

# ICSI Institute for Clinical Systems Improvement

## Health Care Guideline Preventive Services for Adults

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## Annotation Table

<b>Level I Services: Preventive services that clinicians and care systems <i>must</i> assess the need for and recommend to each patient. These have the highest priority value (see Table 1)</b>	<b>Annotation #</b>
Alcohol Abuse, Hazardous and Harmful Drinking Screening and Brief Counseling	1
Aspirin Chemoprophylaxis Counseling	2
Breast Cancer Screening	3
Cervical Cancer Screening	4
Chlamydia Screening	5
Colorectal Cancer Screening	6
Hypertension Screening	7
Influenza Immunization	8
Lipid Screening	9
Pneumococcal Immunization	10
Tobacco Use Screening and Brief Intervention	11
<b>Level II Services: Preventive services that clinicians and care systems <i>should</i> assess the need for and recommend to each patient. These have value but less than those in Level 1 (see Table 2)</b>	<b>Annotation #</b>
Abdominal Aortic Aneurysm Screening	12
Depression Screening	13
Folic Acid Chemoprophylaxis Counseling	14
Hearing Screening	15
Hepatitis B Immunization	16
Herpes Zoster/Shingles Immunization	17
Human Papillomavirus (HPV) Immunization	18
Inactivated Polio Vaccine (IPV) Immunization	19
Measles, Mumps, Rubella (MMR) Immunization	20
Obesity Screening	21
Osteoporosis Screening	22
Tetanus-Diphtheria Immunization (Td/Tdap)	23
Varicella Immunization	24
Vision Screening	25
<b>Level III Services: Preventive services for which the evidence is currently incomplete and/or high burden of disease and low cost of delivering care. Providing these services is left to the judgment of individual medical groups, clinicians and their patients.</b>	<b>Annotation #</b>
Advance Directives Counseling	26
Bimanual Pelvic Exam for Screening	27
Calcium and Vitamin D Chemoprophylaxis Counseling	28
Clinical Breast Exam Screening	29
Dementia Routine Screening	30
Domestic Violence and Abuse Screening and Counseling	31
Drug Abuse Screening and Counseling	32
Injury Prevention Screening and Counseling	33
Preconception Counseling	34
Pregnancy Prevention Counseling	35
Prostate Cancer Screening	36
Sexually Transmitted Infection Counseling	37
Sexually Transmitted Infection Screening (Other than Chlamydia)	38
Skin Cancer Screening and Counseling	39
Thyroid Dysfunction Screening	40
<b>Level IV Services: Preventive services that are not supported by evidence and <i>not</i> recommended</b>	<b>Annotation #</b>
Coronary Heart Disease Routine Screening	41
Diabetes Routine Screening	42
Other Lab Testing (Routine)	43
Ovarian Cancer Screening	44
Screening for COPD with Spirometry	45
Carotid Artery Stenosis Screening with Carotid Ultrasound	46

## Preventive Services Addressed in Alphabetical Order

Service	Annotation #
Abdominal aortic aneurysm screening (Level II)	12
Advance directives counseling (Level III)	26
Alcohol abuse, hazardous and harmful drinking screening and brief counseling (Level I)	1
Aspirin chemoprophylaxis counseling (Level I)	2
Bimanual pelvic exam for screening	27
Breast cancer screening (Level I)	3
Calcium and vitamin D chemoprophylaxis counseling (Level III)	28
Carotid artery stenosis screening with carotid ultrasounds (Level IV)	46
Cervical cancer screening (Level I)	4
Chlamydia screening (Level I)	5
Clinical breast exam screening (Level III)	29
Colorectal cancer screening (Level I)	6
Coronary heart disease routine screening (Level IV)	41
Dementia routine screening (Level III)	30
Depression screening (Level II)	13
Diabetes routine screening (Level IV)	42
Domestic violence and abuse screening and counseling (Level III)	31
Drug abuse screening and counseling (Level III)	32
Folic acid chemoprophylaxis counseling (Level II)	14
Hearing screening (Level II)	15
Hepatitis B immunization (Level II)	16
Herpes zoster/shingles immunization (Level II)	17
Human papillomavirus (HPV) immunization (Level II)	18
Hypertension screening (Level I)	7
Inactivated polio vaccine (IPV) immunization (Level II)	19
Influenza immunization (Level I)	8
Injury prevention screening and counseling (Level III)	33
Lipid screening (Level I)	9
Measles, mumps, rubella (MMR) immunization (Level II)	20
Obesity screening (Level II)	21
Osteoporosis screening (Level II)	22
Other lab testing (routine) (Level IV)	43
Ovarian cancer screening (Level IV)	44
Pneumococcal immunization (Level I)	10
Preconception counseling (Level III)	34
Pregnancy prevention counseling (Level III)	35
Prostate cancer screening (Level III)	36
Screening for COPD with spirometry (Level IV)	45
Sexually transmitted infection counseling (Level III)	37
Sexually transmitted infection screening (other than Chlamydia) (Level III)	38
Skin cancer screening and counseling (Level III)	39
Tetanus-diphtheria immunization (Td/Tdap) (Level II)	23
Thyroid dysfunction screening (Level III)	40
Tobacco use screening and brief intervention (Level I)	11
Varicella immunization (Level II)	24
Vision screening (Level II)	25

*Return to Table of Contents*

## Table of Contents

<p><b>Work Group Leader</b> John M. Wilkinson, MD <i>Family Medicine, Mayo Clinic</i></p> <p><b>Work Group Members</b> <b>Essentia Health East Region (F/K/A) Superior Health Center</b> Jessica Morgan, RN, CNP <i>Advanced Practitioner</i></p> <p><b>Gillette Children's Specialty Healthcare</b> Christina L. Storlie, DPT <i>Physical Therapy</i></p> <p><b>HealthPartners Medical Group and Regions Hospital</b> Charles Bass, MD <i>Family Medicine</i> Michael Maciosek, PhD <i>Research</i> Peter Rothe, MD, FACP <i>Internal Medicine/Geriatrics</i> Leonard Snellman, MD <i>Pediatrics</i> Leif Solberg, MD <i>Family Medicine</i></p> <p><b>Multicare Associates</b> Leslie C. Milteer, PA-C <i>Advanced Practitioner</i></p> <p><b>Northwest Family Physicians</b> Patricia Vincent, MD <i>Family Medicine</i></p> <p><b>Olmsted Medical Center</b> Kimberly J. McKeon, MD <i>OB/GYN</i></p> <p><b>Park Nicollet Health Services</b> Lisa Harvey, RD, MPH <i>Health Education</i></p> <p><b>South Lake Pediatrics</b> Andrea Gravley, RN, MAN, CPNP <i>Pediatrics</i></p> <p><b>University of Minnesota Physicians</b> Susan Diem, MD, MPH <i>Internal Medicine</i></p> <p><b>ICSI</b> Kari Johnson, RN <i>Clinical Systems Improvement Facilitator</i> Rochelle Hayes <i>Systems Improvement Coordinator</i></p>	<p><b>Algorithms and Annotations</b> ..... 1-46</p> <p>    Annotation Table ..... 1</p> <p>    Preventive Services Addressed in Alphabetical Order ..... 2</p> <p>    Evidence Grading ..... 4-5</p> <p>    Foreword</p> <p>        Introduction ..... 6-9</p> <p>        Scope and Target Population ..... 9</p> <p>        Aim ..... 9</p> <p>        Clinical Highlights ..... 10</p> <p>        Implementation Recommendation Highlights ..... 10-11</p> <p>        Related ICSI Scientific Documents ..... 11</p> <p>        Definition ..... 11</p> <p>    Annotations ..... 12-46</p> <p><b>Quality Improvement Support</b> ..... 47-68</p> <p>    Aims and Measures ..... 48</p> <p>        Measurement Specifications ..... 49-61</p> <p>    Implementation Recommendations ..... 62</p> <p>    Implementation Tools and Resources ..... 63</p> <p>    Implementation Tools and Resources Table ..... 64-68</p> <p><b>Supporting Evidence</b> ..... 69-87</p> <p>    References ..... 70-78</p> <p>    Appendices ..... 79-87</p> <p>        Appendix A – Counseling Messages ..... 79-80</p> <p>        Appendix B - ICSI Shared Decision-Making Model ..... 81-85</p> <p>        Appendix C – Alcohol Use Disorders Identification Test (AUDIT) Structured Interview ..... 86</p> <p>        Appendix D – Injury Prevention Counseling Messages ..... 87</p> <p><b>Disclosure of Potential Conflicts of Interest</b> ..... 88-90</p> <p><b>Acknowledgements</b> ..... 91-92</p> <p><b>Document History and Development</b> ..... 93-96</p> <p>    Document History ..... 93-95</p> <p>    ICSI Document Development and Revision Process ..... 96</p>
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## **Evidence Grading**

### **Literature Search**

A consistent and defined process is used for literature search and review for the development and revision of ICSI guidelines. The PubMed database was utilized and the literature search was divided into two stages to identify systematic reviews (stage I), and randomized controlled trials, meta-analysis and other literature (stage II). Literature search terms used for this revision are below and include literature from October 2010 through April 2012. Search terms included vitamin D, advanced directives and prevention.

### **GRADE Methodology**

Following a review of several evidence rating and recommendation writing systems, ICSI has made a decision to transition to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system.

GRADE has advantages over other systems including the current system used by ICSI. Advantages include:

- developed by a widely representative group of international guideline developers;
- explicit and comprehensive criteria for downgrading and upgrading quality of evidence ratings;
- clear separation between quality of evidence and strength of recommendations that includes a transparent process of moving from evidence evaluation to recommendations;
- clear, pragmatic interpretations of strong versus weak recommendations for clinicians, patients and policy-makers;
- explicit acknowledgement of values and preferences; and
- explicit evaluation of the importance of outcomes of alternative management strategies.

### **This document is in transition to the GRADE methodology**

Transition steps incorporating GRADE methodology for this document include the following:

- All new literature considered by the work group for this revision has been assessed using GRADE methodology.
- The strength of the recommendations is being assessed.

*[Return to Table of Contents](#)*

**Evidence Grading**

<b>Category</b>	<b>Quality Definitions</b>	<b>Strong Recommendation</b>	<b>Weak Recommendation</b>
<b>High Quality Evidence</b>	Further research is very unlikely to change our confidence in the estimate of effect.	The work group is confident that the desirable effects of adhering to this recommendation outweigh the undesirable effects. This is a strong recommendation for or against. This applies to most patients.	The work group recognizes that the evidence, though of high quality, shows a balance between estimates of harms and benefits. The best action will depend on local circumstances, patient values or preferences.
<b>Moderate Quality Evidence</b>	Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.	The work group is confident that the benefits outweigh the risks but recognizes that the evidence has limitations. Further evidence may impact this recommendation. This is a recommendation that likely applies to most patients.	The work group recognizes that there is a balance between harms and benefits, based on moderate quality evidence, or that there is uncertainty about the estimates of the harms and benefits of the proposed intervention that may be affected by new evidence. Alternative approaches will likely be better for some patients under some circumstances.
<b>Low Quality Evidence</b>	Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change. The estimate or any estimate of effect is very uncertain.	The work group feels that the evidence consistently indicates the benefit of this action outweighs the harms. This recommendation might change when higher quality evidence becomes available.	The work group recognizes that there is significant uncertainty about the best estimates of benefits and harms.

[Return to Table of Contents](#)

# Foreword

## Introduction

This guideline, Preventive Services for Adults, outlines recommended preventive services, including screening maneuvers, counseling messages and specific interventions for adults of average health risk.

This guideline is intended to be used primarily by health care organizations to design systems of care for the reliable delivery of preventive services to populations of patients. The various tests included in this guideline are discussed only in the context of screening asymptomatic individuals and the early detection of certain clinical conditions. We do not address the use of these tests in patients with symptoms, or for the ongoing management of these conditions.

As far as possible, the work group has reviewed the relevant literature and reached a consensus in making our recommendations. We have also incorporated recommendations from other ICSI guidelines, as well as those of other groups, especially the United States Preventive Services Task Force (USPSTF).

