Integrated Online Employee-Based eHealth: Execution, Evaluation and Effectiveness

Trevor van Mierlo, B.A.
Rachel Fournier, B.Sc.
Peter Selby, MBBs, CCFP, MHSc, ASAM

10 May 2007

V-CC

Education. Interaction. Research. Support

What is eHealth?

- Static Educational Content
- Assessments / Screeners / Brief Interventions
- Full Behavior Modification Programs
- Online Counseling Sessions (Peer / Health Care Professional Guided)

EHCPs = Electronic Health Care Programs
WATI = Web Assisted Tobacco Interventions
eSBI = Electronic Screening and Brief Intervention
eHealth = Electronic Health Care
IBIs = Internet-Based Interventions
CCBT = Computerized Cognitive Behavioral Therapy

*Not talking about electronic medical records (EMR)

Wall Street Journal   - May 22, 2000

"… disease management programs have been delivered via traditional media such as newsletters or telephone helplines. But now the interactive capabilities of the Internet open up a powerful new way for drug companies to use these programs to communicate with – and influence – patients."

"The place is open 24 hours a day… people can discuss their problems on their own terms and timing," says Trevor van Mierlo, the project delivery manager who helped develop the site.

Novartis' Ms. Hill says, "This definitely gives us a competitive advantage," and adds the site's performance "has generated a lot of interest within the company. In fact… Novartis is using an educational grant to support a test program for high blood pressure… "

What Happened?

Dot-com Bubble
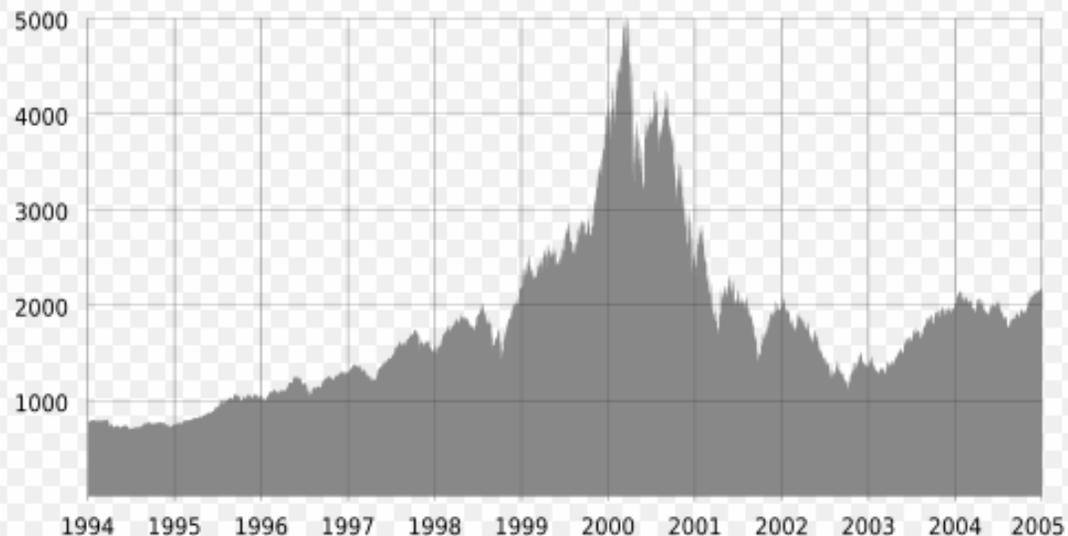
Back to the Basics

Successful Behavior Change

- Evidence-Based
- Personalized
- Peer Support / Expert Guidance

Benefits of Online Offerings

- High Reach (no geographic barriers)
- Low Cost (per user)
- Accessible (available 24 / 7)
- Anonymous

What is Success?

Success = Reach x Efficacy

Mass Customization

Does Anyone Use It? (Reach)

The proportion of Americans who logged on to the Internet at least one per day from their home rose from 27% in January 2002 to 35% in late 2005

Source: Pew Internet, April 2006

80% of adult Internet users, or about 93 million Americans, have searched for at least one of 16 major health topics online.

Source: Pew Internet, July 2003

What are they looking for?

