

# Breast Cancer

## **PREAMBLE**

*“More than eight million people a year die from cancer of which more than 60% of those deaths occurred in low- and middle-income countries. The future burden will probably be even larger because of the adoption of western lifestyles, such as smoking, poor diet, physical inactivity, obesity, and fewer childbirths, in economically developing countries “The absolute number of cancer cases in developing countries is set to rise dramatically, so action must be taken now.” These Low-income countries are where services are least developed, facilities largely absent and trained cancer experts are few. (Union for International Cancer Control. UICC & IARC 2015)*

## **THE REALITY OF CANCER IN NIGERIA & THE NEED TO BREAK THE CYCLE OF IGNORANCE**

*Like it or not, Cancer is currently responsible for more than 7 million deaths per year; more than Malaria, TB and HIV/AIDS combined. By 2020 there are expected to be 15 million new cases of cancer every year. Globally every 68 seconds a woman dies from breast cancer and every 2 minutes, a woman dies from Cervical Cancer. In Nigeria 26 women die daily from Cervical Cancer and yet these are avoidable deaths, as no woman should die from Cervical Cancer, which has efficacious preventive Vaccinations for Primary prevention and very affordable & available methods of screening for Early Detection in the pre-malignant stage. The awareness level of Nigerian women to Cervical and Breast Cancer ‘best practices’ or to any Cancer, is very low, and even this is dogged by fear, denial, cultural/superstitious biases, procrastination, misconceptions/wrong perceptions, stigmatization and poverty restraints, all which contribute to the late detection saga. This has given rise to the ‘crisis of the breast cancer scourge in our environment’ – viz: more than 83-87% of the affected women present late, incurring unaffordable bills of 150,000 -350,000 - 850,000 naira every 3 weeks on drug treatment, followed closely by rapid deterioration and death, with resultant high morbidity and mortality in young and middle age groups when they are best productive in contributing to the socio-economic development of our nation! Late presentation of Breast/Cervical, & other cancers will continue to increase in Nigeria, unless we do something more proactive than we have been doing in the past!*

While the outcome for several forms of cancer have improved over the last decade in developed countries, mostly due to; vast technological and scientific advancements, the outlook remains grim in Nigeria. The available statistics bear this out. The World Health Organization figures show that Nigeria currently enjoys number one position for worst cancer death, world-wide (for 4 out of every 5 Nigerians diagnosed with Cancer dies) ... and yet a chill went down our spines when we lost an average of 8 victims to Ebola Virus Disease.

*"It is not beyond us" to prevent premature deaths from cancer, so we simply cannot sit back and continue to let the global burden grow. “Feasible and affordable solutions exist, such as increased*

*tobacco control, increasing physical activity, reducing Obesity, earlier detection and treatment, plus access to life-saving vaccination programs, which if implemented, will help to significantly reduce disease-based poverty and prevent millions of preventable deaths.” (UICC).*

This write-up is a unique opportunity to raise awareness that there is much that can be done at an individual, community and governmental level, to harness and mobilize these solutions and catalyze positive change. By moving forward together, we have the potential to show Cancer that- “It is not beyond us”.

## **THE BREAST CANCER**

*Breast Cancer, like all Cancers is NOT caused by witchcraft or any form of supernatural force. Cancer is one of the Non-Communicable Diseases that can affect anyone, anywhere, in any country, at any time, like Diabetes, Cardiovascular Diseases, Stroke, and Premature Aging Diseases. Cancer is a complex group of over 200 diseases with many possible causes.*

### **BREAST CANCER — A SERIAL KILLER OF WOMEN – THOUGH NOT A DEATH SENTENCE**

- ✓ Breast cancer strikes women hard, being the most common type of cancer in women.
- ✓ Globally every 68 seconds a woman dies from breast cancer.
- ✓ Breast Cancer is a major health problem in Nigeria and other African countries.
- ✓ Breast cancer is the leading cause of cancer death in women in Nigeria.
- ✓ All women can get breast cancer.
- ✓ The chances of a woman getting breast cancer in her lifetime is about 1 in 7 (globally) and 1 in 29 in Nigeria.
- ✓ About 350,000- 500,000 women are diagnosed with breast cancer in Nigeria annually, and 83-87% of them come in at ‘late stages’, increasing death rate by 70%.
- ✓ According to Dr. Blaylock, Newsmax medical editor of The Blaylock Wellness Report, ***all these deaths should NOT have happened, if women are given more information.***
- ✓ Breast cancer can be treated successfully, but the chances for successful treatment are highest when the cancers are found early, and the mass detected is as small as possible.

