

# Bridging the Gap:



*Early detection  
of cancer for the  
medically  
underserved*



## About Our Program

Mary Bird Perkins Cancer Center, headquartered in Baton Rouge, La., partners with more hospitals and serves more cancer patients than any other program in the state. Our mission: to improve survivorship and lessen the burden of cancer through expert treatment, compassionate care, early detection, research, and education. To achieve our mission, we collaborate with the state's largest private hospital: Our Lady of the Lake Regional Medical Center in Baton Rouge, as well as with St. Tammany Parish Hospital in Covington and Terrebonne General Medical Center in Houma to deliver comprehensive, quality cancer care.

In a state with high cancer mortality rates due to late-stage diagnosis, Mary Bird Perkins has pioneered education,

prevention, and early detection programs to deliver these services to communities where they are needed most. Mary Bird Perkins' early detection and education program, established in 2002, is committed to serving members of our community. Over the years, the early detection program has been enhanced and refined to ensure efficient, evidence-based, effective screening for five types of cancer and a broad array of education programs in southeast Louisiana. Through this vital outreach program, the people who live in our community have access to secondary prevention interventions, such as cancer screenings, awareness events, and education services, to help improve the overall health and quality of their lives.

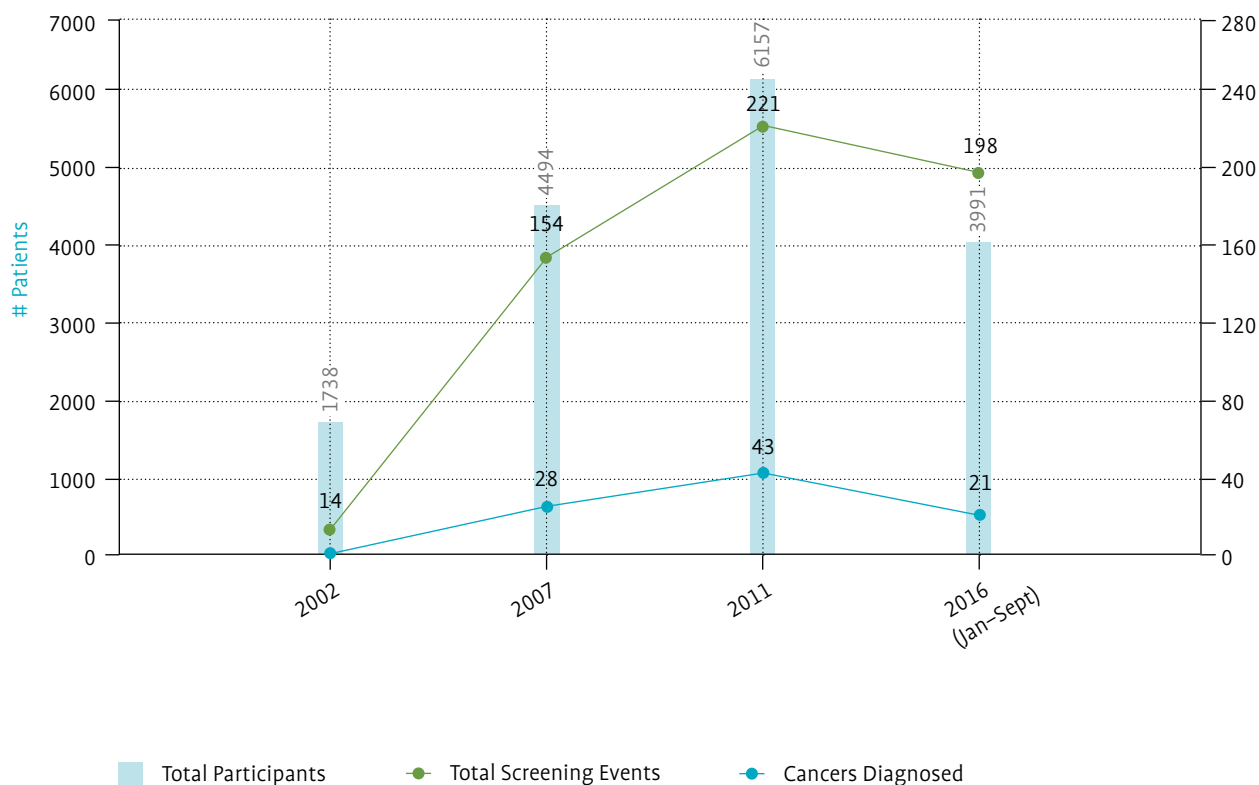
**E**arly detection is the nation's best strategy for decreasing cancer mortality rates.<sup>1</sup> Mary Bird Perkins' early detection and education program was established in 2002, in response to the growing number of patients in our region diagnosed with late-stage tumors. Often, the medically underserved face the greatest challenges in accessing critical early detection services. Accordingly, our early detection and education program focuses on this at-risk population, providing life-saving cancer screening programs for thousands of southeast Louisiana residents who lack access due to insurance status, limited availability of primary care providers (PCPs), or other barriers.