Throughout the guideline, we recommend a preference-based approach, strongly encouraging patients and clinicians to utilize the principles of shared decision-making, particularly when the evidence about specific interventions is incomplete or equivocal.

## Organizing a Practice for Delivery of Preventive Services

Preventive services cannot be reliably delivered by individual clinicians at routine "checkups" or "annual physicals," in the setting of the traditional one-on-one office visit, relying only on memory and good intentions.

To reliably deliver preventive services, health care organizations must incorporate new systems of care; nearly every patient contact for any reason should be considered as an opportunity for prevention.

In order to provide preventive services, it is first necessary to know which services are needed for individual patients. The ICSI guideline [Healthy Lifestyles](#) discusses systems to identify and stratify risk factors. Decision support tools, preferably integrated into the medical record, should generate alerts and reminders when services are due, both for individuals seen in the office, as well as for individuals for whom the care system has assumed responsibility but who may not be seen regularly.

These new systems incorporate such features as treatment protocols, task delegation, automated patient reminders, and other decision support tools. Pre-visit planning, post-visit or between-visit outreach, system alerts, and decision support have also been shown to be useful as have shared decision-making, patient activation and care management (*Bodenheimer, 2003 [Low Quality Evidence]*). Continuity of care has been shown to improve the consistency with which services are delivered (*Flores, 2008 [Moderate Quality Evidence]*).

## Team-Based Approach

Team-based care, with all health professionals sharing responsibility and working together to serve a population of patients, is essential for the reliable and efficient delivery of preventive services. Even if the traditional one-on-one office visit was effective, clinicians do not have enough time to deliver care in this manner; one study estimated that a primary care clinician, working alone, would spend over seven hours each day just providing all USPSTF-recommended services to a typical panel of patients (*Yarnall, 2003 [Low Quality Evidence]*). Rather, it is only through the cooperative efforts of appropriately trained and empowered team members, working at the fullest level of their licensure and skills, that this can be accomplished.

*[Return to Table of Contents](#)*

## **Prioritization of Preventive Services**

Health care systems may need to initially focus on the reliable delivery of selected high-value preventive services. The work group has prioritized the services included in this guideline; they are ranked by evidence of effectiveness, based upon the sum of their clinically preventable burden and cost effectiveness. Although most preventive services target high-burden conditions, not all are equally effective in reducing disease, and each service has its own cost. By focusing on services with relatively high health impact and favorable cost effectiveness, limited resources can be directed to those preventive services that produce the largest health improvements.

**Level I preventive services:** Clinicians and care systems *must* assess the need for and recommend these services to every patient. These have the highest value and are worthy of attention at every opportunity.

**Level II preventive services:** Clinicians and care systems *should* assess the need for and recommend these services to every patient. These have demonstrated value, although less than Level I services, and should be provided whenever possible.

**Level III preventive services:** Clinicians and care systems *could* recommend these services to patients, but only after careful consideration of costs and benefits. These are services for which the evidence of effectiveness is currently incomplete or equivocal, or which may have the potential for significant harm. Providing these services is left to the judgment of individual medical groups, clinicians and their patients. Decisions about preventive services in particular should be made based on the principles of shared decision-making.

**Level IV preventive services:** These services are *not* supported by evidence and should not be recommended. They may have insufficient evidence of effectiveness, clear evidence of lack of effectiveness, or the potential for significant harm without any benefit.

## **Counseling Services**

While there is good evidence that modifying certain behaviors has positive health benefits (unsafe sex, accidents and safety, nutrition, physical activity), there is minimal evidence at present that screening for these conditions or asking about them in the context of a risk assessment, even if followed by advice from a physician or other clinician, will result in a change in behavior or positive outcomes. Therefore, this guideline makes:

- minimal recommendations for risk assessment to drive counseling for what are largely lifestyle issues,
- specific recommendation that risk assessment and counseling about lifestyle not be considered suitable parameters for systematic implementation measures, and
- counseling messages for those clinicians who want to provide such counseling or whose patients express an interest in receiving this information.

Nevertheless, there is no question that the elimination of the unhealthy behaviors addressed in this document would significantly reduce morbidity and mortality in the general population. Modifiable health behaviors account for up to 50% of premature deaths in this country (*Flegal, 2005 [Low Quality Evidence]*). Furthermore, the main problem is the lack of good controlled trials of such counseling, not that there are trials showing mixed or no effects. Therefore, clinicians may choose to provide such counseling even though we do not yet have a solid evidentiary basis for it.

See also [Appendix A, "Counseling Messages."](#)

[Return to Table of Contents](#)



## **Physical Exam**

Most of the elements of the traditional physical examination are notably absent from these recommendations. The physical examination was originally developed and taught as a way to thoroughly evaluate the patient with a significant health problem or complaint, particularly in the hospital setting. It was not designed as a screening test for an asymptomatic person; in fact, it fails nearly all of the criteria for an effective screening test identified by most authorities. As a diagnostic test, done in response to specific complaints or symptoms, the physical exam remains of inestimable, if underutilized value.

The only elements of the physical exam that have been sufficiently studied and that are recommended by this guideline are blood pressure evaluation as part of hypertension screening (Level I); height, weight and body mass index as part of obesity screening (Level II), vision screening (Level II) and hearing screening (Level II).

For the other exams specifically mentioned in the guideline, there is incomplete evidence and/or high burden of disease and low cost of delivery care: for clinical breast exam screening (Level III), digital rectal exam of the prostate (Level III) and skin cancer screening for the general population (Level III). Level III services are left to the judgment of individual medical groups, clinicians and their patients.

There is no evidence that cardiopulmonary, abdominal or neurologic exams, or the bimanual pelvic exam, done as routine screening maneuvers in asymptomatic patients, will reliably detect occult disease of any type. We recognize the real and intangible benefits, as well as patient expectations, inherent in examining a patient, but caution against assuming that all patients expect or want a physical exam as a part of routine preventive services.

## **Patient-Centered Care: Shared Decision-Making and Patient Activation**

Patients and families should have the opportunity to understand the risks and benefits of preventive services and to consider their personal values and preferences in their decisions. They should be encouraged to actively participate in this process to the extent to which they desire.

Shared decision-making is a key part of patient-centered care. Patient-centered care is one of the six aims of the Institute of Medicine in *Crossing the Quality Chasm* and is defined as "care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions" (*Institute of Medicine, 2001 [Reference]*).

The decisions that people face in health care systems are complex and important. There is a need to balance potential benefits and risks. In many situations, there is not one best alternative based on medical evidence. Personal values and preferences play a large part in what an individual's best choice might be.

Shared decision-making uses a structured process and specific tools to provide information to people and to encourage them to actively participate in decision-making.

Shared decision-making has been shown to improve patient knowledge and clarity about preferences. It also may increase patient trust, compliance, and satisfaction with the decision process and the ultimate decision. Shared decision-making may increase appropriate utilization of preventive services.

There is good evidence that well-designed decision aids can improve patient knowledge. They help clarify the decision, identify decision-making needs, explore needs and how values relate to the decision, and plan next steps (*O'Connor, 2007 [Systematic Review]*).

Shared decision-making has intrinsic value. Patient preferences matter, especially when making preference-sensitive decisions, where the best choice for the patient depends on his or her values and preferences. The medical evidence is clear: clinicians generally do not know their patient's preferences unless they specifically ask about them. Therefore, in many situations, a "shared" rather than a "delegated" model for decision-

[Return to Table of Contents](#)

making is desirable. The ultimate goal is to ensure that medical decisions are well informed by the best available evidence and consistent with patient preferences and values.

See [Appendix B, "ICSI Shared Decision-Making Model,"](#) for more information.

### **Care Coordination**

Although some individuals, following health risk assessments and screening tests, will initiate and sustain lifestyle changes on their own, most will require some degree of structured feedback and follow-up to achieve even modest improvements. Patient-centered health care systems should implement evidence-based changes to ensure consistent follow-up of conditions and risk factors, and support for healthier lifestyles.

#### **Timely feedback**

- Clear, strong personal message
- Include documentation of "lifestyle vital signs"

#### **Appropriate interventions**

- Integrate into clinical decision support to assist the care team with knowledge of evidence-based preventive services to recommend at a given time
- Decision aids can help patients increase knowledge and collaborate with choices and options
- If screening and/or counseling results warrant treatment, see treatment guidelines

#### **Optimal follow-up**

- Plan for and anticipate upcoming preventive service needs. Electronic systems may be particularly beneficial for advanced ordering of services
- Providing preventive screening and counseling services
- If screening and/or counseling results warrant additional follow-up, proceed as indicated. See also treatment guidelines, as noted in the specific topic sections

[Return to Table of Contents](#)

## **Scope and Target Population**

The scope of this guideline is to provide a comprehensive approach to the provision of evidence-based preventive services including screening maneuvers, immunizations, counseling and education, and to assist in the prioritization of these preventive services.

This guideline is not intended to diagnose or treat any condition – if a health issue or condition is found or suspected, or a screening maneuver is abnormal, other guidelines (such as the [Lipid Management in Adults](#) guideline or [Hypertension Diagnosis and Treatment](#) guideline) address the details of subsequent evaluation, testing and management.

This guideline targets average risk asymptomatic adults age 18 or older, whose health status and life expectancy are sufficient for them to benefit from these preventive services. In general, this guideline does not apply to pregnant women, individuals with chronic disorders, or high-risk populations; certain exceptions are noted.

[Return to Table of Contents](#)

## **Aim**

1. Increase the rate of patients up-to-date with Level I preventive services. (*Annotation Table, Level I Services*)

[Return to Table of Contents](#)

## Clinical Highlights

- All clinic contacts – whether acute, chronic or for preventive services – are opportunities for prevention. Incorporate appropriate preventive services at every opportunity.
- Address or initiate adult preventive services that clinicians and care systems *must* assess the need for and recommend to each patient. These have the highest priority value. (*Annotation Table, Level I Services; Aim #1*)
  - Alcohol abuse; hazardous and harmful drinking screening and brief counseling
  - Aspirin chemoprophylaxis counseling
  - Breast cancer screening
  - Cervical cancer screening
  - Chlamydia screening
  - Colorectal cancer screening
  - Hypertension screening
  - Influenza immunization
  - Lipid screening
  - Pneumococcal immunization
  - Tobacco use screening and brief intervention
- Provide timely feedback, appropriate interventions and optimal follow-up.

[Return to Table of Contents](#)

## Implementation Recommendation Highlights

The following system changes were identified by the guideline work group as key strategies for health care systems to incorporate in support of the implementation of this guideline.

- Prioritization and implementation of preventive services should be part of the overall system and should include the following:
  - Practice preventive services at every clinic opportunity while addressing high-priority services.
  - Individualize preventive services; regularly assess patient risk factors.
  - Provide resources around lifestyle change and available community resources.
- Develop a plan for staff and clinician education around preventive services and organizational goals for implementation of preventive services (should also include education around "level" of service and the rationale behind each level).
- For those organizations having electronic medical records, develop a decision support component that will generate reminders for preventive services in order to support completion of recommended Level I services.
- For those organizations with a paper medical record, create a "tickler" system that will generate reminders for preventive services in order to support completion of recommended Level I services.
- Develop a "catch-up" plan for those patients who are not on time with services by creating a tracking system that allows for periodic medical record audits to identify patient gaps in preventive services.

[Return to Table of Contents](#)

## Foreword

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- Develop a collaborative relationship with patients in order to activate/motivate them to practice preventive health.
- Place throughout the facility patient education materials that focus on preventive services and the importance of each. Materials may include, but are not limited to, posters, pamphlets, videos and available Web sites, as well as services available in the community.
- Develop a process for encouraging the elderly that it is important for them to be accompanied by a family member/caretaker at each visit.

