Integrating Cancer Prevention Through Personal & Public Actions

Iowa Cancer Consortium
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Disclosure Information

Ernest Hawk, MD, MPH

I have the following financial relationships to disclose:

Consultant for: Cancer Prevention Pharmaceuticals, PLx Pharma, Inc., Pozen, Inc.

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Employee of: The University of Texas MD Anderson Cancer Center

and

I will not discuss off label use and/or investigational use in my presentation.
UT-MD Anderson’s Mission

“To eliminate cancer in Texas, the nation and the world…”

Moonshot Program
Established in 2012 to accelerate translational progress
Discover, develop & deliver safe, timely, effective, efficient, equitable, patient-centered or culturally-tailored, sustainable ("STEEEPS") programs to our patients & the public
One-third to One-half of Cancer Deaths Are Preventable in Western Populations

Effective cancer prevention is applied in two domains across the lifespan

Evidence-Based Personal Actions

Evidence-Based Population Actions

- Know your family hx / risk assessment
- Avoid tobacco & alcohol
- Eat a healthy diet
- Be physically active
- Avoid excessive UV exposure
- Use preventive meds & vaccines
- Follow a cancer-screening program
- Public policy
- Delivery of community-based clinical services
- Education – public & professional

Colditz, Sellers & Trapido, Nature Reviews Cancer 6, 75-83 2006
AACR Cancer Progress Report, 2014
Evidence-Based Personal Actions
The Lyda Hill Cancer Prevention Center
at The University of Texas MD Anderson Cancer Center

• Prevention Services
  • Cancer risk assessment
    • Genetic testing
  • Screening
    • Breast (15-20%)
    • Colon (15-70%)
    • Cervix (80-90%)
    • Lung (20%)
    • Prostate
    • Skin

• Risk Reduction Recommendations
  • Personal preventive therapy
    • Hepatitis C Rx (70-90%)
  • Lifestyle interventions (“Healthy living”)
  • Healthy Heart Program

• Diagnostic Services
  • Undiagnosed Breast
    • Abnormal mammograms or breast lesions
  • Undiagnosed Derm
    • Abnormal skin lesions
  • Undiagnosed Gyn
    • Abnormal Pap test and/or HPV test

• Survivorship
  • Breast, Thyroid, GI (colorectal, anal)

Total patient visits = 51,500 in FY16
Know & Share Your Family’s History of Cancer (and pre-cancers)

**Even in the genomics era, family history is still relevant and important in assessing risk**

- 5% - 10% of all cancers due to an inherited gene defect
  - Particularly concerned when individuals have multiple, bilateral, or early-onset cancers
- Family history can increase risk of many different cancers (e.g., breast, ovarian, colorectal)
- Tools are available to collect family histories & analyze risk
- Speak with your doctor & family about your family history

Free Tools:
https://www.familyhealthware.com/home (CDC)
http://www.yourdiseaserisk.wustl.edu

American Cancer Society, Family Cancer Syndromes.
Avoid Tobacco

Tobacco Causes Many Important Health Concerns

- Tobacco use is the most preventable cause of disability and death in the United States
  - 16M Americans are living with a disease due to smoking
  - >480,000 deaths – or approximately one in five deaths - annually
  - Smokers die 10 years earlier than non-smokers

- Each year, secondhand smoke contributes to:
  - 3,400 lung cancer deaths
  - 36,000 deaths from heart disease

- Reduce your risks:
  - Don’t start using tobacco
  - Stop tobacco use; ask for help, if needed
  - Assist others in stopping by offering encouragement, support, and assistance
  - Avoid secondhand smoke
MD Anderson’s Tobacco Treatment Program (TTP)
A Proactive Treatment Model Across MD Anderson

• Referral to the TTP is automatic (all smokers & recent quitters within 12 mos.) & not provider-dependent

• Referral triggers response, a motivational interview, and therapeutic triage by TTP staff within 3 business days

• Four available treatment options
### TTP Cessation Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Self-Help & follow-up** | - Every patient is called (4X). If not reached, materials are sent & follow-up calls placed in 3 months  
                         - Self-Help Packet includes tip guide, local & web resources and medication information                                                  |
| **Motivational Enhancement** | - All reached patients receive a motivational intervention on first call from Bachelor-level support staff to assess smoking status, readiness to quit and patient preferences  
                              - Can be triaged to counselor, scheduled for in-person or phone-option or receives self-help plus 3 mos. follow-up. All patients accepted regardless of motivation level. |
| **Phone Only**       | - Telephone counseling only, similar to in-person, but no medication consultation with program physician, or program-provided medication. Keeps same counselor, schedules follow-ups as in-person  
                         - Also receives all self-help information and offer to send information or consult with their physician for Rx |
| **Comprehensive**    | - Highly individualized treatment by Masters-level professionals (assigned at consult)  
                         - Address motivation, cancer care, psychosocial & financial stress, mental health concerns, etc.  
                         - Pharmacotherapy - full range of monotherapies; combinations & on-going management/change  
                         - Clinical trial opportunities |
Tobacco Treatment Program Cessation Rates

2012 – 2015

<table>
<thead>
<tr>
<th>EOT (3 Month)</th>
<th>6 Month</th>
<th>9 Month</th>
<th>12 Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondent-Only</td>
<td>Intent-to-Treat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47%</td>
<td>48%</td>
<td>47%</td>
<td>48%</td>
</tr>
<tr>
<td>41%</td>
<td>42%</td>
<td>37%</td>
<td>34%</td>
</tr>
</tbody>
</table>
Impact of Automated TTP Referral
Referral Tracking - April 30, 2012 through April 30, 2015

**Average #referrals/day**
- Pre = 11.1
- Post = 44.5

**3-fold increase**

Automatic EHR referrals
Evidence Summary: Diet & PA in Cancer Incidence

[Diagram showing evidence summary for various dietary and lifestyle factors related to cancer incidence.]
Eat a Healthy Diet

Fruits: 1.5-2 cups
Vegetables: 2-3 cups
Grains: 5-8 oz.
Protein: 5-6.5 oz.
Dairy: 3 cups

Daily Recommended Amounts

Fruits: 1.5-2 cups
Vegetables: 2-3 cups
Grains: 5-8 oz.
Protein: 5-6.5 oz.
Dairy: 3 cups

Source: U.S. Dept. of Agriculture (USDA); choosemyplate.gov; Accessed 7/28/15
Avoid or Limit Exposure to Alcohol

If consumed at all, limit drinks to 2 for men & 1 for women per day

- Avoid or Limit Exposure to Alcohol
  
  If consumed at all, limit drinks to 2 for men & 1 for women per day

- Alcohol convincingly increases risk of 6 cancers:
  - Mouth
  - Pharynx
  - Larynx
  - Esophagus
  - Breast
  - Colorectal (in men; probably in women)