Using two mobile medical clinics, Mary Bird Perkins delivers more than 7,000 free screenings annually for breast, colorectal, prostate, skin, and oral cavity cancers. Each screening partic-

ipant is also provided with education on cancer risk, screening guidelines, and healthy lifestyles. Participants with abnormal findings are supported by a patient navigator through resolution of the abnormal finding. On average, each year 1,200 screening participants require additional follow-up with about 50 of these individuals receiving a cancer diagnosis.

Since its inception, Mary Bird Perkins' early detection program has provided more than 75,000 free cancer screenings for Louisiana's medically underserved population, continuously working toward our goal of reducing cancer mortality in our state (Figure 1, page 68). From 14 screening events in 2002, the program today has expanded to more than 300 events in 18 parishes (counties) in southeast Louisiana annually. The program is funded by grants, third party events, and the compassionate generosity of the communities we serve.

**Figure 1. Screenings & Diagnosis, 2002–2016**



### Early Detection & Prevention Education

Louisiana’s cancer mortality rate is one of the highest in the nation. The Louisiana Tumor Registry reports that high cancer-mortality rates are attributable to residents’ lack of education, inadequate access to cancer screening for early detection, and a lack of primary healthcare in some regions.<sup>1</sup> The result is high percentages of late-stage diagnosis—making cancer difficult, if not impossible, to treat successfully. Mary Bird Perkins’ early detection program is significant to healthcare and health equity in our region because it works to reduce cancer mortality among a considerable number of medically underserved adults.

With the availability of simple screening procedures for breast, prostate, colorectal, skin, and oral cancers that help detect the disease in asymptomatic adults, we are able to successfully use mobile medical clinics in strategically selected locations and work with grassroots organizations to recruit and serve participants within medically underserved neighborhoods.

While many communities have mobile health clinics or mobile digital mammography, few programs address five different cancer types and provide follow-up until resolution for each participant with an abnormal finding via a patient navigator. In addition to the number of cancer types we address, Mary Bird Perkins’ early detection program serves a geographic area that includes more than one-quarter of the state’s population. Our early detection program is built on four key elements:

- A community-based, 12-month delivery model
- Patient navigation that streamlines the process for patients and ensures follow-up of findings
- The use of national tools that monitor health outcomes by ZIP Code
- Partnerships that reduce duplication and maximize transitions through the care continuum.

On weekdays, evenings, and weekends, our mobile clinics can be found in the parking lots of barber shops, shopping centers,



Mary Bird Perkins' mobile clinics, the Early Bird I and II, travel throughout southeastern Louisiana providing early detection services to those most in need.

community centers, grocery stores, or at community events across the 18-parish service region. In the simplest terms, we increase access to cancer-related health services that improve community health in our region for low-income and under-resourced families. Of the 18 parishes we serve, 11 are Health Services and Resources Administration (HRSA) Health Professional Shortage Areas. Mary Bird Perkins' early detection and education program efficiently increases both access to cancer screenings and health literacy for thousands of medically underserved adults. We help save and extend the lives of individuals affected by cancer by finding tumors early, which allows those we serve additional time to work, parent, volunteer, and engage in other activities that enrich under-resourced communities. For patients without insurance or facing other barriers to healthcare, an "all clear" health status provides the peace of mind to carry on with their lives.