*Return to Table of Contents*

## Related ICSI Scientific Documents

### Guidelines

- [Colorectal Cancer Screening](#)
- [Diagnosis of Breast Disease](#)
- [Diagnosis and Management of Type 2 Diabetes Mellitus in Adults](#)
- [Diagnosis and Treatment of Osteoporosis](#)
- [Diagnosis and Treatment of Respiratory Illness in Children and Adults](#)
- [Hypertension Diagnosis and Treatment](#)
- [Healthy Lifestyles](#)
- [Immunizations](#)
- [Initial Management of Abnormal Cervical Cytology \(Pap Test\) and HPV Test in Adult and Adolescent Females](#)
- [Lipid Management in Adults](#)
- [Major Depression in Adults in Primary Care](#)
- [Palliative Care](#)
- [Prevention and Management of Obesity \(Mature Adolescents and Adults\)](#)
- [Preventive Services for Children and Adolescents](#)
- [Routine Prenatal Care](#)

### Protocol

- [Prevention of Falls \(Acute Care\)](#)

*Return to Table of Contents*

## Definition

**Clinician** – All health care professionals whose practice is based on interaction with and/or treatment of a patient.

*Return to Table of Contents*

## Algorithm Annotations

### Preventive Services That Clinicians and Care Systems *Must* Assess the Need for and Recommend to Each Patient. These Have the Highest Priority Value (Level I)

Level I preventive services are worthy of attention at every opportunity. Busy clinicians cannot deliver this many services in any single encounter. However, with systems in place to track whether or not patients are up-to-date with the high-priority preventive services for their age group, clinicians can recommend the high-priority services as opportunities present.

**Table 1: Level I Services by Age**

Service	19-39 Years	40-64 Years	65 Years and Older
Alcohol abuse, hazardous and harmful drinking screening and brief counseling	Identify those with risky or hazardous drinking, as well as those who have carried that behavior to the point of meeting criteria for dependence, and then provide brief intervention.		
Aspirin chemoprophylaxis counseling		Encourage for men age 45-79 years when the potential benefit of a reduction in myocardial infarctions outweighs the potential harm of an increase in gastrointestinal hemorrhage. Encourage for women age 55-79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.	
Breast cancer screening		Mammogram every one to two years for women ages 50-75 years. (See <a href="#">Annotation #3</a> for evidence and recommendations for other ages.)	
Cervical cancer screening	No screening before age 21 regardless of age of onset of sexual activity. Screening every three years between ages of 21-65.		Stop screening at age 65-70 if adequate screening was carried out in the preceding 10 years.
Chlamydia screening	All sexually active women age 25 years and younger.		
Colorectal cancer screening		Age 50 years and older or age 45 years of age and older for African Americans and American Indians/Alaska Natives. No screening recommended for ages 76-85 unless there are significant considerations that support screening in an individual patient. No screening recommended for ages 86 or older.	
Hypertension screening	Blood pressure every two years if less than 120/80; every year if 120-139/80-89 Hg.		
Influenza immunization	Annually during flu season for all individuals.		
Lipid screening	Fasting fractionated lipid screening for men over age 34 every five years.	Fasting fractionated lipid screening for men over age 34 and women over age 44 every five years.	
Pneumococcal immunization	Immunize high-risk groups once. Reimmunize those at risk of losing immunity once after five years.		Immunize at age 65 if not done previously. Reimmunize once if first received more than five years ago and before age 65, or an immunocompromising condition is present.
Tobacco use screening and brief intervention	Establish tobacco use status for all patients and reassess at every opportunity. Provide brief intervention.		

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 1. Alcohol Abuse; Hazardous and Harmful Drinking Screening and Brief Counseling (Level I)

### Recommendation:

- Clinicians must identify those with risky or hazardous drinking, as well as those who have carried that behavior to the point of meeting criteria for dependence, and then recommend a brief intervention. In the United States, risk/hazardous drinking is defined as the number of standard drinks (12 oz. beer, 1 glass of wine or mixed drink) in a given time period:
  - Healthy women (and healthy men over 65 years): no more than 7 drinks per week or no more than 3 drinks per occasion
  - Healthy men (less than 65 years): no more than 14 drinks per week or no more than 4 drinks per occasion

*(U.S. Department of Health and Human Services, 2007 [Low Quality Evidence; Strong Recommendation])*

Screening can be done by using a validated questionnaire such as the AUDIT, which detects hazardous or harmful alcohol use and is more amenable to brief interventions (*Saunders, 1993 [Low Quality Evidence]*).

Other questionnaires, especially the four-question CAGE-AID (*Brown, 1995 [Low Quality Evidence]*), are primarily designed to identify patients with dependence or abuse, and do not include questions about the quantity or frequency (*Fiellin, 2000 [Low Quality Evidence]*).

See [Appendix C, "Alcohol Use Disorders Identification Test \(AUDIT\) Structured Interview,"](#) and see the [Implementation Tools and Resources Table](#) for "Substance Abuse and Mental Health Services Administration" for the CAGE-AID and other screening tools.

### Efficacy

The U.S. Preventive Services Task Force in 2004 "found good evidence that screening in primary care settings can accurately identify patients whose levels or patterns of alcohol consumption do not meet criteria for alcohol dependence but place them at risk for increased morbidity and mortality." It also "found good evidence that brief behavioral counseling interventions with follow-up produce small to moderate reductions in alcohol consumption that are sustained over 6- to 12-month periods or longer" (*Whitlock, 2004 [Systematic Review]*). In a standardized review of the clinically preventable burden and cost effectiveness of 25 preventive services recommended by the U.S. Preventive Services Task Force, Solberg et al. found this service to have the fourth-highest priority score and one of only six services that were actually cost-saving from a societal perspective. Additionally, the authors demonstrated that problem drinking screening and brief interventions in primary care are two of the most health-effective and cost-effective clinical preventive services. They rank very close to tobacco cessation counseling, yet are two of the least commonly delivered (*Solberg, 2008 [Systematic Review]*).

### Counseling messages

Brief counseling should follow the 5A model (a variation on tobacco intervention guideline):

- Assess current and historical use of alcohol.
- Advise patients to reduce use to moderate levels and avoid binge drinking.
- Agree on individual goals for reduction or abstinence.
- Assist with motivation, skills and supports.
- Arrange follow-up support and repeated counseling, including referral if needed.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

Other messages that may be of value include:

- Advise all females of childbearing age of the harmful effects of alcohol on a fetus and the need for cessation during pregnancy.
- Reinforce not drinking and driving.
- Advise patients to not ride with someone under the influence of alcohol and to prevent him or her from driving.

**Related guideline**

ICSI [Healthy Lifestyles](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 2. Aspirin Chemoprophylaxis Counseling (Level I)

**Recommendation:**

- Clinicians must assess patient's risk for heart disease to determine if aspirin is needed (*Strong Recommendation*).

A risk assessment for heart disease (men) or stroke (women) is necessary to deliver this service. Online tools to assess 10-year coronary heart disease and stroke risk are available at:

Medical College of Wisconsin: <http://www.mcw.edu/calculators/CoronaryHeartDiseaseRisk.htm>

Western States Stroke Consortium: <http://www.westernstroke.org/PersonalStrokeRisk1.xls>

U.S. Preventive Services Task Force guidance on using 10-year coronary heart disease and stroke risk to weigh harms and benefits is summarized in the tables later in this section.

Aspirin chemoprophylaxis must be encouraged for men ages 45 to 79 years when the potential benefit of a reduction in myocardial infarctions outweighs the potential harm of an increase in gastrointestinal hemorrhage and for women ages 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.

Please see ICSI [Diagnosis and Management of Type 2 Diabetes Mellitus in Adults](#) guideline for more information on aspirin use in diabetic patients.

**Efficacy**

The U.S. Preventive Services Task Force recommends a risk assessment and discussion of aspirin therapy for primary prevention of myocardial infarction in men at risk of coronary heart disease (CHD) and ischemic stroke in women (*U.S. Preventive Services Task Force, 2009a [Systematic Review]*).

Although the U.S. Preventive Services Task Force found there is fair evidence that higher doses of aspirin and NSAIDs used over longer periods of time may reduce the incidence of colorectal cancer, the task force concludes the harms outweigh the benefits and recommends against routine use of aspirin and NSAIDs for the primary prevention of colorectal cancer in average-risk individuals (*Dubé, 2007 [Systematic Review]*).

A meta-analysis (*Berger, 2006 [Meta-analysis]*) of pooled data from six primary prevention randomized trials showed that aspirin therapy reduced the risk of myocardial infarctions (MIs) by 72% in men (based on five studies), but found no MI risk reduction in women (based on three studies). The same analysis showed a risk reduction for ischemic stroke of 24% in women (based on two studies), but found no ischemic stroke risk reduction for men (based on four studies). When the increased risk of hemorrhagic stroke was factored in, the study showed a decrease in combined ischemic and hemorrhagic strokes of 17% in women and a non-statistically significant increase in stroke risk of 13% in men. These primary prevention trials,

[Return to Annotation Table](#)

[Return to Table of Contents](#)

[www.icsi.org](http://www.icsi.org)

**Algorithm Annotations**

and a larger number of trials of secondary prevention, also demonstrate that aspirin therapy increases rates of gastrointestinal bleeding.

Estimates of the magnitude of benefits and harms of aspirin therapy vary with an individual's risk for CHD and stroke. The probability of a prevented myocardial infarction exceeds the risk of gastrointestinal bleeding and hemorrhagic stroke risk for men with the following age and 10-year CHD risk:

Age	10-Year CHD Risk
45-59	≥ 4%
60-69	≥ 9%
70-79	≥ 12%

The probability of a prevented ischemic stroke exceeds the risk of gastrointestinal bleeding and hemorrhagic stroke risk for women with the following age and 10-year stroke risk:

Age	10-Year Stroke Risk
55-59	≥ 3%
60-69	≥ 8%
70-79	≥ 11%

The U.S. Preventive Services Task Force encourages shared decision-making about daily low-dose aspirin use with men and women whose 10-year CHD and stroke risk, respectively, meet these levels (*U.S. Preventive Services Task Force, 2009a [R]*).

The optimum dosage of aspirin therapy is not known. Doses of 81 milligrams per day appear as effective as higher doses.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 3. Breast Cancer Screening (Level I)

**Recommendations:**

- Screening mammogram must be recommended every one-two years for women ages 50-75 years (*Strong Recommendation, Moderate Quality Evidence*).
- Screening mammograms could be recommended to women ages 40-49 and over the age of 75 (*Weak Recommendation, Moderate Quality Evidence*).

All women over age 40 should routinely be given the opportunity to receive information about breast cancer screening and informed decision-making. Therefore, breast cancer screening decisions, especially among women ages 40-49 and over age 75, must be informed by a process of shared decision-making among patients, medical groups and individual clinicians.

**Efficacy**

Screening mammography is the best available tool currently available for the early detection of breast cancer and has been shown to decrease breast cancer mortality.

In 2002, the U.S. Preventive Services Task Force found "fair evidence that mammography screening every 12 to 33 months significantly reduces mortality from breast cancer." They recommended screening

[Return to Annotation Table](#)

[Return to Table of Contents](#)



mammography every one to two years for all women greater than 40 years of age, although they noted that there was minimal benefit for low-risk women in the 40- to 49-year age group, and insufficient evidence of benefit for women older than age 75.

In 2009, the U.S. Preventive Services Task Force, based on a review of prior evidence and on new evidence, made specific age-based recommendations for screening mammography:

The decision to begin screening between ages 40 and 49 should be individualized and requires shared decision-making, taking "patient context into account, including the patient's values regarding specific benefits and harms."

For women ages 50-74 years, biennial screening is recommended, as the "benefit of screening mammography is maintained by biennial screening" but "may be reduced when extending the interval beyond 24 months."

For women over age 75, the U.S. Preventive Services Task Force concluded that the "current evidence is insufficient to assess the additional benefits and harms of screening mammography" (*Mandelblatt, 2009 [Low Quality Evidence]; Nelson, 2009 [Systematic Review]*).

### Benefits of treatment

Earlier detection of breast cancer offers the potential of treating the disease more effectively and with less morbidity at an earlier stage.

### Harms of treatment

Screening is associated with important potential harms including equivocal or false-positive mammograms, which may lead to unnecessary biopsies and anxiety. Newer technologies, biopsy techniques, and systems of care may obviate these concerns to some degree.