## **ORIGIN OF THE WORD CANCER**

The origin of the word cancer is credited to the Greek physician Hippocrates (460-370 BC), who is considered the “Father of Medicine.” Hippocrates used the terms *carcinoma* and *carcinoma* to describe non-ulcer forming and ulcer-forming tumors. In Greek, these words refer to a **crab**, most likely applied to the disease because the finger-like spreading projections from a cancer called to mind the shape of a crab. The Roman physician, Celsus (28-50 BC), later translated the Greek term into *cancer*, the Latin word for crab. Galen (130-200 AD), another Greek physician, used the word *oncos* (which is Greek for swelling) to describe tumors. Although the crab analogy of Hippocrates and Celsus is still used to describe malignant tumors, Galen’s term is currently used as a part of the name for cancer specialists – Oncologists, and the discipline that manages Cancer is called Oncology.

## **WHAT IS CANCER?**

Cancer is a term used to describe a group of illnesses, all having certain common characteristics - in which cells of an organ or tissue in the body become abnormal as a response to different triggers. These group of abnormal cells then begin to grow and multiply ‘out of control’. There

are over **200 different types of cancer**, which can affect any part of the body in various ways, from head to toe, each with; a specific name, unique treatment and chance of being cured. Cancer does not affect the teeth, hair and nails, because they are dead

- Normal cells generally divide about 50 times, and reproduce themselves throughout the body in an orderly and controlled manner to replace worn out tissue, to heal wounds, and to maintain healthy organs, they then get old and either they die or they sit there and do nothing – **thus they are mortal**.
- Cancer cells, unlike normal cell, will continue to divide forever and live forever unless purposefully killed, - **this is called 'immortality'**. Cancer cells don't follow any rules, they are anarchist, so not only do cancer cells have unlimited growth potential, but they also stop communicating with each other and with the normal cells that surround them.
- Some tumours grow and enlarge only at the site where they begin and these are referred to as **benign tumours**. Others not only enlarge locally but also have the potential to invade and destroy surrounding normal tissue and to spread to distant parts of the body, & then begin to grow in those other parts of the body, like the bones, brain, liver, and blood. They achieve this through eating through the boundaries of the organ where they started and either burst through the blood vessels or through Lymphatic channels to other organs - a process known as "**metastasis**". These are called **malignant tumours or cancers**. Recent studies have shown that cancers, such as that of the prostate and breast, can begin to develop from 10 to 40 years before they are detected.

#### **WHAT IS BREAST CANCER?**

- Breast cancer is a potentially dangerous or malignant tumor that develops from a cell of the breast. There are many types, depending on which of the part of the breast, the cell it started from originated. It could be from the cells of the tubes that carry the milk to the baby, or in the glands that produce and the lobules that house the milk.
- The disease occurs mostly in women, but men can get breast cancer as well (about 0.3-07, and sometimes 5-9% incidence, have been documented depending on which study)

#### **PREVENTION & RISK FACTORS FOR DEVELOPING BREAST CANCER?**

##### ***What causes breast cancer?***

The cause of breast cancer is unknown.

That is why it is important to get tested/screened, to be sure to detect it early.

***Many risk factors -- such as someone's genes and family history -- cannot be controlled.***

***However, a healthy diet and a few lifestyle modifications may reduce overall chance of cancer in general.***

##### **A) Risks that one cannot control:**

- Being a woman: All women can get breast cancer. The chance of a woman getting breast cancer in her lifetime is about 1 in 8.
- Increasing age.
- Early beginning of menstruation (before age 12) & Late Menopause (after age 55)
- Genetic/hereditary factors. (Having the breast cancer gene).
- Family history of cancer of the breast (mother, sister, auntie, cousin, or self). The risk increases the closer the relationship.

- Previous personal history of breast cancer.