8 of 10 Internet users have gone online specifically seeking health information

Health Topic	Internet users who have searched for information
Diet / Nutrition	44%
Depression / Anxiety	21%
Alcohol or Drug Problems	8%
Quitting Smoking	6%

Source: Pew Internet, July 2003

Young or Old Employees?

- 37% of online baby boomers used the Internet for health reasons in 2006.

- 44% of online non-boomers used the Internet monthly for health reasons.

- Both are as likely to use online tools to manage conditions.

Source: Jupiter Research, April 2007

V-CC Beta Program for Smoking Cessation: StopSmokingCenter.net

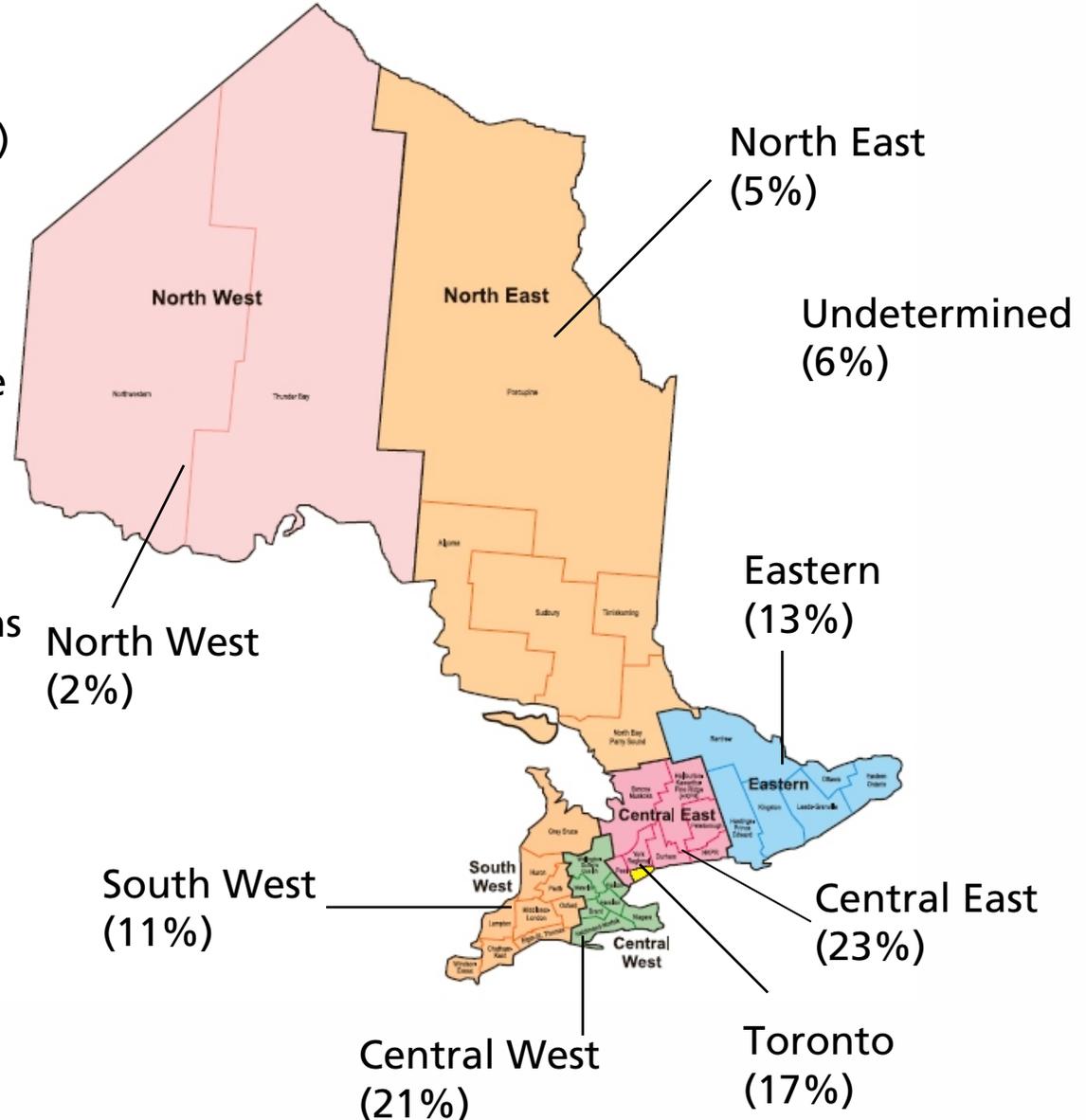| Program	SSC versions 1 & 2	SSC version 5
Period	Sep 28, 2000 – Sep 30, 2002	Nov 5, 2004 – May 8, 2007
# Days	726	1,003
# Users	4,644	25,233
Age	37 Years	42 Years
Sex	65.7% Female	65.8% Female

