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House Bill 191

Increasing Access to Screening Mammograms

for Women with Health Insurance

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In 2008, there were over 180,000 new cases of breast cancer and over 40,000 deaths related to breast cancer in the United States (National Cancer Institute, 2009a). Over 15,000 new cases of breast cancer were reported in Texas in 2008 (Cancer, 2009). The National Caner Institute (NCI) and the Surveillance, Epidemiology, and End Results (SEER) predict a 12.7 percent lifetime risk of women developing breast cancer in the United States (National Cancer Institute, 2009a). Research has taught us that early detection of breast cancer will improve overall survival (Fidalgo, Miranda, Chirivella Ibanez, Bermejo, Pons, et al., 2008, Humphre, Helfand, Chan, & Wolf, 2002). Screening mammograms are the key to early detection (Earnster, 2002; Kerlikowske & Barclay, 1997). Mammography can detect 85% of asymptomatic breast cancers. (Kerlikowske & Barclay, 1997 & United States Food and Drug Administration, 2009).

In 2003, the percentage of women who had mammograms was over 30% greater in those with health insurance coverage compared to women without health insurance coverage (National Center for Health Statistics, 2005). Insurance coverage is critical for compliance of routine screening mammograms. Health insurance companies should allow women, who subscribe to coverage under their policies, to seek mammograms without unnecessary processes. Such unnecessary processes include limiting the authority to order a screening mammogram solely to the primary care physician rather than allowing other members of the patient's medical team. A primary care provider (PCP) is a licensed health professional such as a medical doctor, nurse practitioner, or physician assistant that is a patient's main healthcare provider (Cross, 2007). Other members of the medical team, not designated as the PCP, could be the patient's gynecologist, surgeon, nurse practitioner or physician assistant that is not designated by the insurance company as the PCP, but give care to the patient for a variety of health issues. In 2004, only 25% of Texas counties reported enough primary care providers for the population (Cross,

2007). This shortage of primary care physicians is increasing in our country (Avantes, 2007). This shortage will limit the ability of patients to see their primary care providers for screening mammograms.

Increasing access to screening mammograms for women with health insurance is the topic of House Bill 191. House Bill 191 states that insurance companies would allow any member of the patient's medical team to order a screening mammogram and not limit the authority to the primary care physician (Texas Legislature Online, 2009). The bill does allow the insurance company to request prior approval for the mammogram (Texas Legislature Online, 2009). Representative Robert Alonzo of district 104, filed the bill on November 11, 2008 in the 81<sup>st</sup> Legislature of the State of Texas. House bill 191 had a first read and was sent to the insurance committee February 12, 2009.

#### Background

#### Social

Except for skin cancers, breast cancer is the most common cancer in American women (Cancer, 2009). A reduction in breast cancer deaths has been documented since 1990, in part, due to the results of early detection and increased technology with the transition from analog mammography to digital mammography (Cancer, 2009). Mammography is the most critical tool we have to detect early breast cancer (Earnster, 2002; Gur, et al., 2004). With early detection of breast cancer, stage 0 and stage 1, the five year survival rate is 100% (Cancer, 2009). Late detection of breast cancer, stages four, has a 20% five year survival rate (Cancer, 2009).

Many women with health insurance are predominantly at the mercy of the primary care provider for an order for a screening mammogram. The concern is the large shortage of primary care providers in Texas (Avantes, 2007 & Cross, 2007). In 2007, fewer doctors selected primary

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care residencies compared to 2006, 8.1% down to 7.8% (Cross, 2007). This is a concerning trend as the population increases and the amount of primary care doctors are decreasing. Screening mammograms have been proven to detect breast cancer at an early stage and increases the chances of survival (Kerlikowske & Barclay, 1997, Humphrey et al., 2002 & Tabar, 2001). With the current and future projected shortage of primary care providers, other members of a patient's healthcare team should be allowed to order screening mammograms. State mandated coverage for screening mammograms already exists with basic health insurance for women (Scott, 1999). This bill will only increase access to mammograms by broadening the number of medical providers that can order the test.

