What's your story?

Patient Voice™

Version 2.0

Everybody has a story …

- The botched diagnosis that led to the early demise of a family member.
- The chronic epilepsy that defies successful treatment.
- The frustration with getting an appointment to see a General Practitioner, or worse, a specialist.
- What drugs and other treatments really work?
- When can we fully trust the health system again?

… and you know the situation is not getting any better.

Issues

1. A rapidly growing and aging population.
2. Poor paper-based health records.
3. Duplication, frustration, confusion and mistakes.
4. The scarcity of doctors, nurses and technicians.
5. The health industry is not “patient-centric”.

The **Patient Voice**™ Solution

1. “Personal Health Records” are patient controlled health records, accessed online.

2. Better health record accuracy provides evidence to doctors, improving treatment outcomes.

3. Serving people suffering from chronic disease, their families, healthy people, and physicians.

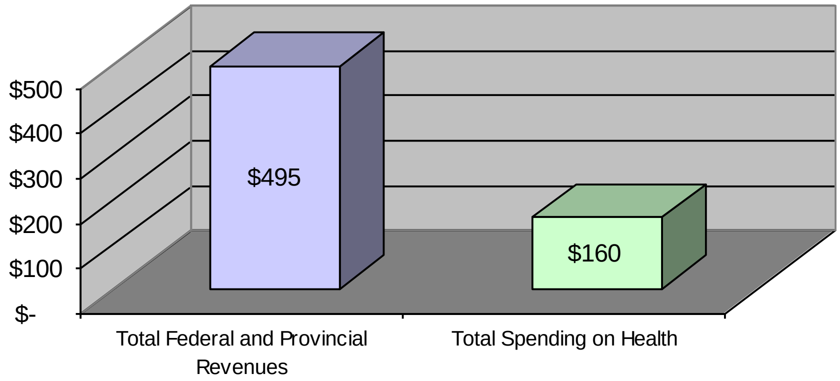
4. An easy to use supplement to existing health records, monitoring patient’s illness trajectory.

5. Supports advanced chronic disease research.

Are we getting good value?

Tax Revenue vs. Health Spending in Canada, 2007

(C$ billions)



About $0.32 of every tax dollar collected in Canada goes into the health system. That system is heralded by many as exemplary.

Source: Ministry of Finance, Canada; CIHI; Ministry of Finance of each province

> "When doctors graduate from medical school, the top 33% of the class make the best researchers, the middle 33% make the best doctors, and the bottom 33% make the most money."
>
> *Source: BC Provincial Health Officer, 2003*

> "Medical guesswork. From heart surgery to prostate care, the health industry knows little about which common treatments really work."
>
> *Source: Business Week, May 29, 2006*

> The key cause of long waiting lists in the Canadian health system is "block funding", where physician billing codes can take precedence over quality patient care.
>
> *Source: President, Canadian Medical Association, 2008*

Patient Voice™ has real value

Patient Voice™ is built to improve the outcomes of medical treatment. Clear evidence of successful treatments are tracked by the system. A sample of other valuable contributions and insights includes:

- Patients are better prepared prior to treatment.
- The accuracy of patient reporting to health teams improves.
- Patients provide better information to doctors, other caregivers, friends and family members with less effort.
- Portability of health records supports team health services.
- Dosage balancing enhances efficacy of medications.
- Chronic (vs. acute) condition observations are emphasized.
- The system makes it easy to capture **Condition** (i.e. I had a headache); **Intervention** (I took an Aspirin); and **Outcome** (the headache went away) details over extended periods of time.
- ‘David Brailer, former National Coordinator for Health in the U.S., stated that "… Just as we saw consumers take a more active role in various key life activities such as investing, so too will we see the consumer take a much more active role in their own healthcare, particularly the baby-boom generation who is aging…” *(Source: Branham Group, 2007)*
- The personal health record (PHR) market category exists within the projected $1.4B electronic health record market. Growth for 2008 is projected at 12%. *(Source: IDC Health Industry Insights, 2007)*
- After one year with no changes to the system, 77% of pilot project patients login to **Patient Voice™** every week. *(Source: Patient Voice™ usage statistics, 2007)*
- Multinational corporations including Microsoft and Google have recently announced plans to support personal health record deployment in the US. Their efforts will help make traditional sources of patient data (from clinics, hospitals, insurance companies, pharmacies, test facilities and others) more accessible to patients. That “infrastructure” will improve **Patient Voice™** applications by providing more data to the patient more easily.

