Content Analysis of Emails in Medicine

Patient email communications offered as a substitute for direct psychiatric outpatient care.

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RATIONALE

Electronic communication (e-mail, instant messaging, social networks, etc.) is now essential as a business and social communication tool, but remains rare as an intervention technique in doctor-patient communication. E-mail offers an increasingly knowledgeable and wired patient population quicker and more efficient access for basic medical services (e.g. scheduling appointments, reordering prescriptions, receiving lab test results, simple clarification of medical instructions, etc.) than current use of telephone and/or lengthy waits for office appointments to address these basic needs.

We also believe e-mail patient-physician contact is more efficient (i.e. will require 2-10 minutes of physician time) in responding to many routine clinical situations that currently require a scheduled individual office visit.

The Mood Disorders Association of BC (MDABC) Psychiatric Urgent Care Program offers an alternative model of care. The model uses either group medical visits (GMV) or regular e-mail communication between psychiatrist and patient in lieu of individual follow up appointments. A comparative economic analysis indicates that our model is over four times as efficient in terms of psychiatric costs per patient compared to traditional psychiatric outpatient care. We are now examining the efficacy of our model compared to traditional care.

METHODOLOGY

All patients attending the MDABC Psychiatric Urgent Care Program are given a handout at intake on 'how to e-mail with your doctor' (see Apendix II)

We have completed an initial content analysis of the patient-psychiatrist e-mail communications to explore the extent to which e-mail messages in lieu of individual follow up visits, mimic the communication dynamics of traditional follow-up visits in psychiatric outpatient care.

A random sample of e-mail correspondence (N=42) exchanged between one of the program psychiatrists and six patients (3 males, 3 females; average age = 42; diagnosis: 3 major depression, 1 bipolar II, 1 dysthymic disorder, 1 general anxiety disorder) from June - October 2010 was analyzed to provide user characteristics, the extent of e-mail communication, and the nature of such communications.

A research associate read each e-mail and the patient request and the psychiatrist's response contained within it was analyzed for (1) extent of e-mail communication (time from the intake assessment, frequency, word counts, date and time of exchange), (2) nature of exchange (task-focused exchange, socio-emotional exchange), (3) details of patient requests and (4) psychiatrist's responses. The taxonomy of patient requests and psychiatrist's responses was developed based on the literature and after an early examination of patient-psychiatrist e-mail exchange prior to the study period.

RESULTS

1. On average, patients sent their first e-mail to the psychiatrist within nine days of the intake assessment. On average e-mail messages received contained 207 words. E-mail responses sent by the psychiatrist contained 143 words and were returned within 11.85 hours of receipt. The psychiatrist estimates each e-mail response required 2 -10 minutes of time.
2. Of the twenty responses sent by the psychiatrist: the psychiatrist responded weekday late afternoons/evenings or weekend evenings. Three quarters of the messages from the patients were sent on weekdays.
3. Category Breakdown of total words in e-mail exchange (7409)*

A. 6470 words (88%) - task focused communication on medical matters

i.	**20%**	information exchanges on specific symptoms
ii.	**44%**	information exchanges on medication
iii.	**15%**	information about sub-specialty care
iv.	**15%**	medical administrative/pharmacy related matters
v.	**6%**	other

B. 939 words (12%) - socio-emotional exchanges

i.	**26%**	expression of appreciation/gratitude
ii.	**27%**	expression of worry/anxiety
iii.	**36%**	other non medical topics
iv.	**10%**	direct encouragement from psychiatrist

*see appendix I for an example of categories A i - v; B i - iv

DISCUSSION

In the specialty of psychiatry the use of psychiatrist-patient e-mail follow up would appear far more time efficient when one considers the outpatient psychiatric follow up appointments are typically scheduled for 30 minutes if not longer. The convenience for patients who could have basic or relatively simple concerns answered immediately (i.e. typically <24 hours), medication side effects corrected or treatments altered before the lengthy wait for an office appointment would appear evident. In addition to the efficiency for patients, we would suggest that this intervention could result in more efficient use of psychiatric office time—allowing psychiatrists to see additional new psychiatric referrals where current wait times in our Province for a psychiatric referral is often six months (or the dreaded mantra too often heard in referring GP's offices that 'the psychiatrist's wait list is closed').

Our findings suggest that e-mail communications between psychiatrist and patient can accomplish informational tasks to meet the medical needs of these patients. The rapid response offered by electronic communication appears to build rapport and enhances the physician-patient relationship.