#### **B) Risks that one can control:**

- Drinking alcohol (several studies suggest that any quantity ingested is a risk)
- Smoking & inhaling secondary smoke
- Leading a sedentary lifestyle (Physical inactivity).
- Being obese/overweight, especially belly fat.
- Breast feeding less than 15 months.
- 1<sup>st</sup> pregnancy ending in an abortion
- Old age at 1<sup>st</sup> birth or never having given birth at all.
- First full time pregnancy after age 30.
- Radiation before puberty.
- Prolonged exposure to female reproductive hormones– oral contraceptives and Hormone replacement therapy
- Wrong diet

- John Hopkins study found that Cancer is also a disease of the mind, body & spirit and thus **Cancer can be 'fuelled' by emotional stress like; Anger, Un-forgiveness, & bitterness.**

#### **Women with stressful marriages**

#### **Eating a Healthy Diet Can Cut Risk of Cancer By 35-40%:**

- ✓ Eat a healthy diet, with a variety of 5 servings of fruits and vegetables daily. Eat more of vegetables, especially leafy green vegetables (in as raw a form as possible, not over cooked), eat your fruits before or in-between meals, & not immediately after meals.
- ✓ Eat in moderation (2/3<sup>rd</sup> vegetable, and the balance made up of your carbohydrate & protein)
- ✓ Eat food as close as possible to its natural form (Vegetables raw or steamed, not overcooked in water)
- ✓ Limit your intake of processed & refined foods, foods laden with preservatives, & sugar/sweeteners /enhancers.
- ✓ Limit or eliminate your intake of alcohol [1 drink per day for women, 2 per day for men].
- ✓ Eat more vegetables, lentils (beans-type foods) & our natural complex carbohydrates (sweet potato, cocoyam, yam, properly processed cassava products, local rice)
- ✓ Boil or Grill your foods, rather than fry or smoke them (if you must fry – pan-fry in shallow oil)
- ✓ Use very little oil for cooking & avoid re-using oil, or using **oil that is in a 'solid state' when it is at room temperature** & animal fat. Olive Oil, flaxseed oil, Virgin Coconut oil, well processed palm-oil are recommended.
- ✓ Drink lots of water – for our bodies are 80% water. Best to drink water an hour before or an hour after food (not with food) and just before you go to bed and immediately after you get up from bed. (Aim to drink not less than 2-4 litres of water daily as a load)
- ✓ Exercise at least 3 to 4 times a week, sustaining your body in motion for at least 30 minutes each time.
- ✓ Eat less salt, & energy dense, nutrient poor, sugar laden, refined foods- especially carbohydrates, & foods with preservatives.

- ✓ Avoid food enhancers containing MSG (Monosodium glutamate) and sweeteners with aspartame, etc. Season your food with natural ingredients; herbs, Scent Leaf, Onions, garlic, ginger, Turmeric, Cayenne Pepper, etc.

### **SYMPTOMS BREAST CANCER**

**Early Breast Cancer** usually does not cause symptoms, defining the need for regular breast exams. As the cancer grows, symptoms may include:

- **Breast Lump or lump in the armpit** that is hard, has uneven edges, and usually does not hurt.
- Change in the size, shape, or feel of the breast or nipple -- for example, you may have redness, dimpling, or puckering that looks like the skin of an orange.
- Fluid coming from the nipple -- may be bloody, clear-to-yellow, or green, and look like pus

***Symptoms of advanced breast cancer may include:***

- Bone pain
- Breast pain or discomfort
- Skin ulcers
- Swelling of one arm (same side as the breast with the cancer)
- Weight loss

### **EARLY DETECTION OF BREAST CANCER THROUGH SCREENING:**

This is when you, as an individual, well, 'hale and hearty', nothing wrong with you, take the decision and diligently practice and participate in actions and tests that can reveal something in your body that might be a sign that you may be harbouring breast cancer cells in your body. You will not see these signs ordinarily if you do not search for them. If you don't know they are there, the breast cancer cells will grow secretly in you, till one day, it will rear its ugly head through, ugly disfiguring disease of the breast, pain, bleeding, loss of weight, etc., as enumerated above. So refusing to search for the early warning signs because of fear or 'Strong

Faith', will not stop what is already in your body from growing and eventually becoming a threat to your life. ***So lose your fear and take action today.***

*Some of us love our cars better than our bodies, for we don't wait for our cars to stop us on the way before we take them for servicing.*

***We take our cars for servicing as and at when due. So also must we do for our bodies.***

## **HOW TO TAKE YOUR BODY FOR SERVICING**

### **EARLY DETECTION OF BREAST CANCER – aka –SCREENING RECOMMENDATIONS**

**BWS Promotes 4 levels of Screenings:**

- \* Self Breast Exams.
- \* Clinical Breast Exams.
- \* Breast Ultrasound/Elastography.
- \* Mammograms.