Feedback on Version 1.0

> "Patient Voice enables me to go into a doctor's appointment prepared."
>
> *(Source: pilot project **patient**, 2007)*

> "I get very tired of going into doctor's offices and seeing a million paper records filed, and only hope they haven't lost mine. And sometimes they do. Staff changes, and the system is clogged with paper. And doctors are so rushed, booking patients every 15 minutes"
>
> *(Source: pilot project **caregiver**, 2007)*

> "You probably realize that I really like this Patient Voice and all the possibilities it offers - I appreciate the opportunity to share my thoughts on the process, as well!"
>
> *(Source: **neurologist**, 2007)*

> "I am enjoying using this. The desktop view is fine for me, and I liked the clean and non-medical look (Look Mom, no icons/buttons... Wow!)."
>
> *(Source: **neurologist**, 2007)*

> "I have another medical condition and was wondering if I could use the medication history for those medications as well as it would be a great resource for my family if anything were to happen to me?"
>
> *(Source: pilot project **patient**, 2007)*

> "I like the idea that I can keep track of my life, and empower my doctors visits with real information such as when I had tests, blood work done, who my doctors are. I really like printing out the graph and taking it to my doctors appointment, so I can point out low days, and good days."
>
> *(Source: pilot project **patient**, 2007)*

History

June 2000	Assignment from **Microsoft**. Corvallis Clinic (300,000 patients) (custom electronic health record system developed under contract)
October 2001	Private public partnerships in healthcare IT research (develop online M.Sc. degree in health information science at 4 Canadian universities; develop Graduate degree research project in GRID computing for the health system; develop proteomic lab information management software start-up company)
October 2004	**Patient Voice™** idea born (Kitchen table discussion of how to improve Mom's role as caregiver for chronically ill brother.)
	Preliminary design
January 2005	Association with patient group
	Advisory Committee
August 2005	**IBM** partnership established
	Prototype launch
Sept 2005	Privacy Policy developed; **KPMG** partnership
March 2006	**Patient Voice™** Charter
April 2006	Pilot Project launch
June 2006	Patient consultations
April 2007	KEY FINDING: 77% pilot patients login weekly, after one year
October 2007	Microsoft HealthVault Version 1.0 announced. "Infrastructure not apps."
March 2008	Google Health Version 1.0 announced. "Infrastructure not apps."
April 2008	**Patient Voice™** Version 2.0 development. "Apps not infrastructure!"

How **Patient Voice**™ works

What to Expect

E-mail reminders	• To use the system daily, which may be ignored.
Daily Questions	• Online questionnaires relating to a specific condition. If you don't feel too well one day, choose to do just a few questions.
Health History	• Track detailed information about a condition, about the interventions undertaken by you and your medical team, and about the outcomes of those treatments.
Status Graph	• The ability to view at a glance changes in your condition over time, based on your input to Daily Questions and Health History.
Lists	• Keep current lists of medications, family health conditions, physicians, friends and family and a variety of other important information.
Security	• You will control two passwords. One is yours and should not be circulated to anyone. One is for friends, family and others. It will allow them to see your records, but not to change them. Only the subscriber (patient), or their designated caregiver, should be entering data about a patient in the Patient Voice system.
Privacy	• Protection of your Patient Voice records according to industry best practices in place on our host platform at IBM Canada, and in accordance with our Privacy Policy.
Research	• The strictly anonymous use of some elements of your records in concert with many other similar records to indicate trends, which once identified, may lead to improvements in your treatment and in your condition.

No annoying advertising!

What not to Expect

- Do not expect medical opinions about your condition, treatments or expected outcomes.
- Do not expect chat rooms, discussion groups, mailing lists or other related online services.
- Do not expect Patient Voice to replace your physician's advice.

Suggested Best Practices

- For the first few weeks, use the system daily or every other day.
- Keep track of specific conditions (symptoms, side effects etc.), interventions (medication changes, surgery, physiotherapy etc.) and outcomes (general information and specifics).
- Track all medications, changes to those meds, and other treatments you undergo.
- Let a few friends and family know that they can login to check your recent status, and provide them with your login name (your e-mail address) and with the password you selected upon registration for friends and family.
- After a week or two, view a graphic to see at a glance how your condition changes over time.
- Give out only the password for "Friends & Family" that you setup when you first registered. You may also change either password any time you wish. Just remember to let your friends and family know!

