

HEALTH CARE MAINTENANCE IN THE ELDERLY

- GOALS:**
- 1) To improve quality of life.
 - 2) To delay or prevent common conditions of aging
 - 3) To maintain function

Objectives:

- 1) To give the learner current recommendations for PRIMARY and SECONDARY prevention.
- 2) To help the learner assimilate these recommendations into their current practice patterns.
- 3) Describe the concept of TERTIARY prevention.

1) Why Preventative care not always done:¹

- A) Confusion over suitable interventions
- B) Insufficient time and support staff in office settings.
- C) Inadequate 3rd party reimbursement
- D) Patient Barriers: cost, transportation, *reluctance*.
- E) Insufficient training of providers in prevention and aging.

A) Why CONFUSION over best practices in preventative health care?

Discrepancies between:

- current practices of mentors.
- &
- evidence based recommendations
- &
- cost-political based recommendations

B) Insufficient time and support staff.

- Remedies:
- 1) -devise systems to streamline these practices
e.g. flow sheets, annual exams with check-list for staff to follow.
 - 2) -delegate to ancillary personnel²
(*successful delegation*: define goal, responsibility
and set follow up time and what you expect.)
e.g. flu/ immunization program
 - 3) -use the technology
e.g. reminders of appointments, lists of age groups or disease groups.
 - 4) -use of the annual exam³

Appendix A. Third U.S. Preventive Services Task Force (USPSTF) Recommendations and Ratings

The USPSTF grades its recommendations according to one of five classifications (A, B, C, D, or I), reflecting the strength of evidence and magnitude of net benefit (benefits minus harms).

- A. The USPSTF strongly recommends that clinicians routinely provide [the service] to eligible patients. (The USPSTF found good evidence that [the service] improves important health outcomes and concludes that benefits substantially outweigh harms.)
 - B. The USPSTF recommends that clinicians routinely provide [the service] to eligible patients. (The USPSTF found at least fair evidence that [the service] improves important health outcomes and concludes that benefits outweigh harms.)
 - C. The USPSTF makes no recommendation for or against routine provision of [the service]. (The USPSTF found at least fair evidence that [the service] can improve health outcomes but concludes that the balance of benefits and harms is too close to justify a general recommendation.)
 - D. The USPSTF recommends against routinely providing [the service] to asymptomatic patients. (The USPSTF found at least fair evidence that [the service] is ineffective or that harms outweigh benefits.)
 - I. The USPSTF concludes that the evidence is insufficient to recommend for or against routinely providing [the service]. (Evidence that [the service] is effective is lacking, of poor quality, or conflicting and that the balance of benefits and harms cannot be determined.)
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Appendix B. Third U.S. Preventive Services Task Force (USPSTF) Strength of Overall Evidence

The USPSTF grades the quality of the overall evidence for a service on a 3-point scale (good, fair, or poor).

Good: Evidence includes consistent results from well-designed, well-conducted studies in representative populations that directly assess effects on health outcomes.

Fair: Evidence is sufficient to determine effects on health outcomes, but the strength of the evidence is limited by the number, quality, or consistency of the individual studies; generalizability to routine practice; or indirect nature of the evidence on health outcomes.

Poor: Evidence is insufficient to assess the effects on health outcomes because of limited number or power of studies, important flaws in their design or conduct, gaps in the chain of evidence, or lack of information on important health outcomes.