### Shared decision-making

All women over age 40 should routinely be given the opportunity to receive information about breast cancer screening and informed decision-making. The decision regarding age of initiation and frequency of screening should be made after helping women understand potential benefits, harms and limitations of mammography. This decision should also take into account the patient's age, risk stratification (<http://www.cancer.gov/bcrisktool>), personal values, concerns and individual circumstances (*Mandelblatt, 2009 [Low Quality Evidence]; Nelson, 2009 [Systematic Review]*).

Various patient decision aids are available and can be useful tools; for example, this Web site provides an interactive screening mammography decision aid created by the University of Sydney: <http://www.mammogram.med.usyd.edu.au/>.

See also "Clinical Breast Exam Screening (Level III)."

### Related guideline

ICSI Diagnosis of Breast Disease guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 4. Cervical Cancer Screening (Level I)

### Recommendations:

- Screening must not be recommended for women before the age of 21 regardless of age of onset of sexual activity.
- Women age 21-65 must be screened by Pap smears every three years. In women older than 30, the interval can be extended to five years by co-testing with a combination of Pap smear and human

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Algorithm Annotations

papillomavirus (HPV) testing. Screening should usually be stopped at age 65 if adequate screening was carried out in the preceding 10 years.

- Annual Pap smear screening must still be recommended to women known to have a higher risk for cervical cancer. This would include women who have had previous cervical dysplasia (CIN 2 or 3), were exposed in utero to diethylstilbestrol, or are immunocompromised (e.g., HIV positive).
- Screening is not recommended for women who have had a total hysterectomy (with complete removal of the cervix) for benign disease, and who do not have a history of CIN 2 or 3.
- Routine HPV screening is not recommended for women under the age of 30.

(Moyer, 2012 [Systematic Review]; Whitlock, 2011 [Systematic Review]; Strong Recommendations; High Quality Evidence)

### Efficacy

Pap smear screening programs have been shown to be very effective in detecting and preventing cervical cancer. This screening can be performed with either conventional Pap smears or liquid-based cytology; both have been shown to be equivalent in testing (Siebers, 2009 Moderate Quality Evidence).

Screening with both Pap tests and human papillomavirus (HPV) testing is the most sensitive and specific testing, but due to the low incidence of cervical cancer in the U.S., there is no benefit in doing both (Leinonen, 2009 [High Quality Evidence]; Kotaniemi-Talonen, 2008 [Low Quality Evidence]). The addition of HPV testing does increase the likelihood of positive screening results, which in turn increases the likelihood of prolonged surveillance and over treatment. This is especially true in women under the age of 30, where HPV infection is typically transitory and self-resolving. Therefore, HPV testing in this young age group should be used only to triage management of atypical squamous cells of undetermined significance (ASCUS) on cytology.

Any cervical cancer screening program risks harm from over diagnosis and unnecessary treatments of lesions that would otherwise naturally regress or remain insignificant. Over diagnosis risks patient anxiety, discomfort and increased frequency of future testing. Treatment of cervical lesions can risk adverse pregnancy outcomes, such as preterm delivery and low-birth-weight infants. Because of this, over treatment is especially significant in young women. Decreasing the frequency of screening reduces these risks, without risking any significant increase in cervical cancer or cancer treatment outcomes (Moyer, 2012 [Systematic Review], High Quality Evidence).

There are no studies that support or deny the benefit of the bimanual pelvic exam screening for an asymptomatic female for any condition of the female genital tract (Westhoff, 2011 [Low Quality Evidence]; Padilla, 2005 [Low Quality Evidence]).

Several studies have shown that human papillomavirus screening is more sensitive than Pap tests for detection of CIN-2/3+ (significant disease) but that it is less specific (Sankaranarayanan, 2009 [High Quality Evidence]). New studies are looking at screening with human papillomavirus testing with a reflex to cytology (Pap) if positive, with colposcopy only for cytology of low-grade squamous intraepithelial lesion (LGSIL) or greater. This modality shows promise for the future as more studies are done (Kitchener, 2009 [High Quality Evidence]; Arbyn, 2008 [Low Quality Evidence]).

### Related guideline

ICSI Initial Management of Abnormal Cervical Cytology (Pap Test) and HPV Test in Adult and Adolescent Females guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 5. Chlamydia Screening (Level I)

### Recommendation:

- Routine screening for chlamydia must be recommended for all sexually active women age 25 years and younger (Meyers, 2007 [Systematic Review]; Centers for Disease Control and Prevention, 2002 [Low Quality Evidence]; Strong Recommendation). There is no evidence that a bimanual pelvic examination aids in the detection of chlamydial infection; screening using a urine sample is as effective as obtaining an endocervical swab.

Risk factors include:

- having new or multiple sex partners,
- having prior history of a sexually transmitted infection (STI), and
- not using condoms consistently and correctly.

### Burden of suffering

Chlamydia is the most common bacterial sexually transmitted infection in the United States. An estimated three million new cases occur annually, with the majority being asymptomatic when initially infected. If left untreated, chlamydia infections can lead to serious complications, including pelvic inflammatory disease (PID), infertility and increased risk of human immunodeficiency virus (HIV) infection. It has been shown that having a process to identify, test and treat women at risk for cervical chlamydia infections is associated with a decreased incidence of pelvic inflammatory disease (Scholes, 1996 [High Quality Evidence]).

### Efficacy

The sensitivity of available screening tests for chlamydia infection is 80% and higher (Cook, 2005 [Systematic Review]). The U.S. Preventive Services Task Force does not recommend a specific screening test as studies have generally been performed in ideal circumstances in small populations with high prevalence rates. However, they concluded that nucleic acid amplification tests had higher sensitivities and specificities than older antigen detection tests and better sensitivities than culture (Meyers, 2007 [Systematic Review]). Following detection, treatment with antibiotics approaches 100% efficacy. Two randomized studies have observed a decrease in pelvic inflammatory disease following chlamydia screening (Østergaard, 2000 [Low Quality Evidence]; Scholes, 1996 [High Quality Evidence]).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 6. Colorectal Cancer Screening (Level I)

### Recommendation:

- Colorectal cancer screening must be recommended in average-risk patients 50 years of age, or 45 years of age and older for African Americans and American Indians/Alaska Natives (Whitlock, 2008 [Strong Recommendation; High Quality Evidence]).

The decision to stop screening should be influenced by comorbidities, patient preferences and expected life span (at least 8 to 10 years to warrant continued screening). The U. S. Preventive Services Task Force recommends not screening ages 76-85 unless there are significant considerations that support colorectal screening in an individual patient. The U. S. Preventive Services Task Force recommends against screening ages 86 or greater.

Criteria for determining whether a patient is average-risk:

- 50 years old or if African American or American Indian/Alaska Native, 45 years old (Perdue, 2008 [Low Quality Evidence]; Agrawal, 2005 [Low Quality Evidence]).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Algorithm Annotations

- No personal history of polyps and/or colorectal cancer
- No personal history of inflammatory bowel disease (*Winawer, 2003 [High Quality Evidence]*)
- No family history of colorectal cancer in:
  - one first-order relative diagnosed before age 60, or
  - two first-order relatives diagnosed at any age (*Folsom, 2000 [Low Quality Evidence]*)
- No family history of adenomatous polyps in:
  - one first-order relative diagnosed before age 60

Use one of the following methods for colorectal cancer screening, based on shared decision-making by the patient and family:

- Stool testing
  - Guaiac-based fecal occult blood testing annually
  - Fecal immunochemical testing annually
- 60 cm flexible sigmoidoscopy every five years with or without stool test for occult blood annually
- CT colonography every five years
- Colonoscopy every 10 years

The ICSI [Colorectal Cancer Screening](#) guideline summarizes the evidence for the effectiveness of the various screening tests commonly used for colorectal cancer screening.

### Related guideline

[ICSI Colorectal Cancer Screening](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 7. Hypertension Screening (Level I)

### Recommendation:

- To detect and monitor hypertension, blood pressure must be measured at least every two years for adults with blood pressure less than 120/80 and every year if blood pressure is 120-139/80-89 Hg. Higher blood pressures should be confirmed and managed per protocol. As a practical matter, this standard may be most reliably implemented if blood pressure is measured at every patient visit (*Chobanian, 2003 [Guideline] Strong Recommendation*).

### Efficacy

#### Periodic screening in adults at patient visits

Hypertension is an important public health problem that affects 25-30% of adult Americans. Hypertension is a major risk factor for ischemic heart disease, left ventricular hypertrophy, renal failure, stroke and dementia. Conversely, blood pressure control is correlated with a reduction in incidence of myocardial infarctions, strokes and heart failure (*Chobanian, 2003 [Guideline]; Lewington, 2002 [Meta-analysis]*).

#### Standardized blood pressure measurement

Accurate, reproducible blood pressure measurement is necessary to ensure correct blood pressure classification and to allow valid comparisons among serial pressure recordings (*Chobanian, 2003 [Guideline]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

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### Blood pressure screening classification

The relationship between blood pressure measurement and vascular risk is continuous and graded. The risk of cardiovascular disease doubles with each increment of 20/10 above 115/75 (*Chobanian, 2003 [Guideline]; Lewington, 2002 [Meta-analysis]*).

### Confirming elevation/education and risk factor assessment

A proposed follow-up schedule based on the initial blood pressure level, as well as diabetes, cardiovascular or renal disease and risk factors, is noted in the ICSI [Hypertension Diagnosis and Treatment](#) guideline. Recommend blood pressure confirmation and follow-up within two months if the blood pressure is 140-159/90-94. Recommend blood pressure confirmation and follow-up within one month if the blood pressure is greater than 160/100.

### Counseling messages

- If blood pressure is greater than 120/80, it needs to be confirmed and evaluated in the context of the patient's risk factors.

While the evidence is limited, clinicians may consider encouraging patients to modify lifestyle to promote blood pressure control, especially in the presence of additional risk factors for vascular disease, such as dyslipidemia or diabetes mellitus. Important modifications include weight loss if overweight, limiting alcohol use, nicotine abstinence, increased physical activity and reduced dietary sodium and increased potassium and calcium intake (*Chobanian, 2003 [Guideline]; Wong, 2003 [Low Quality Evidence]*).

### Related guideline

ICSI [Hypertension Diagnosis and Treatment](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 8. Influenza Immunization (Level I)

### Recommendation:

- Immunization must be recommended annually during flu season for all individuals (*Strong Recommendation*).

### Related guideline

ICSI [Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 9. Lipid Screening (Level I)

### Recommendation:

- A fasting cholesterol fractionation (total cholesterol, calculated LDL cholesterol, HDL cholesterol and triglyceride) must be recommended for men over age 34 and women over age 44 every five years (*Strong Recommendation*).

If patient is not fasting and probability of a return visit is low, consider checking total cholesterol and HDL cholesterol. If available, also consider measuring direct LDL cholesterol.

Based on risk assessment, patients and clinicians should discuss the issues surrounding lipid screening with men between the ages of 20 and 34 years and women between the ages of 20 and 44 years. A specific example would be the need to screen those men ages 20-34 years and women ages 20-44 years with first-degree relatives with total cholesterol greater than 300 or history of premature CHD.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Algorithm Annotations

Individuals with total cholesterol less than 200, LDL less than 130, triglyceride less than 200, and HDL of 40 or above have a desirable cholesterol level and should be advised to repeat cholesterol fractionation in five years.

Individuals with total cholesterol greater than or equal to 200, LDL greater than or equal to 130, triglyceride greater than or equal to 200, and HDL less than 40 may be at higher risk of vascular disease, and these patients should follow treatment recommendations as outlined in the ICSI [Lipid Management in Adults](#) guideline.

Patients whose screening recommendations would be different include those who:

- have histories of CHD, cerebrovascular disease (CVD), peripheral vascular disease (PVD), diabetes mellitus (DM), metabolic syndrome or who are being case managed for dyslipidemia. Their disease management will involve a more aggressive approach to lipid monitoring;
- have health status or life expectancy that would not be affected by knowledge of their lipid status (e.g., those with comorbid conditions such as terminal cancer); and
- are in circumstances where cholesterol levels may not represent their usual levels. These situations include acute illness, hospitalization, unintended weight loss, pregnancy or lactation within the previous three months. Screening should be delayed under these circumstances.