### Measuring Program Effectiveness & Collecting Outcomes Data

Five key questions drive our evaluation of programmatic effectiveness and success:

1. Are we using evidence-based best practices for cancer screening and outreach to medically underserved adults?
2. Are we reaching the targeted population(s)?
3. Are we effective in increasing screening rates and compliance, as well as reducing late-stage diagnosis among the underserved?
4. Is our approach cost effective?
5. Does the program ensure timely follow-up of abnormal findings in order to transition participants quickly into treatment, if diagnosed?

Implementation of evidence-based practices has improved the performance of our early detection program. For example, the Community Preventive Services Task Force promotes reminder



systems to increase breast mammography and colorectal cancer screening.<sup>3</sup> We document three reminder calls for participants to return colorectal kits [fecal immunochemical test (FIT) kits] and two reminder calls for annual mammograms. One of the most preventable among the more common cancers, colon cancer affects Louisiana citizens at particularly high rates, so Mary Bird Perkins enhanced its strategy for colorectal screenings in 2012. Each month, we spend additional time educating those at highest risk for this disease, those with a personal or family history of polyps and colon cancer, and minority patients over age 50 who have never been screened and distributing FIT kits to those at highest and average risk. This additional education and the reminder phone calls increased our return rates from 46 percent to 57 percent from 2012 to 2013.

Our highest priority for data analysis, however, is to ensure we are reaching our goal of serving those patients facing barriers to healthcare. Analyses of aggregated participant demographic profiles demonstrate that we are effective in attracting these at-risk patients, including patients lacking health insurance and those more likely to experience disparate outcomes because of race and/or ethnicity. For example, between January 2010 and September 2016, of patients screened 59 percent (n=45,618) were uninsured and 51 percent were minorities (a group often characterized with worse cancer outcomes). Of the uninsured, 21

percent of those screened required navigation and 214 uninsured individuals were diagnosed with cancer. Approximately 48 percent of the navigated screening participants were minorities and 108 were diagnosed with cancer.

Over the life of the early detection program, we have developed numerous measures of effectiveness, including cost studies. Our average cost per community-based early detection event, during which we routinely screen 35 to 40 adults, is between \$4,000 to \$9,000. This covers the costs for:

- Personnel
- Outreach and awareness efforts
- Fuel
- Regular clinic maintenance
- Screening exams, such as mammograms, colorectal FIT kits, and PSA tests.

In 2016, the cost per adult screened (which also includes follow-up diagnostic tests) averaged \$206, depending on the type of cancer screening and follow-up required. This is less than the cost of an office visit at clinics and physician offices for these same services. Some screening events attract more than 100 participants, which further decreases the cost per participant.

Mary Bird Perkins Cancer Center also monitors compliance with annual cancer screenings by previously screened individuals.



The Center offers free cancer screening for five types of cancer, including skin, breast, colorectal, oral cavity, and prostate.

**Table 1. Early Detection Program Outcomes, 2015**

	BREAST	SKIN	PROSTATE	COLORECTAL	ORAL	TOTAL
Total Participants	3,858	1,875	850	1,190 (56%*)		8055
Total Events	99	65	30	127	8	329
Participants Never Screened	886 (23%)	1251 (67%)	221 (26%)	686 (58%)	250 (87%)	3294 (41%)
Participants Navigated (abnormal)	1225 (32%)	179 (10%)	62 (7%)	33 (3%)	12 (4%)	1511 (19%)
Participants Uninsured	2663 (69%)	551 (29%)	242 (28%)	492 (41%)	100 (35%)	4048 (50%)
Minority Participants	2283 (59%)	648 (35%)	507 (60%)	600 (50%)	163 (58%)	4201 (52%)
Diagnosis of Cancer	36	32	2	0	0	70

\* Percentage in parentheses represents the return rate

Annual compliance demonstrates patients’ understanding of recommended screening guidelines (one of our educational goals) and the confidence they have in our program. Since 2010, more than 63 percent of screening participants have been screened by our early detection program more than once. Because of demand and available funding, we are performing more breast cancer screening events and, as a result, finding more breast cancers than other diseases. Over the last six years, 50 percent of these screening participants have returned for a mammogram at least once.

We continue to layer summative and formative measures as effective screening outreach practices emerge. Additionally, we have developed a customized screening-tracking database that allows the cancer center to capture:

- Participant demographics
- Insurance status
- Length of time since last screening
- Abnormal findings
- Documentation of follow-up diagnostics.

