

PHC

432 Team

2

PREVENTION & SCREENING IN FAMILY PRACTICE



Done By:
Nourah Alajmi
Mohammed Adel
Khan

Reviewed By:
Badr almutairi
Nourah Alajmi

جامعة
الملك سعود
King Saud University



Objectives

1. Definition of screening / prevention and its uses in family practice
2. To identify prevention types and targeted people for each type with examples.
3. To identify appropriate approaches for prevention and screening of common problems in primary care.
4. To explain pros and cons of screening.
5. To justify the rational for selection of a screening test with practical examples.
6. To explain the benefits of a good screening program.

Note: Males' part - which is not included in our objectives - is colored with grey.

What is Prevention?

Prevention includes a wide range of activities — known as “interventions” — aimed at reducing risks or threats to health.

Prevention Types:

Researchers and health experts talk about three categories of prevention:

Primary prevention

- ★ Primary prevention aims to **prevent disease or injury before it ever occurs.**
- ★ **This is done by** preventing exposures to hazards **that cause disease or injury.**
- ★ **altering unhealthy or unsafe behaviors** that can lead to disease or injury.
- ★ **increasing resistance** to disease or injury **WHENEVER** exposure occur.

Secondary prevention

- ★ To reduce the impact of a disease or injury that has **already occurred.**
- ★ This is done by **detecting and treating disease or injury as soon as possible** to halt or slow its progress
- ★ Encouraging personal strategies to **prevent re-injury** or recurrence
- ★ Implementing programs **to return people to their original health and function** to prevent long-term problems.

Tertiary prevention

- ★ To soften the impact of an **ongoing illness or injury that has lasting effects.**
- ★ This is done by helping people **manage long-term, often-complex health problems** and injuries (e.g. chronic diseases, permanent impairments) .
- ★ This helps to improve as much as possible their **ability to function, their quality of life and their life expectancy**

Examples :

Primary prevention

- ★ **Legislation and enforcement to ban or control the use of hazardous products (e.g. asbestos) or to mandate safe and healthy practices (e.g. use of seatbelts and bike helmets)**
- ★ **Education about healthy and safe habits (e.g. eating well, exercising regularly, not smoking)**
- ★ **Immunization against infectious diseases.**
- ★ **Removing the causal agents; like sanitation measures of nineteenth century.**

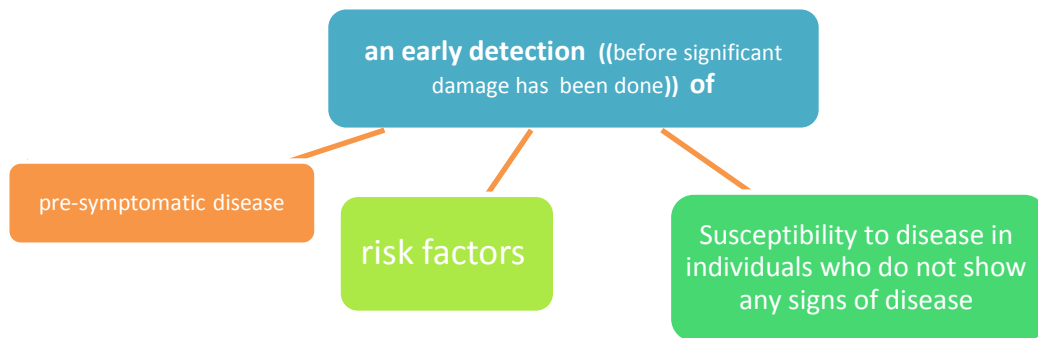
Secondary prevention

- ★ **regular exams and screening tests to detect disease in its earliest stages (e.g. mammograms to detect breast cancer)**
- ★ **daily, low-dose aspirins and/or diet and exercise programs to **prevent further heart attacks or strokes****
- ★ **suitably modified work so injured or ill workers can return safely to their jobs**
- ★ **Identifying the **pre-symptomatic diseases** (or risk factors) before significant damage is done e.g. screening for hypertension.**

Tertiary prevention

- ★ **Cardiac or stroke **rehabilitation** programs.**
- ★ ****Chronic disease management** programs (e.g. for diabetes, arthritis, depression, etc.)**
- ★ ****Limiting complications** /disability in patients with established disease by regular surveillance e.g. trying to prevent Diabetic problems by good control, regular funduscopy, and foot care.**
- ★ **Finding **support groups** that allow members to share strategies for living well**
- ★ **Vocational rehabilitation programs to retrain workers for new jobs when they have recovered as much as possible.**