- Amount of alcohol consumed is more important than the type

- Ethanol is the causative agent, found in all alcoholic drinks

- Alcohol can lead to cancer through:
  - Damaging cells of the upper digestive tract
  - Acting as a solvent & allowing other harmful chemicals to enter cells
  - Lowering the body’s ability to absorb certain nutrients
  - Increasing levels of estrogen

Image from National Institute on Alcohol Abuse & Alcoholism (NIAAA)
Dietary Supplements Cannot Be Relied Upon for Cancer Prevention

Major Null or Negative Trials of Dietary Supplements or Modifications in Neoplasia Prevention

• Beta-carotene & alpha-tocopherol
  – CARET and ATBC
• Synthetic retinoids
  – a series of trials in lung/H&N risk cohorts
• Selenium +/- vitamin E
  – SELECT in prostate cancer prevention
• Wheat bran fiber or healthy overall dietary pattern
  – Polyp Prevention Trials
  – Women’s Healthy Eating & Living (WHEL) Trial
• Calcium, vitamin D, low-fat diet
  – Women’s Health Initiative

*Lippman & Hawk, Cancer Res 2009*
RR = 0.76
(95% CI: 0.72, 0.81)
Most active to least active
Physical Activity & Breast Cancer Risk
Systematic Review of 28 Cohort Studies & Trials

• 18 of 28 cohort studies (64%) reported risk decreases

• Average 20% risk reduction comparing most active to least active women
Be Physically Active to Reduce Cancer Risks

• Limit sedentary activities

• Be physically active for at least 30 minutes every day
  • Adults should engage in at least 150 minutes of moderate-intensity exercise per week

• Include strength training exercises at least 2 days per week
Body-mass index and incidence of cancer: a systematic review and meta-analysis of prospective observational studies

Andrew G Renehan, M

Associated with increased risk of cancer at 9 sites for men and cancer at 11 sites for women.

<table>
<thead>
<tr>
<th>Cancer site and type</th>
<th>Number of studies</th>
<th>RR (95% CI)</th>
<th>p</th>
<th>I²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endometrium</td>
<td>19</td>
<td>1.59 (1.50–1.68)</td>
<td>&lt;0.0001</td>
<td>77%</td>
</tr>
<tr>
<td>Gallbladder</td>
<td>2</td>
<td>1.59 (1.02–2.47)</td>
<td>0.04</td>
<td>67%</td>
</tr>
<tr>
<td>Oesophageal adenocarcinoma</td>
<td>3</td>
<td>1.51 (1.31–1.74)</td>
<td>&lt;0.0001</td>
<td>0%</td>
</tr>
<tr>
<td>Renal</td>
<td>12</td>
<td>1.34 (1.25–1.43)</td>
<td>&lt;0.0001</td>
<td>45%</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>7</td>
<td>1.17 (1.04–1.32)</td>
<td>0.01</td>
<td>80%</td>
</tr>
<tr>
<td>Thyroid</td>
<td>3</td>
<td>1.14 (1.06–1.23)</td>
<td>0.001</td>
<td>5%</td>
</tr>
<tr>
<td>Postmenopausal breast</td>
<td>31</td>
<td>1.12 (1.08–1.16)</td>
<td>&lt;0.0001</td>
<td>64%</td>
</tr>
<tr>
<td>Pancreas</td>
<td>11</td>
<td>1.12 (1.02–1.22)</td>
<td>0.01</td>
<td>43%</td>
</tr>
<tr>
<td>Multiple myeloma</td>
<td>6</td>
<td>1.11 (1.07–1.15)</td>
<td>&lt;0.0001</td>
<td>0%</td>
</tr>
<tr>
<td>Colon</td>
<td>19</td>
<td>1.09 (1.05–1.13)</td>
<td>&lt;0.0001</td>
<td>39%</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>7</td>
<td>1.07 (1.00–1.14)</td>
<td>0.05</td>
<td>47%</td>
</tr>
<tr>
<td>Liver</td>
<td>1</td>
<td>1.07 (0.55–2.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastric</td>
<td>5</td>
<td>1.04 (0.90–1.20)</td>
<td>0.56</td>
<td>4%</td>
</tr>
<tr>
<td>Ovarian</td>
<td>13</td>
<td>1.03 (0.99–1.08)</td>
<td>0.30</td>
<td>55%</td>
</tr>
<tr>
<td>Rectum</td>
<td>14</td>
<td>1.02 (1.00–1.05)</td>
<td>0.26</td>
<td>0%</td>
</tr>
<tr>
<td>Malignant melanoma</td>
<td>5</td>
<td>0.96 (0.92–1.01)</td>
<td>0.05</td>
<td>0%</td>
</tr>
<tr>
<td>Premenopausal breast</td>
<td>20</td>
<td>0.92 (0.88–0.97)</td>
<td>0.001</td>
<td>39%</td>
</tr>
<tr>
<td>Lung</td>
<td>6</td>
<td>0.80 (0.66–0.97)</td>
<td>0.03</td>
<td>84%</td>
</tr>
<tr>
<td>Oesophageal squamous</td>
<td>2</td>
<td>0.57 (0.47–0.69)</td>
<td>&lt;0.0001</td>
<td>60%</td>
</tr>
</tbody>
</table>
Maintain a Healthy Weight Across Time

• **Obesity linked to increased cancer risk**
  - Make healthy choices
  - Control portion size
  - Eat food low in calories but high in nutrients
  - Eat fewer calories and burn more calories by exercising
AICR’s Nutritional & Exercise-related Recommendations for Cancer Prevention

1. Be as lean as possible without becoming underweight.
2. Be physically active for at least 30 min each day. Limit sedentary habits.
3. Avoid sugary drinks. Limit consumption of energy-dense foods.
4. Eat more of a variety of vegetables, fruits, whole grains & legumes such as beans.
5. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.
6. If consumed at all, limit alcoholic drinks to 2 for men and 1 for women per day.
7. Limit consumption of salty foods and foods processed with salt.
8. Don't use supplements to protect against cancer.
9. * It is best for mothers to breastfeed exclusively for up to 6 months and then add other liquids and foods.
10. * After treatment, cancer survivors should follow the recommendations for cancer prevention.

*Special Population Recommendations

Source: http://www.aicr.org/reduce-your-cancer-risk/recommendations-for-cancer-prevention/
MD Anderson’s Clinical Care Algorithm for Physical Activity

**Physical Activity (PA) - Adult**

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers.

