

Be Well @ Work: A Research Study in BC Worksites

Carolyn Gotay, PhD
Canadian Cancer Society Chair in
Cancer Primary Prevention
University of British Columbia
Vancouver, BC

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What the talk will cover

- Why did we do this study?
- What was the study about?
 - Participants
 - Findings
 - Quantitative
 - Qualitative
- What were some lessons learned?
- Where are we going now?

The annual burden of cancer in British Columbia

- 23,300 new cases expected
- 9,800 deaths
- 2 in 5 Canadians expected to develop cancer in their lifetimes

The good news

30-50% of Canadian cancer cases and cancer deaths are **potentially preventable** each year.

From: Surveillance & Risk Assessment Division, CCDPC, Public Health Agency of Canada

This is the reason behind
this project:

*to identify the best ways to
help people reduce their
cancer-related risks*

The workplace: A great way to reach Canadians

- Working Canadians spend almost half of their waking hours - more than 36 hours each workweek - on work activities
- Workplace wellness programs provide a way to reach diverse populations
- Benefits include:
 - building on social networks
 - in-place communication systems and events
 - existing facilities and professional resources.
 - potential to reach family and friends

In addition...

- The workforce is changing
 - In 2001, one in 10 Canadian workers was at least 55. By 2031, Statistics Canada expects that ratio to jump to almost 1 in 4.
 - In 1981, there were about 6 people in the labour force for each retiree. By 2031, that ratio will have declined to fewer than 3 to 1.
- Very little research in Canada
- We don't know the best worksite approaches and few programs have used new communication strategies

How this project began (1)

- Summer 2010
 - Carolyn reads an interesting article about a worksite wellness program (Sternfeld, et al., 2009)

Sternfeld, et al. (2009)

Am J Prev Med 36: 475-83.

- ALIVE! (A Lifestyle Intervention Via Email)
- 16-week e-mail program
 - Individually-tailored
 - Physical activity, fruits/vegetables, fats/sugars
 - Small goals
 - Tracking
- 787 employees in large healthcare organization
- Outcomes
 - Physical activity, diet

Results

Sternfeld, et al., 2009

- Intervention group showed significant **increases** in
 - Total activity
 - Moderate physical activity
 - Vigorous activity (immediate only)
 - Walking
 - Fruits & vegetables
- And **decreases** in
 - Sedentary behaviours (immediate only)
- Immediately after the intervention and at 4 months (except as noted)

How this project began (2)

- Summer 2010
 - Carolyn reads an interesting article about a worksite wellness program (Sternfeld, et al., 2009)
- Fall 2010
 - Canadian Cancer Society releases an RFA: “Interventions to prevent cancer”
 - Carolyn meets with CCS BCY program to discuss worksite programs and finds out they have a tobacco control program in place, plan to expand
 - Carolyn submits Letter of Intent to RFA competition
- Spring 2011
 - LOI approved, application submitted and approved
 - Project begins!

What did we do?

- Used existing models of worksite programs
- Worked with a partner that had developed worksite programs
 - Canadian Cancer Society British Columbia and Yukon
- Designed a study that tested 3 programs in a randomized design

Identifying participants

- Eligibility criteria:
 - Employee access to individual email
 - Employees speak/read English
 - Institutional support (including internal communications with employees, assisting the UBC and CCS project managers and providing space for the launch, for any activities and for the final forum)
 - Signed support letter from site representative

Institutional participants



What did we do?

- Tested 3 programs; random assignment to condition
 - Individualized email approach (Alive!) (UBC-O) (N=170)
 - Comprehensive CCS approach led by CCS (UFV) (N=285)
 - Combined interventions (TRU) (N=225)
- Surveyed responses before and after the program
 - Also assessed at 6 and 9 months
 - Online self-report questionnaires
- Other data collected: interviews, focus groups, records from intervention attendance and worksites

