

Risk factors, health maintenance, disease prevention

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History of health prevention

"Those who are well do not need a physician, but the sick do."

Jesus of Nazareth Mark 2:17

American Medical Association

- 1922 – first proposed ANNUAL physical exam of healthy people
 - "One size fits all"
- 1983 – recommends PERIODIC visits
 - Appropriate testing based on age, sex, ...

United States Preventative Services Task Force

- Commissioned 1984
 - US Dept of Health and Human Resources
 - 2002 = Agency for Healthcare Research and Quality (AHRQ)
- Majority of deaths < 65 are preventable
- Mission = promote effective clinical prevention
 - (but, first do no harm)
- Recommendations based on scientific evidence
- Audience = clinicians in primary care settings

USPSTF editions

- First edition
 - Convened 1984
 - Published as single volume, 1989
- Second edition
 - Published as single volume 1996
 - 70 chapters
- Third edition – incrementally released
 - Convened 1998
 - 55/70 chapters out of date
 - 15 new chapters to be added
 - First new publications released, April 2001
 - As of 1/05, 43 new recommendations

USPSTF –3rd edition

- Convened to assess the merits of preventive measures:
 - Screening tests
 - Cancer
 - Heart and vascular disease
 - Mental health conditions
 - Metabolic, nutritional and endocrine conditions, etc.
 - Counseling
 - Breast feeding, diet, physical activity, skin cancer,
 - Tobacco use etc.
 - Chemoprophylaxis
 - Hormone replacement therapy
 - Aspirin use in primary prevention of heart dz, etc.

USPSTF Rating System for Strength of Overall Evidence

- Good/Fair/ Poor
- Good: Evidence includes **consistent** results from **well-designed**, well-conducted studies in **representative populations** that **directly assesses** effects on health **outcomes**

USPSTF Recommendations and Ratings:

- A: strongly recommends/good evidence
- B: recommends/fair evidence
- C: no recommendation for or against/ fair evidence to improve outcomes, but, harms ~ benefits
- D: recommend against/fair evidence for ineffective or harms > benefits
- I: insufficient to recommend for or against/ evidence is lacking or of poor quality, or conflicting; benefit vs. harm cannot be determined

Top 10 Causes of Death 2000 & 2001 (men and women)

1. Heart diseases (29.6% of all deaths in 2000)
2. Cancer (23%)
3. Cerebrovascular diseases (7%)
4. Chronic lower respiratory dzs (5.1%)
5. Accidents (4.1%)
6. Diabetes Mellitus (2.9%)
7. Influenza and Pneumonia (2.7%)
8. Alzheimer Dz (2.1%)
9. Nephritis, Nephrotic Syndrome, Nephrosis (1.5%)
10. Septicemia = overwhelming infection, in the bloodstream (1.3%)

Leading Causes of Death (2000 & 2001)

- | ■ Ages 20-39, Men | ■ Age 20-39, Women |
|---------------------|--------------------|
| 1. Accidents | 1. Accidents |
| 2. Suicide | 2. Cancer |
| 3. Homicide | 1. Breast |
| 4. Heart Disease | 2. Uterine |
| 5. Cancer | 3. leukemia |
| 1. Leukemia | 3. Heart Disease |
| 2. Brain | 4. Suicide |
| 3. Bones and Joints | 5. Homicide |

Risks and causes of death

- Accidents
 - Seat belts?
 - Helmets? Did you ask about exercise/hobbies?
 - Occupation?
- Suicide
 - Gun in house?
 - Prior h/o suicide attempt?
 - H/o depression?
- Heart disease
 - Cholesterol?
 - HTN?
 - DM?
 - Early family history?
 - Tobacco?