# Economic

The financial impact of this bill in relation to the insurance companies will be long term savings. In the Texas insurance code, article 3.70, all insurance companies in the State of Texas must include coverage for an annual screening mammogram with a health insurance policy (Texas insurance code, 2009). The true savings will be in the cost of treating breast cancer patients. Ductal carcinoma in situ of the breast is an early form of breast cancer and is primarily detected by mammograms (National Cancer Institute, 2009b). With early detection, a patient may avoid chemotherapy, a systemic drug treatment used for invasive breast cancer (National Cancer Institute, 2009b). With late detection of breast cancer, chemotherapy is an important tool for the survival of breast cancer. The general side effects of chemotherapy are increased risk of infections, fatigue, anemia, nausea and vomiting, and bleeding problems (Cancer, 2009). Due to the side effects of chemotherapy, the patient may have to be hospitalized for treatment. Research shows that almost 10% of patients with breast cancer that receive chemotherapy will have at least one hospitalization secondary to neutropenia, a fever, or some type of infection (Polednak, 2004). Chemotherapy side effects can decrease the patient's quality of life, capacity to work and maintain employment, and ability to complete activities of daily living (Cancer, 2009). These effects may linger for months after the treatments are completed (Cancer, 2009).

This could be financially devastating for any family or single person. The average cost of chemotherapy for invasive breast cancer is over \$23,000 for the entire therapy per patient (Oestreicher et al., 2005). Without early detection of breast cancer, many women will need more aggressive treatment plans, such as a modified radical mastectomy with radiation and chemotherapy which will include longer hospital admissions and increased cost of treatment (National Cancer Institute, 2009a). With increased access to mammograms, many women will have their cancer detected earlier and possibly avoid more aggressive treatment plans (Earnstein, 2002).

#### Ethical

An ethical code in health care insurance is to "keep paramount the needs of those whom I serve" (National Association of Health Underwriters, 2009). The insurance companies should also exercise the principles of beneficence, to take action to help others and not just refrain from harming others (Beauchamp & Childress, 2009). The ethical issue is insurance companies complicating the path for their customers to acquire screening mammograms. This would be in conflict with the principles of beneficence (Beauchamp & Childress, 2009). With the shortage of PCPs in Texas and insurance companies mandating only PCPs can order screening mammograms, the insurance companies may be creating harm to their health insured women by impeding access. This action is in conflict with the principles of nonmaleficence, to do no harm (Beauchamp & Childress, 2009).

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Another aspect to consider is the autonomy of women with health insurance to make a choice of who shall order certain tests. She may prefer certain providers of her medical team and be more open about health concerns with one over another. Beauchamp & Childress (2009) describe how autonomy and authority may be difficult at times, but not impossible. With any health insurance policy, you agree to the terms of the contract when you purchase the policy and grant the insurance company certain authority over your medical care. By supporting House Bill 191, the insurance companies can increase the autonomy of women. With the patient's interest in mind, insurance companies should not hesitate to support this bill. House Bill 191 only grants access to a screening test that the State of Texas mandates the insurance companies furnish to their customers with health insurance policies (Texas insurance code, 2009). Any hindering of access to screening exams by insurance companies may demonstrate unethical behavior. *Political* 

Longest (2006) describes how special interest groups have an enormous amount of political power on policy. The American Medical Association (AMA), American Association for Retired Persons (AARP), and the National Association of Health Underwriters (NAHU) are a few of the special interest groups that will have desired outcomes for this bill. The AMA represents PCP's that may see this as an encroachment on their patient population. If all members of the medical team may order screening mammograms, the PCP's may lose patient visits and have a loss of revenue. This bill does not take away the ability of PCP's to order test, just removes the monopoly they have to order screening mammograms with some insurance companies. The PCPs may also see this as the opening of the flood gates to increase ordering privileges to providers with other test they have control over such as colonoscopies and prostate test. In protecting the medical practice of the PCP's, the AMA would not support House Bill

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191. The AARP will support the bill given that it will benefit many of the female members of their organization that have healthcare insurance. Passage of this bill may lead future legislation that may increase access to other test for its members as stated earlier.

Special interest groups can be a voice for the public and help steer the political process (Longest, 2006). To get this bill signed into law, Representatives and Senators must be lobbied by the citizens of Texas and special interest groups. This type of legislation can make an immediate impact on the health of many at minimal cost by increasing access to mammograms.

Personal testimony, oral or written, is an important and powerful role for the passage of legislation (Mason, Leavitt, & Chaffee, 2007). Personal testimonies could confirm the difficulty of obtaining an order for a screening mammogram. Breast cancer survivors can testify on the benefits of early detection of breast cancer and how it has impacted their survival.

