Evaluating the Effectiveness of the Community Outreach Program at Baylor Medical Center at Garland 2012 - 2014
Introduction

Community outreach is a top priority for the Baylor Medical Center at Garland cancer program. The program has supported community health through health education on cancer prevention, risks, and recommended screenings.

Cancer prevention through education has been a regular component of our community outreach efforts. Education is an important factor for prevention of cancer and has the potential to impact numerous individuals at an economically reasonable cost. Educational information promoting healthy lifestyles, healthy behaviors, and cancer prevention is distributed by the hospital through events such as health fairs, group education sessions hosted by churches and employers, and public health symposiums.

The overall goal of our community outreach program is to reduce the burden of cancer in Dallas County and surrounding areas.

Community Needs Assessment Overview

The 2012 – 2014 Community Needs Assessment for Baylor Medical Center at Garland highlights a service area with an overall average healthy population. Based on the 2013 and 2014 county health rankings for the State of Texas, Dallas County ranked 67th and 58th respectively in Health Outcomes and 158th and 130th in Health Factors. The rankings were determined after researchers surveyed 232 Texas counties on everything from insurance coverage to adult smoking rates to diabetic screenings (countyhealthrankings.org).

The Baylor Garland service area demographics depict a population with household income, education level and overall health status similar to the national average. But, analysis of health behaviors in the service area population shows preventative care utilization rates as very low or below the national average. This is a definite community gap that the Baylor Garland cancer program needs to address.

Cancer Rates in Dallas County

According to the Texas Department of State Health Services – Texas Cancer Registry, the top five cancer sites in Dallas County are breast, lung/bronchus, prostate, colorectal, and kidney and renal. Baylor Garland sees a similar pattern in terms of patient admissions and treatment with the breast, colorectal and lung comprising the top three sites.
Community Outreach Goals

The community needs assessment provides the Baylor Garland cancer program with a means to identify the needs of the population served within the community, the potential to improve cancer health disparities, and gaps in resources. The needs assessment can be used to guide the initiatives for community outreach and education.

Goals set for 2012 - 2014

- Focus on top cancer sites within the Baylor Garland service area – breast, colon and lung
- Increase education on the top cancer sites to address cancer risks and cancer prevention, including increasing preventative care utilization rates such as cancer screening exams.
- Increase education on healthy lifestyles, preventative care and general cancer information.

Community Outreach

Health Fairs and Screenings

Health fairs and screenings are a good way to impact the community in an effort to increase awareness and knowledge of cancer risks and prevention. Participants receive general wellness screening tests (lipid panel, BMI, skin cancer) and have access to informational brochures regarding cancer risks and prevention.

Advantages of community health fairs include free access to general wellness screenings and free access to health information, including cancer risks and prevention.

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># of events</td>
<td># of Participants</td>
<td># of events</td>
</tr>
<tr>
<td>Health Fairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>1</td>
<td>145</td>
<td>1</td>
</tr>
<tr>
<td>Businesses</td>
<td>2</td>
<td>273</td>
<td>0</td>
</tr>
<tr>
<td>Other Centers</td>
<td>3</td>
<td>300</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6</td>
<td>718</td>
<td>10</td>
</tr>
<tr>
<td>Aver. Reach per event</td>
<td>120</td>
<td></td>
<td>431</td>
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</tbody>
</table>
Educational Articles
Baylor Medical Center at Garland distributes a community magazine every other month that reaches over 38,000 households within the service area. Each publication has at least one article pertaining to cancer risk, treatment or prevention. Many of the articles address the top cancer sites for the Baylor Garland population. There are regular references to the recommended screening guidelines for breast, colon and lung cancer. In addition, articles promote general healthy living including advice pertaining to food and nutrition, exercise and stress relief.

For Women For Life/It’s a Guy Thing
Baylor Garland hosts two annual wellness expos focused on women in January and men in June. This is a major event with approximately 300 community members attending each year. These mega-wellness expos offer many opportunities for community participants to increase their knowledge and awareness of cancer risks and prevention.