- **What is screening : (secondary prevention)**



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- Application of certain procedures to populations by doctor initiative , with the aim of identifying asymptomatic disease or people at risk from it.
 - The presumptive **identification of unrecognized disease or defect** by the application of tests, examinations, or other procedures which can be applied rapidly
 - Screening is **applied to well persons** who probably have a disease from those who probably do not
 - A screening is **not intended** to be diagnostic
 - Persons with **positive or suspicious findings** must be referred to their physicians for diagnosis and necessary treatment

Purpose of Screening

- Identifying unrecognized disease (early stage)
- Identifying persons at increased risk for the presence of disease, who warrant further evaluation
- Classifying people with respect to their likelihood of having a particular disease
- Reducing morbidity and mortality from disease among persons being screened

Requirements of a good screening Program:

Knowledge of disease	Knowledge of test	Treatment for disease	Cost considerations
<ul style="list-style-type: none">•The condition should be important common & diagnosable by acceptable methods.•There must be a recognizable latent or early symptomatic stage (in which effective interventional treatment is possible)•The natural course of the condition should be adequately understood	<ul style="list-style-type: none">•Suitable test or examination•Test acceptable to population.•simple & cheap•On a group agreed by policy to be high risk•Case finding should be continuous	<ul style="list-style-type: none">•Accepted treatment for patients•Facilities for diagnosis and treatment available•Agreed policy concerning whom to treat	<ul style="list-style-type: none">•case cost- effective•costs of case finding economically balanced in relation to possible expenditures on medical care

Wilson criteria - using the mnemonic **IATROGENIC**

- **I** mportant - the condition should be an important one
- **A** cceptable treatment for the disease
- **T** reatment and diagnostic facilities should be available
- **R** ecognizable at an early stage of symptoms
- **O** pinions on who to treat as patients must be agreed
- **G** uaranteed safety e.g. low radiation exposure
- **E** xamination must be acceptable by the patient
- **N** atural history of the disease must be known
- **I** nexpensive test
- **C** ontinuous screening i.e. not a one-off

Benefits of a good Screening Program

- Screening Tests often unearth diseases at an earlier stage
- Improvement in Mortality & Morbidity rates.
- The possible economic saving on future treatment.

Setting a Local Screening Program

- Identify a problem that meets the Wilson Criteria.
- Auditing the records to see the baseline problems.
- How big is the problem – you know high-risk group?
- Clearly define objectives.

Setting a Local Screening Program

Define the Methods:

1. Opportunistic
2. By Patient Invitation
3. By Patient Visiting

What is opportunistic Screening

- Taking the opportunity when the patient attends on another matter to screen him or her for desired characteristics.
- Simple and cheap to administer.
- No dependence on patients' compliance.
- Targets those persons who will not usually attend for preventive advice services.

What is Family Physicians Role in Screening?

- Family physicians is the one who provides an **anticipatory care approach** for precluding problems.
- This specialty puts all efforts **to offer all appropriate forms of prevention within the consultation** and the organizational framework of primary care.

Common Screening Conditions

- Hypertension Screening, detection and follow-up.
- Cervical Cytology
- Developmental surveillance.
- Well woman & man clinic.
- Visiting elderly people at home.
- Mammography.
- Serum lipid estimation.
- Screening psychiatric illness.
- Prostate Cancer screening

Common Preventive Interventions:

- Immunization /Vaccinations.
- Postmenopausal hormonal Replacement.
- Life style Counselling.
- Advice on Smoking.
- Weight -watching.
- Keeping fit and aerobic programs

Common Cancers screening tests in Family Practice Clinic

- Cervical cytology.
- Mammography.
- Fecal occult blood.
- Prostate Specific Antigen

Some practical examples of prevention & Screening and how to approach :

1-Prevention & screening in Elderly people

ELDERLY IS A CONDITION /STAE /AGE GROUP, WHICH IS:

- | | |
|---|---|
| a) Common. | e) Continuous. |
| b) Important. | f) On a group agreed by policy to be high risk. |
| c) Diagnosable by acceptable methods. | |
| d) Simple & cheap, case cost-effective. | |

A. Falls Prevention like:

- Asses gait & balance training.
- Assessing auditory & visual impairments
- Medication review /withdrawal (especially hypnotics, anti-depressants).
- Home hazard intervention and follow-up.
- Osteoporosis risks assessment.