Lipid testing is recommended because elevated LDL, elevated triglycerides and low HDL are important risk factors for CHD. Treatment of these risk factors is readily available and significantly decreases the risk for CHD.

### **Efficacy**

There is good evidence that lipid measurements can identify in men greater than age 34 years and women greater than age 44 years individuals at increased risk of CHD and good evidence that treatment substantially reduces the incidence of CHD (*Heart Protection Study Collaborative Group, 2002 [High Quality Evidence]*; *Shepherd, 2002 [High Quality Evidence]*; *National Cholesterol Education Program, 2001 [Guideline]*; *Pignone, 2001 [Low Quality Evidence]*; *Garber, 1996 [Meta-analysis]*; *Shepherd, 1995 [High Quality Evidence]*; *Neaton, 1992 [Low Quality Evidence]*; *Anderson, 1987 [Moderate Quality Evidence]*).

No clinical trials address the treatment of dyslipidemia among men ages 20-34 years and among women ages 20-44 years. Screening should be individualized for patients in these age groups.

Fractionated cholesterol is the most effective screening test for dyslipidemia because elevated LDL and triglycerides and low HDL are risk factors for vascular disease (*National Cholesterol Education Program, 2001 [Guideline]*).

Some patients should not be offered lipid screening as outlined in this guideline. It is well recognized that cholesterol interpretation depends on the presence of other risk factors for large vessel disease. Patients with diabetes mellitus are at high risk for large vessel disease and for that reason should undergo aggressive lipid management. Patients with CAD, PVD and/or CVD should also be aggressively managed for dyslipidemia (*Levy, 1993 [Low Quality Evidence]*).

### **Related guideline**

ICSI [Lipid Management in Adults](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 10. Pneumococcal Immunization (Level I)

### Recommendations:

- Immunize at age 65 if not done previously.
- Reimmunize once if first received was greater than five years ago and before age 65 or an immunocompromising condition is present.
- Reimmunize those at risk of losing immunity once after five years.
- High-risk groups must be immunized once.

### Related guideline

[ICSI Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 11. Tobacco Use Screening and Brief Intervention (Level I)

### Recommendation:

- Clinicians must establish tobacco use status for all patients and reassess at every opportunity. All forms of tobacco should be included. Provide ongoing cessation services to all tobacco users at every opportunity (*U.S. Preventive Services Task Force, 2009b [Systematic Review]; Fiore, 2008 [Low Quality Evidence]; Strong Recommendation*).

Reinforce non-users to continue non-use of tobacco products.

Recommend tobacco cessation services on a regular basis to all patients who use tobacco. (All forms of tobacco should be considered.)

Establish secondhand smoke exposure status for all patients. Advise all patients exposed to secondhand smoke that exposure is harmful. Encourage a smoke-free living and working environment for patients, and assist the exposed patient to communicate with other household members about decreasing smoke in their house. Encourage the patient to support smoking cessation efforts among other household members who use tobacco (*Fiore, 2008 [Low Quality Evidence]*).

### Efficacy

Tobacco use is the single most preventable cause of death and disease in our society. There is good evidence that clinical-based interventions are effective. There is good evidence that tobacco cessation interventions are best carried out when the entire clinical staff is organized to provide these services (*U.S. Preventive Services Task Force, 2009b [Systematic Review]; Fiore, 2008 [Low Quality Evidence]*).

Structured physician clinical-based smoking cessation counseling is more effective than usual care in reducing smoking rates (*Katz, 2004 [High Quality Evidence]*). The addition of telephone-based counseling may result in further improvements in cessation (*Zhu, 2002 [High Quality Evidence]*). The success of this approach in the adult population has led to the adoption of the same approach in the pediatric population. Numerous effective pharmacotherapies for smoking cessation now exist. Except in the presence of contraindications, these should be used with all patients attempting to quit smoking.

While readiness-stage intervention is commonly used, evidence does not strongly support it (*Riemsma, 2003 [Systematic Review]*).

Two treatment elements are effective for tobacco cessation intervention: social support for cessation and skills training/problem-solving. The more intense the treatment, the more effective it is in achieving long-term abstinence from tobacco.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

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**Counseling messages**

The key components of successful tobacco cessation interventions are:

- Ask about tobacco use and smoke exposure at every opportunity.
- Advise all users to quit.
- Assess willingness to make a quit effort.
- Provide a motivational intervention if the user is not ready to make a quit effort (*Fiore, 2008 [Low Quality Evidence]*). See ICSI [Healthy Lifestyles](#) guideline for more information.
- Assist users who are willing to make a quit attempt.
- Arrange follow-up.

**For all ages:**

- If accompanying household member uses tobacco, encourage member to quit. If the member user is interested in quitting, encourage a visit at his or her clinic for more cessation assistance.
- Provide educational and self-help materials.

**Related guideline**

ICSI [Healthy Lifestyles](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## **Preventive Services That Clinicians and Care Systems *Should* Assess the Need for and Recommend to Each Patient. These Have Value but Less Than Those in Level I (Level II)**

Level II services have been shown to be effective and should be provided whenever possible. If systems/care management teams are successful in keeping patients on time with high-priority services during illness and disease management visits, preventive services in the second group can be delivered at any opportunity once Level I services are complete.

[Return to Annotation Table](#)

[Return to Table of Contents](#)



Algorithm Annotations

Table 2: Level II Services by Age

Service	19-39 Years	40-64 Years	65 Years and Older
Abdominal aortic aneurysm screening			Men ages 65-75 who have ever smoked.
Depression screening	Routine screening if there are systems in place to ensure accurate diagnosis, effective treatment and careful follow-up.		
Folic acid chemoprophylaxis counseling	Counsel women of reproductive age to consume 400 to 800 micrograms of folic acid per day from food sources or supplements.		
Hearing screening		Hearing screening followed by counseling on the availability of hearing aid devices and making referrals as appropriate for older adults.	
Hepatitis B immunization	Universal routine immunization for young adults less than 40 years of age.		
Herpes zoster/shingles immunization		Immunize at age 60 and older in patients who have no contraindications.	
Human papillomavirus (HPV) immunization	Recommended for all 11- to 12-year-old females and catch-up for females age 12-26. Routine vaccination of males ages 11-12 years with three doses of HPV4. The vaccination series can be started beginning at age 9. Males ages 13 to 21 years who had not already received the HPV4 vaccine should also be vaccinated. Males ages 22 through 26 years of age may be vaccinated.		
Inactivated polio vaccine (IPV) immunization	Vaccination should occur for adults not previously immunized against polio.		
Measles, mumps, rubella (MMR) immunization	Persons born during or after 1957 should have one dose of measles vaccine; a second dose may be required in special circumstances.		
Obesity screening	Record height, weight and calculate body mass index at least annually.		
Osteoporosis screening	Women younger than age 65, who are post menopausal and determined to have a significantly increased fracture risk should be screened.		Women age 65 and older should be screened for osteoporosis.
Tetanus-diphtheria immunization	Administer a one-time dose of Tdap to adults who have not received Tdap previously or for whom vaccine status is unknown.		
Varicella immunization	For all adults without evidence of immunity, a dose of varicella vaccine should be given followed by a second dose at an interval of at least 28 days. A catch-up second dose of varicella vaccine should be given to all children, adolescents and adults who received only one dose previously.		
Vision screening		Objective vision testing for adults age 65 and older.	

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 12. Abdominal Aortic Aneurysm Screening (Level II)

### Screening

For *men* ages 65-75 who have *ever* smoked (100 cigarettes in one's lifetime is the validated research definition of "ever smoked"), a one-time screening ultrasonogram for abdominal aortic aneurysm should be recommended.

For *men* ages 65-75 who have *never* smoked, there are no recommendations for or against a one-time screening ultrasonogram for abdominal aortic aneurysm.

For *women*, regardless of age or smoking status, screening ultrasonography for abdominal aortic aneurysm *is not recommended*.

*(Fleming, 2005 [Systematic Review])*

### Efficacy

An abdominal aortic aneurysm (AAA) is defined as an infrarenal aortic diameter greater than 3.0 cm (normal diameter 2 cm). The overall prevalence of AAA is 4.2-8.8% in men and 0.6-1.4% in women. About 9,000 deaths occur annually in the United States due to AAA rupture; the majority of deaths occur before the victim reaches the hospital, but the surgical mortality is also very high (41%). Elective repair of AAA bears a relative low mortality and ranges from 1 to 5% depending upon technique used, volume of AAA procedures done by the operator and hospital, etc.

The most prominent AAA risk factors are male gender, age and smoking. Other risk associations include family history, coronary artery disease, hypercholesterolemia and hypertension. Negative risk associations include female gender, diabetes and black race.

Abdominal ultrasonography is very effective in identifying AAA. Computerized tomography and magnetic resonance imaging are also effective but more costly.

A meta-analysis (*U.S. Department of Health and Human Services, 2005 [Systematic Review]*) of prospective studies demonstrate that "screening significantly reduces AAA-related mortality in men age 65 to 80 years" with a summary odd ratio of 0.57. But "no significant reduction in all-cause mortality was evident with screening." For never smokers, the evidence shows that AAA screening also decreases AAA-related pathology, but the much lower prevalence of AAA in this group limits the benefits and thus precludes a positive or negative screening recommendation. The studies in women are more limited, but due to an even lower AAA prevalence than never-smoker men, demonstrate no screening benefit (*Scott, 2002 [High Quality Evidence]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 13. Depression Screening (Level II)

### Recommendation:

- Routine depression screening should be recommended for adult patients (including older adults) but only if the practice has staff-assisted "systems in place to ensure that positive results are followed by accurate diagnosis, effective treatment, and careful follow-up." The optimum interval for rescreening is unknown. (*O'Connor, 2009 [Systematic Review]*).

### Efficacy

When combined with systematic management, screening can be very effective. There is now considerable evidence from many randomized trials (*Williams, 2007 [Systematic Review]*; *Gilbody, 2003 [Systematic*

[Return to Annotation Table](#)

[Return to Table of Contents](#)

Review]) that it is possible to improve treatment (both medications and psychotherapy) in primary care settings for patients with depression, but these trials have all implemented systematic ways to:

- provide care management with close follow-up by a team working with the primary care clinician,
- enhance planned collaboration with mental health clinicians, and
- provide education and self-management support.

Benefits from screening are unlikely to be realized unless such systems are functioning well. There is no evidence about potential harms of screening except that there may be a short-term increase in suicidal behavior in those ages 18-29 years who received antidepressants, especially paroxetine.

There are many instruments that have been well tested and validated for screening, ranging from two questions to the PHQ-9, a nine-question survey that is being increasingly used in primary care settings to estimate severity and provide monitoring over time, as well as for initial screening (Löwe, 2004 [Low Quality Evidence]; Spitzer, 1999 [Low Quality Evidence]), See the ICSI guideline for [Major Depression in Adults in Primary Care](#) and the "Implementation Tools and Resources Table" section of this guideline for example instruments and recommendations about management.

#### Counseling messages

There is no evidence that simple, brief messages have any effect.

#### Related guideline

ICSI [Major Depression in Adults in Primary Care](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 14. Folic Acid Chemoprophylaxis Counseling (Level II)

#### Recommendation:

- Clinicians should offer to counsel women of reproductive age to consume 400-800 micrograms of folic acid per day from food sources and/or supplements (Wolff, 2009b [Low Quality Evidence]).

#### Efficacy

Neural tube defects (NTDs) are common birth defects that affect approximately 3,000 pregnancies each year (Centers for Disease Control and Prevention, 2004 [Low Quality Evidence]). The occurrence of NTDs is reduced by 50-70% with the daily periconceptional consumption of 400-800 micrograms of folic acid (U.S. Preventive Services Task Force, 2009c [Guideline]). Not all women receive adequate levels of folic acid in their diets, and the 2005 March of Dimes Gallup survey indicated the number taking daily supplements is declining. When asked what would motivate them to take a supplement, the most common reported needs were being sick or a clinician's recommendation (Centers for Disease Control and Prevention, 2005 [Low Quality Evidence]).