Is There a Digital Divide?

Urban vs. Rural?
Post-Secondary Educated vs. High School Educated?
Skilled vs. Unskilled?

High Reach, Low Cost & Accessible

Canadian Cancer Society
(smokershelpline.ca /
teleassistancepourfumeurs.ca)

• 24% of Canadians
live in "Golden Horseshoe"

• Approx 1/3 of Ontarians live
In small cities / rural areas
with limited access to
health care resources

• 4,032 Registered in 6 months

• Client geographic
distribution roughly
matches general population
distribution

North East
(5%)

Undetermined
(6%)

Eastern
(13%)

North West
(2%)

South West
(11%)

Central East
(23%)

Central West
(21%)

Toronto
(17%)

V-CC

www.v-cc.com

Do They Work? (Efficacy)

- Dose Response?

- Issue of Attrition?

- "Tire Kickers"

- Increased Choice of Online Interventions

- Legal implication

Legality

We are all HICs!
(Health Information Custodians)

1. Personal Information Protection and Electronic Documents Act (PIPEDA - Canada)
2. Personal Health Information Protection Act, 2004 (PHIPA – Canada)
3. Health Insurance Portability and Accountability Act (HIPAA - USA)
4. United States Department of Health and Human Services (OHRP – USA)
5. EU Directive 95/46/EC and Supplementary Directive 2002/58/EC (European Union)

Legality

Key Features

1. Must have a checkbox (endorsement) implying consent. Check boxes may NOT be previously endorsed

2. ALL team members having perceived access to data must be informed of privacy regulations

   - researchers, advisors, database architects, statisticians, front-end HTML designers, graphic artists, lawyers, marketers, hardware/database/security engineers, information architects, etc.

3. ALL team members must also be cognisant of data storage procedures and timelines

4. If you are using an outsourced solution, pass as little "identifiable" information as possible

What to Look For

- An "evidence-based" solution (preferably not "flashy")

- A solution that "talks" to your system
  - via query strings / webservice

- An IT infrastructure that can expand (or contract) with your system

- A solution that will highlight your brand

- A solution that contains the least amount of "personally identifiable information"

Future Directions

• Programs will be increasingly personalized and will be tailored to address more than one condition or behavior (e.g. smoking + weight loss; depression + exercise)

• Internet most likely will not replace telephone, but telephone is moving to the Internet (cost savings)

• If you are building programs, build them with a "software mindset". Your program will change.

• Make sure your internal IT Team and/or vendor realize that today's new intervention is already yesterday's news.

• The Internet moves faster than science.

So What?

