfaction

Assessed using the System Usability Scale (SUS)

Not surprisingly younger patients and those who use a tablet or smartphone regularly scored higher and needed less help to use the Tablet

Overall there were high SUS scores but there is quite a bit of bias in those who completed the SUS



# Benefits

1. Clear and immediate documentation of email consent (paper process had an obvious delay)
2. Automatic integration with EMR
3. Most patients found the tablets easy to use
4. No paper to lose or scan or shred





# Challenges

1. Hospital network issues
2. Some patients not comfortable with technology
3. Did not improve collection of email consent forms. Numbers of forms completed was dependent more on the secretary than paper vs. tablet
4. The tablets are subject to normal wear and tear



# Questions?