Here are a few of the offerings:
- Wellness screenings (full lipid panel, blood pressure, body fat % and body mass index)
- Cancer Prevention/Education booths (Healthy Cooking Demonstrations to Prevent Colon Cancer)
- Educational Seminars led by physicians - at least one oncology topic is typically offered
- Q&A sessions with a panel of physician experts – the participants direct their specific questions to the physician panel
- Physician practice booths – typically, one-on-one conversations with the physician are possible
- Educational booths – American Cancer Society, Women’s Imaging/Mammography, cardiopulmonary (lung function screening), gastroenterology (colon screening information)
- Skin cancer screenings
Effectiveness of the Community Outreach Strategy

How does Baylor Garland assess the effectiveness of its Community Outreach program? The ideal goal is the reduction of cancer rates and mortality, especially for the three top cancer sites in the service area. But this is a long-term goal that is not easy to measure in the short-term. Regional and national data regarding breast and colon cancer screening rates by state or county are typically 3-5 years behind. In order to assess current effectiveness or the current community outreach strategy, it is necessary to look at a combination of measures that are monitored including:

- Rate or volume of cancer screening procedures
- Stage of cancer at primary diagnosis (early vs late)
- Participant evaluations at community outreach events

It is difficult to draw a conclusion on effectiveness based on any of these measures independently. But when looked at together, we can make fairly good assumptions about the effectiveness of the Baylor Garland community outreach strategy and use this as a tool for future plans.

Volume of cancer screening procedures

The cancer program can monitor the screening volume of these procedures at a Baylor Garland location. The goal of community education on cancer prevention is to encourage the recommended cancer screening exams with the expectation of finding cancers earlier rather than later in their development. But the volume of screening procedures at Baylor Garland only tells part of the story. There are many competing facilities/locations that perform women’s imaging/mammography and or colonoscopies on an outpatient basis. These facilities are not required to report or share their information with the state. The data below includes only the Baylor Garland volume totals. This data will not include any patients who may have been influenced by the information gained at a Baylor Garland community outreach event if they had their screening procedure performed at one of the many non-reporting facilities.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>% increase 2012 – 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Mammo</td>
<td>7358</td>
<td>7059</td>
<td>8909</td>
<td>21%</td>
</tr>
<tr>
<td>Colonoscopy*</td>
<td>1780</td>
<td>1069</td>
<td>825</td>
<td>(53.6%)</td>
</tr>
<tr>
<td>Low Dose CT**</td>
<td></td>
<td></td>
<td>3</td>
<td>200%</td>
</tr>
<tr>
<td>Skin Cancer Screening***</td>
<td>275</td>
<td>245</td>
<td>192</td>
<td>(30.2%)</td>
</tr>
<tr>
<td>At-risk for Skin Cancer***</td>
<td>Unk</td>
<td>0</td>
<td>9</td>
<td>Unk</td>
</tr>
</tbody>
</table>

*Data obtained from the Baylor Garland volume reports

*Colonoscopy:* The drop in volume is due to a push for colonoscopy at ambulatory centers. Baylor Garland performs the procedure primarily for patients who do not meet ambulatory center criteria. Additionally, one referring gastroenterology practice is no longer on the Baylor Garland medical staff, impacting volume.

**Low dose CT:** Scans for lung cancer screening have already dramatically increased in 2015 with coverage now offered through CMS and commercial carriers.

***Skin Cancer – At-risk:** Patients determined to be at-risk for possible skin cancer were instructed to follow up with their primary care provider or dermatologist.
Stage of cancer at primary diagnosis
The goal of effective community outreach education regarding cancer prevention is to encourage increased participation in recommended cancer screenings and the adoption of healthy lifestyle behaviors. One outcome of these behavior shifts should be identifying and diagnosing cancers at earlier stages of the disease.

Baylor Garland has seen a steady increase in the number of breast in situ cases (Stage 0) over the three year period. Diagnosis at Stage I have decreased by 14% with Stage III increasing by 1%. The number of unknown AJCC Stage directly correlates with the number of biopsy only cases at Baylor Garland.

From 2012 to 2014, Baylor Garland saw a decrease in colon cases diagnosed at Stage I; a steady number of cases diagnosed at Stage II; and an increase of 10% of colon cases diagnosed at Stage III. The late stage colon cases diagnosed at Stage IV has decreased by 3%. The number of unknown Stage correlates with the number of colonoscopy only cases.

Over the period of 2012 to 2014, Baylor Garland has seen an 8% decrease in the number of lung cancer cases diagnosed at Stages I and II. Stage III has increased by 12%. Overall, Stage IV lung cancers have decreased by 4%.

*Data taken from the Baylor Health Care System Cancer Registry*
Breast Cases – Baylor Garland has seen a steady reduction, from 15.79% to 1.85%, in Stage III and Stage IV initial diagnoses from 2012 to 2014. Opportunities for improvement exist with the Stage II initial diagnosed breast cases but overall the results are positive.