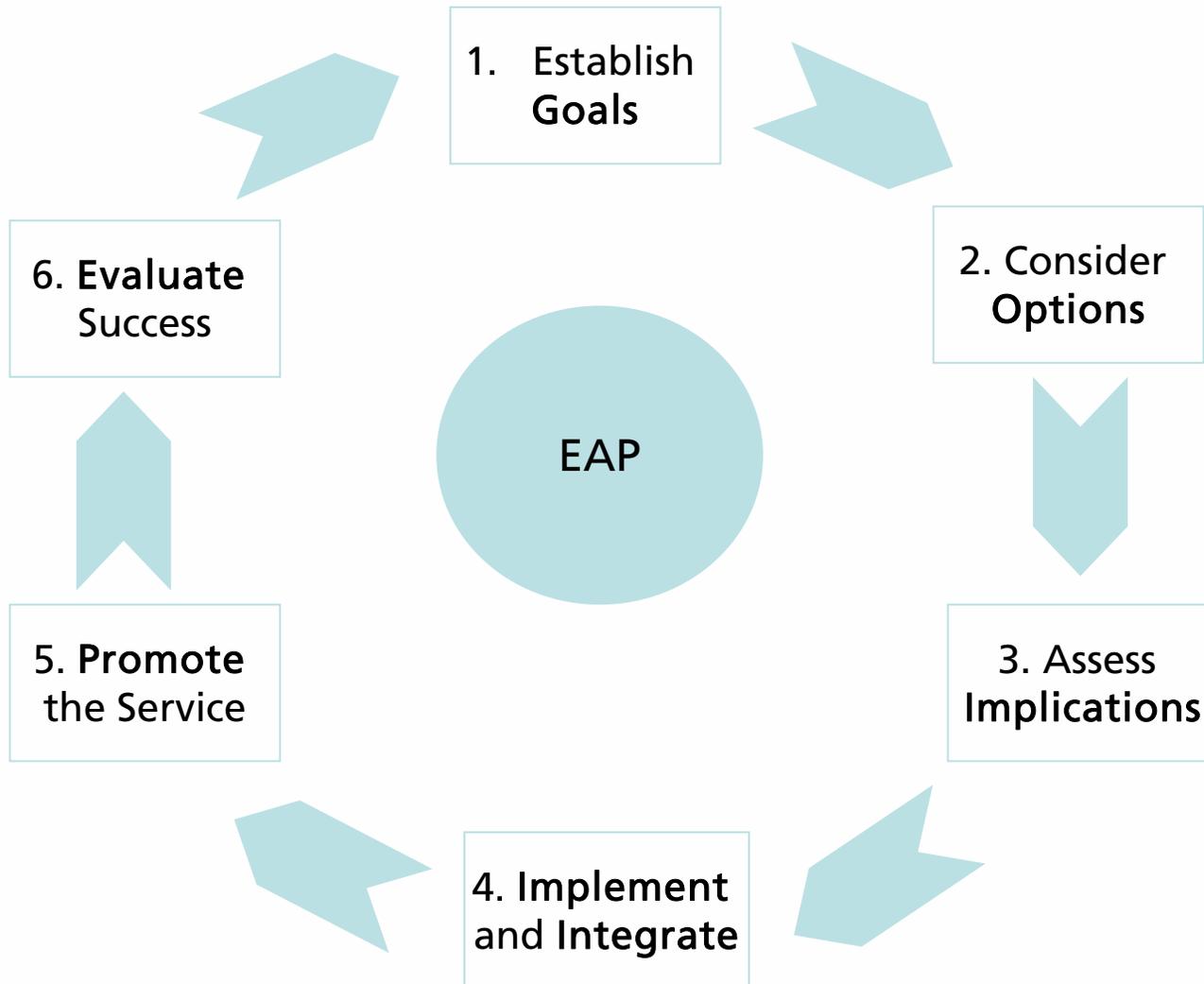**Why should EAPs care about eHealth?**

Well-executed online health programs can blend very well with EAP philosophy of 24/7 access to anonymous, evidence-based care

Costs of Common Conditions

Untreated conditions are costly to employees, families, and employers

	Obesity	Tobacco Use	Depression	Anxiety / Panic
Common *Prevalence*	58% Overweight, 23% Obese	21%	12% of men 20% of women	25%
Debilitating	Normal-weight women miss about 3.4 days a year vs. 5.2 days for women who are obese	Smokers work on average one month less *per year*	Employees affected by major depression will miss 30 – 50 days of work per year	
Costly *Average annual costs to employers and payers*	$3.55 (PMPM) for men and $5.71 for women	Additional $5,717 *each year* to employ a smoker.	Extra medical: $2,000 - $3,000 per employee Absenteeism: average $145 per day	
Unnecessary	Effective treatments combine tailored intervention with elements of peer and expert support			