Leading Causes of Death 2001 Same for M & F age 60-79

- | ■ Ages 60-79, Men | ■ Age 60-79, Women |
|---|---|
| 1. Cancer (157,504 deaths) | 1. Cancer (129,877 deaths) |
| 1. Lung (15,886 deaths) | 1. Lung (39,099 deaths) |
| 2. Colon (5,078 deaths) | 2. Breast (17,405 deaths) |
| 3. Pancreas (2,958 deaths) | 3. Colon (12,255 deaths) |
| 4. Liver (2,472 deaths) | 4. Pancreas (7,722 deaths) |
| 5. Esophagus (2,347 deaths) | 5. Ovary (7,353 deaths) |
| 2. Heart Disease | 2. Heart Disease |
| 3. Chronic lower respiratory dzs (COPD) | 3. Chronic lower respiratory dzs (COPD) |
| 4. Cerebrovascular dzs | 4. Cerebrovascular dzs |
| 5. DM | 5. DM |

Web sites for guidelines

- USPSTF(for clinicians)
- www.ahrq.gov/clinic/gcpspu.htm (3rd edition)
- www.ahrq.gov/clinic/uspstf.htm (overview USPSTF)
- www.ahrq.gov/clinic/uspstfix.htm (bullets - index)
- <http://www.ahrq.gov/clinic/gcpspu.htm> (updates to third edition)
- National Guideline Clearing House (AHRQ)
<http://www.guideline.gov/index.aspx>
- Canadian Task Force on the Periodic Health Exam (CTFPHE)
www.ctfphc.org/

Risk assessment

- **Accuracy** of the history **documented** is crucial
- **Thoroughness** of the history is crucial

2 examples of risk assessment

- Heart disease event in next ten years
 - Framingham risk assessment
 - <http://hin.nhlbi.nih.gov/atp/iii/calculator.asp?usertype=prof>
 - <http://gateway.ut.ovid.com/gw2/ovidweb.cgi>
 - (NCEP, adult treatment panel III, JAMA May 2001)
- Breast Cancer risk in next 5 years
 - Gail model
 - <http://bcra.nci.nih.gov/brc/q1.htm>
 - Modified Gail model
 - <http://www.halls.md/breast/riskcom.htm>

Framingham 10 year risk assessment for MI/cardiac death

- Age: years
- Gender: Female/Male
- **Total Cholesterol:** mg/dL
- **HDL Cholesterol:** mg/dL
- **Smoker:** No Yes
- **Systolic Blood Pressure:** mm/Hg
- Currently on any medication to treat high blood pressure. No Yes

Framingham 10 year risk assessment for MI/cardiac death

High risk > 20% ten yr risk

Intermediate risk 10-20% ten yr risk

Low risk < 10% ten yr risk

Some factors to consider when deciding who to screen:

- Age
- Sex
- Family history
 - Breast cancer (breast and ovarian cancer)
 - Colon cancer
- PMHx/surgical history
 - Diabetes? - Gestational diabetes? obese?
 - Hysterectomy for benign or malignant reason?

Colon cancer

- All patients age 50 and over. "A" rec
 - Stool cards ("good" evidence)
 - Flexible sigmoidoscopy ("fair" evidence)
 - Colonoscopy (no direct evidence)
 - Barium Enema (no direct evidence)
- Begin earlier (<age 50) if higher risk
 - 20% of all colon cancers occur in pts with risk factors:
 - Family history of first degree relative dx < age 60
 - Family hx hereditary nonpolyposis colorectal CA
 - Personal history of longstanding ulcerative colitis

Breast cancer

- All women age 40 and over. "B" rec for screening mammography with or without a clinical breast exam q 1-2 yrs
 - Decreases 10 yr risk of breast cancer by 20-25%
- Higher risk with family history (Bates p. 302-304):
 - Premenopausal 1st degree relative
 - Bilateral cancer in 1st degree relative
 - BRCA1 and BRCA 2 genes
 - Only 5-10% of all breast cancer
 - But 50% risk of dz if < age 50; 80% risk of dz by age 65

What do we do at Loyola?