II) Preventative Recommendations⁴

A) Review Summary Sheet

B) Know Strength of Evidence and **source** of recommendations:

Research based vs. Consensus Panel

Find the USPSTF at <http://www.ahrq.gov/clinic>

C) Blood Pressure Screening⁵

1) Recs: -Screen with each exam and at least q 1-2 years. (A)

Goal BP $\leq 140/90^6$ standing⁷

D) Breast Exam/Mammogram

1) Recs: H.C. Provider Performed Breast Exam : - annually >40 y.o. (I)⁸
Mammogram (USPSTF) -q 1-2 yrs > 40-70 y.o. (B)⁹
(with 3 yrs life expectancy^{10,11})

2) Data: - 45% new breast cancers in >65 y.o.
- only 50-84% elderly women have had mammogram^{12, 13, 14, 15}
-55% of women > 50 y.o. in Nebraska had mammograms
-average growth rate: 10 yrs from nonpalpable to 1 cm.¹⁶
~10 yrs from malignant transformation to palpable mass¹⁷
-mammograms detect cancer 4 yrs before palpable
-Mammograms regular use: -less likely to die of dz to age 85 yo¹⁸
-diagnosis at earlier stage of dz.
-Women (any age) with **no** to **moderate** comorbidities experienced lower rates of death with mammographically detected tumors and women with **multiple or severe** comorbidities failed to show benefit¹⁹

3) Cost Medicare covers (screening) every year.

E) Pelvic Exam/Pap Smear

1) Recs: -q 2-3 years after 3 negative annual exams (A)
-may decrease freq. or d/c after age 65 with 2 negative exams²⁰
-continue Paps if multiple sexual partners or new sexual partner

2) How: swab or "cyto" brush insertion and rotation, +/-spatula scrape to comment; on patient positioning

3) Data: -no prospective trials
- numerous cohort & case-control studies->90% efficacy²¹
-abnormal Pap 2-3x more likely in unscreened > 65 y.o.
-positive smears in > 65 y.o. indicate invasive disease 4x more

4) Cost Medicare covers (screening) q 2 years 3

F) Cholesterol

1) Recommendations for screening:

-men age 35 and older²³ (USPSTF) (A)

-women age 45 and older (USPSTF) (A)

-both sexes, all ages with high risk or known CHD^{24, 25, 26, 27} (B)

- 2) Data: -Total chol./HDL ratio is best predictor²⁸
 (At risk T.Chol./HDL ratios: men \geq 6.4, women \geq 5.6)
 -30-40% reduced cardiovascular morbid/mortality with lipid

3) Cost Medicare covers -*screening* lipid panel q 5 yrs if lipids w.n.l.
 ratios.
 (*screening* lipid panel=>t.chol., HDL, triglycerides)

- G) Colorectal cancer screening..... ALL: age >50 y.o, HIGH RISK earlier.^{14, 15} (A)
 1) Recs: FOBT -annually > 50 y.o. (USPSTF) good
 Sigmoidoscopy -q 3-5 years > 50 y.o. fair
 Colonoscopy -q 2 yrs in high risk^{16, 17},
 -q 10 yrs average risk

(Stop: age >85 y.o.¹⁸ or life expectancy < 13 years)¹⁹

- 2) Data: -peak incidence age 70-80 y.o.
 -33% reduction in relative risk mortality colorectal ca.^{20, 21}
 (with FOBT q year)²²
 -predictive value of FOBT higher in age > 70 y.o.²³
 -40% age > 50 with 1 or more adenomatous polyp²⁴
 -10-15 yrs for adenomatous poly to invasive disease²⁵
 -colonoscopy more cost effective than FOBT &/or sigmoidoscopy²⁶
 25-43% national had screening, 39-43% Nebraska (2000)²⁷
- 3) Cost: Medicare covers screening sigmoidoscopy q 4 yrs.
 Medicare covers screening FOBT q 1 year.
 Medicare covers colonoscopy q 2 yrs in high risk^{28, 29}
 and every 10 years in average risk³⁰

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- I) Osteoporosis
 1) Recs: -Calcium 1500 mg/day & Vit D 400-800 IU/d (B)
 -estrogen prophylaxis post-menopause (B)
 -weight bearing exercise (B)
 -routine screening for >65 (ave. risk*) (USPSTF) (B)
 -BMD at the femoral neck by DXA is the best

predictor³¹

- 2) Data :
Incidence

- 41 percent of white women older than 50 have osteopenia³²
- 70 percent of white women older than 80 have osteoporosis³³
- 50% of postmenopausal; women will have osteoporosis-related fracture (25% will have vertebral deformity³⁴, 15% hip fx³⁵.)