#### Stakeholders

The most important stakeholders for this bill are the women with health insurance who are 35 years old or older. Stakeholders of this bill also include the Representatives and Senators of Texas, insurance companies, mammography centers, all licensed medical providers of women with health insurance such as surgical oncologists, medical oncologists, radiation oncologists, nurse practitioners, and physician assistants. Also included as stakeholders are public and private hospitals and the families of patients who are at risk for breast cancer.

#### **Issue Statement**

How should the state government increase access to screening mammograms for women with health insurance by allowing any of the patient's medical providers to order the screening test?

# Policy Goals and Objectives

- 1. Establish a law that will provide women the choice of a medical provider with the purpose of ordering a screening mammogram.
- 2. Increase access to screening mammograms for women with health insurance.
- 3. Decrease the demands of primary care providers in Texas.
- 4. Detect breast cancer at an early stage for increased survival rates.
- Increase awareness of the importance of access to screening mammograms for Texas Representatives, Senators and insurance companies in the fight against breast cancer.
- 6. To have a positive financial impact by lowering the cost of breast cancer treatment with early detection.

#### **Policy Options and Alternatives**

1. *Major change option*. Establish legislation that would allow not only the PCP, but all licensed medical providers the authority to order a screening mammogram for patients with health insurance in the State of Texas. House Bill 191 would provide such legislation.

2. *Incremental change option*. Create new legislation that would have monetary fines for insurance companies that do not improve access to all cancer screening tests such as mammograms by expanding the authority to order such test to all healthcare providers and not limiting the authority to the PCP.

3. *Do nothing option*. Vote against the bill, conceding the authority to order screening mammograms to insurance companies. This would be comparable to doing nothing.

# **Evaluation of Options**

# Evaluation Criteria

The criteria used to evaluate the policy options and alternatives are access, political feasibility, and financial impact.

# Alternatives

# Major change option

*Pro.* House Bill 191 will increase access to screening mammograms for the women of Texas with health insurance by allowing all medical providers to order the test and not just the PCP. As stated earlier, increasing access to mammograms will detect breast cancer at an earlier stage and increase the survival of women diagnosed with breast cancer. This bill will have a large impact on a women's autonomy to choose the provider to order her screening mammogram and possible decrease her cost of treatment if she was diagnosed with breast cancer. This bill will have great political support from the AARP, individual citizens, and woman advocate groups such as the National Organization for Women (NOW) due to the benefits of increased access to screening mammograms.

*Con.* Due to their current monopoly on ordering screening mammograms, House Bill 191 may not be supported by PCPs. The PCPs will have the AMA fight this bill to protect them from this alteration in ordering screening mammograms. By removing the control of ordering this test, they may have negative financial implications to their practice due to fewer patient visits. This bill may also see political opposition from insurance companies due to the cost of more women having access to screening mammograms.

#### Incremental change option

Pro. With legislation that creates fines for insurance companies for not improving

access to cancer screening tests, access would be increased. The insurance company would not want to incur fines or have the publicity of creating such limitations. All patients with health insurance would benefit from this bill and have increased access to not only screening mammograms, but other vital tests such as screening colonoscopies, and pap smears. Patient advocate groups would lobby for this bill putting political pressure on Representatives and Senators to vote for it. Individual citizens would also lobby for this legislation to hold insurance companies accountable for access to medical screening tests.

*Con.* The political feasibility would be difficult. The NAHU would lobby against any legislation that would create monetary fines or new state regulations for the insurance industry. The AMA would legislate against this bill since it may have a negative financial impact on PCP's due to increasing the authority to order screening test. The financial impact of this bill will be in phases. The insurance companies may have an initial increase in cost with more members getting screening exams. The long term effect of this legislation would be positive; a decrease in treatment cost due to early detection of cancer (National Cancer Institute, 2009a).

#### **Do Nothing Option**

*Pro.* The current system is not perfect but does work for many women. No change to the system will not decrease access to many women, but may in the future when there are fewer PCPs. The short term cost of doing nothing is difficult to predict for patients, PCP's or the insurance industry. The long term financial impact could be significant with the decreased cost of treating an early stage of breast cancer compared to late stage treatment cost.

*Con.* Without change to the current process access will not be increased. It is documented that there is a shortage of primary care providers in Texas and the shortage is predicted to increase (Avantes, 2007 & Cross, 2007). Access to screening mammograms will actually

diminish with no action as primary care providers are not increasing at the rate of the population (Avantes, 2007). The political feasibility to do nothing is strong. The AMA and insurance lobby will push to do nothing and keep the current system arguing that breast cancer survival is in decline with the current system.