**INITIAL ASSESSMENT**

- Qualified clinical personnel to assess level of current physical activity (frequency, intensity, type, duration).  
  
- Meeting ACSM Physical Activity Guidelines?  
- Patient interested in increasing PA?  
  - Yes
    - Positive reinforcement, and encouragement to maintain activity level
    - Continued reinforcement of guideline recommendations at follow-up visit.
  - No
- Patient interested in starting or increasing physical activity?
  - Yes
    - Conduct Motivational Interview (MI) to encourage any physical activity and limit sedentary behavior to potentially reduce risk of cancer and chronic disease.
    - Provide patient education document “Benefits of physical activity in cancer risk reduction”
    - Reassess level of PA upon return to clinic
  - No
- Does patient require clearance?  
  - Yes
    - Provide patient with form Physical Activity Clearance to be completed by treating provider
  - No
    - Refer to Exercise Physiology Technologist (EPT)/community exercise program/independent exercise program Provider for exercise prescription

**Program Components:**
- Systematic evaluation
- Defined trigger
- Motivational interviewing
- Physical activity “prescription”
- Motivational monitoring
- Assessment
Healthy Living Clinic’s Exercise Prescription

Warm Up

Cardio Program

<table>
<thead>
<tr>
<th>Activity</th>
<th>Intensity</th>
<th>Duration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bayou Hills</td>
<td>Up and down “hills”</td>
<td>45 seconds or three times up and down</td>
<td></td>
</tr>
<tr>
<td>Straight Jog</td>
<td>Jog your normal pace</td>
<td>2 - 4 minutes</td>
<td></td>
</tr>
<tr>
<td>Sprints</td>
<td>Four to six fast straights</td>
<td>20 – 30 seconds each</td>
<td></td>
</tr>
</tbody>
</table>

Summary Of Program

<table>
<thead>
<tr>
<th>Activity</th>
<th>Type</th>
<th>Sets</th>
<th>Reps</th>
<th>Duration</th>
<th>Tempo</th>
<th>Intensity</th>
<th>Rest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squat – Prisoner</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Centipede</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio</td>
<td>Exercise</td>
<td>3</td>
<td>2-5</td>
<td>minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral Lunge (SI Joint)</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sitting Dip</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio</td>
<td>Exercise</td>
<td>3</td>
<td>2-5</td>
<td>min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Squat Thrusts</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Push-Up – Staggered Arms</td>
<td>Exercise</td>
<td>3</td>
<td>10-20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio</td>
<td>Exercise</td>
<td>3</td>
<td>2-5</td>
<td>minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abdominals - supine lowering</td>
<td>Exercise</td>
<td>3</td>
<td>15-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oblique Twist</td>
<td>Exercise</td>
<td>3</td>
<td>15-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cool Down

SQUAT - PRISONER

Reps: 10-20 Sets: 3 Intensity: 
Tempo: Rest: Duration:

Preparation:
- Stand in proper alignment, at shoulder width, with hands behind the head, fingers interlocked (DO NOT PRESS INTO THE HEAD/NECK).

Movement:
- In the brief push-up position, make sure legs are fully extended, glutes contracted, and back is flat with abdominals drawn in. Quickly hop feet back under body and go right into squat jump again.
- Repeat for desired repetitions. Perform repetitions as quickly as can be controlled.

PUSH-UP - STAGGERED ARMS

Reps: 10-20 Sets: 3 Intensity: 
Tempo: Rest: Duration:

Preparation:
- Initiate a thorough dynamic warm-up prior to starting this exercise. This engages the nervous system. Prepare for this motion by keeping a lengthened position in the body.

Movement:
- This movement involves a push-up in a staggered arm position. Start in a push-up position. Hands about shoulder-width apart—with one hand forward (towards the head) and the other hand lower (towards the stomach) as shown. Perform a pushup (see “Pushup” in the Exercise Library for description). Perform desired number of repetitions and switch hand positions. TRAINERS: Watch for hinging at the hip or a sway in the lumbar spine—these may be indications of fatigue.
Avoid Excessive Sun & Other Forms of UV Radiation

• Seek shade & limit time in the sun, especially at midday

• Cover-up with clothing that covers your arms & legs

• Wear a wide-brimmed hat

• Wear wrap-around sunglasses

• Apply SPF 30 sunscreen & reapply every 1-2 hrs.

• Protect your children

• Avoid tanning beds
Obtain Cancer Preventive Vaccines

- Human papillomavirus (HPV) is strongly associated with cervical, genital, anal, and many oral cancers
- Vaccine recommended for females and males, ages 9 – 26 to prevent precancers and cancers
- Vaccinated females who should still follow the screening guidelines for cervical cancer

**Preliminary data from England’s national HPV vaccination program (2008)**
- 2010 = 20% sexually-active women aged 16-18yo infected with HPV 16 or 18
- 2012 = 6.7%

Follow an Evidence-based Cancer Screening Program

Women: Screening exams by age

Take this checklist to your next doctor appointment. Your doctor can help you develop a more tailored screening plan if needed.

Ages 20-29
- Clinical breast exam every one to three years to check for breast cancer, starting at age 21
- Pap test every three years to check for cervical cancer

Ages 30-39
- Clinical breast exam every one to three years to check for breast cancer
- Pap test and HPV test every five years to check for cervical cancer and HPV

Ages 40-49
- Mammogram and clinical breast exam every year to check for breast cancer
- Pap test and HPV test every five years to check for cervical cancer and HPV

Ages 50 and older
- Mammogram and clinical breast exam every year to check for breast cancer
- Pap test and HPV tests every five years to check for cervical cancer and HPV. MD Anderson does not recommend screening after age 65.
- Colonoscopy every 10 years or virtual colonoscopy every five years to check for colorectal cancer. If you're age 76 to 85, your doctor can help you decide if you should continue screening.

Men: Screening exams by age

Take this checklist to your next doctor appointment. Your doctor can help you develop a more tailored screening plan if needed.

Ages 40-49
- Beginning at age 40, you should speak with your health care provider about the benefits and limitations of prostate cancer screening.
- If you choose prostate cancer screening, you should get a digital rectal exam and PSA test every year beginning at age 45 to check for prostate cancer. If you are African American or have a family history of prostate cancer.

Ages 50 and older
- If you choose prostate cancer screening, you should get a digital rectal exam and PSA test every year to check for prostate cancer.
- Colonoscopy every 10 years or virtual colonoscopy every five years to check for colorectal cancer. If you're age 76 to 85, your doctor can help you decide if you should continue screening. MD Anderson does not recommend screening after age 85.