Screening

- To prevent 1 hip fx:
 - screen: -731 for women aged 65-69,
 - 143 for women aged 75-79.³⁶

Treatment

- 69-106 y.o. 30-40% decrease vertebral & hip fractures with calcium and Vit D.²²
- decrease bone loss and fractures in age 47-75 y.o. with estrogen.^{23, 24}
- estrogen and progesterone prevent bone loss^{25, 26}
- begin estrogen within 3 yrs onset menopause²⁷ and continue indefinitely²⁸
- estrogen helps even 20 years after menopause^{29, 30, 31}
- estrogen doses 0.3 to 0.625 mg +/- progesterone effective in preventing bone loss³²
- alendronate reduces all osteoporotic fxs. (RR 0.48 -0.63)³³

3)Cost - Medicare covers bone densitometry with *indications* only:

Medicare acceptable indications:

- bone pain
- previous fracture
- osteomalacia
- post-menopausal risk*
- estrogen therapy
- glucocorticoids
- monitor response to FDA osteop., drug Rx.

(NOT OSTEOPOROSIS)

*Risk³⁴: **Best predictor = low body weight**

Others: early menopause, white/Asian, sedentary, smoker, alcohol abuse, caffeine use, or low calcium and vitamin D intake, family history, primary hyperparathyroid, hyperthyroid, corticosteroids, phenytoin 5

J)Prostate Cancer

1)Recs: -DRE/PSA annually > 50 y.o. ALL MEN (C-D)
> 40 y.o. (A.A. or + Family Hx)

2)Data; -most common malignancy in older men & mortality rises with age³⁵
-occult prostate ca. --~30% age 70 y.o.
(Autopsy study) ~ 50% ninth decade^{36, 37}

So what is the problem?

The problem is that we don't know what to do with localized disease.

Why don't we know what to do?

Here is why:

Prostate Cancer continuing:

-localized prostate cancer (T 0-2) followed without

5 year survival -98%

10 year survival -87%

-extra prostatic disease (T 3-4)⁴¹

5 year survival -51%

10 year survival -0%

-doubling time of early prostate ca. is 3 years⁴²

-tumor growth rates.⁴³

1gm(0 yrs)^o 32gm (10 yrs)^o 1 kg(20yrs)=lethal

HOW GOOD ARE OUR TESTS?

Test Positive predictive value⁴⁴

-DRE -----22-31%

-trans. rectal ultsnd(TRUS)---17-41%

-PSA-----35%

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2 QUESTIONS WE MUST ANSWER

What ages do we screen?

How do we screen them ?

We limit our screening to the groups we can help the most.

That is: *-UNDER 70 y.o.*

or

-WITH > 10 years LIFE EXPECTANCY

HERE IS WHY?

PSA, DRE & Prostate Cancer Screening

Two groups based on treatment options :

Group 1

(Age > 70) or (age < 70 with < 10 years life expectancy)⁴⁵

- Localized disease ° no treatment.
- Metastatic disease ° anti-androgen or chemotherapy

Group 2

(Age < 70 with > 10 years life expectancy)

- Localized disease(T 0-2)
Treatment: ° Surgical, Anti-androgens, Radiation therapy
- Metastatic disease(T3-4)
Treatment ° Surgical, Anti-androgens, Radiation 6

Confusing fact----- Up til now

- PSAscreening ° no reduction in mortality, morbidity
- ° no improvement in quality of life⁴⁶

BUT NOT ALL THE VOTES ARE IN !!!!!