#### **Breast Self-Exam (BSE)**

- BSE IS SHOULD BE DONE EVERY MONTH BY EVERY FEMALE THAT HAS A BREAST
- *some recommendations suggest that BSE should commence from the time the breast buds appear, so that it could become a habitual practice by age 20. This is also vital, as 8-18-year-old girls, though rare, have been known to have Breast Cancer.*
- If one is still having their periods (monthly menstruation), the BSE should be performed from Days 8 -12 after one's period has stopped. This is so the examination gets done when the breast is not tender, nor lumpy.
- If one is already menopausal (if you have stopped seeing your period because of age), choose & perform the BSE on the same day every month.
- As most people don't remember to do this monthly exercise, we advise women to pick a partner (their husband, friend, sister, colleague) to remind them and you her, to perform the exam monthly (This is called picking a 'Buddy' aka 'Buddy-Check 2')

#### **Clinical Breast Exam (CBE)**

A clinical breast exam (CBE) is an examination of the breasts by a health care professional (who has taken the time to learn how this is conducted), such as a doctor, or nurse and should be performed ONCE A YEAR FROM AGE 20.

*The CBE is a good time for women who don't know how to examine their breasts to learn the proper technique from their health care professionals. Women should ask their doctors or nurses to teach them BSE and watch their technique.*

#### **MAMMOGRAPHY**

- *A mammogram is an X-ray photograph of the breast, and is as safe as a dental X-ray, to help identify the breast lump or disease.*
- *Women over age 40 are recommended to have a mammogram each year, because Mammographic interpretation improves with age, when the glandular tissue of the breast is usually replaced with fatty tissue, giving a more translucent image on Mammograms.*
- *If any lady has a family history of breast cancer or other factors that increase their risk, it is recommended that screening commences as early as 25-30 years old, **with Ultrasound of***

*the breast, Elastography or MRI. Please Consult with a doctor what is right for you, from age 20.*

### **A MILIEU OF INFORMATION ON EXAMINATIONS AND TESTS**

On getting to the hospital, or screening Centre, you will be counselled, and asked a number of questions to ascertain your symptoms and risk factors, and then a Healthcare provider (Nurse or Doctor), will perform a physical exam, which will include both breasts, armpits, and the neck and chest area. Following this, and depending on your age, and what has been found by the Clinical Examination, the following additional tests may be instituted:

- **Mammography** -to help identify the breast lump
- **Breast MRI** - to help better identify the breast lump
- **Breast Ultrasound** - to show whether the lump is solid or fluid-filled
- **Breast Biopsy/Needle Aspiration, or Breast Lump Removal** - to remove all or part of the breast lump for closer examination by a laboratory specialist

If it is confirmed that you do have breast cancer, additional tests will be done to see if the cancer has spread. These tests are targeted to ‘**stage**’ your disease. Staging your disease helps guide future treatment and follow-up and gives you some idea of what to expect in the future. Breast cancer stages range from 0 to IV. In general, breast cancer that stays where it started from is called ‘**in situ**’ or ‘**Non-invasive Breast Cancer**’. If it spreads, it is called ‘**Invasive Breast Cancer**’. The higher the ‘stage number’, the more advanced the cancer.

The 5-year survival rate refers to the number of patients who live at least 5 years after their cancer is found. American Cancer Society (ACS) 5-year survival rates for persons with breast cancer that have been appropriately treated are as follows:

- 100% for stage 0
- 100% for stage I
- 92% for stage IIA
- 81% for stage IIB
- 67% for stage IIIA
- 54% for stage IIIB
- 20% for stage IV

Thus the prognosis worsens the higher the stage.