The overall political feasibility of passing House Bill 191 is strong. With the political actions of the insurance lobby, the ability of passage of House Bill 191 may be weakened, but is still promising. The AARP or many other organizations such as the National Organization for Women (NOW) along with personal testimonies will drive the positive side of this bill and educate on the limited negative impact to the insurance companies or the primary care providers. The ability of the primary care providers to order a screening is not weakened. This bill only expands the ability to order screening mammograms to other members of the medical team.

The overall financial impact of not passing the bill will be difficult to realize. The insurance companies will not have an immediate increase in expenses nor will see long term savings. We know that early detection of breast cancer will decrease overall treatment cost, but not to what extent (Oestreicher et al., 2005 & NCI, 2009). The primary care physicians will see no change in revenue with the continuation of the current insurance policies.

#### **Comparison of Alternatives**

For comparison of policy alternatives via a scorecard, see Appendix A

#### **Recommended Solutions**

In 2008 there were over 180,000 new cases of breast cancer (National Cancer Institute, 2009a). Early detection of breast cancer with mammography is a key component for detection and survival (Kerlikowske & Barclay, 1997, Humphrey et al., 2002 & Tabar, 2001). Passing

House bill 191 will increase access to screening mammograms with low initial financial impact, a large potential savings and is politically feasible (Advantes, 2007 & Oestreicher et al., 2005).

The second option, legislate fines to insurance companies that do not allow easy access to screening test, will be faced with political opposition from the insurance lobbyist and the AMA. The option will increase access to mammograms and other screening test. Fines to insurance companies may be contested and not have any immediate impact for increasing access for breast cancer screening. The long term financial impact would have an overall healthcare cost savings.

The third option is to continue allowing insurance companies to have the primary care provider order screening mammograms. This option will not improve access to screening mammograms or improve breast cancer detection or survival. Legislatures may not want to change the current process since physicians and the insurance lobby may recommend the current process works. This option will have no immediate financial impact and it may be difficult to understand future medical cost savings.

#### References

Avantes, J. (2007). Primary care physician shortage creates medically disenfranchised population. Retrieved February 27, 2009 from http://www.aafp.org/online/en/home/publications/news/news-now/professionalissues/20070322disenfranchised.html

- Bauchamp, T., & Childress, J. (2009). Principles of biomedical ethics. (6<sup>th</sup> ed.). Oxford, New York, Oxford University Press.
- Cancer (2009). *Texas cancer facts and figures*. Retrieved February 22, 2009 from http://www.acsf2f.com/Docs/TxCC\_F&FBrch08.pdf
- Cancer (2009). What are the key statistics for breast cancer? Retrieved April 18, 2009 From http:// www.cancer.org/docroot/cri/content/cri\_2\_4\_1x\_what\_are\_the\_key statistics\_for\_breast\_cancer\_5.asp
- Constanza, M., Stoddard, A., Luckmann, R., White, M., Avrunin, J. & Clemow, L.
  (2000). Promoting mammography: a randomized trial of telephone counseling and medical practice intervention. *American Journal of Preventive Medicince*, 19, 39-46.
- Cross, M. (2007). *What the primary care physician shortage means for health plans*. Retrieved February 23, 2009 from http://www.managedcaremag.com/archives/0706/0706.shortage.html
- Earnster, V., Barbash, R., Barlow, W., Zheng, Y., Weaver, D., Cutter, G. et al. (2002).
  Detection of ductal carcinoma in situ in women undergoing screening mammography. *Joural of the National Cancer Institute, 94*, 1546-1554.
- Fidalgo, J., Miranda, J., Chirivella, I., Ibanez, J., Bermejo, B, Pons, C. et al. (2008). Impact of a mammography screening program on the breast cancer population of

the region of Valencia (Spain). Clinical and Translational Oncology, 10, 745-752.