The interventions

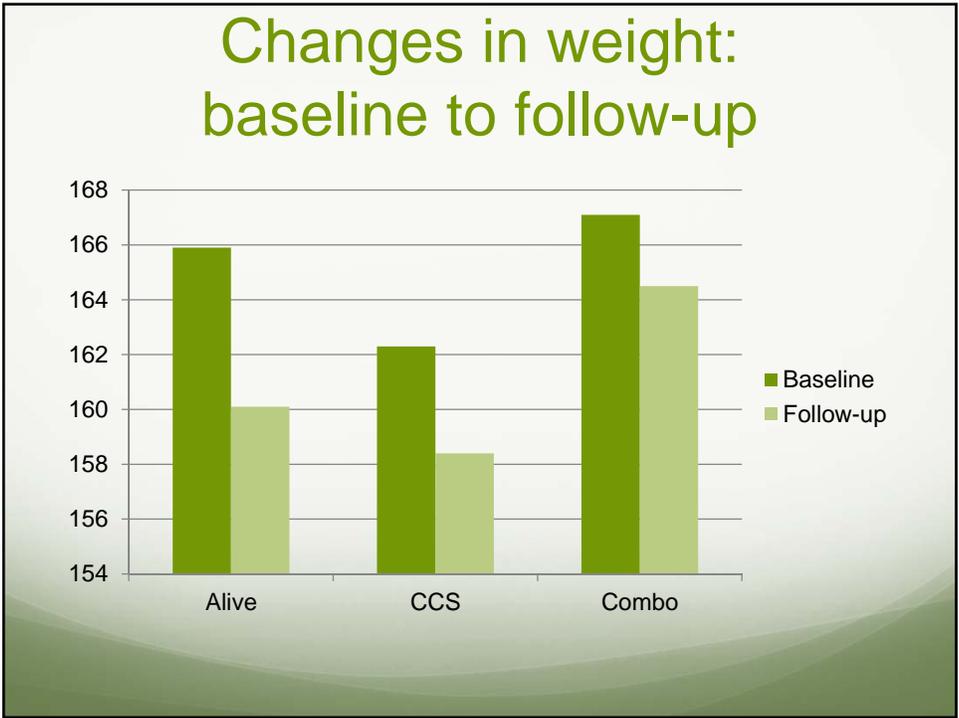
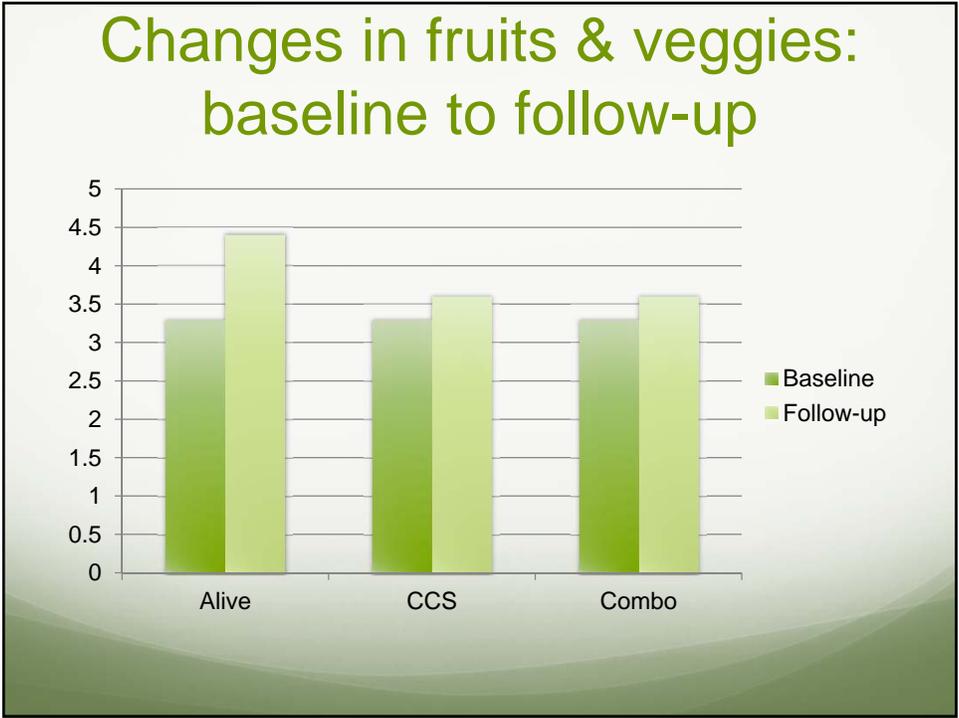
- ALIVE!
 - 12-month program
 - Participants choose which of two areas to focus on first: fruits and vegetables; or physical activity
 - Personalized, health behaviour theory-driven messages are generated and delivered by email 1-2 times per week
- CCS Intervention
 - Includes assessment, monitoring, health challenges
 - Specific activities varied according the worksite
 - Focus on social support, team building
 - Also included environmental assessment and policy building

The participants at baseline

Variable	Alive	CCS	Combo
Age*	39.6	45.4	46.2
Gender (% women)	80%	86%	85%
Chronic conditions	32%	35%	31%
Smoker	7%	5%	5%
BMI	26.1	26.5	26.9
F&V servings	3.3	3.3	3.3
Tired/low energy (% a lot/very much)	35%	32%	30%
Trouble sleeping (% a lot/very much)	25%	26%	28%

Results: A Snapshot

All 3 programs had a
positive impact on
nutrition and weight!