$70/year subscription!

Estimated Market Size

More people than you may think suffer from at least one chronic disease. The approximations below are based on the number of people reported to be living with the condition today, or the ‘prevalence’ of the disease.

Epilepsy and Parkinson’s Disease are listed first in the table, because the **Patient Voice™** Pilot Project (started in April 2006) continues to service those patient groups today. Other groups of interest are listed later in the table, and are being considered for inclusion in Version 2.0.

The table below describes the number of people in Canada and the US in each patient group. The population of the US in 2007 was about 301.1 million, while Canada’s population was about 33.4 million.

Patient Group	% of Pop (approx.)	US & Canada (approx.)
Epilepsy	0.6%	2,007,181
Parkinson's Disease	0.3%	1,137,402
Over 65	14%	45,830,622
"Worried Well"	10%	33,453,009
Eating Problems	15%	50,179,513
Drug Abuse	18%	58,542,765
Alcoholism	14%	45,496,092
Arthritis	13%	43,488,911
Anxiety	12%	40,143,611
Migraine	10%	33,453,009
Heart & Stroke	10%	31,780,358
Depression	8%	27,598,732
Diabetes	5%	16,391,974
Osteoporosis	4%	14,719,324
Cancer	3%	11,151,003
Alzheimers	1%	3,345,301
Aids	0.2%	669,060

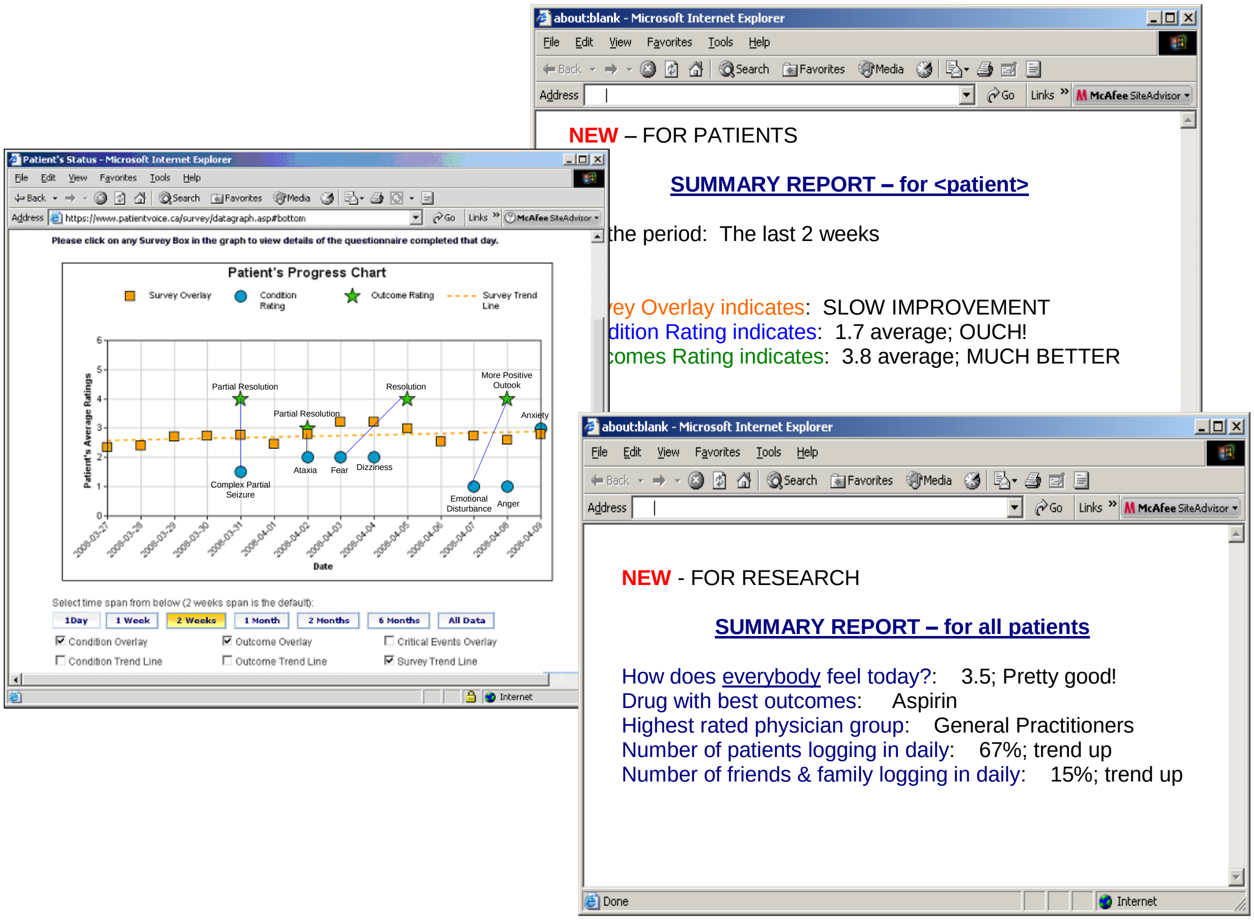
(Sources: Statistics Canada, Health Canada, Heart & Stroke Foundation, National Cancer Institute, Mood Disorders Society and others.)