B. Mental health screening in older people.

- Assessing for depression.
- Assessing living conditions and Social isolation.
- Assessing Medications causing depression like Beta-Blockers, statins, calcium channel blockers.

C. Osteoporosis Screening & Prevention

Why to screen?

The BMD (bone minerals density) remains constant in women until menopause when it falls sharply for 5-10 years (estrogen withdrawal bone loss), and more slowly there after (age -related bone loss)

Osteoporosis -Preventive Strategies

Encouraging new bone formation, Discouraging Bone Resorption,
Achieving a high BMD

HOW?

- Regular weight bearing exercises.
- Avoidance of Smoking
- A calcium rich diet .
- Calcium & Vit D supplementation (those find deficient).
- Measures at home to prevent falls.

D. Life style advice.

E. Stroke prevention

cancer screening

Why cervical, breast cancer screening?

- | | |
|---------------------------------------|--|
| a. Common. | d. Simple & cheap, case cost-effective. |
| b. Important. | e. Continuous. |
| c. Diagnosable by acceptable methods. | f. f) On a group agreed by policy to be high risk. |

1- CERVICAL SCREENING (12th most common cancer among women)

What to Screen: Screening the Cervix for early detection of Cervical Cancer.

Why to Screen - what is the Evidence:

The natural History of Cervical Cancer involves several pre malignant stages (e.g. grades of dysplasia & carcinoma in situ).

Evidence says, Regular Cervical Screening can detect this, several years in advance of frank Carcinoma.

➤ **What is Screening Tool for Cervix:**

- It is **Pap smear** (A microscopic technique to examine vaginal debris - first developed by zoologist George N.Papanicolaou.)
- **The Pap smear has been the model for cancer screening.**
- Pap tests aims to identify abnormal cells sampled from the transformation zone, the junction of ecto- and endocervix, where cervical dysplasia and cancers arise.

Pap-Test dilemma:

- a. It is a Screening test to be administered to asymptomatic patients.
- b. **Not a diagnostic test to confirm or refute the suspicion of disease.**
- c. More than 50% of women who has cervical cancer had never been Pap smeared

➤ **Effectiveness of Pap smear Test:**

- **More sensitive of detecting** Cervical Squamous cell malignancy.
- Squamous cell carcinoma of cervix is more prevalent than adenocarcinoma of cervix. .
- **Cure rates were higher for women with cervical cancer detected by screening as compared to those diagnosed by symptoms.**
- This screening tool can detect **very early changes**, if untreated, could lead to invasive cervical cancers over the course of years.

➤ **Who are the high Risk group:**

1. Low socioeconomic class.	2. Early age of first sexual intercourse.
3. Early age of first pregnancy.	4. Multiple sexual partners.
5. Frequent pregnancies.	6. Human pappiloma virus- type 16,18 and 33.
7. Smoking doubles the risk of cervical cancer.	

➤ **Potential Errors in sampling & evaluating Pap-smear:**

- 1) **Clinician** may not sample the area of cervical abnormality.
- 2) **Abnormal cells** may not be plated on the slide.
- 3) **Cells** may not be adequately preserved with fixative.
- 4) **Cytopathologist** may not identify the abnormal cells.
- 5) **The cytologist** may inaccurately report the findings.

➤ **Cervical Screening Intervals:**

- All women should receive their first invitation for **routine screening at 25 y.o**
- In younger age range cervical screening interval have been **reduced from 5 to 3 years**

➤ **Role of Family Physician in Cervical Screening:**

- Should have an **effective call –and –recall system** for inviting women registered with them for screening.
- Patient should **ensure to keep their correct contact** details with Family physician.
- During family planning clinics, any women with overdue smears and had no recent cervical smears done, should be offered smears.

➤ **Limitation of Cervical Screening Tests**

- A **false -negative** rate of about **10% for carcinoma in situ**. (even necrotic tumors can give a negative results)
- A **false –positive** rate of about **5 %**(smears showing mild dysplasia).
- **Sampling problems:** the squamocolumnar junction not always accessible.
- Possible causes which may upset interpretation like: (**Menstruation, Pregnancy, Contraceptive pills, Intrauterine device and Polyps**).

