Prevention among Cancer Survivors– the example of smoking cessation

Karen M. Emmons, Ph.D.

Elyse Park, Elaine Puleo, Anne Mertens, Rita Butterfield, Ellen Gritz, Fred Li, Jane Weeks
5-Year Relative Survival Rates, Childhood Cancer

Ages 0-19

1974-76: 40%
1977-79: 50%
1980-82: 60%
1983-85: 70%
1986-88: 80%
1989-95: 90%
Smoking Status of CCSS Cohort Members, age 18 and older (n=9,709)

- Ever Smoker: 28%
- Current Smoker: 17%
- Other Tobacco Use: 11%
- Smoking Rate (cigs/day): 14
- Quit Attempt in previous 2 years: 42%

Emmons, et al., JCO, 2002
Actuarial Estimates of Age at Initiation of Smoking for Selected Characteristics

Emmons, et al., JCO, 2002
Survivor’s Knowledge re Smoking

• High levels of:
  – knowledge about harmful effects
  – perceived vulnerability
  – Low intentions to use tobacco

  – Tyc, Hadley, & Crockett, 2001
Smoking Prevention Among Childhood Cancer Survivors

• Intervention:
  – Late effects risk counseling
  – Educational video
  – Written physician feedback
  – Telephone counseling @ 1- and 3 months

• Outcomes (12-months):
  – Higher smoking-related knowledge
  – Higher perceived vulnerability
  – Lower intention to smoke

• Tyc, et al., 2003
Actuarial Estimates of the Years to Smoking Cessation for Selected Characteristics

Emmons, et al., JCO, 2002
Challenges to Intervention Research with Survivors

- Population is geographically dispersed
- Age group is highly mobile
- Stressors of low income
- Survivor identity is key
- Cancer ‘experience’ is dependent on cancer/treatment type
Reach

High

Low

Efficiency

Tailored Mats. & Telephone Counseling

Mass Media

Pamphlets

Self-help Guides

Brief Counseling

Group Program

Individual Counseling

Intervention Efficacy

High
Partnership For Health (PFH) Study Design

Baseline Survey

Randomization (n=796)

Self-help Control Group (n=398)
- Physician Message
- Self-help materials

Intervention Group (n=398)
- Physician Message
- Tailored and targeted materials
- Peer delivered phone counseling
- Stage-matched smoking cessation
- NRT
<table>
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<th>Variable</th>
<th>M or %</th>
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<td>Age</td>
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<td>Cancer Diagnosis</td>
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<td>Gender (% Male)</td>
<td>53%</td>
<td>Leukemia/Lymphoma</td>
<td>55%</td>
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<td>&lt; HS</td>
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<td>HS</td>
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<td>Post-HS</td>
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<td>Surgery</td>
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<td>Chemo +/- Surg</td>
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<td>Radiation + Chemo</td>
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<td>Age at Diagnosis</td>
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<td>0-9</td>
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Smoking Characteristics --PFH

- Smoking rate: 15 cigs/day (SD=12)
- Quit attempt, past year: 58%
- Nicotine dependent: 53%
- Confidence to quit, next month: 2.21 (M, 5-pt scale)
- Readiness to Change:
  - Precontemplation: 18%
  - Contemplation: 43%
  - Preparation: 39%
Social Contextual Factors --PFH

- Social network
  - Nonsmoking 5%
  - Most/all smokers 54%
- Social support (M, 5-pt scale) 3.92 (sd=.88)
- Moderate or high perceived risk 89%
- Depression/psych symptoms 14%
- Have a PCP 77%
PFH—Health Care

• Have a primary care physician 77%
• Provider knows cancer status 96%
• Provider very/extremely knowledgeable about the illness 48%
Partnership for Health
Smoking Cessation Outcomes

Follow-up Interval

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<th>8-mos.*</th>
<th>12-mos.**</th>
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<td>SH</td>
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<tr>
<td>PC</td>
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</table>

*p < .001
**p < .01
Cost-Effectiveness

• Intervention delivery cost per person:
  $298.17 for the PC group, and $1.25 for SH.

• Incremental cost-effectiveness:
  $5,371 per additional quit at 12 months
How to Provide Smoking Services to Survivors

- Increase oncologists’ understanding of the importance of providing smoking cessation services
- Increase organizational infrastructure for smoking cessation within survivorship programs
- Develop mechanisms for offering pharmacotherapy to all smokers
- Develop and evaluate smoking cessation interventions that can reach childhood cancer survivors
Teachable Moments for Smoking Cessation

• Transition from inpatient to outpatient care
• Involvement of family members
• Clinical feedback
• Incorporation of prevention into ‘milestone’ events

• McBride & Ostroff, 2003
PFH-2—A Web-Based Intervention

Baseline Survey

- Web Intervention
  - Tailored materials
  - Free Zyban/NRT
  - Tailored Web Ix
  - 12-month follow-up

- Materials Intervention
  - Tailored materials
  - Free Zyban/NRT
  - 12-month follow-up
5-Year Relative Survival Rates, Childhood Cancer

Ages 0-19