The eHealth Project Lifecycle

- 1. Establish **Goals**
- 2. Consider **Options**
- 3. Assess **Implications**
- 4. Implement and **Integrate**
- 5. **Promote** the Service
- 6. **Evaluate** Success

EAP

V-CC

1. Establish Goals

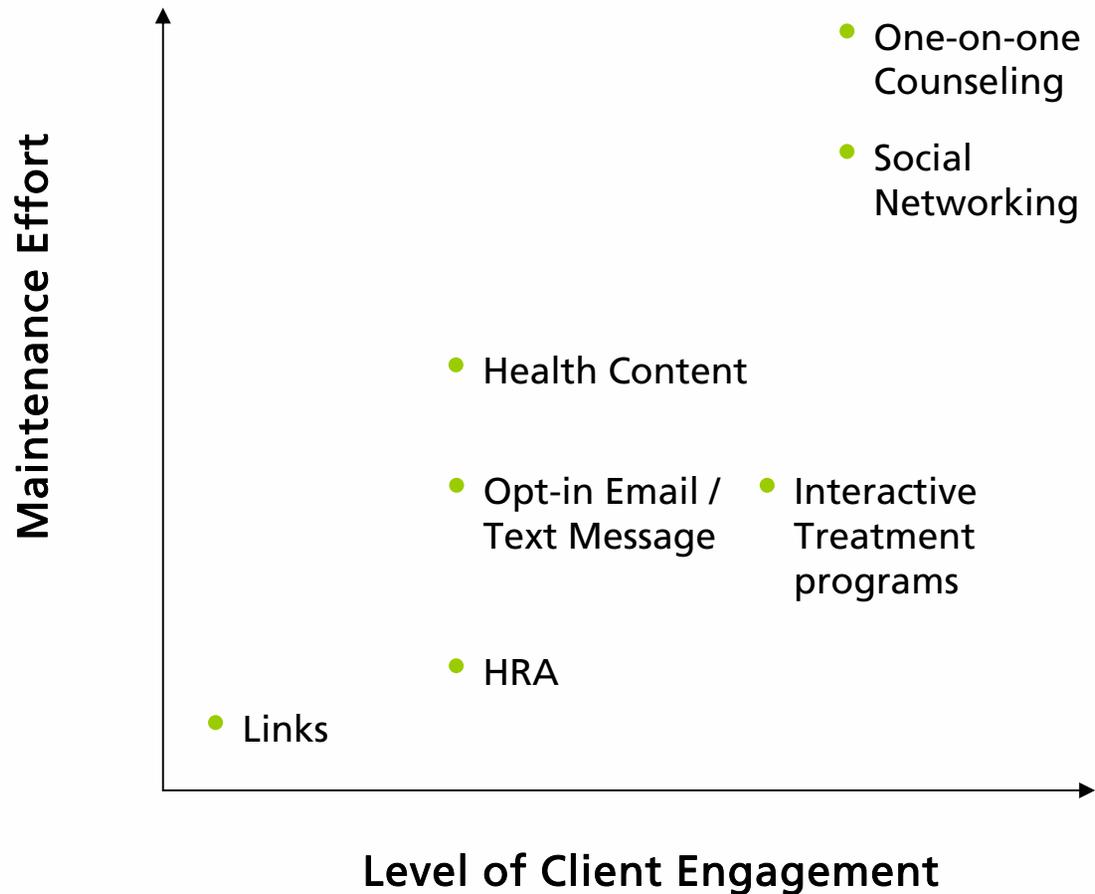**What do you want to accomplish by offering eHealth services?**

- Stay competitive – more EAPs are online
- Meet expectations: Clients go online for information
  - Manhattan Research 2005: 22 mill. consumers went online to learn more about the pharma ads, only 6.2 mill. dialed an 800 number
- Expand access to anonymous, evidence-based support
- Support existing counseling, health and wellness services
- Measure outcomes
- Potential to offset costs of traditional offline services

2. Consider Options

So you've decided to go online...what are your options?