One concern: Drop out from baseline to final

680 started the study and only 360 completed final questionnaire

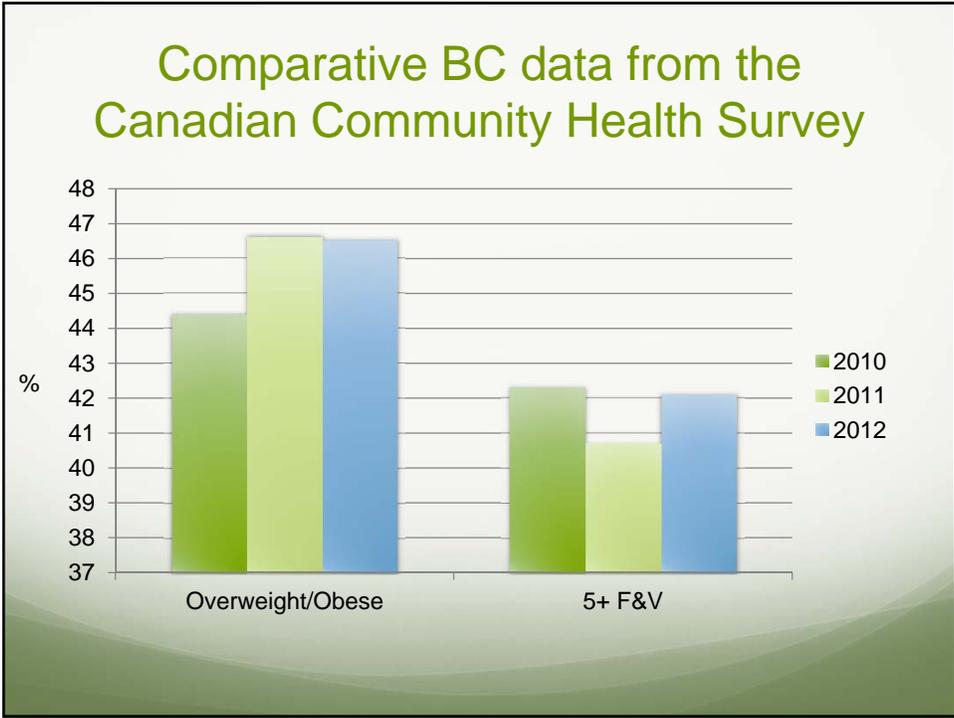
Older people and women were more likely to finish the study

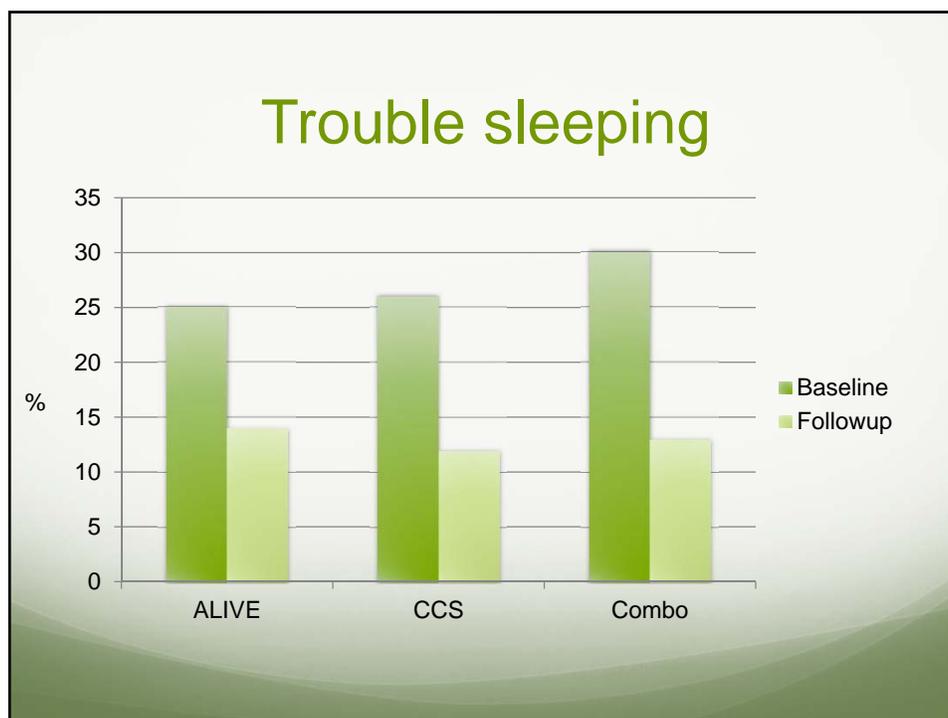
No differences between drop outs and finishers for outcome variables: fruits & veggies, weight, BMI