At a minimum, we track the numbers of adults served, participant demographics, the number of screenings and communities served, and the types and numbers of cancers diagnosed. Analyses of these data sets ensure we continue to reach the target populations (see Table 1, above).

### Improving Health Status Through Convenience

For many of the participants in our early detection program, a key barrier to accessing cancer screenings in a traditional setting is the time it takes to be screened, including time away from work or other obligations. Mary Bird Perkins uses its mobile medical clinics to bring culturally-appropriate best practices for cancer

screening and prevention education directly to venues that are strategically and conveniently located in areas that are easily accessible and, at times, outside traditional clinic hours. Using this approach, we remove multiple geographic, structural, and psychological barriers to regular cancer screenings that often result in late-stage diagnosis. For most participants, our screenings are relatively quick and convenient, allowing them to maintain their regular schedule with minimal interruption. To ensure timeliness, we schedule appointments for breast cancer screenings, but work to accommodate walk-ups as our screening locations are often held in high-traffic areas that allow us to engage individuals’ onsite. An additional convenience factor is our ability to offer participants more than one type of cancer screening at a single event.

Throughout the year, we offer multiple screenings at a single event, especially in rural areas. Our experience has shown that people are more likely to participate if they have access to multiple services at one time. In addition, for the past 10 years, Mary Bird Perkins—Our Lady of the Lake Cancer Center has hosted Fest for Life, a signature event designed to bring cancer awareness and screening access to the minority community. This event offers a festival-like atmosphere complete with live music, food, activities for children, and door prizes for those screened. This one-day family event, held on the parking lot of a local technology park, delivers more than 600 cancer screenings in a single day and focuses on screening awareness among ethnic minorities. It is a true community event that encourages families to create a culture of wellness. More than 100 community volunteers and partnering nonprofit organizations come together to make the annual Fest for Life event a success.

In addition to providing multiple screening opportunities

at times and locations that are convenient for our participants, our partnership with other local providers, such as Woman’s Hospital in Baton Rouge, ensures that screening and follow-up processes are streamlined, allowing participants to save time and other resources. For example, to avoid duplication with mobile mammography resources, Mary Bird Perkins has a long-standing partnership with Woman’s Hospital for breast screening events (99 events in 2015). Although mobile mammography is a common delivery strategy in the U.S., our partnership has provided more than 32,000 free breast screenings since the inception of the early detection program, with follow-up, allowing each organization to maximize resources and areas of strength.