REFERENCES

1. Recupero PR: E-mail and the psychiatrist-patient relationship. J Am Acad Psychiatry Law 2005; 33: 465-475
2. Seeman MV, Seeman M et al: E-Psychiatry using web-based communications to connect with patients. Psychiatrist Times 2010; 27: 1-7

APPENDIX I

54 year old policeman • Diagnosis: major depressions disorder • Initiated treatment via email with fluoxetine.

Sent: July 22, 2010
To: Ron Remick

Hi Dr. Remick,

Initial visit at MDA June 3, 2010, diagnosed depression.

I have been on 20mg fluoxetine and sleep well with 50mg trazodone.

B/i. **My world in a nut shell is better.** I noticed big differences in my tolerance level in the home with my teens and wife. Minor family problems seemed so complex and unsolvable in the past, now just seem like normal living. At times in the past where I gave myself permission to be angry at trivial issues I now give myself a moment to wonder, "what would be the best way to deal with this?"

I have been able to pin point some triggers to my depression, which still rears its ugly head from time to time. I will be seeking out some cog. beh. therapy... as I now have clearer picture to see what triggers are.

I am sleeping much sounder with meds... I am anxious though as to my reliance on sleeping pills...

My work world has changed I am back in uniform patrolling... I work steady early morning shift 4 days on 4 off... I am up at 0330 and off about 3pm... so far I am happy with my body and mind adjusting...

SO... what next?... 1 1/2 months has past. I am grateful for this normal time.

Are you facilitating any groups this Summer? I would like to attend.

I have about a week left of second order prescriptions.

Reply Sent: June 22, 2010

Hi. This sounds like a very positive early report. The usual therapeutic dose of fluoxetine is 20-60mg and most start to show a response on day 10-14 so you are right on time. I suggest we leave the two medications the same (Take more or less of the trazodone if your sleep gets disturbed again and/or you feel 'too drugged' in the morning) and let's give this does about four weeks. So update me again about July 5-10 on your return (review symptoms you described which are in paragraph 2 or 3 of my dictated report) when you update me.

Have your pharmacy call me (604-682-2344 ext. 62121) no later than Friday June 25 as I am out of town midnight June 25 - June 29.

Sent: June 22, 2010
To: Ron Remick

Seen at MDA Thurs June 3 2010.

Diagnosed: major depressive disorder

I missed giving you the June 15 update...

Hi. It was only one day I went back to 10mg Fluoxetine. I am handling 20mg fine. The medication no longer gives me any adverse side affect either the Fluoxetine 20mg or the Trazodone 50mg.

In fact I do feel a subtle altered state in my relations with family... I feel more settled in the daily dealings with my daughters and wife... I shrug my shoulders at things that would put me off before.

I am going out of town for a week June 27 - July 3.

I will call pharmacist to make arrangements for a refill... I take it he will call you? I thought I would ask for say another 50?

20mg caps of fluoxetine would be fine and 50mg tabs of trazodone seems to work good too.

Thanks.

Reply Sent: June 11, 2010

A/i. **Headaches and gastro side effects occur** in about 30% of users but typically (in >80%) resolve in 4-7 days. So if you want to try 10/20mg on alternate days for a week that is fine.

What about trying a whole trazodone or 50mg for your sleep?

B/iv. **You will get better!**

Update me again in a week.

Ron

Sent: June 11, 2010
To: Ron Remick

Diagnosed: major depressive disorder

Thurs June 10, day 2 of 20mgs of fluoxetine.

A/i. No real symptoms on day 1 of 20mgs, but today by noon it was like a hang over and partly like the interior of my body was vibrating, no nausea, **medium strength headache**, until I took 1000mgs Tylenol and slept for an hour. I feel normal now at bed time. **My stomach disorder** is quite evident today as well, it is affecting my sleep I will book an appointment with Morrell Fri. I am awaiting a colonoscopy... I might have to push for sooner than later... it worries me.

I have continued taking 1/2 50mg trazodone... don't really notice much better sleep after 4 am.

I didn't work today but Fri. I am back, I think I will draw back to 10mgs fluoxetine, then 20 - 10 -20...

What do you think doc?

Reply Sent: June 6, 2010

I suggest:

A/ii. 1. You continue the trazodone to insure you are sleeping. The usual dose is 25mg - 150mg so if you feel it is not enough feel free to take more.
2. I would suggest on Tuesday you **double the dose of fluoxetine to 20mg** or two of the capsules and then we will give it 2-3 weeks to see if there is any improvement (it also comes as a 20mg capsule if it helpful and you need to reorder)

A/iii. 3. **We will be evaluating improvement** by whether there is any change in the symptoms (3rd paragraph of my report which I have attached as it may not have reached you via mail) and I will be interested in which symptoms are better, which are worse and which are unchanged.