- Standardized forms
 - Databases filled out by new pts
 - Progress notes – new and return visits
- EPIC – electronic medical record

Gynecology yearly visit progress note at LUHS

- | ■ Counsel | ■ Tests |
|-------------------------------|---------------------|
| ■ Smoking cessation | ■ Occult blood |
| ■ Illicit drug cessation | ■ Pap |
| ■ Calcium/Vitamin D | ■ GC/Chlamydia |
| ■ Menopause/HRT risk benefits | ■ Bone density |
| ■ Domestic violence | ■ Cholesterol |
| ■ Self breast exam | ■ Mammogram |
| | ■ Influenza vaccine |
| | ■ Tetanus vaccine |

Pediatric new patient database at LUHS

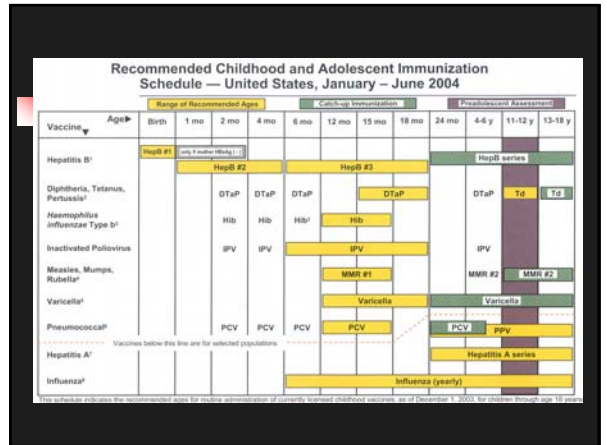
- Family history
- Does child live in a pre-1960 building?
- Do any smokers live with the child?
- Is a gun kept in the place where your child lives?
- Has anyone close to this child died?

Adult new patient database at LUHS

- Family history
- Blood transfusion?
- Cholesterol in last 5 years?
- Stool test for: blood, endoscopy, BE?
- Immunizations
- Do you own a handgun?
- Pap/Pelvic exam/Mammogram?
- Smoke?
- Alcohol?
- Seat belts?

What do we do at Loyola?

- Flow sheets for adults
 - Preventative care (brown)
 - Chronic disease (pink)
- Pediatric vaccination sheet for children
- EPIC – electronic medical record



It is not just good medicine...

- HEDIS
 - Insurance carriers (HMOI)
 - LUHS Primary Care QI projects
 - Preventative care
 - Chronic disease – DM, asthma
 - Influenza vaccinations
 - Age 6 month – 23 month
 - Age 50-64
 - Age 65+
 - Diabetics/asthmatics
 - Primary care – yearly faculty review
 - Primary care – recredentialing for privileges
 - Malpractice – failure to diagnose

HEDIS

- =Health Employer Data Information Set
 - 271 different insurance companies
 - 71.3 million covered lives in America
 - HMO or POS insurance
 - Reports on 60 measures annually

HEDIS Measures examples

Childhood (Age 2) vaccination status

- 4 doses DTP
- 3 doses IPV or OPV
- 1 dose MMR
- 2 doses Haemophilus influenza type b
- 3 doses Hepatitis B
- 1 dose Varicella Zoster

Adolescent (Age 13) vaccination status

- 2 doses MMR
- 3 doses Hepatitis B
- 1 dose Varicella Zoster

HEDIS Measure example

Cervical Cancer screening

Women age 18-65

One pap in three years

Exclusion=hysterectomy for a benign diagnosis (surgical hx)

Influenza season 2004-2005

- Influenza causes 51,000 excess deaths/yr
- Influenza and Pneumonia
 - #7 overall cause of death in US, 2000
 - #8 cause of death in children age 1-14 in US, 2000
- Each year:
 - 10% to 20% of population is ill with influenza
 - 30% to 40% of school children get influenza

Quality Improvement

- QI is here and now
- "Opportunity to Improve"
 - Hunch
 - Baseline measurement
- Standard/Target defined
 - Good studies
 - Expert opinion – National Consensus
- Implement a change, new process
- Remeasure and assess, did it work?