#### Counseling messages

- Eat folic acid-rich foods and fortified foods such as dark green leafy vegetables; dried beans and peas; whole grain, fortified enriched grain products and breakfast cereals; and citrus fruits and berries.
- Take a vitamin supplement containing folic acid.

#### Related guideline

ICSI [Routine Prenatal Care](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 15. Hearing Screening (Level II)

### Recommendation:

- Hearing screening followed by counseling on the availability of hearing aid devices and making referrals as appropriate should be recommended for older adults. Patients should initially be asked if they have hearing loss. Patients who provide a yes response should be referred for formal audiometric testing. If the reply is no, they should be further screen with the whispered-voice test or handheld audio scope. The work group concurs with the U.S. Preventive Services Task Force conclusion that there is insufficient data to recommend a specific screening frequency. Limited data on progression of hearing loss suggests that screening once every 2 to 10 years is reasonable.

### Efficacy

No studies have directly demonstrated a relationship between hearing screening and improved hearing function, hearing-related quality of life, or activities of daily living. Inadequately corrected hearing can become a barrier to care, however. Hearing screening has been recommended for elderly adults by the USPSTF based upon separate evidence of high prevalence of hearing impairment, the accuracy and inexpensiveness of simple screening questionnaires, the effectiveness of hearing aids, and the willingness of 40-60% of individuals to follow through with additional screening and purchase of hearing aids. Single question screening is nearly as effective as the whisper-voice test or the handheld audiometric device (*Chou, 2011 [Systematic Review]; Bagai, 2006 [Meta-analysis]*). The prevalence of uncorrected hearing loss in the elderly is approximately 25% (*Popelka, 1998 [Low Quality Evidence]; Mulrow, 1990 [High Quality Evidence]; Koike, 1989 [Low Quality Evidence]; Lichtenstein, 1988 [Low Quality Evidence]*).

Evidence is not clear on a specific age cutoff, particularly for undetected hearing loss.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 16. Hepatitis B Immunization (Level II)

### Recommendation:

- Hepatitis B universal routine vaccination should be recommended for young adults less than 40 years of age. Please pay special attention with regard to schedule and dosing as it varies by risk and age.

### Related guideline

[ICSI Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 17. Herpes Zoster/Shingles Immunization (Level II)

### Recommendation:

Zoster vaccine should be recommended to all persons age 60 years and older who have no contraindications, including persons who report a previous episode of zoster or who have chronic medical conditions. The vaccine should be recommended at the patient's first clinical encounter with his or her health care clinician.

### Related guideline

[ICSI Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 18. Human Papillomavirus (HPV) Immunization (Level II)

### Recommendation:

Routine use of the human papillomavirus (HPV2 or HPV4) vaccine should be recommended for all 11- to 12-year-old females and catch-up for females ages 12 through 26. Routine vaccination of males ages 11-12 years with three doses of HPV4. The vaccination series can be started beginning at age 9. Males ages 13 to 21 years who had not already received the HPV4 vaccine should also be vaccinated. Males ages 22 through 26 years of age may be vaccinated.

### Efficacy

The Advisory Committee on Immunization Practices (ACIP) has recently recommended the routine vaccination of boys ages 11 or 12 with three doses of quadrivalent vaccine, HPV4 (Gardasil), to protect them against HPV. The vaccine received a permissive recommendation in 2009, but it was not part of the routine ACIP-recommended vaccines. On further review, it was felt that this new recommendation was justified due to increasing rates of anal cancer, and head and neck cancers, as well as the direct benefit of preventing genital warts in males. It is also postulated that the vaccine will reduce male-to-female transmission of HPV due to disappointing rates of female HPV vaccinations.

*(Centers for Disease Control and Prevention, 2011 [Guideline])*

### Related guideline

ICSI [Immunizations](#) guideline for specific dosing schedule and intervals.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 19. Inactivated Polio Vaccine (IPV) Immunization (Level II)

### Recommendation:

- Vaccination should be recommended for adults not previously immunized.

### Related guideline

ICSI [Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 20. Measles, Mumps, Rubella (MMR) Immunization (Level II)

### Recommendation:

- Adults who are lacking documentation of vaccination or evidence of disease and who were born during or after 1957 should receive one dose of measles immunization. A second dose may be required in special circumstances.

### Related guideline

ICSI [Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 21. Obesity Screening (Level II)

### Recommendation:

- Height, weight and body mass index (body mass index) should be recorded at least annually.

A body mass index greater or equal to 30 is defined as obese, and a body mass index of 25-29 is defined as overweight. Intensive intervention for obese individuals, based on body mass index, is recommended by the U.S. Preventive Services to help control weight (*McTigue, 2003 [Systematic Review]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

[www.icsi.org](http://www.icsi.org)

### Efficacy

The body mass index is reliable and valid for identifying adults at increased risk for mortality and morbidity due to obesity or overweight (*McTigue, 2003 [Systematic Review]*).

Clinicians may use waist circumference as a measure of central adiposity. Men with waist circumferences greater than or equal to 40 inches (102 centimeters) and women with a waist circumference greater than or equal to 35 inches (88 centimeters) are at increased risk for cardiovascular disease (*Lean, 1998 [Low Quality Evidence]*). In the Health Professional Follow-up Study, overall and cardiovascular mortality in men increased linearly with baseline body mass index in younger men (those initially younger than 65 years) and had no relationship with body mass index in older men (those initially at least 65 years); by contrast, waist circumference predicted risk for overall and cardiovascular mortality among the younger men, and predicted risk for cardiovascular death among older men (*Baik, 2000 [Low Quality Evidence]*). The Iowa Women's Health Study found that the waist-hip ratio was a better predictor of total cardiovascular mortality than body mass index, and that even in women in the lowest body mass index quintile, there was a markedly increased risk for diabetes if they also had a high waist-hip ratio (*Folsom, 2000 [Low Quality Evidence]*).

The ICSI guideline, [Prevention and Management of Obesity \(Mature Adolescents and Adults\)](#), states that physician intervention can be effective; the physician can have an important influence, and successful weight management is possible. This guideline also states that weight management requires a team approach.

The National Weight Control Registry includes over 4,000 adults who have maintained at least a 30-pound weight loss for at least one year. 89% reported using both diet and physical activity for their loss. Over 55% reported receiving some type of weight loss assistance from a commercial program, physician or nutritionist. Most participants (83%) indicated a trigger for their weight loss. Medical triggers were most common (23%). A medical trigger was broadly defined and included such things as their physician telling them to lose weight or a family member having a heart attack. Those who stated medical reasons for their loss also had better initial losses and maintenance. Medical triggers were also associated with less regain during the two-year follow-up (*Wing, 2005 [Low Quality Evidence]*).

The U.S. Preventive Services Task Force concludes that there is insufficient evidence to recommend for or against routine behavioral counseling to promote either a healthy diet or physical activity (*Eden, 2002 [Low Quality Evidence]*; *Pignone, 2003 [Meta-analysis]*). However, intervention is encouraged due to the numerous benefits associated with consumption of a healthy diet and exercise in the prevention of obesity.

Primary care clinicians could have a significant impact on dealing with obesity since it's estimated that they see over 11% of the population every month (*Green, 2001 [Low Quality Evidence]*). Patients who reported receiving advice to lose weight during a routine checkup were more likely to report trying to lose weight than those who did not (*Folsom, 2000 [Low Quality Evidence]*).

Obese persons should be encouraged to enroll in programs that, at a minimum, have three in-person encounters in a three-month period, but to ensure effectiveness, such patients should be encouraged to enroll in intensive programs that last for a year, combine nutritional and exercise counseling, and have a long-term maintenance program (*McTigue, 2003 [Systematic Review]*).

### Related guidelines

[ICSI Prevention and Management of Obesity \(Mature Adolescents and Adults\)](#) guideline.

[ICSI Healthy Lifestyles](#) guideline.

See also the "[Implementation Tools and Resources Table](#)" section of this guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 22. Osteoporosis Screening (Level II)

### Recommendation:

- Women age 65 and older should be screened for osteoporosis (*U.S. Preventive Services Task Force, 2002 [Systematic Review]*).

Women younger than age 65 who are postmenopausal and determined to have a significantly increased fracture risk ( $\geq 10\%$  10-year fracture risk) should be screened for osteoporosis (*U.S. Preventive Services Task Force, 2011 [Guideline]*). Fracture risk can be estimated using validated clinical risk-assessment instruments such as the FRAX and others (*Nelson, 2010 [Systematic Review]*).

For women whose initial screening test demonstrates adequate bone mass density, there is currently no recommendation regarding optimal interval to rescreen. In one study of women  $>$  age 65, repeat bone mineral density measurement up to eight years after initial testing did not significantly change estimates for fracture risk (*Hiller, 2007 [Low Quality Evidence]*).

For men, there is currently insufficient evidence to support a specific screening recommendation, as the benefits and harms of screening have not been determined (*U.S. Preventive Services Task Force, 2011 [Guideline]*).

Screening for osteoporosis to determine bone mineral density (BMD) is commonly done by dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine or quantitative ultrasonography of the calcaneus (*U.S. Preventive Services Task Force, 2011 Guideline*).

### Efficacy of screening

This guideline addresses screening for women who have not had osteoporotic fractures, often called "fragility" or "low-impact" fractures. Also excluded are woman with a diagnosis of secondary osteoporosis or conditions strongly associated with this diagnosis, e.g., chronic glucocorticoid therapy.

The USPSTF commissioned a systematic review of the evidence for osteoporosis screening and the comments below are largely derived from this review (*Nelson, 2010 [Systematic Review]*).

- 1) There is convincing evidence that bone measurement tests predict short-term risk for osteoporotic fractures in women and men.
- 2) No controlled studies have evaluated the effect of screening for osteoporosis on fracture rates or fracture-related morbidity or mortality.
- 3) Adequate evidence indicates that clinical risk-assessment instruments (FRAX, OST and others) have only modest predictive value for low bone density or fractures. Because of this only modest predictive value, the ICSI guideline chose to use a simpler rounded off value of " $\geq 10\%$  10-year fracture risk" rather than the USPSTF "9.3% 10-year fracture risk" for postmenopausal women  $<$  age 65. The USPSTF derived the 9.3% value from using the FRAX tool to determine the fracture risk of an average 65-year-old white woman without other risk factors.
- 4) For men, the benefits and harms of screening have not been determined. However, some guidelines do recommend screening for men. For example, the American College of Physicians recommends using a risk-assessment instrument on "older men" to determine if further testing is warranted; the National Osteoporosis Foundation recommends screening men  $\geq$  age 70 plus doing an assessment on younger men.
- 5) Bone mineral density (BMD) is commonly done either by dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine or quantitative ultrasonography of the calcaneus. Current diagnostic and treatment criteria for osteoporosis rely on DXA measurements only; criteria for quantitative ultrasonography have not been defined.

For further information on testing and treatment for osteoporosis, plus primary prevention of osteoporosis (diet, exercise, vitamin D and other issues), see the ICSI [Diagnosis and Treatment of Osteoporosis](#) guideline.

**Related guideline**

ICSI [Prevention and Treatment of Osteoporosis](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 23. Tetanus-Diphtheria Immunization (Td/Tdap) (Level II)

**Recommendation:**

- Administer a one-time dose of Tdap to adults who have not received Tdap previously or for whom vaccine status is unknown to replace one of the 10-year Td boosters in all age groups with close contact with children less than one year old (including postpartum women, grandparents, child care clinicians, teachers, etc., and health care personnel with direct patient contact) (*Centers for Disease Control, 2011 [R]*).

**Related guideline**

ICSI [Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 24. Varicella Immunization (Level II)

**Recommendation:**

- For adults without evidence of immunity, a dose of varicella vaccine should be given followed by a second dose at an interval of at least 28 days. A catch-up second dose of varicella vaccine should be given to all children, adolescents and adults who received only one dose previously.