Intent-to-treat GEE analysis for cluster randomized trial

Outcome	CCS vs. ALIVE	Combo vs. Alive	Combo vs. CCS
F&V	0.31 (0.29 – 0.32)	0.28 (0.26 - -0.29)	0.031 (0.027 – 0.034)
Weight	0.57 (0.42 – 0.72)	0.38 (0.23 -0.54)	0.19 (0.13 – 0.24)

Changes between baseline and follow up, 95% confidence intervals, GEE, ITT controlling for age, gender, and baseline scores.





What did participants say about ALIVE?

- "I liked the exercise more because that is where I was weaker ... And I actually liked the weekly frequency because it kept reminding me that I wasn't doing what I was supposed to be doing."
- "I liked the little quizzes at the end, and those were kind of fun ... sometimes I went, oh, that's interesting!"
- "I thought I initially was eating the right amount [of fruit and vegetables], and then when I started tracking it I found that I wasn't, so I started increasing it more. But I didn't find it that hard to do, in fact it completely changed my diet"

What did participants say about the CCS approach?

- "The Be Well at Work competition between the teams was really, really good in helping us get a lot more actively engaged. I think our department, there's three of us, but we all got involved in that as well as some of our students. It was really easy to track with the computer And it was a good way to help keep people motivated and promote that team spirit"
- "Having a group ...got me motivated to go out there, because I wouldn't do it on my own"
- " I found the biggest shift for me ... I had my co-workers message me and say, 'Okay we are going out for a walk today,' and we'd motivate each other, so I found that really helpful."
- "It made you want to do it because you knew you would have to write it down. Someone is watching."

What do participants suggest for future programs and studies?

- Shorter surveys, less frequent emails
- Variety of classes to suit all levels/interests/times of day
- "Trying to get people together to do things was really really hard."
- Need to offer classes at different times of day to accommodate all
- Classes FREE, and AT WORK
- Do not like to sweat

Future worksite health promotion programs

- Need to find ways to encourage non-participants
- Important to model balanced life for students
- Need support from management and union
- Even if you are not participating, the emails about wellness help culture and convince people to take a break, that the employer supports us
- App for phone?
- Tracking can completely change your life and family
- Would be nice to hear stats and about the research studies

A story from a participant

After my husband passed away my two children and myself were making a conscious effort to change to a healthier lifestyle. The Be Well at Work program started soon afterwards and I signed up.

My kids and I really enjoyed the whole program as I fully immersed them in the program with myself. We would together pick out a new fruit or vegetable and then look up new recipes to make using that item. This has followed through, especially with my oldest daughter, and she loves to look up new recipes for us to try. The best part is that every Friday we menu plan together for the coming week and she is an integral part of the decision making. My youngest daughter has even expanded her eating and enjoys trying new meals. My kids also help in the meal preparation which is a huge help!

I also enjoyed the activity part of the program and would set certain goals for myself, and once again my children, to meet. This helped us to get out and be active on a daily basis with as little as a walk around the neighbourhood after dinner to hiking in our local parks on the weekends – things we still do to this day.

Other measures

- Environmental scan
 - Vending machines
 - Work cafeterias
- Policies
 - Healthy food at meetings
- “Unexpected consequences”

Lessons learned

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- Technology changes!!!
- Having senior management involved makes things much easier.
- Learn as much as you can about the program before signing on to an contractor.
- You have to be flexible when doing research in the “real world.”
- Be open to synchronicity.
- You can make a difference – so persist!

Next steps

- CCS BCY activities
 - <https://www.wellnessfits.ca/>
- Newly funded Canadian Partnership Against Cancer (CPAC) award
- Cancer Prevention Centre
 - <http://cancerprevent.ca/>

Thank you...

- To the Worksite Wellness team
 - **Project Coordinator: Melody Monro**
 - Co-Is: Ben Amick (U of Toronto), Kitty Corbett (SFU), Sharon Storoschuk (CCS)
 - Statistician: Hui Shen (UBC)
 - Consultants: Joan Bottorff (UBCO), Barbara Sternfeld (Kaiser Permanente CA), Glorian Sorensen (Harvard)
 - Project Staff: Sue McPhail
- And especially to the coordinators at all 3 sites, the 680 participants, and the Canadian Cancer Society *who made the project possible*