Age group (years)	Frequency of Screening
25	First invitation
25-49	3 yearly
50-64	5 yearly
65 +	Only those who are not screened till age of 50 or had recent abnormal test

Human Pappiloma Virus Immunization & Future of Cervical Screening:

- **HPV Type 16 and 18 – the most carcinogenic of the pappiloma viruses.**
- They causes 70 % of cervical cancers worldwide.
- **Two vaccines types** has been licensed for protection.

Advantages of Vaccines:

- Offer high level of protection.
- 98% seropositivity at 4.5 years follow-up.
- A significant reduction in the number of pre-cancerous changes in immunized individuals.
- Vaccine also protects genital warts.

➤ **Issues of HPV-Vaccines:**

- In spite of the Vaccine, the Cervical Screening program will continue b/c clinical trial data has shown that it will not protect all HPV types that cause cervical cancer.
- Parental concerns over sexual implications of HPV immunization may also reduce uptake of this Vaccine, thereby reducing the efficacy of the HPV-immunization program.

2- SCREENING FOR BREAST CANCER

➤ **The size of the Problem :**

- The major form of Cancer among women.
- Among 20% of female cancer deaths, **it is the most common cause of death in women aged 35-54.**
- In UK, highest breast cancer mortality rate.

➤ **Risk Factors:**

Female sex	Previous breast cancer	Previous endometrial or ovarian cancer.
Family History	Age(peak incidence after age45)	Social Class: one of the few cancers to have higher risk in more affluent class.

Risk Group:

1. Healthy women aged 50–70 years are eligible for routine breast screening.
2. Women at increased risk of breast cancer (such as with a strong family history of breast cancer) may be eligible for breast screening before 47 years of age.
3. Hormone Replacement Therapy (HRT):
Long-term use of combined estrogen and progesterone increases the risk of breast cancer. This risk seems to return to that of the general population after discontinuing them for five years or longer.
4. Increase Menstrual periods: either by early menarche or late menopause:
Women who have had more menstrual cycles because they started menstruating early (before age 12) and/or went through menopause later (after age 55) have a slightly higher risk of breast cancer. The increase in risk may be due to a longer lifetime exposure to the hormones

<u>Prolonged Estrogen exposure and increased Risk</u>	<u>What will decrease the Risk</u>
<ul style="list-style-type: none"> ➤ Early menarche & late menopause. ➤ Estrogen used in HRT and OCP. ➤ Obesity – increase endogenous estrogen. 	<p>Breaks in estrogen exposure due to childbirth and breast feeding reduces breast cancer risk.</p>

➤ **Prognosis:**

- On average, 2/3 of all women are alive 5-years after diagnosis.
- Females diagnosed with early local disease do far better than metastatic spread.

➤ **Role of mammography (screening test for breast cancer):**

Breast screening uses mammography (radiography) to find small changes in the breast before there are any other signs or symptoms of breast cancer.

Some Histological facts:

- The tissues of young women’s breast is dense, resulting in practical difficulties in interpretation.
 - **“MRI OR Ultrasound is recommended in younger women”.**
- Premenopausal thinning makes mammography easier in older (50+) women.

Some psychological facts:

- All women undergoing screening **experience anxiety** about undergoing tests, awaiting results, experiencing indignity.
- Some may become even **phobic**.

➤ **What are the benefits and harms of mammography:**

The benefits include	The harms include
<ul style="list-style-type: none"> • It detects breast lumps too small to be palpated, and 5-years • Still clinical examination can pick-up 50-60% of the abnormal cases. • survival is better for early disease. • The sensitivity of modern mammography is about 80% and specificity of 95%. • This procedure gives very low -level X-ray exposure of about 1 rad. • UK-Breast Cancer Screening Program screening decreases deaths by 48%. • Women chose to attend Screening v/s not to choose, there found 35% reduction in Breast cancer cases. 	<ul style="list-style-type: none"> • Over-diagnosis leading to unnecessary treatment. (Over-diagnosis refers to the detection of breast cancers through screening that would not have been diagnosed without screening and would not have threatened the lives of the women concerned.) • False-positive mammograms leading to unnecessary further investigations. • False reassurance due to missed cancer and incorrect diagnosis. • Pain and discomfort due to mammography. • Psychological distress. • Radiation exposure, which may increase the risk of breast cancer.