4. I have also attached our guidelines for email; correspondences and I would like you to update me in about 10 days (as I am away June 9-13) but will have email access during that time.

A/iv. 5. **If and when you need more medication** if you call your pharmacist, tell him what meds and the current dose and how much you want (1, 2, 3 month supply) and ask him to call me – I typically return pharmacy phone calls Monday-Thursday in less than two hours and do return them at other times within 24 hours.

Update me again about June 15.

You will get better!

Ron

Sent: June 6, 2010
To: Ron Remick

Hi Dr Remick.

I was to email you yesterday (Saturday) but was on Mayne Island for weekend.

Third day of 10mg Prozac and 1/2 50mg Trazodone...

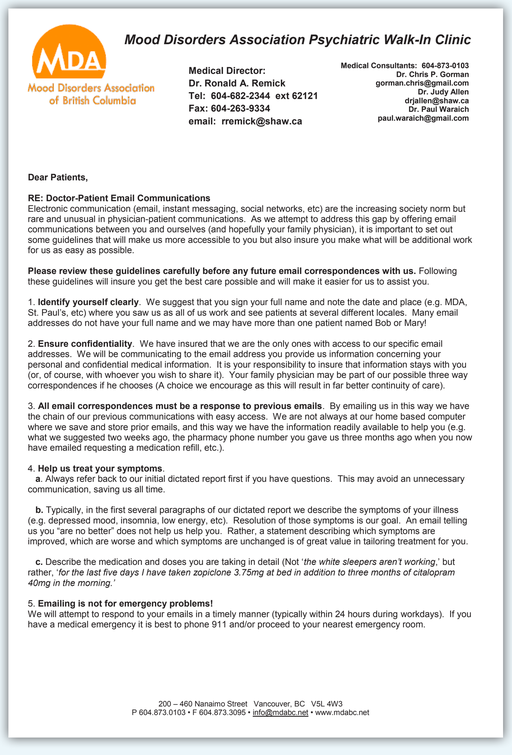
Maybe a headache second day that is about it...

I feel like I had good sleeps... waking to pee at 4... but able to get back to sleep.

What now?

APPENDIX II

Mood Disorders Association Doctor-Patient Email Communications Guidelines.



Mood Disorders Association Psychiatric Walk-In Clinic

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Dear Patients,

RE: Doctor-Patient Email Communications
Electronic communication (email, instant messaging, social networks, etc) are the increasing society norm but rare and unusual in physician-patient communications. As we attempt to address this gap by offering email communications between you and ourselves (and hopefully your family physician), it is important to set out some guidelines that will make us more accessible to you but also insure you make what will be additional work for us as easy as possible.

Please review these guidelines carefully before any future email correspondences with us. Following these guidelines will insure you get the best care possible and will make it easier for us to assist you.

1. **Identify yourself clearly**. We suggest that you sign your full name and note the date and place (e.g. MDA, St. Paul's, etc) where you saw us as all of us work and see patients at several different locales. Many email addresses do not have your full name and we may have more than one patient named Bob or Mary!

2. **Ensure confidentiality**. We have insured that we are the only ones with access to our specific email addresses. We will be communicating to the email address you provide us information concerning your personal and confidential medical information. It is your responsibility to insure that information stays with you (or, of course, with whoever you wish to share it). Your family physician may be part of our possible three way correspondences if he chooses (A choice we encourage as this will result in far better continuity of care).

3. **All email correspondences must be a response to previous emails**. By emailing us in this way we have the chain of our previous communications with easy access. We are not always at our home based computer where we save and store prior emails, and this way we have the information readily available to help you (e.g. what we suggested two weeks ago, the pharmacy phone number you gave us three months ago when you now have emailed requesting a medication refill, etc.).

4. **Help us treat your symptoms**.
a. Always refer back to our initial dictated report first if you have questions. This may avoid an unnecessary communication, saving us all time.

b. Typically, in the first several paragraphs of our dictated report we describe the symptoms of your illness (e.g. depressed mood, insomnia, low energy, etc). Resolution of those symptoms is our goal. An email telling us you "are no better" does not help us help you. Rather, a statement describing which symptoms are improved, which are worse and which symptoms are unchanged is of great value in tailoring treatment for you.

c. Describe the medication and doses you are taking in detail (Not *'the white sleepers aren't working,'* but rather, *'for the last five days I have taken zopiclone 3.75mg at bed in addition to three months of citalopram 40mg in the morning.'*

5. **Emailing is not for emergency problems!**
We will attempt to respond to your emails in a timely manner (typically within 24 hours during workdays). If you have a medical emergency it is best to phone 911 and/or proceed to your nearest emergency room.

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