Quality Improvement at LUHS

- On going
- Every department
- CCE = Center for clinical effectiveness
 - Quarterly reports
- Top down – Dr. Barbato, CEO; VPs, every manager, every physician
- You will experience QI efforts at LUHS

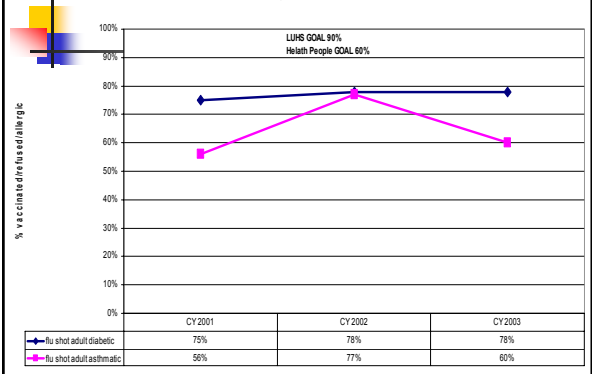
Influenza - goals

- Healthy people 2010 vaccination goals
 - age 65+ = 90%
 - Healthcare worker goal = 60%
 - LUHS '02 37%
 - LUHS '03 42%
 - High risk age 18-64 goal = 60%
 - Asthma
 - Diabetes Mellitus
 - ESRD (end stage renal disease)
 - Chronic cardiovascular and pulmonary disease

Influenza 2002

- LUHS PC chart audits from **last** flu season got flu shot or documented refusal:
 - age 65+ = 83%
 - age 50-64 = 66%
 - Adult with asthma = 72%
 - Adult with DM = 75%
 - Children age 6 mo – 23 mo = 15%
 - NEW 2003 – is covered by Vaccines for children

Influenza vaccinations in diabetics and asthmatics
Calendar year chart audit



Influenza season 2004-2005

Expanded indications promoted, May 2004

(<http://www.cdc.gov/mmwr/PDF/RR/RR5306.pdf>)

- Age 50+ (not just 65+)
- Children ages 6mo – 23 months
- Pregnant women, **all** trimesters
- Chronic diseases – DM, asthma, ESRD, immunosuppression (HIV or by meds), chronic CV and pulmonary disease...

Influenza vaccination

- LUHS system efforts – all of ambulatory
 - Primary care
 - Pediatrics
 - Obstetrics/Gynecology
 - Internal medicine specialty (cardiology, pulmonary...)
 - Cancer center
- Stop flu buttons
 - Smaller size this year – more people wore
- IDX prompts to clinical staff
 - 10/1/03 to 12/31/03
 - Pts ages 50+
 - Children ages 6 months to 23 months

Increased Publicity Influenza season 2003-2004

- Posters in cases
 - Posters on campus buses*
 - Table tents on waiting room end tables*
 - "Inside the system" newspaper*
 - Patient mailed reminders of visits*
 - Flu clinics in LOC lobby
 - Mailed postcards to high risk pts – Oct*
- *new for 2003

Influenza is a serious illness.

Flu shots can help prevent the suffering, missed days of work and complications that are associated with the flu.

Who should get a flu shot?

- Any adult age 50 or older
- Any child age 6 months thru 23 months
- Anyone with chronic lung disease such as asthma
- Anyone with chronic cardiovascular disease
- Anyone with Diabetes
- Any pregnant women in her second or third trimester during flu season
- Anyone with immunosuppression (weak immune system)
- Anyone who works in a nursing home or chronic care facility
- Anyone who wishes to decrease the likelihood of becoming ill with influenza (over 5 months of age)

Flu shots are available now.

There are several new recommendations this year for flu shots. Talk to your doctor today to see if any of the new recommendations apply to you.




Don't risk getting the flu, ask about a flu shot today.





Influenza Resource

- www.cdc.gov/nip/flu/ (home page CDC flu)



Influenza 2004-2005, changes to increase vaccination rates

- Delete consent form
 - not legally required
 - Slowed down the process (a barrier)
- Standing order for adults for all LUHS 2004
 - Take the doctor out of the loop
- Flu shots offered to inpatients at time of discharge if age 65 and older



Documenting flu shots

- If you don't document,
 - **You didn't give it!**
 - Document refusals



Influenza season 2003-2004

- **Everyone** has a role to play encouraging influenza vaccination

Health care workers should get vaccinated!

- Employee health fare
- Safety fare
- Occupational health nurse on campus
 - VARYING LOCATIONS, VARYING HOURS



Risk assessment

- Practice on each other in small groups
- Standardized patient exercise