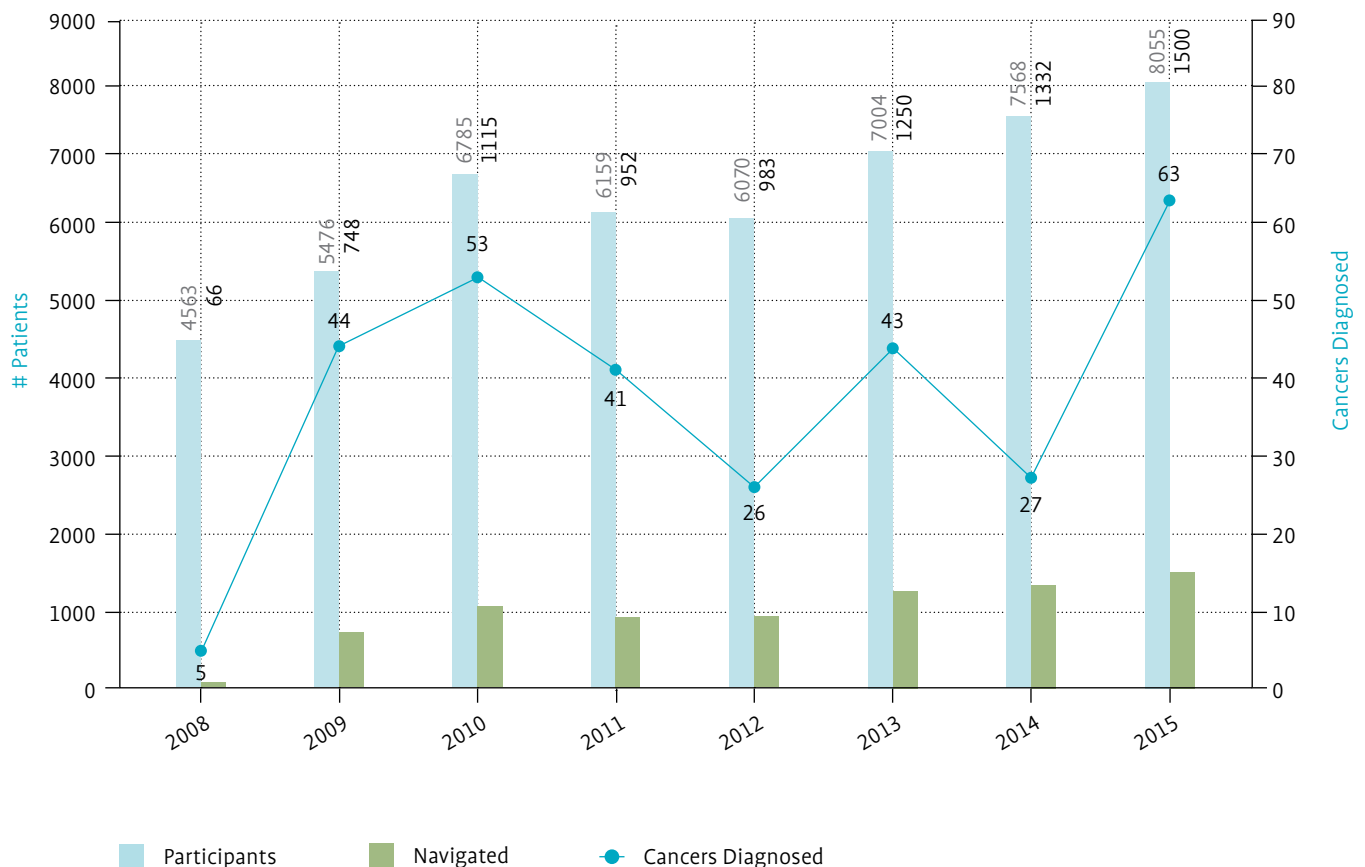
Woman’s Hospital’s mobile mammography clinic and Mary Bird Perkins’ mobile medical clinics park side-by-side at each breast screening. Mary Bird Perkins provides publicity and recruitment, a physician for clinical breast exams, physician orders if mammograms are needed, and patient navigation services. Woman’s Hospital delivers on-site screening mammo-

grams and follow-up tests at the hospital. We leverage Woman’s Hospital’s participation in the Louisiana Breast and Cervical Health Program to cover eligible women (ages 50 to 64 with no insurance) and follow-up diagnostics, along with additional funding administered by both organizations. In 2015, approximately 3,858 women were screened for breast cancer through our partnership, with more than 32 percent navigated for abnormal findings, and 36 individuals diagnosed with breast cancer and transitioned into treatment.

### Improving Health Status Through Patient Navigation

Delays along the cancer continuum can have a negative effect on survivorship. Research shows that women without insurance, who are diagnosed with breast cancer often delay treatment, which can compromise outcomes. Our patient navigation model promotes timely diagnosis and treatment and aims to ensure seamless, coordinated care and services. Patients with a screening abnormality are contacted by a patient navigator and supported

Figure 2. Patient Navigation, 2008–2015





Participants are screened by physicians in a mobile clinic environment. Navigation services are provided to patients who receive an abnormal finding to ensure they receive the necessary follow-up care.

until the abnormal finding is resolved in a timely manner. When necessary, the navigator works with other providers, including safety-net hospitals, to assist uninsured and underinsured patients in receiving further follow-up exams. When participants do not qualify for any assistance programs, the early detection program is billed for diagnostic exams, such as breast biopsies and colonoscopies. Our partner hospitals ensure participants diagnosed with cancer are transitioned into treatment, if necessary.

Patient navigators assist patients and their families by guiding them through the complex healthcare systems. On average, approximately 17 percent of all persons screened receive navigation services (Figure 2, left). For example, from 2011 through June 2015, breast screening participants with an abnormal finding in the early detection program have had an average of six days to resolution of any finding, which strongly exceeds national standards. In fact, the CDC recommended performance standard is less than 60 days.<sup>4</sup>

To ensure effective communication between the navigator and the screening participants, Mary Bird Perkins uses an anonymous, mail-back survey for each navigated screening participant. Since 2009, our patient survey results demonstrate that those we serve would recommend our navigation services to others more than 99 percent of the time.