Regardless of your age, practice awareness. This means you should be familiar with your body so that you will notice changes and report them to your doctor without delay.
Clinical Preventive Services Covered by the ACA

<table>
<thead>
<tr>
<th>Cancer</th>
<th>Chronic Conditions</th>
<th>Immunizations</th>
<th>Health Promotion</th>
<th>Pregnancy-Related**</th>
<th>Reproductive Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast cancer - Mammography (women 40+) - Genetic (BRCA) screening and counseling (women at high risk) - Preventive medication (women at high risk)</td>
<td>Abdominal aortic aneurysm screening (men 65–75 who have ever smoked) - Cardiovascular health - Hypertension screening - Blood pressure - Lipid disorders screenings (high risk women 20+; at risk men 20–35; all men 35+)</td>
<td>Haemophilus influenzae type b (adults 18+ with risk factors)</td>
<td>Alcohol misuse screening and counseling (risk assessment all adults)</td>
<td>Alcohol misuse screening and counseling</td>
<td>Contraception (all women with reproductive capacity)</td>
</tr>
<tr>
<td>Cervical cancer - Pap testing (women 21+ with cervix) - HPV DNA testing (women 30–65 with normal pap results)</td>
<td>Aspirin (men 45–79; women 55–79) - Behavioral Counseling (overweight or obese adults with CVD risk factors)</td>
<td>Hepatitis A (adults with risk factors)</td>
<td>Fall Prevention Counseling and Preventive Medication (community-dwelling adults 65+)</td>
<td>Breastfeeding supports - Counseling - Consultations with trained provider</td>
<td>All FDA-approved contraceptive methods as prescribed</td>
</tr>
<tr>
<td>Colorectal cancer - Fecal occult blood testing, sigmoidoscopy, and/or colonoscopy (adults 50–75)</td>
<td>Diabetes (Type 2) screening (adults with elevated blood pressure)</td>
<td>Hepatitis B (adults with risk factors)</td>
<td>Intimate partner violence screening, counseling (women)</td>
<td>Folic acid supplements (women with reproductive capacity)</td>
<td>Sterilization procedures</td>
</tr>
<tr>
<td>Lung cancer screening - Annual tomography (adults 55–80 with history)</td>
<td>Depression screening (adults when follow up supports available)</td>
<td>HPV (women 18–26 and men 18–21 not previously vaccinated; at risk men 22–26)</td>
<td>Influenza (yearly)</td>
<td>Gestational diabetes screenings (after 24 weeks gestation)</td>
<td>Patient education and counseling</td>
</tr>
<tr>
<td>Skin cancer - Counseling (adults 18–24)</td>
<td>Hepatitis C screening (high risk adults; one time screening for adults born between 1945 and 1965)</td>
<td>Measles, Mumps and Rubella (adults 18–49; 50+ with risk factors)</td>
<td>Meningococcal (adults 18+ with risk factors)</td>
<td>Iron deficiency anemia screening</td>
<td>Services related to follow-up, management of side effects, and device removal</td>
</tr>
<tr>
<td>Osteoporosis screening (all women 65+; high risk women &lt;60)</td>
<td>Obesity Screening and Management (all adults via body mass index (BMI)) - Referral for intervention for adults ≥ BMI of 30 kg/m²</td>
<td>Pneumococcal (adults 19–64 with risk factors; adults 65+)</td>
<td>Pneumococcal (adults 19–64 with risk factors; adults 65+)</td>
<td>Preeclampsia preventive medicine (pregnant women at high risk)</td>
<td>Screenings</td>
</tr>
<tr>
<td>- Td booster, Tdap</td>
<td>Varicella</td>
<td>Zoster (adults 60+)</td>
<td>Tobacco counseling and cessation interventions</td>
<td>Low-dose aspirin (at risk women after 12 weeks of gestation)</td>
<td>Chlamydia (sexually active women ≤24 years old, older women at risk)</td>
</tr>
<tr>
<td></td>
<td>- Zoster (adults 60+)</td>
<td>Tobacco counseling and cessation interventions</td>
<td>- STI and HIV counseling (adults at high risk; all sexually-active women)</td>
<td></td>
<td>- Gonorrhea (sexually active women ≤24 years old, older women at risk)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>- Syphilis (adults at high risk)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- HIV (adults 15–65; at-risk younger adolescents and older adults)</td>
</tr>
</tbody>
</table>

Table 1: Summary of Selected Preventive Services for Adults Covered by Non-Grandfathered Private Plans without Cost Sharing
Several prospective cohort studies & a systematic review demonstrate significant benefits for adherence to ACS cancer prevention guidelines, beyond tobacco avoidance.

- Each study computed scores to reflect adherence to ACS or AICR guidelines regarding: BMI, physical activity, diet, & alcohol intake.

<table>
<thead>
<tr>
<th>Study</th>
<th>Cohort</th>
<th>No. of Individuals</th>
<th>Follow-up Time</th>
<th>Reduction in All-Cancer Incidence</th>
<th>Reduction in All-Cancer Mortality</th>
<th>Reduction in CVD Mortality</th>
<th>Reduction in All-Cause Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Prevention Study-II</td>
<td>50-74 y.o.</td>
<td>111,966</td>
<td>14 y</td>
<td>N/A</td>
<td>Women-24% Men-30%</td>
<td>Women-58% Men-48%</td>
<td>42% (Same in men &amp; women)</td>
</tr>
<tr>
<td>NIH-AARP Diet &amp; Health Study</td>
<td>50-71 y.o.</td>
<td>476,396</td>
<td>10.5 y – 13.6 y</td>
<td>10-19%</td>
<td>Women-24% Men-25%</td>
<td>N/A</td>
<td>Women-33% Men-26%</td>
</tr>
<tr>
<td>Systematic Review</td>
<td>8 studies in 7</td>
<td>1,154,986</td>
<td>6 y – 14 y</td>
<td>4-45%</td>
<td>20-61%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Evidence-Based Population Actions
Cancer Control Platform Mission & Deliverables

Develop and deliver comprehensive evidence-based actions (PES) in cancer prevention, screening, early detection and survivorship to achieve a measurable and lasting reduction in the cancer burden, especially among the underserved.