### **When to Contact a Medical Professional**

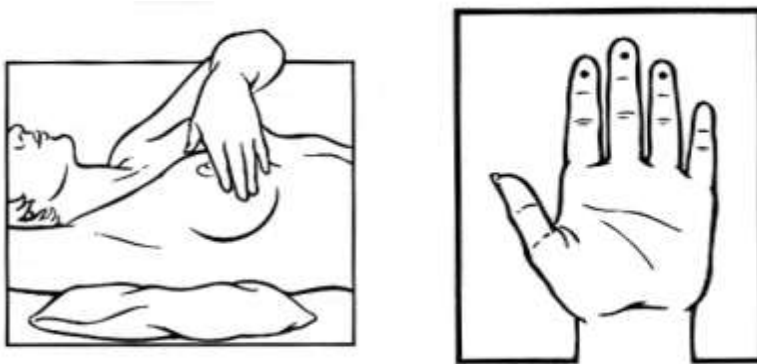
Contact a health care professional for an appointment if:

- You have a breast or armpit lump
- You are a woman age 40 or older and have not had a mammogram in the last year
- You are a woman age 25, 30 or older and have a mother or sister with breast cancer, or have already had cancer of the breast, uterus, ovary, or colon.
- You do not know how or need help learning how to perform a Breast Self-Examination.

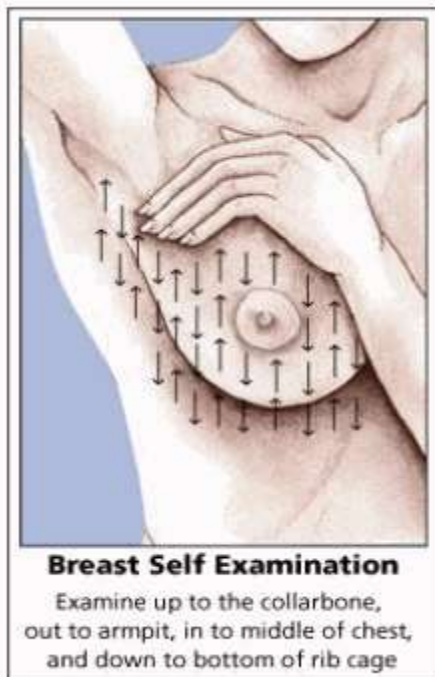
### **How to examine your breasts – THE BREAST SELF EXAMINATION (BSE)**

- Lie down and place your right arm behind your head. The exam is done while lying down, not standing up. This is because when lying down the breast tissue spreads evenly over the chest wall and is as thin as possible, making it much easier to feel all the breast tissue.

- Use the finger pads of the 3 middle fingers on your left hand to feel for lumps in the right breast. Use overlapping dime-sized circular motions of the finger pads to feel the breast tissue.



- Use 3 different levels of pressure to feel all the breast tissue. Light pressure is needed to feel the tissue closest to the skin; medium pressure to feel a little deeper; and firm pressure to feel the tissue closest to the chest and ribs. It is normal to feel a firm ridge in the lower curve of each breast, but you should alert the doctor if you feel anything else out of the ordinary. If you're not sure how hard to press, talk with your doctor or nurse. Use each pressure level to feel the breast tissue before moving on to the next spot.
- Move around the breast in an up and down pattern starting at an imaginary line drawn straight down your side from the underarm and moving across the breast to the middle of the chest bone (sternum or breastbone). Be sure to check the entire breast area going down until you feel only ribs and up to the neck or collar bone (clavicle).





There is some evidence to suggest that the up-and-down pattern (sometimes called the vertical pattern) is the most effective pattern for covering the entire breast, without missing any breast tissue.

- Repeat the exam on your left breast, putting your left arm behind your head and using the finger pads of your right hand to do the examination.
- While standing in front of a mirror with your hands pressing firmly down on your hips, look at your breasts for any changes of size, shape, contour, or dimpling, or redness or scaling of the nipple or breast skin. (The pressing down on the hips position contracts the chest wall muscles and enhances any breast changes.)
- Examine each underarm while sitting up or standing and with your arm only slightly raised so you can easily feel in this area. Raising your arm straight up tightens the tissue in this area and makes it harder to examine.

*“This procedure described above for doing Breast Self Exam is different from previous recommendations. These changes represent an extensive review of the medical literature and input from an expert advisory group. There is evidence that this position (lying down), the area felt, pattern of coverage of the breast, and use of different amounts of pressure increase a woman's ability to find abnormal areas”.*

### **Clinical Breast Exam (CBE)**

For this exam, you undress from the waist up. The health care professional will first look at your breasts for abnormalities in size or shape, or changes in the skin of the breasts or nipple. Then, using the pads of the fingers, the examiner will gently feel (palpate) your breasts. Special attention will be given to the shape and texture of the breasts, location of any lumps, and whether such lumps are attached to the skin or to deeper tissues. The area under both arms will also be examined.