**Related guideline**

ICSI [Immunizations](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 25. Vision Screening (Level II)

**Recommendation:**

- Objective vision testing (Snellen chart) for asymptomatic patients must be recommended for adults age 65 and older. The work group concurs with the U.S. Preventive Services Task Force conclusion that there is insufficient data to recommend a specific screening frequency. Limited data on progression of vision loss suggests that screening once every 2 to 10 years is reasonable. For purposes of performance measurement, screening frequency is specified as once every five years.

**Efficacy**

The U.S. Preventive Services Task Force recently stated there is no evidence of improved functional ability or quality-of-life improvement (*Chou, 2009 [Low Quality Evidence]*) from vision screening. Primary studies reviewed by the work group found good evidence linking vision screening to improved vision and that vision screening is beneficial in reducing falls.

A review of epidemiologic studies conducted in the United States, United Kingdom and Australia concluded that the prevalence of undercorrected visual impairment is about 10% between the ages of 65 and 75 and 20% above the age of 75 (*Evans, 2004 [Low Quality Evidence]*). These summary estimates include only one U.S. study (*Tielsch, 1990 [Low Quality Evidence]*) but are generally consistent with other U.S. studies

[Return to Annotation Table](#)

[Return to Table of Contents](#)



(West, 2003 [Moderate Quality Evidence]; Muñoz, 2002 [Low Quality Evidence]; Klein, 1996 [Low Quality Evidence]).

Five vision screening randomized controlled trials failed to show an improvement in usual corrected vision (Smeeth, 1998 [Systematic Review]). However, each study used vision questionnaires for screening rather than the recommended acuity testing. Vision questionnaires have poor sensitivity and specificity in identifying undercorrected vision impairment and are not recommended for use in screening. One randomized control trial of vision screening by acuity testing in primary care failed to find an improvement in visual acuity three to five years following screening (Smeeth, 2003 [Moderate Quality Evidence]). However, the ability to detect an effect may have been hampered by an analysis sample that included more individuals who failed to receive screening than individuals who tested positive for undercorrected visual acuity. The study did find a non-statistically significant improvement in binocular acuity, but not in the acuity of the lowest acuity eye.

A study of fall prevention among Australians 70 or more years of age found a non-statistically significant reduction in falls of 4.4% with vision screening alone (Day, 2002 [Moderate Quality Evidence]). Overall, the study results point toward an impact of vision screening on falls that could not be detected at a statistically significant level with sample size of the study. The same study did observe a statistically significant reduction of falls of 11.1% when vision screening was combined with an exercise program and 14.0% when vision screening was combined with an exercise program and home hazard management. The effect of fall prevention was 4.2% and 4.1% larger than the effects observed for the same interventions without a vision screening component.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Preventive Services for Which the Evidence Is Currently Incomplete and/or High Burden of Disease and Low Cost of Delivering Care. Providing These Services Is Left to the Judgment of Individual Medical Groups, Clinicians and Their Patients (Level III)

Level III services either have insufficient evidence to prove their effectiveness and/or have important harms. For these preventive services in particular, decisions about recommending the service should be based on shared decision-making. It is important to remember that insufficient evidence does not mean the service is not effective, but rather that the current literature is not sufficient to say whether or not the service is effective.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 26. Advance Directives Counseling (Level III)

### Recommendation:

- Counseling regarding an advance directive could be delivered in the following situations:
  - Periodically for all individuals, with the frequency determined by an individual's circumstances: less often with healthy younger individuals, more often in those with life-threatening conditions and the elderly.
  - Organ and tissue donation discussion is appropriate and important for all age groups.
  - All completed advance directives should be documented in a prominent place in the records and should be periodically reviewed by the individual and clinicians to make sure that the declaration accurately represents the individual's current wishes. A reappraisal is particularly important if the individual's medical status changes.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Efficacy

### Burden of suffering

Everyone is at risk of entering into a medical crisis in which he or she is not capable to make decisions and in which the availability of an advance directive would be desirable. If therapies are applied or withheld against an individual's wishes, there are medical consequences plus misallocation of resources. Also there is increased potential of psychological trauma to patient/family if preferences are not addressed prospectively.

### Efficacy of the intervention

There are mixed results in studies that seek to document whether or not the preferences documented in an individual's advance directive are consistently implemented or give sufficient guidance (*Teno, 1997 [High Quality Evidence]*; *Danis, 1991 [Low Quality Evidence]*). But some studies do suggest that advance directives can be very effective in guiding subsequent hospital care (*Tolle, 1998 [Low Quality Evidence]*). Improvements in education of clinicians and patients, availability of completed advance directives and specificity of instructions are likely to improve effectiveness in the future.

### Efficacy of counseling

Research has shown that simple counseling interventions can markedly increase the completion rate of advance directives (*Heffner, 1997 [Low Quality Evidence]*; *Rubin, 1994 [Moderate Quality Evidence]*).

### Counseling messages

**For clinician**

- The vast majority of people feel comfortable discussing this topic, but lack of clinician initiative is cited as a major barrier to completion.

### For all adult patients and clinicians

- Everyone should consider whether he or she would wish to have organs donated after death. If he or she would, he or she should complete a declaration.
- Everyone should consider what medical treatments to accept or refuse should he or she be unable to communicate preferences to their doctor. These choices can go beyond addressing whether or not to receive cardiopulmonary resuscitation and may include issues such as use of breathing machines (ventilators), feeding tubes, intravenous hydration, antibiotics, etc., depending upon circumstances. The POLST (Physician Orders for Life-Sustaining Treatments) and other forms can assist in reviewing and declaring decisions.
- Everyone should complete an advance directive plus communicate preferences verbally to family and clinician.
- An advance directive should also create a Durable Power of Attorney for Health Care designee(s), the legal designation of another person or persons (usually a family member or friend) to speak on his or her behalf regarding medical care choices if the author becomes incapable of making these decisions.

See also the ICSI [Palliative Care](#) guideline.

### Resources

For more information regarding the MN Health Care Directive, contact the Minnesota Board of Aging's Senior LinkAge Line at 1-800-333-2433 or go to the MN Department of Health Web site at: <http://www.health.state.mn.us/>.

POLST Information: <http://www.ohsu.edu/polst>

[Return to Annotation Table](#)

[Return to Table of Contents](#)

General information: <http://www.honoringchoices.org>

Organ and Tissue Donation information: <http://www.donatelifemidwest.org>

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 27. Bimanual Pelvic Exam for Screening (Level III)

### Recommendation:

- There is no evidence in a literature review that an asymptomatic female benefits from a bimanual pelvic exam for hormonal contraception management, screening for chlamydia and gonorrhea, or ovarian and cervical cancer screening [*Weak Recommendation, Low Quality Evidence*].

### Efficacy

There are no studies that support or deny the benefit of the bimanual pelvic exam for screening for an asymptomatic female for general screening of any condition of the female genital tract (*Westhoff, 2011 [Low Quality Evidence]*; *Padilla, 2005 [Low Quality Evidence]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 28. Calcium and Vitamin D Chemoprophylaxis Counseling (Level III)

### Recommendation:

- There is insufficient evidence to assess the balance of benefits and harms of counseling adults to get an adequate intake of vitamin D and calcium in order to prevent either cancer or bone fractures.

### Efficacy

Adequate calcium intake from food sources and supplements promotes bone health; however, the evidence is insufficient to recommend counseling for non-institutionalized, community-dwelling, asymptomatic adults without previous history of fractures or cancer (USPSTF at <http://www.uspreventiveservicestaskforce.org/uspstf12/vitamind/vitdart.htm>). However, vitamin D supplementation does appear to be effective in preventing injury from falls in community-dwelling adults aged 65 years and over who are at increased risk for falls.

Daily elemental calcium recommendations for healthy individuals from diet and supplement include:

19-50 years	1,000 milligrams
Over 50 years	1,200 milligrams ( <i>Tang, 2007 [Meta-analysis]</i> )
Maximum limit	2,500 milligrams

### Related guideline

[ICSI Diagnosis and Treatment of Osteoporosis guideline.](#)

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 29. Clinical Breast Exam Screening (Level III)

### Recommendation:

- There is insufficient evidence for or against the clinical breast exam as a screening tool for breast cancer (*Weak Recommendation, Low Quality Evidence*).

### Efficacy

Evidence is insufficient to recommend for or against routine clinical breast exam alone to screen for breast cancer. No studies are available comparing a clinical breast exam alone to no screening; some studies showed

[Return to Annotation Table](#)

[Return to Table of Contents](#)

that the addition of a clinical breast exam to a mammogram screening program gave no greater benefit than mammography alone (*Humphrey, 2002 [Low Quality Evidence]*).

**Related guideline**

ICSI Diagnosis of Breast Disease guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 30. Dementia Routine Screening (Level III)

**Recommendation:**

- Clinicians could recommend screening for dementia.

**Efficacy**

Evidence is insufficient at this time to support whether routine testing for dementia in the older adult population is beneficial in primary care settings.

Alzheimer's and vascular disease are the two most common causes of dementia. Loss of cognitive function from dementia does pose a large burden of suffering on patients and their families who care for them, and estimated annual costs are \$100 billion dollars annually in the United States. There are screening tools available for dementia, such as the MMSE (Mini Mental Status Exam). While these tests have good sensitivity, they only have fair specificity. Accuracy is limited by age, ethnicity and education level.

Early detection and treatment do not appear to have a significant impact on the course of the disease, which is slowly progressive. Drug therapy is available, but results are mixed, and show at best, small benefits. Although the burden of illness is great, the work group notes the lack of screening tests with good predictive value, and available treatment does not show significant beneficial results (*Boustani, 2003 [Systematic Review]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 31. Domestic Violence and Abuse Screening and Counseling (Level III)

**Recommendation:**

Screening and counseling for domestic violence and abuse could be recommended. No single tool has been identified as the gold standard for screening of domestic violence or abuse (*Basile, 2007 [Low Quality Evidence]*). It may be necessary to tailor domestic violence messages when providing care to various ethnic and racial groups in the area.

An example of two questions that are commonly used in assessments are:

- Does your partner put you down or try to control what you can do?
- In the past year have you ever been hit, pushed, restrained or choked during an argument?

**Efficacy**

Insufficient evidence exists to recommend for or against the routine screening for parents or guardians for the physical abuse or neglect of children, women for intimate partner violence or older adults or their caregivers for elder abuse (*Nelson, 2004 [Low Quality Evidence]*).

Very little data exists for the prevention of elder abuse. The American Medical Association guidelines suggest that physicians play an active role in the assessment, intervention and prevention of elder abuse. Doctors are asked to incorporate into their daily practices routine screening questions related to this abuse. Doctors are asked to provide support to overburdened caregivers, e.g., suggest home-care services, caregiver support groups and respite care (*Aravanis, 1993 [Low Quality Evidence]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

Clinicians should also be alert for symptoms and signs of drug abuse and dependence, various presentations of family violence, and suicidal ideation in persons with established risk factors. Studies show that patients favor inquiries about abuse. Methods used to screen for domestic violence can include self-administered questionnaire, medical staff interview and physician interview. There is some evidence that self-administered questionnaires are as effective as medical or physician interviews (*Chen, 2007 [High Quality Evidence]; MacMillan, 2006 [High Quality Evidence]*).

#### Counseling messages

- Discuss awareness of potential violence in dating and relationships, emphasizing the need to set boundaries and clearly communicate them to others.
- Discuss ways to stop potentially violent arguments.
- Discuss sexual orientation and associated potential risk of violence exposure.
- Discuss the fact that experiencing anger and conflict is normal.
- Discuss the fact that dealing with conflict violently is a learned behavior that has dire consequences. Violent behavior can also be unlearned. Reinforce nonviolent discipline and conflict resolution. Reinforce the fact that no person should fear violence or abuse in any relationship.
- Discuss safe storage of firearms when appropriate.
- Ask about weapons in the home and how they are stored.
- Suggest home-care services, caregiver support groups or respite care for those caring for the elderly.
- Provide care management with a method of follow-up.
- Provide education and self-management support.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 32. Drug Abuse Screening and Counseling (Level III)

#### Recommendation:

- There is insufficient evidence that screening and referral are effective, individual clinicians could choose to ask about it in individual situations, since it is clearly a very high-risk behavior that complicates care of most other medical problems.