- Gur, D., Sumkin, J., Rockette, H., Ganott, M., Hakim, C., Hardesty, L., et al. (2004).
  Changes in breast cancer detection and mammography recall rates after the
  Introduction of a computer-aided detection system. *Journal of the National Cancer Institute*, 96, 185-190.
- Humphrey, H., Helfand, M., Chan, B., & Wolf, S. (2002). Breast Cancer screening: A summary of the evidence for the U.S. Prevention Services Task Force. *Annals of Internal Medicine*, 137, 347-360.
- Kerlikowske, K. & Barclay, J. (1997). Outcomes of modern screening mammography. Journal of National Instituted of Cancer Monographs, 22, 105-111.
- Longest, B.B. (2006). *Health policy making in the United States* (4<sup>th</sup> ed.). Chicago, Ill: AUPHA Press.
- Mason, D., Leavitt, J., & Chaffee, M. (2007). *Policy & politics in nursing and healthcare* (5<sup>th</sup> ed.) St Louis, Mo: WB Saunders.
- National Association of Underwriters (2009). *NAHU's code of ethics*. Retrieved February 22, 2009 from http://www.nahu.org/about/index.cfm
- National Cancer Institute (2009a). *Breast Cancer*. Retrieved February 23, 2009 From http://www.cancer.gov/cancertopics/types/breast
- National Cancer Institute (2009b). *Stage I, II, IIIA, and Operable IIIC Breast Cancer*. Retrieved March 15, 2009 from http://www.cancer.gov/cancertopics/pdq/treatment/breast/HealthProfessional/page7#Secti on\_183

National Center for Health Statistics (2005). National Health Interview Survey public

use data file 2003. Retrieved February 23, 2009 from

http://www.cdc.gov/nchs/about/major/nhis/quest\_data\_related\_1997\_forward.htm

- Oestreicher, N., Ramsey, S., McCune, J., Linden, H. & Veenstra, D. (2005). The cost of adjuvant chemotherapy in patients with early stage breast cancinoma. *Cancer*, *15*, 2054-2062.
- Polednak, A. (2004). Surveillance for hospitalizations with infection related diagnoses after chemotherapy among breast cancer patients diagnosed before age 65. *Chemotherapy*, 50, 157-161.
- Scott, R. (1999). Mandated mammography benefits. Do exceptions swallow the rule? Retrieved February 23, 2009 from

http://www.law.uh.edu/healthlaw/perspectives/Managed/990601Mammography.html

- National Cancer Institute (2009). *Breast Cancer*. Retrieved February 23, 2009 From http://www.cancer.gov/cancertopics/types/breast
- Texas insurance Code (2009). *Texas Insurance Code, Art. 3.70-2(H)*. Retrieved February 23, 2009 from www.capitol.state.tx.us/tlodocs/78R/billtext/doc/SB00541F.doc.
- Texas Legislature Online (2009). *House Bill 191*. Retrieved February 22, 2009 from http://www.capitol.state.tx.us

United States Food and Drug Administration (2009). An effective defense against breast Breast cancer: FDA's mammography quality standards program. Retrieved March 16, 2009 from

http://www.fda.gov/opacom/factsheets/justthefacts/20mammo.html

# Appendix A

Comparison of Policy Alternatives

# Table 1Comparison of Policy Alternatives

	Alternative 1	Alternative 2	Alternative 3
Criteria	Pass HB 191	Legislate fines for insurance compaines	Insurance companies dictate who orders screening mammograms
Access	++	++	-
Political feasibility	+	-	+
Financial Impact	++	++	-
	5+	4+/1-	1+/3-
Score for Each Alternative	5	3	-2

Appendix B

Policy Brief

To: Representative Chris TurnerFrom: William Lodrigues MS, WHCNP, RNCRe: House Bill 191, Increasing access to screening mammography

# THE ISSUE

Screening mammograms are a vital tool in the detection and prevention of breast cancer. Many insurance companies allow only the primary care provider to order screening mammograms. With a major shortage of primary care providers in Texas, access to screening mammograms may be difficult.

# BACKGROUND

- 1. In 2008 there were over 15,000 new cases of breast cancer in Texas and over 180,000 in the United States.
- 2. Over 2,700 people died of breast cancer in Texas in 2008.
- 3. Screening mammograms can detect breast cancer at an early stage.
- 4. Early detection of breast cancer increases the chances of survival.
- 5. Only 25% of Texas counties reported enough primary care providers for the population.
- 6. There is a nationwide shortage of primary care physicians and the shortage is predicted to worsen.

# ALTERNATIVES

1. Allow any member of a patient's medical team to order a screening mammogram. Advantages: Increased access to screening mammograms by allowing health insurance members to chose any associate of her healthcare team to order screening mammograms. This can be a financial benefit by detecting or preventing breast cancer.