Actual potential subscribers to **Patient Voice™** can be calculated according to the following formula. The calculations are based on findings from the pilot project.

Disease	US & Canada (approx.)	Approx. 10% “visible”	Approx. 10% “engage”	Approx 15% “use daily”
Eating Problems	50.2 million	5.02 million	502,000	75,300
“Worried Well”	33.5 million	3.35 million	335,000	50,250
Heart & Stroke	31.8 million	3.18 million	318,000	47,700

Version 2.0 Enhancements

Automated Meds Balancing	• This is the **Patient Voice™** proprietary algorithm for calculating and presenting improved treatment outcomes associated with medications dosage adjustments. Improvements to tracking side effects, and timing for drugs to take effect and wear off will also be addressed.
New Patient Groups	• Version 2 will support a larger audience in two ways. Several new patient groups will be added and supported in much the same way as Epilepsy and Parkinson's are handled now. Secondly, patients will be able to manage more than one condition inside their online profile.
More Questionnaires	• Version 2 will enhance the editorial content of questionnaires presented to patients. More and better questions, question rotation, patient selection of questionnaires and other improvements will be addressed.
Printed Reports	• Patients will be able to better prepare for meetings with their medical team with a selection of clear and informative printouts. Make the most of your 15 minutes with the specialist by choosing from a set of preformatted reports.
"Triggers"	• Version 2 will initiate efforts to identify the "triggers" (dietary, exercise, stress, medication etc.) which are associated with specific "conditions". Recall that conditions, interventions (treatments) and outcomes are presently well covered in Version 1.
Alerts	• Medications scheduling, caregiver reminders, patient action items, deterioration or improvement notifications and other system generated alerts will be developed.
Nutrition Aid	• Keep track of how diet relates to overall health, over time.
Imaging	• Import X-rays, MRI, CAT scans and other images from your health team.



NEW – FOR PATIENTS

SUMMARY REPORT – for <patient>

the period: The last 2 weeks

ey Overlay indicates: SLOW IMPROVEMENT
dition Rating indicates: 1.7 average; OUCH!
comes Rating indicates: 3.8 average; MUCH BETTER

Address: https://www.patientvoice.ca/survey/datagraph.asp#bottom

Please click on any Survey Box in the graph to view details of the questionnaire completed that day.

Select time span from below (2 weeks span is the default):

☑ Condition Overlay ☑ Outcome Overlay ☐ Critical Events Overlay
☐ Condition Trend Line ☐ Outcome Trend Line ☑ Survey Trend Line

NEW - FOR RESEARCH

SUMMARY REPORT – for all patients

How does everybody feel today?: 3.5; Pretty good!
Drug with best outcomes: Aspirin
Highest rated physician group: General Practitioners
Number of patients logging in daily: 67%; trend up
Number of friends & family logging in daily: 15%; trend up

Next Steps

Long term partnerships

The most important activity presently underway is the development of long term partnerships to effectively manage and sustain **Patient Voice™.** To maintain the independence we have achieved requires that we not/NOT undertake traditional partnerships, for example with multinational pharmaceutical companies.