Policies
Inform, impact & implement worksite, government & public policies & related activities

Education – public & professional
Develop & deliver school-based programs, media campaigns & counter-marketing programs. Improve health professional knowledge through CME programs & telementoring activities

Services beyond MD Anderson’s walls
Improve professional practice & delivery of community-based screening & early detection, counseling, immunization, & prevention services
Evidence-Base for Cancer Control

7. Identified evidence-based strategies for improvement

- Identified gap analysis by comparing goals to ongoing activities and best practices
- Conducted a gap analysis
- Developed eight prioritized goals
- Identified ongoing activities; in the community and MDACC
- Prioritized strategies and implemented projects following broad vetting
- Aligned research with control activities to become mutually informative
- Defined "cancer control" for the institution
- Established the focus for cancer control efforts at MDACC
- Established objective criteria and identified data needs & resources

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**JAMA Internal Medicine**

Formerly Archives of Internal Medicine

Mar 25, 2012, Vol 173, No. 6

**Ask-Advise-Connect**

A New Approach to Smoking Treatment Delivery in Health Care Settings

Jennifer Lee, MD, MPH; Ranjita Reddy, MD; Yumna Cao, MS; Jeffrey Grzywacz, PhD; Perny Harms, BS; Barry Sharp, MD; Lindsay Miles, BS; Susan M. Zilversmit, PhD; David W. Weller, PhD

---

**Cancer Prevention & Research Institute of Texas**

**P.L.A.N.E.T.**

Plan, Link, Act, Network with Evidence-based Tools
Six Selection Criteria for Cancer Control Priorities

1. Significance of the cancer burden/risk factor in the selected population vs. the state or nation

2. Availability of adequate data on cancer burden or risk factors
   a. Accurate
   b. Reliable
   c. Serially-measurable

3. Availability of effective, evidence-based strategies for prevention and/or early detection

4. Feasibility of implementing promising clinical or population-based interventions, based on
   a. Expertise
   b. Associations
   c. Not resources

5. Potential for meaningful impact

6. Alignment with the Texas Cancer Plan
Key Parameters of an Implementation Strategy for Cancer Control

- **Dominant risk factors**
- **Levels of intervention/cohort**
- **Control actions/intensity (PES)**
  - Passive
  - Active
- **Risk-based cohort subsets**
- **Moonshot-oriented cancer sites/organ systems**

Cancer-causing infections (e.g., HPV, H. pylori, hep C, hep B)

Obesity (excess calories &/or physical inactivity)

Excessive alcohol

Excessive UV exposure

Improper use of prev. meds.

Improper evidence-based screening

- Public education
- Professional education
- Facilitate service delivery
- Provide service
- Implement policy
- Enforce policy

- Risk Assessment

- Individual
- Family
- Community - Schools*
  - Faith orgs.
  - Workplaces
- Region
- State
- Nation
- World

- Low
- Moderate
- High

- Neoplastic risk
- Education level
- SES
- Access to services
- Receipt of services
- Literacy
- Language skills
- Pop’n cancer rates

- Tobacco

- High-risk breast/ovarian cancers
- HPV-related cancers
- Colorectal cancer
- Melanoma
- Lung cancer

- Improper use of prev. meds.
Public Policy

Inform, Impact & Implement

Worksite, Government & Public Policies & Related Activities

**Tobacco**
- Tobacco-Free Hiring at MDACC
- Convened UT “Eliminate Tobacco Use” Summit
- SB97 passed prohibiting sale of e-cigs to minors
- Created & disseminated a tobacco-free campus policy toolkit for use throughout Texas

**UV Protection**
- Worked with 9 states re: tanning bed legislation
- SB265 passed permitting students to bring & use sunscreen at school
- Joint Position Statement on Indoor Tanning across professional organizations

**HPV Prevention**
- SB200 passed requiring TX DSHS to produce a plan to address HPV-related cancers
- Collective endorsement of HPV vaccine by all NCI-designated cancer centers
# Education

Develop & Deliver School-Based Programs, Media Campaigns & Counter-Marketing Programs to Improve the Public’s & Health Professionals’ Knowledge

<table>
<thead>
<tr>
<th>Tobacco</th>
<th>UV Protection</th>
<th>HPV Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Convened “UT Eliminate Tobacco Use” Summit</td>
<td>• Created &amp; disseminated a Skin Cancer Prevention Toolkit for College Campuses</td>
<td>• Conducted employee survey re: vaccination beliefs &amp; attitudes</td>
</tr>
<tr>
<td>• Promoted ASPIRE Program’s reach: 29 states, 7 internat’l partners, 35,000+ student interventions initiated</td>
<td>• Hosted Texas Skin Cancer / Melanoma Screening &amp; Prevention Summit</td>
<td>• Completed environmental scan of existing HPV-related programs</td>
</tr>
<tr>
<td>• Created 3 novel mobile apps re: tobacco prevention &amp; cessation (18,000+ downloads)</td>
<td>• Developed and disseminated “Ray &amp; the Sunbeatables” pre-school sun-safety curriculum</td>
<td>• Hosted HPV Summit: “Increasing HPV Vaccination in the US: A Collaboration of NCI-Funded Cancer Centers”</td>
</tr>
</tbody>
</table>
Community-Based Clinical Services

Improve Professional Practice & Delivery of Community-Based Screening & Early Detection, Counseling, Immunization, & Prevention Services

**Tobacco**
- Tobacco Treatment Program
- Dissemination of TTP’s cessation algorithms
- Electronic referral of all tobacco users
- Convened UT “Eliminate Tobacco Use” Summit
- Taking Texas Tobacco Free 2

**HPV Prevention**
- South Texas Cervical Cancer Project
- Management & Prevention of Cervical Cancer in Latin America
- Management of Cervical & Breast Cancer in Africa (i.e., Zambia & Mozambique)
What is **EndTobacco**?

An unprecedented and sustained institutional commitment by MD Anderson Cancer Center in 2014 to advance evidence-based tobacco control as a core element of our mission through leadership, investment, and collaboration

- Program developed by an 18-member working group of MD Anderson scientists, clinicians, administrative leaders & public health practitioners in response to charge from Dr. Ronald DePinho

- Structured process to review & recommend evidenced-based & best practices from the CDC & WHO, as well as best practices from across the U.S.

- Actions that MD Anderson is initiating & implementing, working through partnerships, to ultimately end tobacco at multiple levels
Need for Cessation Interventions

- Nearly 70% of smokers want to quit
- Symptoms of depression or negative mood significantly predict prevalence & relapse
- Up to 14 attempts needed for some to achieve success
- Nicotine dependence is a “chronic relapsing disorder”
- 42% report a quit attempt in the past 12 months
- Annually, less than 3% succeed on their own
Nine Benefits of Quitting for Cancer Patients

- Longer survival
- Better chance of successful treatment
- Fewer, less serious side-effects of treatment
- Faster recovery from treatment
- Lower risk of secondary cancers
- Lower risk of infection
- Easier breathing
- More energy
- Better quality of life

Source: ASCO, Stopping Tobacco Use After a Cancer Diagnosis, 2012
MD Anderson’s **EndTobacco®** Initiative
Advances Evidence-Based Tobacco Control