New Data

- age 50-80, screened annually (N = 7,155) over 7 years
- all with PSA > 3.0 received TRUS and biopsy,
- of positives biopsies (N=367): 92% received treatment

which gave a 69% reduction in prostate cancer mortality in screened⁴⁷

- Treatment type distribution:
- Antiandrogen plus - radical prostatectomy -46%
- Antiandrogen plus -radiation -32%
- Antiandrogen alone -15%

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THE CURRENT RECOMMENDATIONS

PSA LEVELS :

SUGGESTED RANGES: FOR AGE AND RATE OF INCREASE (VELOCITY)

| AGE | PSA ⁴⁸ | PSA ⁴⁹ | PSA VELOCITY |
|-------|-------------------|-------------------|--|
| 40-49 | 0.0-2.5 | 0.0-2.2 | 0.75 ng/ml/yr ³⁶ over 2 years |
| 50-59 | 0.0-3.5 | 0.0-3.5 | “ |
| 60-69 | 0.0-4.5 | 0.0-4.9 | “ |

70-79

0.0-6.5

0.0-5.8

“

"EDDIE'S" CURRENT PLAN

Age <70 with >10 years life expectancy

PSA

DRE

DIAGNOSTIC ACTION³⁷

| | |
|---|---|
| <p><Age-specific range & velocity < .75 ng/ml/2 yrs or PSA < 3.0 (future ?)</p> <p>> Age-specific range or velocity > .75 ng/ml/2 yrs or PSA > 3.0 (future?)</p> <p>Any value</p> | <p>NEG----->Annual PSA & DRE</p> <p>NEG----->Urologic referral.*</p> <p>POS.----->Urologic referral*</p> |
|---|---|

Age >70 y.o. or age < 70 with life expectancy <10 years

don't recommend**

Pos----->?Urologic referral

* PSA and trans rectal ultrasound guided biopsy and other expensive toys..

*Ed's *mindless spineless* clause: "you wanna PSA, you getta PSA"->then I'll deal with it if abn.

III) Primary Prevention:

A) Exercise

- 1) Recs -prevention of CAD in at risk³⁸ USPSTF (A)
 - prevention of osteoporosis (aerobic & resistance)
- 2) Data
 - physical exercise at all levels prevents heart dz and death^{39, 40}
 - exercise including weight lifting improves musculoskeletal conditioning and physical function⁴¹
- 3) Cost Cheap!

B) Immunizations:

- 1) Tetanus-diphtheria
 - dT booster q 10 years
 - in previously non-immunized:
 - series of 3 dT at:
 - initial, 2 months and 6 months from first dT.
 - tetanus immune glob. if tetanus prone injury
- 2) Pneumovax:⁴²
 - age 65 y.o.
 - Repeat at 7 years in immunocompromised.
- 3) Influenza
 - annually for age > 65 y.o.

- C) Smoking cessation (A+)
- D) Aspirin:
- 1) Recs: -patients (risk factors CHD)^{43, 44, 45, 46} > 50 y.o. (A)⁴⁷
 - (dose 81-325 mg q d.)
 - 2) Data: -effective primary and secondary prevention cardiovascular and cerebrovascular disease⁴⁸
 - effective secondary prevention of stroke and death age 70-80 with previous cerebral ischemia⁴⁹
- E) Sensory
- 1) Recs: -vision acuity (B)
 - hearing impairment screening (B)
 - glaucoma by specialist in age >65 y.o (C)
 - Medicare covers annually

IV) *Can't prevent, ineffective screen:*^{15, 2}

| <i>Screening for:</i> | <i>Strength of evidence</i> | <i>Lab/tests</i> | <i>Strength of evidence</i> |
|--------------------------|-----------------------------|--------------------------|-----------------------------|
| Lung cancer screening | (D) | Annual chemistry profile | (D) |
| Ovarian cancer screening | (D) | Annual CXR | (D) |
| Uterine cancer | (D) | Annual CBC | (D) |
| Hematologic malig. | (D) | Annual EKG | (D) |
| Pancreatic Cancer | (D) | | |