Colon Cases – From 2012 to 2014 Baylor Garland saw a great improvement in diagnosing colon cancer during the early stages. In 2013, over 71% of the cases diagnosed were late Stage III or Stage IV. By 2014, late stage diagnosis dropped to 22% of cases. Colon cancer prevention is moving in the right direction when you consider the increase in screening volume (32% from 2012 – 2014), the increase in early stage diagnosis and the community outreach education efforts.

Lung Cases – The results for lung cases by stage at diagnosis show mixed results and a definite opportunity for improvement going forward. On the positive side, the percent of lung cancer cases diagnosed in early Stage I or Stage II has drastically increased. But in 2014 there was also a 37.5% rate of lung cancer cases diagnosed at Stage IV. The plan going forward should focus in two areas: consumer and physician education regarding the low-dose CT screening exam for lung cancer and smoking cessation education.

Participant Evaluations from For Women For Life/It’s a Guy Thing
One way to assess the immediate effectiveness of the Baylor Garland community outreach strategy is through point-of-contact evaluations. Below are the results of exit surveys from the Baylor Garland yearly women’s and men’s wellness events, which feature health information booths (including information on cancer and cancer programs), as well as physician presentations on a range of topics (including cancer and cancer risk).

<table>
<thead>
<tr>
<th>Attendance</th>
<th>For Women For Life</th>
<th>It’s A Guy Thing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>454</td>
<td>310</td>
</tr>
<tr>
<td>Participants who rated the event as Good or Excellent (which included skin cancer checks, health information booths and physician presentations)*</td>
<td>98.3%</td>
<td>97.5%</td>
</tr>
<tr>
<td>2013</td>
<td>384</td>
<td>268</td>
</tr>
<tr>
<td>Participants who rated the event as Good or Excellent (which included skin cancer checks, health information booths and physician presentations)*</td>
<td>98.6%</td>
<td>95.2%</td>
</tr>
<tr>
<td>2014</td>
<td>379</td>
<td>158</td>
</tr>
<tr>
<td>Participants who rated the event as Good or Excellent (which included skin cancer checks, health information booths and physician presentations)</td>
<td>96.5%</td>
<td>92.3%</td>
</tr>
</tbody>
</table>

*For Women For Life also included breast cancer risk assessments.
Conclusion

The goal of the Baylor Garland Community Outreach program is to address the needs, health disparities and gaps identified in the community needs assessment with a focus on cancer risks and prevention. The top initiatives for 2012 – 2014 included 1) a focus on the top three cancer sites in the service area (breast, colon, and lung), 2) increasing education on cancer risks and prevention 3) increasing preventative care utilization rates such as cancer screening exams and 4) increasing education on healthy lifestyles, preventative care and general cancer information.

Community Outreach activities were planned with these goals in mind. Baylor Garland offered health fairs and screenings, educational publications and yearly wellness expos targeted specifically toward women or specifically toward men. To evaluate the effectiveness of these activities, the cancer program monitored the volume of cancer screening procedures, the stage of cancer at diagnosis for breast, colon and lung cases, and the participant evaluations regarding the wellness expos. When you look at the combined results of the three measures, you can identify several areas of success in regards to the community outreach strategy.

- The women’s and men’s wellness expo evaluations show positive results for the screenings, physician presentations and informational booths.
- In terms of colon cancer prevention, the increase in early stage diagnosis is a very positive sign.
- Lung cancer – there is an increase in percentage of cases that are diagnosed in early stages.

Opportunities for improvement for 2015 – 2017

The cancer program at Baylor Garland will continue to provide community outreach education on the sites of breast and colon cancer. But the greatest opportunity for improvement is found with lung cancer prevention.

- Focus on lung cancer prevention with the goal of decreasing late (Stage III and Stage IV) diagnosed cases.
  - Educate the public and the physicians on the use of low-dose CT scan program to detect early lung cancer cases.
  - Offer screening of past/current smokers to determine eligibility for low-dose CT exam
  - Offer smoking cessation information and educational opportunities.
- Develop a process for the Navigation Program to follow up with patients determined to be at risk for lung cancer. The Navigation Program will work directly with the patient and physician to encourage appropriate follow up based on the risk.
- Continue to focus on education of the importance of colon cancer screenings.
  - Educate the public on the importance of colonoscopy
  - Educate the public on colon cancer prevention such as diets high in fiber and cruciferous vegetables.