Well Person Assessment Clinic (Screening & Prevention Clinics):

- **By family physicians only (WELL PERSONS CHECK-UPS CLINICS)**

- **Why to have these Clinics**

- This will attract patients who might not attend any consultation .
- Who don't want to visit any hospital unless they are sick .
- People who attend these clinics are Health conscious and in receptive frame of mind

- **Well Persons Check-ups Clinics**

- These Clinics Offer more time and more informal atmosphere.
- Also avoids the real pit falls of opportunistic screening, which is sometimes inconvenient (busy clinic, patient is already sick).
- Much potential for Health Promotion and Educating self-help for common minor problems.
- Income may be boosted.

-
- Greater satisfaction for patient and Doctors

- Why most Screening & Prevention Program Fails?

- Is it something about human behaviors or everybody has his/ her own approach to life?

- Costs to patients/doctors /health care

- Un necessary anxiety or even psychological harm .
- False reassurance .(some time)
- Economic costs .
- Doctors time & resource costs.
- Tests / follow up /further investigations and treatment

-Psychological Costs of screening

- Always a concern that communication of negative results may be harmful – may lead to unhealthy life style (less chances to return for follow up tests).
- Telling patient they have HTN may lead to low self-esteem or poor marital relationship.
- Women with abnormal mammogram (grey area screening) will be more anxious than those with normal mammograms (follow up visits).

Obstacles or approaches to Prevention & Screening Programs:

PATIENT RELATED OBSTACLES	How to overcome these Patient -related obstacles
<ul style="list-style-type: none"> ✓ It will not happen to me – The Ostrich Approach. ✓ You go when it's your turn and you can't change that –The fatalistic approach. ✓ I do not believe they know the true facts –The skeptic approach. ✓ May have to scarifies the physical pleasures of life (smoking /shisha addictions) 	<ul style="list-style-type: none"> ✓ Point out the disadvantages - the seriousness and the magnitude of the Risk. ✓ Point out the benefits - physical, social, financial. ✓ Anticipate and be prepared to discuss difficulties. ✓ Suggest coping strategies. ✓ Give simple advice and supplement with written information.

Final comments –you are screening not diagnosing

SCREENING TEST	DIAGNOSTIC TEST
Done to those who are apparently healthy or asymptomatic	Done to those with suggestive signs and symptoms
Applied to a group of individuals	Applied to a single person
Results are based on one criterion	Results are based on the evaluation of a number of symptoms , signs & Investigations
Results are not conclusive	Results are conclusive & Final
Less accurate Less expensive Not a basis of treatment	More accurate More expensive Basis of treatment /

Extra (male slides, not included in ours)

Screening For Breast Cancer:

- **Breast Self-examination:**
 - Worthwhile preventive exercise should be taught at every available opportunity.
 - But evidence is shaky like; showed no reduction in overall mortality but increases number of invasive investigations & benign results.
 - At the same time a sense of Guilt engendered in patients who fail to self-examine before it's too late.
- **Alternative Concept of Breast awareness:**
 - Females should be encouraged to get familiar with the feeling of normal breast through-out their monthly cycles.
 - Regularly reporting any changes from abnormality rather than regular systemic self-examination.

Screening For Bowel Cancer:

- **Introduction:**
 - **Colorectal Cancer (CRC) is a common & lethal disease.**
 - **2nd leading cause of Cancer deaths.**
 - **Worldwide, it is 2nd most commonly diagnosed cancer in women & third most common in Men.**
 - Approximately 1 in 3 people who develop CRC die of this disease.
- **Screening Rationale:**
 - Removal of premalignant adenomas can prevent the cancer and removal of localized cancer can prevent CRC-related deaths.
 - Progression from adenoma to carcinoma take at least 10-years on average.

- **Risk Factors affecting Screening recommendations:**

over age of 60 year	Lack of exercise
A previous Colon polyp	Obesity
Personal history of IBD	Family history
Diet: high fat & red meat, low vegetables, folate and fiber	Smoking and alcohol
Personal history of colon cancer	

Twice a year screening for colorectal cancer using Fecal Occult Blood (FOB) tests reduces mortality by 16%.