**Goals:**
1. Reduce smoking in youths
2. Reduce the proportion of nonsmokers exposed to secondhand smoke
3. Increase counseling and smoking-cessation attempts among current smokers

**Key Initiatives:**
Cancer Prevention & Control Platform

End Tobacco
An MD Anderson Cancer Center program

Policy

• Tobacco 21
• Comprehensive Tobacco-Free Laws
• Tobacco-Free College & University Campuses, Ballparks
• Tobacco-Free Hiring in Health Systems & Large Employers

Prevention & Education

• Youth K-12 Programs
• College/Young Adult Programs
• UT System Employees & Family Programs

Cessation Services

• Tobacco Treatment Program - Share Auto-referral & Cessation Algorithms
• Develop & Implement a Certified Tobacco Treatment Training Program (2017)
• Knowledge Transfer to Healthcare Professionals Working with Smokers:
  • Behavioral Health
  • Pregnant Women
Tobacco-Free Hiring at UT-MD Anderson

Institutional Policy

- Began testing applicants & trainees for tobacco use in anyone given an offer or appointment on/after January 1, 2015
  - Caveats:
    - Graduate Medical Education (GME) Residents & Fellows will be tested if they are in programs starting on or after July 1, 2016
    - Those not paid or benefited by MD Anderson will not be tested (e.g. trainees from other schools, volunteers, etc.)
- **Legacy** faculty, employees, trainees, etc. are NOT tested
- Applicants testing positive for tobacco-associated nicotine* are referred to MD Anderson’s Tobacco Treatment Program for free cessation services
  - If successful, they may re-apply in 6 months

*Unique to MD Anderson, applicants testing + for cotinine are tested for anabasine (i.e., an alkaloid found only in tobacco) to differentiate tobacco vs. nicotine users
Tobacco-Free Hiring at UT-MD Anderson

1-Year Post-Implementation Data

Total no. of applicants tested = 4,365
  Cotinine+ = 30
  Cotinine+/anabasine– (i.e., NRT users) = 27
  Cotinine+/anabasine+ (i.e., tobacco users) = 3

Pre-employment Tobacco Positivity Rate = 3/4,365 = 0.07%

Costs of the UT-MD Anderson TFH Policy

• Direct costs = ~$73,000/yr. (1 extra staff, contractual costs)
• Indirect costs = minimal, as no noticeable change in applicant #’s
• One-time implementation costs = large group of stakeholders met monthly for 1 yr.
• In-house experts used for policy, legal, process & communication efforts
EndTobacco: U of Texas System Dissemination Project

Purpose:
• Create a tobacco-free culture through policy, prevention and cessation efforts
• Each institution created action plans including next steps and major goals for policy, prevention, and cessation on their campus.

Potential System-wide Impact:
6 Academic Institutions
8 Health Science Centers
2 Medical Schools
213,000 Students
90,933 Faculty & Staff
The University of Texas’
Eliminate Tobacco Use Program

- February 2016 summit of 14 UT academic & health science campuses to share current tobacco control policies & practices

- Each institution developed its own comprehensive plan to improve its tobacco control policies & strategies

- Post-summit outcomes to date
  - Organization & leadership
    - Each campus has a designated tobacco control officer; convened every Q
  - Tobacco-free campus policies
    - System-wide following adoption @ UT Tyler, UT Dallas, UT Permian Basin
    - UT Austin includes e-cigs; under consideration elsewhere
    - 2 new medical schools opened with this policy in place
  - Tobacco-free hiring policies
    - UT Southwestern & UT Health NE exploring
  - Tobacco training/enforcement programs
    - MD Anderson applying for Certified Tobacco Treatment Training accred. for healthcare professionals (currently not offered in TX, LA, OK, NM)
    - UT Austin leading enforcement program development & training
What Constitutes Child/Youth Health?

6 Actions

1. Eat a Healthy Diet
   • Include a variety of fruits, vegetables, whole-grains
   • Limit red & processed meats, salty foods, energy-dense foods
   • Avoid sugary drinks

2. Be Physically Active

3. Achieve & Maintain a Healthy Weight

4. Eliminate Tobacco & Alcohol Use

5. Limit Ultraviolet (UV) Exposure

6. Receive Recommended Cancer Preventive Vaccines (e.g., hepatitis B, HPV)
In 2013, Texas became the 4th state with a tanning bed prohibition for minors.
Minors’ Tanning Bed Prohibition

In 2016, Adopted in 14 States

MD Anderson has shared lessons learned, testimony, background data & directly assisted efforts in: CO, KY, KS, SC, WA, MD, MS, OK, & AZ

- Under Age 18 effective (14 states)
- Under Age 18 proposed (11 states)
- Under Age 17 or lower proposed (1 state)
- No active tanning legislation in 2015

Source: NCSL/AIM at Melanoma
NCSL: National Conference of State Legislatures
Purpose: To evaluate Texas indoor tanning facilities’ compliance with the state’s 2013 under-18 ban.

Methods: Female employees, ages 17-19, of a mystery shopping firm posed as 17-year-old potential customers who had never tanned before and called facilities to inquire about using tanning beds.

Findings:
- 81% of Texas indoor tanning facilities complied with the under-18 ban.
- Compliance was significantly associated with facility type:
  - Free-standing facilities (86%)
  - Retail businesses (75%)
  - Salons/spas (68%).
- Before learning the shopper’s age, 83% of facilities reported that clients could tan daily.

Implications:
- Most facilities complied, underscoring importance of legislation as a public health strategy for skin cancer prevention.
- Most reported that clients could tan daily, in contrast to the FDA’s recommended schedule of ≤3 sessions during the first week of indoor tanning.
- This is only 2nd study to evaluate a state’s under-18 indoor tanning ban, & 1st to examine compliance by facility type.
- Findings support need to educate businesses that offer IT but not exclusively, and thus may be less familiar with the law.
- Evaluating & improving compliance is critical to reduce skin cancer incidence.
Collective Endorsement of HPV Vaccination By All NCI-designated Cancer Centers (January/February 2016)
The Institute of Medicine national report predicts that increasing the legal age to purchase tobacco will:

- reduce the smoking rate by 12%
- reduce smoking related deaths by 10%
- result in 249,000 fewer premature deaths
- result in 45,000 fewer deaths from lung cancer

Source: Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products, IOM, 2015
Youth Tobacco Prevention via ASPIRE Dissemination

ASPIRE: bilingual video-enabled, curriculum-based tobacco prevention/cessation education program for middle/high school students

29 US states enrolled

7 international partners enrolled

35,867 interventions initiated

- Houston ISD partnership (largest school district in Texas; 7th largest in the US)

Available in the RTIPs Database
http://rtips.cancer.gov/rtips/index.do
Purpose: To analyze 18-month impact of A Smoking Prevention Interactive Experience (ASPIRE)