### Improving Health Status through Innovation

Peter Drucker's seven opportunities for innovation include "innovation based upon process need—perfecting a process that already exists, replacing a link that is weak, or supplying a link

that's missing."<sup>5</sup> To save lives among those patients characterized with disparate cancer outcomes, patients most often affected by a fragmented health system, Mary Bird Perkins continues to innovate to enhance its early detection and education program. In the program's early years, for example, we increased access by moving screening events from federal clinics and community health facilities to grocery stores, food banks, barber shops, and community centers in underserved communities. Our efforts in bringing screening out to communities was enhanced in 2006, when corporate and individual donors supported the purchase of the Early Bird, our mobile medical clinic, a key element in our current program.

### ZIP Codes & Health Status

A person's ZIP Code is frequently more important to health status than insurance. Using data sources from Thomson Reuters, we use a tool that identifies the severity of health disparity for every ZIP Code in the U.S. The Community Needs Index (CNI) demonstrates the link between community need, access to care, and preventable hospitalizations, which enables us to pinpoint neighborhoods most in need. The CNI score is an average of five scores that measure socioeconomic factors in the community including, income, cultural, education, insurance, and housing barriers. A score of 1.0 indicates a ZIP Code with the least need while a score of between 4.2 and 5.0 represents a ZIP Code with the highest, most immediate need.

Using the CNI tool, we have identified those ZIP Codes within Mary Bird Perkins' service area as having the highest, most





Pictured are members of 100 Black Men of Metro Baton Rouge, Ltd., a community group that has volunteered at the Center's screening events for many years, encouraging men to come to our annual prostate screening at a local barbershop. Volunteers and donors are critical to the Center's ability to provide free cancer screenings.


immediate need. There are 19 ZIP Codes with a score of 4.5-5, which is deemed the highest need. In 2013, Mary Bird Perkins chose to increase outreach, awareness, and screening locations in these ZIP Codes, especially in areas with significantly high incidence and mortality rates. As a result of our efforts, we experienced a 253 percent increase in the number of persons screened and a 175 percent increase in the number of cancers diagnosed. We achieved these improvements by increasing the number of screening events conducted in these ZIP Codes by 59 percent. We have also experienced an increased number of community partnerships in these regions, which has allowed us to reach even more people.

### Moving Forward

For the past 15 years, Mary Bird Perkins has continuously grown its primary (to avert disease) and secondary (to detect illness early and intervene) prevention efforts throughout southeast Louisiana most recently through the use of its mobile medical clinics, the Early Birds I and II.

Going forward we will continue focusing our energies more on primary prevention through providing education and awareness to the community at large. We are also expanding our efforts into the corporate world. We recently launched a pilot focused on employers to provide education and screening services for their employees. The program provides tools to assist in the identification of cancer risk and education on the importance of cancer screening. The program also provides select screenings and navigation services, as well as the design of interventions that address the result of lifestyle choices that

increase the risk of developing cancer, i.e., tobacco use, obesity, and physical inactivity.

Mary Bird Perkins remains committed to bridging the gap for those in need, one cancer screening at a time. 

*Renea Duffin, MPA, is vice president, Cancer Support and Outreach, Mary Bird Perkins Cancer Center, Baton Rouge, La.*

### References

1. Office of Disease Prevention and Health Promotion. Healthy People 2020. [healthypeople.gov](http://healthypeople.gov).
2. LSU Health New Orleans School of Public Health. Louisiana Tumor Registry. [sph.lsuhsoc.edu/louisiana-tumor-registry](http://sph.lsuhsoc.edu/louisiana-tumor-registry).
3. Community Preventive Services Task Force. Effectiveness of interventions to increase screening for breast, cervical, and colorectal cancers: nine updated systematic reviews for The Guide to Community Preventive Services. *Am J Prev Med.* 2012; 43(1):765-786.
4. Richardson LC, et al. Timeliness of breast cancer diagnosis and initiation of treatment in the National Breast and Cervical Cancer Early Detection Program, 1996-2005. *Am J Public Health.* 2010; 100:1769- 1776.
5. Drucker PF. *Innovation and Entrepreneurship*. HarperBusiness; 2006.