- **Screening: (by fecal occult blood FOB)**

1. Every two years if still within the eligible age range for routine screening.
2. If the result is abnormal, they will be referred for a colonoscopy.
3. If the result is unclear, FOB test will need to be repeated.

- **Fecal occult blood test:**

- 1) Fecal occult blood (FOB) test works by detecting tiny amounts of blood which cannot normally be seen in colon motions.
- 2) **The FOB test does not diagnose Colon cancer**, but the results will indicate whether further investigation (colonoscopy) is needed.
- 3) **Fecal occult blood = screening test for colon cancer.**
- 4) **Colonoscopy = diagnostic test for colon cancer.**

Advantages of FOB-Tests Screening :	Disadvantages of FOB-Tests Screening:
<ol style="list-style-type: none"> 1. Non-invasive. 2. More cost effective with few colonoscopies needed for follow-up. 3. Simple to administer. 	<ol style="list-style-type: none"> 1. Inconvenience. 2. Relative insensitivity – occult blood is not uniformly distributed in feces and some lesions bleed intermittently. 3. Relative non-specificity-lesions other than cancer can generate positive tests. 4. Compliance (wide variation).

- **How good is the TEST in practice:**

1. **2% of those screened** will have a positive FOB and should be offered colonoscopy.
2. Of those undergoing Colonoscopy :
 - 10 % will have bowel Cancer.
 - 30% will have polyps.
 - 40% will have no abnormality.
3. **Bleeding** tends to occurs **relatively late in the tumors** natural history.
4. If the test is negative there is still a 1 in 200 chance of a cancer and 1 in 50 chance of an adenoma in the next 4 years.

- **All men and women aged 60-69 should be checked every 2 -yearly with FOB.**
- **Any one Over-70s can also be included(optional)**

- **Other Screening Tools:**

- **Colon Imaging.**

- ✓ Contrast barium enema. ---- every 5 -years
- ✓ Computed Tomographic Colonography ---- every 5 years.

- **Endoscopies.**

- ✓ Flexible Sigmoidoscopy --- every 5-years.
- ✓ Colonoscopy --- every 10- years.

Screening For Prostate Cancer:

- **Incidence & prevalence:**

- 2nd most common cause of Cancer and Cancer deaths, in men both in UK & USA.
- About 10,000 men die annually of prostate cancer.

- **Screening:**

- **Prostate -Specific Antigen (PSA)** – the common name for all. PSA is a blood test to check the level of PSA in blood. Most healthy men have levels under 4 nano-gram per milliliter of blood.

Age group	PSA cut-off
50-59	≥3
60-69	≥4
70 or over	>5

Dilemmas in Measuring PSA:

- **Digital Rectal Examination (DRE) has minimal effects on PSA levels** – causes transient elevation of only 0.26-0.4d ng/ml, PSA can be measured immediately after DRE.
- Ejaculation can increase PSA levels by up to 0.8 ng/ml, levels returns to normal within 48 hrs.
- **After treating Bacterial Prostatitis, PSA returns to normal six to eight weeks after symptoms resolve.**
- **Acute Urinary retention** may elevate PSA levels, *levels decrease by 50% within one to two days following resolution.*

➤ Some FACTS about PSA:

- The PSA test is currently the best method of identifying localized prostate cancer.
- 75% of men with raised PSA had No prostate Cancer on Biopsy.
- More than 50% of patients with raised PSA will become Normal when repeated 6 weeks later.
- **PSA is raised by UTI, BPH, recent ejaculation, vigorous exercise, and prostatitis.**
- PSA cannot differentiate *aggressive* from *indolent* cancer.
- **PSA raises with age & Age related Reference Values** should be used.
- A borderline PSA in an asymptomatic man **should be repeated in 1-3 months** .Any rising trend should be referred urgently.
- **Screening is not recommended in men 75 –years of age with less than 10-years life expectancy,** as treating at this age group is unlikely to improve the survival.

➤ **Digital Rectal Examination(DRE):**

Doctor inserts a gloved, lubricated finger into the rectum to feel for any bumps or hard areas on the prostate that may need to be tested for cancer.

- Can detect Cancers only in the **Posterior & lateral** aspects of prostate gland.
- **Only 85% of the prostate cancers arise peripherally which can be detected by DRE.**
- DRE has a sensitivity of 59% & specificity of 94%.
- Majority of cancers detected by DRE has already been clinically and pathologically advanced.