Methods: 16 predominantly minority, inner-city high schools were randomly assigned to receive the ASPIRE curriculum or standard care (NCI’s *Clearing the Air* self-help booklet). N=1,160 students

Main Finding:
• At 18-month f/u, smoking initiation rates were significantly lower in ASPIRE condition (1.9% vs. 5.8%, p < .05)

Implications:
• Demonstrated the potential for an interactive multimedia program to promote smoking prevention in HS students over 18 months
• Further studies are required to determine ASPIRE's effects on cessation

*Prokhorov, et al., Nicotine Tob Res. 2008 Sep;10(9):1477-85*
A coordinated school health program promoting physical activity + healthy eating in elementary and middle school students

MD Anderson provides support to digitize, translate, disseminate, & expand content re: additional cancer risk factors (i.e., UV exposure, eCigs)
EL PASO CATCH REPLICATION STUDY
INCIDENCE OF OVERWEIGHT/OBESITY IN GIRLS
(> 85\textsuperscript{TH} % BMI)
(N = 423 GIRLS FROM 8 SCHOOLS)

"Net Difference = 11\%*"

p = 0.05

* p<.05, 5\textsuperscript{th} grade CATCH vs. Control, adjusting for baseline

It is important for children to **develop sun safety habits early** to reduce skin cancer risk.

**Sunbeatables™ curriculum:**

- **Theme:** Elements of sun protection as multi-dimensional “superpowers”
- **Pre-K curriculum activities** include a puppet show, science experiments, art projects, sun safety songs, and more
- **K-1 expansion**

**Goal:** Broader national & international dissemination
Adapting Project ECHO to Cervical Cancer Screening & Treatment Along the Texas-Mexico Border

Drs. Kathleen Schmeler, Andrea Milbourne, Ellen Baker

- **Problem:** Cervical cancer incidence 31% higher; advanced stage cancers far too common

- **Causes:** High rates of poverty, lack of insurance, health care shortages (40-50% fewer MDs & NPs/100K population), no one capable of colposcopy or LEEP

- **Actions:**
  - Train & support local MDs & providers (FQHCs & a UT-Health mobile clinic) to perform evidence-based, state-of-the-art cervical education, screening & care
  - Promote CHW-based outreach & public education re: vaccine & screening
Telementoring in Cervical Screening & Treatment Along the Texas-Mexico Border
Drs. Kathleen Schmeler, Andrea Milbourne, Ellen Baker

• Progress to Date:
  – Mentored by Dr. Sanjeev Arora of UNM
  – >60 TeleECHO conferences
  – 9 clinical sites from the LRGV & Houston
  – ~20-25 providers/session (e.g., NPs, PAs, midwives, family practitioners, OB-Gyns)
  – CME/CNE offered
  – Peer-reviewed grant funding from CPRIT
  – Disseminating the program to involve & train partners

• Early Results:
  – Boost in local providers’ sense of support & adoption of best practices
  – Empowerment and enthusiasm to take on other prevention challenges (e.g., HPV vaccination, screening, tobacco cessation)

Project ECHO Expanding to Global Cervical Care & Tobacco Cessation, Survivorship, & Palliative Care

Challenge – covering interested sites across time zones conveniently

Lopez, et al., J Global Onc; Published online before print October 5, 2016
## What Works to Increase Colorectal Cancer Screening: Client & Provider-Oriented Interventions

The Community Guide

http://www.thecommunityguide.org/cancer/screening/

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Breast Cancer</th>
<th>Cervical Cancer</th>
<th>Colorectal Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Client Reminders</strong></td>
<td>Recommended July 2010</td>
<td>Recommended July 2010</td>
<td>Recommended July 2010</td>
</tr>
<tr>
<td><strong>Client Incentives</strong></td>
<td>Insufficient Evidence July 2010</td>
<td>Insufficient Evidence July 2010</td>
<td>Insufficient Evidence July 2010</td>
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<tr>
<td><strong>Small Media</strong></td>
<td>Recommended December 2005</td>
<td>Recommended December 2005</td>
<td>Recommended December 2005</td>
</tr>
<tr>
<td><strong>Mass Media</strong></td>
<td>Insufficient Evidence October 2009</td>
<td>Insufficient Evidence October 2009</td>
<td>Insufficient Evidence October 2009</td>
</tr>
<tr>
<td><strong>Group Education</strong></td>
<td>Recommended October 2009</td>
<td>Insufficient Evidence October 2009</td>
<td>Insufficient Evidence October 2009</td>
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<tr>
<td><strong>One-on-One Education</strong></td>
<td>Recommended March 2010</td>
<td>Recommended March 2010</td>
<td>Recommended March 2010</td>
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<tr>
<td><strong>Reducing Structural Barriers</strong></td>
<td>Recommended March 2010</td>
<td>Insufficient Evidence March 2010</td>
<td>Recommended March 2010</td>
</tr>
<tr>
<td><strong>Reducing Client Out-of-Pocket Costs</strong></td>
<td>Recommended October 2009</td>
<td>Insufficient Evidence October 2009</td>
<td>Insufficient Evidence October 2009</td>
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</table>

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Task Force Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provider Assessment and Feedback</strong></td>
<td>Recommended October 2009</td>
</tr>
<tr>
<td><strong>Provider Incentives</strong></td>
<td>Insufficient Evidence October 2009</td>
</tr>
<tr>
<td><strong>Provider Reminder and Recall Systems</strong></td>
<td>Recommended February 2006</td>
</tr>
</tbody>
</table>

*FOBT only

*FOBT, Flex Sig only*
Colorectal Cancer Screening Successes

**New York City**

**Pre 2003:**
- Low CRC screening rates
- Significant SES disparities

**2003:**
- NYC DHMH launched campaign promoting colonoscopy
- Focused on low SES neighborhoods
- Developed targeted messaging on subway posters, ethnic radio stations, check-cashing sites
- Reached >600 providers city-wide

**Within 5 years:**
- Screening increased from 41.7% to 61.7%
- **Racial/ethnic disparities eliminated**


**Delaware**

**Pre 2002:**
- Low CRC screening rates
- Significant SES disparities

**2002:**
- Delaware Cancer Consortium created
- Goals - increasing screening, improve coordination of care for screen +’s, provide treatment for uninsured, eliminate racial/ethnic disparities

**Within 8 years:**
- Screening rates: DE vs. US = 74% v. 65%
- Incremental improvement = 57% for AAs v. 28% for Whites
- Early-stage CRC in AAs: 15% in 2001 vs. 50% in 2009
- **Racial/ethnic disparities eliminated**
New Priority – Establishing Novel Partnerships to Facilitate Translational Progress

**Demonstration Projects:**
- CMS
- OMH
- MITRE
- Harris County
- HARRIS HEALTH SYSTEM
- VA
- HCPHES

**Affiliates:**
- MD Anderson Cancer Network
- MD Anderson Physicians Network
- Cooper University Health Care
- BAPTIST HEALTH
- UTHealth
- Banner Health

**Foundations:**
- THE KRESGE FOUNDATION
- EPISCOPAL HEALTH FOUNDATION
- Robert Wood Johnson Foundation

**Community Organizations:**
- American Cancer Society
- GoodNeighbor Healthcare Center
- Susan G. Komen
- African American Health Coalition
- Neighborhood Centers Inc.