### **What to Expect When You Have A Mammogram**

- To have a mammogram you must undress above the waist. The facility will give you a gown to wear.
- A Radiographer will be there to position your breasts for the mammogram. Most Radiographers are women.
- To get a high-quality mammogram picture with excellent image quality, it is necessary to flatten the breast slightly. The Radiographer places the breast on the mammogram machine's lower plate, which is made of metal and has a drawer to hold the x-ray film or the camera to produce a digital image. The upper plate, made of plastic, is lowered to compress the breast for a few seconds while the technician takes a picture.
- The whole procedure takes about 20 minutes in experienced hands. The actual breast compression only lasts a few seconds.
- You will feel some discomfort when your breasts are being compressed, and for some women compression can be painful. The health facility staff should schedule your screening guided by your last menstruation, and choose a date when your breasts are likely not to be tender, as they can be just before or during your period.
- Your mammogram results should be given to you within 30 days. Ideally, you will be contacted within 5 working days, if there is a problem with the mammogram. Confide in someone, as the waiting period is always filled with much anxiety
- Being called back for more testing does not mean that you have cancer. In fact, less than 10% of women who are called back for more tests are found to have breast cancer. Being called back occurs often, and most times, it just means an additional image or an ultrasound needs to be

done, to look at an area more clearly. This is more common for first mammograms (or when there is no previous mammogram to look at for comparison) and in mammograms done in women before menopause. It may be slightly less common for digital mammograms.

- Of every 1,000 mammograms, only 2 to 4 lead to a diagnosis of cancer.

If you are a woman aged 40 or over, you should get a mammogram every year. You can schedule the next one while you're at the facility and/or request a reminder.

### **Limitations of mammograms**

A mammogram cannot prove that an abnormal area is cancer. To confirm that cancer is present, a small amount of tissue must be removed and looked at under a microscope. This procedure is called a **biopsy**.

You should also be aware that mammograms are done to find breast cancer that cannot be felt by hand. ***If you have a breast lump, you should have it checked by your doctor and consider having it biopsied even if your mammogram result is normal.***

Mammograms are not perfect at finding breast cancer. They do not work as well in women with dense breasts, since dense breasts can hide a tumor. Dense breasts are more common in younger women, pregnant women and women who are breast-feeding, but any woman can have dense breasts. Black women tend to have breast cancer at younger age (25-35yrs & 50-55yrs), than their white women counterparts.

This dense breast situation can be a problem for young women who are at high risk for breast cancer (because of gene mutations, a strong family history of breast cancer, or other factors) because they have a higher risk of developing breast cancer at a younger age. This is one of the reasons that the American Cancer Society recommends MRI scans in addition to mammograms for screening in these women.

### **CONCLUSION**

Several advances have been made in Breast cancer, both in early detection tools and management, that should encourage women to lose their fear of the disease and rather embrace best practices, working diligently on risk factors that can be influenced, as has been recommended extensively in this write up. Results from a Breast cancer BCRF-funded study, headed by a Nigerian doctor in Chicago, Prof. Funmi Olopade, suggest that Breast Cancer is a genetically and clinically heterogeneous disease. In her own words, "Whether different target cells contribute to this heterogeneity in different populations, and which cell types are most susceptible to oncogenesis is still not well understood. The importance of epigenetic regulation in breast cancer progression is increasingly recognized. Unlike genetic alterations, epigenetic aberrations are potentially reversible, allowing the malignant cell population to revert to a more normal state. With the advent of numerous drugs that target specific enzymes involved in the epigenetic regulation of gene expression, the utilization of epigenetic targets is emerging as an effective and valuable approach to early detection, treatment or prevention of breast cancer'. What is unique about Prof. Funmi Olopade's is that it is aimed at providing answers to the peculiar type of Breast Cancer which is more common in black women, occurs in younger age group and is not as responsive to treatment. Her study mercifully has included African women and is one of several studies going on world-wide to find lasting solutions to the cancer scourge.

*SURELY FOR BREAST CANCER, EARLY DETECTION, & PROMPT MANAGEMENT SAVES LIVES*