Description	Pro	Con
Links to 3rd party health tools	Low maintenance, quick implementation	"Lost" clients, possibility for links to become outdated
HRA	Very engaging, triage to complementary services	Low incentive to return
Health Content / News	Variety and fresh content can engage clients and encourage return visits	Can be maintenance intensive, difficult to measure outcomes
Opt-in Email / Text Messages	Brief motivational messages may be effective at behavior change	Require specialized hardware and software, N. American usage still relatively low
Interactive Treatment Programs	24/7 access to tailored and anonymous programs	Can be time consuming to build
Social Networking	24/7 access to peer and expert support, human touch	Maintenance-intensive, moderators required
One-on-one Email Counseling	Intensive expert advice with specifically tailored feedback, human touch	Very labor-intensive to maintain

2. Consider Options

Maintenance Effort (vertical axis)

- One-on-one Counseling
- Social Networking
- Health Content
- Opt-in Email / Text Message
- Interactive Treatment programs
- HRA
- Links

Level of Client Engagement

3. Assess Implications

What kinds of tools will best achieve your goals? Consider:

1. IT / Infrastructure

- Application Service Provider (ASP) v. Buy v. Build in-house
- Security and Privacy
    - Data integrity
    - Data location
    - Shared versus dedicated servers
- Scalability and Reliability
- Service Level Agreements (SLA)

3. Assess Implications (cont'd)

What kinds of tools will best achieve your goals? Consider:

2. Clinical

- Clinical validity and evidence base
- Outcomes
- Quality, Usability and Health Literacy

3. Assess Implications (cont'd)

What kinds of tools will best achieve your goals? Consider:

3. Operational

- Budget
- Reporting, e.g., group level, format (online, excel, etc.), real time
- Interoperability
- Support and maintenance
- Ability to customize
- Language capacity

This is an **interdisciplinary** field

4. Implement and Integrate

What are best practices for implementation?

- Establish evaluation criteria before building
  - May impact database architecture or other reporting mechanisms
- IT should be the EASY part!
  - Don't let the proverbial tail wag the dog
  - Allow sufficient time for Quality Assurance (QA) testing
  - Soft launch or pilot
- Training: internal and vendor (if applicable)

4. Implement and Integrate (cont'd)

What are best practices for integration?

- Establish ideal client flow
    - User-centric design: How will clients access?
    - Integration with other services
    - Keep it simple: "3 click rule"
    - Remember: most clients are very good at self-triage and will select modality most suitable to them.

5. Promote Your Services (cont'd)

KickButts
Smoking Cessation Program

Case Study: GM's Quit Smoking Challenge

- Well integrated: multiple sites, pharmacist, drug plan
- Well promoted
- Great results
  - 200 participants entered the Quit Smoking Challenge
  - ~100 took advantage of the Pharmacist assessment/support that allowed for the NRT to be covered through the drug plan
  - Now a bi-annual event
  - Will promote earlier next year
  - Conservatively assume only 12% quit, = $120,000 / year saved

5. Promote Your Services

Advertising Works!

- Promotion Opportunities
  - Links from existing site
  - Cross-promotion via complementary services
  - Call Center can notify of additional services
  - Mail / email out to employers / HR
  - Contests
  - Incentives
  - Posters
  - Newsletters
  - Health fairs (demo opportunity)
  - Etc.
- As with traditional services, consider seasonality

6. Evaluation and Monitoring Success

How do we know if it works?

- Advantage of IT programs: **lots** of data. Exciting for researchers, but what information is relevant for clients and managers?

- Integrate reports within existing reporting structure

- Reporting Options
  - Qualitative and Quantitative
  - Demographics, utilization, outcomes, page views, repeat visits, time spent online, etc.

- ROI modeling
  - Ideally show correlation between online usage and increased productivity, lowered health claims, etc.

6. Evaluation and Monitoring Success

Example of Promotion and Usability

- Two EAPs comparable size, reach and offerings

Company A

• "Integrated" – must phone in to access online program

• group level tracking

• handful of participants, few employers

• employer ROI?

Company B

• Open access to employees who log in to EAP site

• group level tracking

• almost 1,000 participants, dozens of employers

• employer ROI conservatively est. $600,000

Don't Miss the Boat!