➤ **DRE v/s PSA:**

- Studies have reported, **more than 45% cancers are detected only by PSA**; while **only 18% are detected solely by DRE.**
- Both PSA & DRE are somewhat complementary , and their combined use can increase the overall rate of detection

If the results of the PSA ± DRE suggest that having a prostate cancer, do a prostate biopsy to find out.

➤ **Biopsy Risks:**

- Prostate Biopsies may also **miss findings cancers** and can rarely cause serious infections.
- Biopsy can lead to **serious anxiety & physical discomfort.**

➤ **To Screen Or Not To Screen:**

The Current evidence does not support “National Screening Program “because over-diagnosis and over-treatment are significant problem.

1. There is controversy about which screen-detected lesions will become clinically significant. Current methods of screening involve measurement of PSA, followed by Transrectal ultrasound scanning and biopsy, but these lack adequate specificity and sensitivity. There are three major treatment options for localized disease: radical prostatectomy, radical radiotherapy, and monitoring with treatment if required.
2. There is no randomized controlled trial evidence to suggest a survival advantage of any of these treatments, and each has risks.

Summary

- Primary prevention aims to prevent disease or injury by : reducing the exposure to hazards and practicing unhealthy behavior or increasing the resistance to diseases
- Secondary prevention tend to reduce the impact of already occurred disease or injury by early detection and treatment and prevention of re-injury
- Tertiary prevention soften the impact of an ongoing illness or injury that has lasting effects to improve patient 's ability to function, quality of life and life expectancy
- Screening is applied on well persons for early detection of diseases
- A good screening method must be easy, cheap and acceptable by the community, targeting common & important condition which has a latent period in which we can detect the disease in early stage and provide suitable treatment.
- The criteria for screening: Knowledge of disease, Knowledge of test, Treatment for disease and Cost considerations.
- Common cancers :
 - Cervical Cancer: The Pap smear has been the model for cancer screening; it is More sensitive of detecting Squamous cell malignancy. which is more prevalent

Age	Frequency of Screening
25	First invitation
25-49	3 yearly
50-64	5 yearly
65 +	Only those who are not screened till age of 50 or had recent abnormal test

- Screening for Bowel Cancer: Screening for colorectal cancer using Fecal Occult Blood (FOB) tests, colonoscopy is diagnostic.
- Screening for Prostate Cancer: Prostate –Specific Antigen (PSA)
- Screening for Breast Cancer: Breast screening uses mammography.
- Premenopausal thinning makes mammography easier in older (50+) women. MRI OR Ultrasound is recommended in younger women
- Prevention & screening in elderly people include prevention of fall , stroke and osteoporosis .

Questions

- 1) Finding support groups that allow members to share strategies for living well is considered as:
 - a. Primary prevention
 - b. Secondary prevention
 - c. Tertiary prevention
 - d. Has no role in prevention

- 2) All of these screening tests are commonly practiced in PHCC **except**:
 - a. Cervical cytology as screening for cervical CA
 - b. CXR as screening for lung cancer in smokers
 - c. Mammography as screening for breast CA
 - d. Fecal occult blood as screening for colon CA

- 3) What is best method of screening for prostate cancer?
 - a. Prostate specific antigen
 - b. Digital rectal exam
 - c. Pap smear
 - d. Biopsy

- 4) What is the diagnostic test for colon cancer?
 - a. CT
 - b. Colonoscopy
 - c. Fecal occult blood
 - d. ultrasound

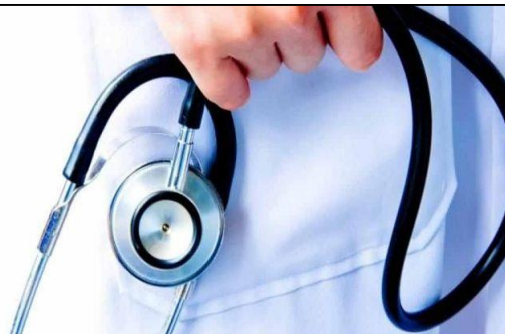
432 PHC Team Leader

Yazeed A. Alhusainy

phcteams@gmail.com

Raghad Al Mutlaq

Phc432teams@gmail.com



Answers:

1st Question:C

2nd Question:B

3rd Question:A

4th Question:B