V) ***TERTIARY PREVENTION***

- 1) VISION TEST-
 - 2) HEARING -----WHISPER TEST
 - 3) UPPER/LOWER EXTREMITY FUNCTION
 - 4) MENTAL STATUS
 - 5) DEPRESSION³
 - 6) HOME ENVIRONMENT
 - 7) INCONTINENCE
 - 8) NUTRITION
 - 9) SOCIAL SUPPORT
- FUNCTIONAL DISABILITY SCREEN

-healthy 65 & beyond per HCP discretion
Screen with: TC/HDL, positive are: women:(TC/HDL >5.6)
men: (TC/HDL > 6.4)

Medicare covers -screening lipid panel q 5 yrs if lipids normal
(screening lipid panel=> t.chol., HDL, triglycerides)

E) Colorectal cancer Recs: FOBT-----° 50 y.o. -----annually
Sigmoidoscopy-----° 50 y.o.-----q 3-5 years
Colonoscopy (for high risk) ° 50 y.o.-----q 2 yrs.
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(Stop: age >85 y.o.⁵ or life expectancy < 13 years)⁶

Medicare covers screening - sigmoidoscopy q.4 yrs,
-FOBT q 1 year. -colonoscopy: q 2 yrs (high risk), q 10 yrs.(Ave. risk)

F)Osteoporosis Recs:-----Calcium 1500 mg/day & Vit D 400-800 IU/d
-estrogen prophylaxis post-menopause
-weight bearing exercise

Medicare covers bone densitometry with indications only:
Medicare acceptable indications:-bone pain -previous fracture
-osteomalacia -post-menopausal risk
-monitor FDA approved osteoporosis therapy-glucocorticoids
(NOT OSTEOPOROSIS)

G)Prostate Cancer: Recs:-----DRE/PSA-----° 50 y.o.(ACS)----- annually
(Discontinue after age 70 or with < 10 yrs life expectancy)

H) Exercise: Recs:-----prevention of CAD in (men)&prevention of osteoporosis(all)

I)Immunizations:Tetanus-diphtheria-----dT booster----- q 10 years
(in previously non-immunized) -series of 3 dT at:-initial, 2 months and 6 months
-tetanus immune glob. if tetanus prone injury

Pneumovax:----- age > 65 y.o.--- repeat:-- if immunocompromised at 7 yrs.

Influenza-----> 65 y.o.-----annually

J) Smoking cessation

K) Aspirin: Recs:-----age > 50 y.o with risk CHD------(dose 81-325 mg q d.)

L)Sensory screen annually Recs:---vision acuity annually, -glaucoma periodically -hearing impairment

PSA, DRE & Prostate Cancer Screening

Two groups based on treatment options :

(Age < 70 with > 10 years life expectancy)

Localized disease(T 0-2)

Treatment:-- Surgical, Anti-androgens, Radiation therapy

Metastatic disease(T3-4)

Treatment---Surgical, Anti-androgens, Radiation

(Age > 70) or(age <70 with < 10 years life expectancy)--

localized disease-----no treatment.

metastatic disease—anti-androgen or chemotherapy

PSA LEVELS :

SUGGESTED RANGES: FOR AGE AND RATE OF INCREASE (VELOCITY)

PSA

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“EDDIE’S” CURRENT PLAN

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| Any value | POS.----- | >Urologic referral* |
| Age >70 y.o. or age <70 with life expectancy <10 years | | |
| don't recommend** | Pos----- | >?Urologic referral |

* PSA and trans rectal ultrasound guided biopsy and other expensive toys..

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Note: REFERENCES HAVE DOUBLE NUMBERS, STARTING OVER AT #11 AFTER #

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²⁷ Data from Mayo Clinic, Rochester Minn.

²⁸ Data from Prostate Cancer Awareness Week 11

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