**International Collaborations:**
- National Cancer Institute
- World Health Organization
- AFRICA CANCER INSTITUTE
- EU
- INEN

** Corporations:**
- EXONMOBIL
- Shell Oil
# A Case Study in Corporate Partnership

**Jason’s Deli**

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$0.10 from every H2O bottle sale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$2 from every bandana sold in Oct.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1&lt;sup&gt;st&lt;/sup&gt; co-branded menu item</td>
<td>Mighty Wild Salmon Salad</td>
</tr>
<tr>
<td>2015</td>
<td>$0.10 from every H2O bottle sale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$2 from every bandana sold in Oct.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2&lt;sup&gt;nd&lt;/sup&gt; co-branded menu item</td>
<td>Quinoa, Shrimp &amp; Mango Salad</td>
</tr>
<tr>
<td></td>
<td>Launched June Strike - Through event ($1 for a tribute)</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$0.50 from every salad sold (3&lt;sup&gt;rd&lt;/sup&gt; co-branded menu item)</td>
<td>Super Slaw Salmon Salad</td>
</tr>
<tr>
<td></td>
<td>$2 from every bandana sold in June</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expanded June Strike - Through event</td>
<td></td>
</tr>
</tbody>
</table>

Planned for 2017 - Salmon Pacifica Salad
History of Success

Jason’s Deli Strikethrough Cancer

Major Achievements to Date:
• Philanthropic donations of $581,624.61
• Broad & novel public messaging to promote health & cancer awareness
• Partnership to assist in menu development, bolstering healthy options

- 260,000 Salads sold
- 11,500,000 pieces of collateral
- 4.5M media impressions
- 775,000 social reach
Goal: Develop “model” projects involving evidence-based interventions that improve health and prevent cancer

Strategy: Forge partnerships and help to unite individuals, schools, workplaces, government, health care providers and policy-makers to plan/implement community-led solutions to make positive, lasting changes in the health of the population within 10 years

Community Engagement & Relationship Building

Community Assessment & Planning

Implementation

Sustainability

Phase 1 Phase 2 Phase 3 Phase 4
The Healthy Communities Initiatives

Energy Sector Partnerships

Takeaways:
- Development hosted an energy kick-off to bring together CEOs to discuss potential gifts
- “Healthy Communities” aligned with many corporate missions & social investment strategies to benefit communities
- “Healthy Communities” was seen as a way to engage employees & potentially lower healthcare costs
- Both Shell & ExxonMobil are dedicated to building a culture of health within their organizations

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date 1</th>
<th>Date 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-up meeting 2</td>
<td>10/12/2015</td>
<td>03/31/2016</td>
</tr>
<tr>
<td>Progress Report Y1</td>
<td>12/2015</td>
<td>NA</td>
</tr>
<tr>
<td>Community engagement and outreach plan developed</td>
<td>12/2015</td>
<td>TBD</td>
</tr>
<tr>
<td>Key informant interviews began</td>
<td>02/2016</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Priorities for The Future of Cancer Prevention

**Research**
- Precancer Genome Atlas (PCGA)
- Preventive applications of immuno- & targeted therapies
- Obesity research to better understand cancer-related mechanisms & identify/develop effective interventions
- D & I research to determine how to improve delivery of effective interventions to maximize STEEPPS

**Control Actions**
- Application of evidence-based interventions to improve health equity related to cancer risk factors, interventions, & outcomes
  - E.g. DE & NY CRC screening successes
- Enhance community planning to improve physical activity in everyday actions
- Taxation to reduce sugary drinks & junk food consumption at the population level
- Improve implementation & dissemination of HPV vaccination & evidence-based cancer screening (e.g., CRC, cervix, breast, lung) to optimize their preventive potential
- Tobacco 21
The Disease Prevention Paradox

Reasons that Prevention is Difficult
1. Success is invisible
2. Lack of drama
3. Statistical lives
4. Delayed rewards
5. Benefits do not accrue to payer
6. Advice changes
7. Persistent behavior change required
8. Bias against errors of commission
9. Acceptance of avoidable harm is norm
10. Double standard in evaluation of prevention & treatment
11. Commercial conflicts of interest
12. Conflicts with personal, cultural beliefs

Strategies to Overcome Obstacles to Prevention
1. Pay for prevention
2. Make prevention cheaper than free
3. Involve employers
4. Re-engineer to reduce need for individual action
5. Use policy to make the right choices easier
6. Use multiple channels to educate, reframe, & elicit positive change

What Might Cancer Coalitions Do to Advance Cancer Control Actions as Essential Priorities?

- Convene
- Organize
- Prioritize
- Lead
- Drive
- Educate
- Evaluate
- Learn
- Iterate
- Model
- Promote
- Partner
- Collaborate
- Expect

- Clarify definitions & promote understanding re: control
- Update/measure progress against the state’s control plan (i.e., risk factors, cancers, pop’n impact)
- Assure state tobacco restitution/tax funds support the plan and its priorities
- Conduct serial behavioral assessments re: risk factors
- Promote a national cancer control plan
- Promote HPV vaccination
- Promote Tobacco 21
- Promote tanning bed restrictions/sun safety in youth
- Initiate a “Delaware initiative” to advance CRC screening
- Get all members on the same page re: their own institutions’ control policies & practices
- Ensure all gov’t agencies endorse/align with control plan
- Promote cancer control with major employers, social agencies, houses of worship, schools
MD Anderson Cancer Prevention & Control Platform
• Joxel Garcia, MD, MBA
• Mark Moreno
• Lewis Foxhall, MD
• Anna Brewster, MPH
• Ruth Rechis, PhD

UV Protection Program
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CATCH Global Foundation
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• David Lakey, MD, MPH
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• Kathleen Schmeler, MD
• Ellen Baker, MD
• Melissa Lopez
“The aim of medicine is to prevent disease and prolong life, the ideal of medicine is to eliminate the need of a physician”

William J. Mayo, MD (1928)