Disadvantages: Increased expensive for insurance companies attributable to the increased number of screening mammograms. Primary care providers may have a decrease in revenue as a result of less patient visits.

2. Create legislature to fine insurance companies that do not increase access to screening mammograms.

Advantages: Increased assess to all screening test for patients with health insurance policies. This may decrease medical expenditures due to early detection of diseases requiring less treatment.

Disadvantages: There is no current legislation proposed to accomplish this option. The insurance lobby will be apposed to any law that attaches penalties to their constituents.

3. Continue to only allow primary care providers to order screening mammograms.

Advantages: There are no advantages with having only primary care providers ordering screening mammograms. The system will continue at its current state.

Disadvantages: This option will not address the access issues that many patients have with the documented shortage of primary care providers.

# RECOMMENDATION

Support House Bill 191 to allow women to choose any member of her medical team to order a screening mammogram. This legislation would increase patient access to a critical tool in the fight against breast cancer.

# References

Avantes, J. (2007). Primary care physician shortage creates medically disenfranchised population. Retrieved February 27, 2009 from http://www.aafp.org/online/en/home/publications/news/news-now/professionalissues/20070322disenfranchised.html

- Cancer (2009). *Texas cancer facts and figures*. Retrieved February 22, 2009 from http://www.acsf2f.com/Docs/TxCC\_F&FBrch08.pdf
- Cross, M. (2007). What the primary care physician shortage means for health plans. Retrieved February 23, 2009 from

http://www.managedcaremag.com/archives/0706/0706.shortage.html

- Earnster, V., Barbash, R., Barlow, W., Zheng, Y., Weaver, D., Cutter, G. et al. (2002).Detection of ductal carcinoma in situ in women undergoing screening mammography.*Joural of the National Cancer Institute, 94*, 1546-1554.
- Humphrey, H., Helfand, M., Chan, B., & Wolf, S. (2002). Breast cancer screening: a summary of the evidence for the U.S. prevention services task force. *Annals of Internal Medicine*, 137, 347-360.
- Kerlikowske, K. & Barclay, J. (1997). Outcomes of modern screening mammography. Journal of National Instituted of Cancer Monographs, 22, 105-111.
- National Cancer Institute (2009). *Breast Cancer*. Retrieved February 23, 2009 From http://www.cancer.gov/cancertopics/types/breast

Appendix C

Talking Points

# **Talking Points**

Lives can be saved with increased access to screening mammograms.

# KEY TALKING POINTS

- 7. A mammogram can detect breast cancer prior to any signs or symptoms.
- 8. Over 2,700 people died of breast cancer in Texas in 2008.
- 9. Screening mammograms can detect cancer at an early stage and help to prevent cancer.
- Some insurance companies only allow a patient's primary care provider to order a screening mammogram.
- 11. There is a nationwide and local shortage of primary care providers.
- In 2004, only 25% of Texas counties had enough primary care providers for the population and the problem is predicted to worsen.
- 13. Allowing all members of the medical team to order screening mammograms will increase access to screening mammograms.



## References

Avantes, J. (2007). Primary care physician shortage creates medically disenfranchised population. Retrieved February 27, 2009 from http://www.aafp.org/online/en/home/publications/news/news-now/professionalissues/20070322disenfranchised.html

- Cancer (2009). *Texas cancer facts and figures*. Retrieved February 22, 2009 from http://www.acsf2f.com/Docs/TxCC\_F&FBrch08.pdf
- Cross, M. (2007). What the primary care physician shortage means for health plans. Retrieved February 23, 2009 from

http://www.managedcaremag.com/archives/0706/0706.shortage.html

- Earnster, V., Barbash, R., Barlow, W., Zheng, Y., Weaver, D., Cutter, G. et al. (2002).Detection of ductal carcinoma in situ in women undergoing screening mammography.*Joural of the National Cancer Institute, 94*, 1546-1554.
- Humphrey, H., Helfand, M., Chan, B., & Wolf, S. (2002). Breast cancer screening: a summary of the evidence for the U.S. prevention services task force. *Annals of Internal Medicine*, 137, 347-360.
- Kerlikowske, K. & Barclay, J. (1997). Outcomes of modern screening mammography. Journal of National Instituted of Cancer Monographs, 22, 105-111.
- National Cancer Institute (2009). *Breast Cancer*. Retrieved February 23, 2009 From http://www.cancer.gov/cancertopics/types/breast