We require multiple partners who can provide capital, marketing strategy and tactics, healthcare IT experience, and patient advocacy background. They will include individuals, companies and other progressive organizations. We have no debt to the health industry. We strive to make accountability commonplace, while improving sustainability in patient care.

Our team to date has included our patient advisors; a professional Advisory Board (primary caregivers; a retired Ph.D. & Director of Nursing Studies; a retired Privacy Commissioner; a neurologist; a retired Professor of Art & Design; a lawyer; non-profit agency staff and many others); and international corporate affiliations including Microsoft, IBM, KPMG, Hill & Knowlton and others.

Focus

What we have done so far has worked very well. So we will keep doing what we have been doing, improving where we can.

Our improved focus on maintaining the unique patient-centric model will, over time through research serve to unite patients, and eventually find cures. There is an impending crisis, a “boomer tsunami”, but systems like **Patient Voice™** will provide relief. We will continue to focus on patient wellness and quality patient care over physician practice patterns and pharmaceutical company profits.

Fixes

The “fixes” and enhancements to be incorporated in **Patient Voice™** Version 2 are being prioritized. Some ideas have already been presented in the previous pages, and are in development. Generally system development happens in three stages: development, testing and production implementation.

The system will continue to put ease of use at the top of the list of all priorities for development. Version 1 delivered a platform that works well. Version 2 will build on that success, simplifying and making more elegant key functionality, while adding new features.

Incorporation of HL-7 standards, while considering defacto standards emerging from other key players entering the personal health record market (without detracting from our focus), will also distinguish **Patient Voice™** 2.0.

Outreach

Finally, we need to reach out to patients directly. Our experience to date has demonstrated that patient advocacy groups generally lack resources and independence to effectively bring forward “big ideas” to their constituents. Direct advertising, Internet outreach and new sales tactics are all under development.

Opportunities

April 25, 2008

Greetings,

Do you want to ensure your health is not your children's burden? Addressing that problem requires innovation, not just more exercise and better eating habits!

I personally believe that because we do not elect physicians and health system administrators, there should be greater accountability for the vast resources which they control.

The idea for Patient Voice™ came about around my Mom's kitchen table in late 2004. How could I use my experience to improve the quality of her retirement years? My brother's chronic epilepsy, and Mom's role as his primary caregiver, led to an early focus on neurological disease. We put together a team with the shared goals to improve the outcomes of medical treatment, and to improve research particularly with "hard cases".

After 8 years working in advanced areas of the healthcare IT field, and more than 15 years before that in the IT business working around the world, I feel confident predicting that personal health records are going to be "bigger" than e-mail. I can say that because I was there for the dawn of both, and our predictions have been accurate so far. It will take 5 to 10 years for personal health records to become as pervasive, slightly less time than it took for everyone to use e-mail as they do today.

During the development of the Patient Voice™ system we have heard many stories. We have learned a great deal. The obstacles anticipated have been overcome. In a health industry where patients and caregivers are not always a priority, the "hard cases" can be found at the bottom of the pile. We have found endemic issues of poor diagnosis, no therapeutic treatment, untested medications, poor regimens and ineffective medications balancing. It has also been shocking to experience the poor communication within the system that has resulted in massive frustration within the patient community.

Doctors need some help. The system needs some help. But patients and caregivers ought to be the ultimate beneficiaries.

Patient Voice™ has an interesting history and the system has received a good deal of positive feedback. The serious investments of time and money by my company and my family have mitigated the risks of the early days. Now is the time for expansion and for Version 2. There is a huge market beckoning in the US and Canada, that can easily grow into a vibrant, multi-lingual global user community.

This is an ambitious effort, but it is practical, and so far things have turned out very well. The initial valuation of our equity has increased about five times since we first offered it in 2002. The next round of capitalization will be the most profitable yet. Now is the time to get involved.

We have a good plan. We fiercely defend our independence. We have shown focused leadership and serious commitment through our investments. World-class partners are part of the great team we are building. Could you be a part of that team? A background role is perfectly acceptable. Specifically we seek capital, marketing support and patient advocacy background.

Patient Voice™ points us in a positive direction. You can help. Make your story part of the solution.

Sincerely,

Patrick Arnold
President

Make **Patient Voice**™ part of your story.

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