#### Efficacy

In 2008, the U.S. Preventive Services Task Force said, "The current evidence is insufficient to assess the balance of benefits and harms of screening adolescents, adults, and pregnant women for illicit drug use. While standardized questionnaires to screen adolescents and adults for drug use/misuse have been shown to be valid and reliable, there is insufficient evidence to assess the clinical utility of these instruments when applied widely in primary care settings" (*Polen, 2008 [Systematic Review]*).

#### Counseling messages

There is no evidence-based information, but it is unlikely that simple counseling messages will suffice, so when individuals with problems due to their drug use are found, the primary aim here should be to refer patients with this problem to specialized treatment programs. The U.S. Preventive Services Task Force did find "there is good evidence that various treatments are effective in reducing illicit drug use in the short term." Attention also needs to be directed to increasing the likelihood of such a referral being followed through.

See [Appendix C, "Alcohol Use Disorders Identification Test \(AUDIT\) Structured Interview."](#)

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 33. Injury Prevention Screening and Counseling (Level III)

#### Recommendation:

- Clinicians could ask about the following:
  - Helmet use when riding a bicycle, motorcycle, snowmobile or all terrain vehicle (ATV).
  - There is fair evidence that primary care interventions that increase exercise, refer to physical therapy, or prescribe vitamin D supplementation reduce injury from falls in older adults by about 15%, at least in the short run.
  - Smoke detector use, cigarette smoking and fire prevention in the home.
  - Seat belt use, avoiding driving while under the influence, and avoiding riding as a passenger with a driver under the influence.
  - Proper education and training on operating small motorized vehicles (including boats, snowmobiles, ATVs, farm vehicles) and hunting (gun safety, tree-stand safety).

#### Efficacy

##### Bicycle safety

There are few controlled studies examining the efficacy of safety helmets in preventing head injuries while riding bicycles, but data from a case-control study provide evidence that the risk of head injury among bicyclists is reduced as much as 80% (*Thompson, 1989 [Low Quality Evidence]*). The second intervention, counseling bicyclists to avoid riding near motor vehicle traffic, is based on evidence that nearly 95% of bicycle fatalities occur as a result of a collision with a motor vehicle.

Families that recalled being counseled about wearing helmets while biking reported 44% compliance, compared to 19% helmet use by families that did not receive counseling (*Quinlan, 1998 [Low Quality Evidence]*).

##### Fall prevention in older adults

There is fair evidence that primary care interventions that increase exercise, refer to physical therapy, or prescribe vitamin D supplementation reduce injury from falls in older adults by about 15%, at least in the short run (*Michael, 2010 [Systematic Review]*). This may be particularly important in those with a history of falling in the past year or if age greater than 85. Home hazard modification may also be effective, but multifactorial assessment and management, vision correction, medication assessment and withdrawal, behavioral counseling, and education have not been found to be effective (*Michael, 2010 [Systematic Review]*).

Falls are a serious problem in the elderly. Compared to younger populations, older persons have both an elevated incidence of falls and a higher susceptibility to injury. More than one-third of persons 65 years of age or older fall each year, and in half the cases the falls are recurrent. In 5-10% of falls, serious injury occurs such as hip fracture, other fracture, subdural hematoma, serious soft-tissue injury and head injury (*Tinetti, 2003 [Low Quality Evidence]*). The death rate from falls is 10/100,000 in those > 65 years old, but 147/100,000 in those > 85 (*Michaels, 2010 [Systematic Review]*). Beyond the acute injury of a fall, there are long-term consequences such as disability, fear of falling, and loss of independence (*Gates, 2008 [Systematic Review]*).

Efficacy of identifying high-risk older adults has been well established (*Tinetti, 2003 [Low Quality Evidence]*). Indicators of higher risk for future falls includes past history of falls, clinically detected abnormalities of gait or balance, use of four or more medications, use of psychotropic medications, acute illness, recent hospitalization, impaired cognition, vision impairment and others.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Algorithm Annotations

Simple and fast clinical screening tests, such as the "Get Up and Go Test," for evaluating gait and balance have been validated. In this test, "The patient is observed and timed while he rises from an arm chair, walks 3 meters, turns, walks back, and sits down again."

However, the only interventions with fair evidence of effectiveness in a recent systematic review for the U.S. Preventive Services Task Force were exercise, physical therapy, vitamin D supplementation, and possibly home hazard reduction. Studies of multifactorial assessment and management (the most frequently recommended intervention), vision correction, medication assessment and withdrawal, education, and behavioral counseling have not demonstrated statistically validated reduction in falls in the Michaels systematic review (*Michael, 2010 [Systematic Review]*).

### Potential harms

There is no evidence that the interventions with evidence of effectiveness have any harmful effects, although long-term risks from vitamin D supplementation have not been thoroughly examined.

The U.S. Preventive Services Task Force is reviewing this topic but currently does not have a recommendation.

### Fire prevention

Several studies have shown that counseling patients to install smoke detectors has been successful (*Bass, 1993 [Low Quality Evidence]*). However, smoke detectors often fail to operate due to incorrect installation or inadequate testing, and some occupants may be unable to hear or respond to the alarm signal. For these reasons, it is important that smoke alarm counseling emphasize the importance of correct installation and biannual testing to ensure proper operation. Evidence is lacking regarding frequency of smoke detector testing, but the work group feels biannual testing is prudent.

### Motor vehicle safety

Injuries are the fifth leading cause of death in the United States and the leading cause of death in persons under the age of 45. Motor vehicle injuries account for about half of these deaths. Motor vehicle injuries are the leading cause of death in persons aged 3-33 (*Williams, 2007 [Systematic Review]*).

Approximately 87.8% of Minnesotans use seat belts (*Minnesota Office of Traffic Safety, 2007 [Low Quality Evidence]*). Use of occupant protection systems has been shown to reduce the risk of motor vehicle injury by about 40% to 50%. It has been estimated that the proper use of lap and shoulder belts can decrease the risk of moderate to serious injury to front seat occupants by 45-55% and can reduce crash mortality by 40-50%. Alcohol is involved in about 40% of fatal motor vehicle crashes. The proportion of fatally injured drivers having illegally high blood alcohol concentrations is highest for those ages 21-24 (*Williams, 2007 [Systematic Review]*).

There is much public concern about the impact of cell phone and other handheld devices on vehicle safety for adults. Two meta-analysis studies were reviewed and both found that reaction times to outside events are increased when a driver is in a cell phone conversation. Interestingly, conversations with passengers had a similar effect on driver reaction times. Review of these studies does not provide strong support for advocating restriction of cell phone conversation any more than passenger conversations (*Caird, 2008 [Meta-analysis]*; *Horrey, 2006 [Meta-analysis]*).

There is generally little information from clinical studies on the ability of physicians to influence patients to refrain from driving while intoxicated or to use safety belts. Many studies have shown short-term improvements that are not sustained over time. Recommendations urging physicians to counsel patients to use occupant restraints have been issued by a number of organizations. Since motor vehicle injury represents one of the leading causes of death in the U.S. and years of potential life lost, interventions of even modest effectiveness are likely to have enormous public health implications (*Williams, 2007 [Systematic Review]*).

See also [Appendix D, "Injury Prevention Counseling Messages."](#)

[Return to Annotation Table](#)

[Return to Table of Contents](#)

[www.icsi.org](http://www.icsi.org)

**Related guideline**

ICSI Health Care Protocol: Prevention of Falls (Acute Care).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 34. Preconception Counseling (Level III)

**Recommendation:**

- Preconception counseling could be recommended during a visit; however, due to time constraints during a routine health maintenance visit, it may be practical to provide comprehensive preconception counseling during a separate preconception counseling visit.

**Efficacy**

The evidence is insufficient to recommend for or against comprehensive preconception counseling.

**Counseling messages**

- 18 years-menopause**
- Inform all women of childbearing age of the deleterious effects of teratogens in early pregnancy, often before the pregnancy is diagnosed.
  - Encourage women who are seeking to become pregnant to schedule a preconception counseling visit.
  - Encourage all women of reproductive age to be on folic acid supplementation 800 micrograms per day.
  - Confirm varicella immunity and immunize if not immune.

**Related guideline**

ICSI Routine Prenatal Care guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### 35. Pregnancy Prevention Counseling (Level III)

**Recommendation:**

- Preventive counseling could be recommended at preventive care visits throughout the reproductive years. These visits could include education and counseling regarding contraception and unintended pregnancy. Other messages could also be given as indicated (e.g., prevention and symptoms of sexual transmitted infections, association between sexual activity and use of drugs, preconception counseling).

**Efficacy**

There is insufficient evidence to support counseling for preventing pregnancy. The unintended pregnancy rate is unknown, but many reproductive age women are sexually active without use of birth control though they don't desire a pregnancy. The national abortion rate is 19% (*Jones, 2008 [Low Quality Evidence]*). Contraception can help avoid unintended pregnancies.

**Counseling messages**

- Obtain a sexual history from all women.
- Inform women that abstinence is the most effective way to prevent pregnancy and sexually transmitted infections.
- Provide detailed information regarding all contraceptive methods, including barrier contraceptives, birth control pills, injectibles, implantables, intrauterine devices, tubal sterilization and vasectomy.

[Return to Annotation Table](#)

[Return to Table of Contents](#)



- Studies have suggested that multimedia education sources and programs offering repetitive, scheduled education sessions may be more effective in assisting patients with their contraceptive choice and promote adherence to a contraceptive method. Referral to any available community resource for contraceptive education outside the traditional clinical setting should be considered.
- Longer-duration contraceptive methods may improve compliance and efficacy.
- To enhance acceptance of contraceptive methods, accompanying health and quality of life benefits should be discussed:
  - Use of oral contraceptives reduces lifetime risks of ovarian and uterine cancer, while improving bone mineral density.
  - Use of barrier contraceptives and spermicides reduces the risk of developing cervical cancer and sexually transmitted infections.
  - Use of hormonal contraceptives can reduce menstrual flow and discomfort.
  - Use of oral contraceptives can reduce acne.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 36. Prostate Cancer Screening (Level III)

### Recommendation:

- Men who wish to undergo prostate cancer screening, and clinicians who wish to offer prostate cancer screening, could do so after considering the following information:
  - Prostate specific antigen (PSA) testing and digital rectal exam (DRE) of the prostate should not be automatically ordered or performed; all men must first be offered the opportunity to weigh both the uncertain benefits of screening, as well as its potential harms, in a process of shared decision-making.
  - Any benefit of prostate cancer screening is likely to be limited to men 55 to 69 years of age. For men 75 years of age or older, screening is not recommended (*U.S. Preventive Services Task Force, 2008 [Systematic Review]*).
  - The optimal frequency of screening, and the degree of PSA elevation that would warrant further evaluation, has not been determined.

### Efficacy

Many prostate cancers detected by PSA testing are indolent and slow growing, and will never be of clinical significance. While there is good evidence that prostate specific antigen screening can detect early stage prostate cancer, the evidence is inconclusive as to whether early detection improves prostate cancer-related mortality. Even in higher risk populations (African-American, family history of prostate cancer, Agent Orange exposure), there is limited evidence that screening is beneficial.

There is a growing body of evidence that suggests that the benefits of screening may be even less, and the harms greater, than previously thought. Two large randomized controlled trials of prostate cancer screening, using PSA testing and digital rectal exam (DRE), reported contradictory results (*Andriole, 2012 [Low Quality Evidence]*; *Andriole, 2009 [Low Quality Evidence]*; *Schröder, 2009 [Moderate Quality Evidence]*). The PLCO trial (*Andriole, 2009 [Low Quality Evidence]*) did not show any survival benefit in men who were screened. This study was limited by several methodologic flaws, the most important being that a large percentage of men in the control arm underwent PSA testing either before or during the trial. The ERSPC trial (*Schröder, 2009 [Moderate Quality Evidence]*) did show a small benefit from screening, but only in a subset of men 55-69 years of age. While the USPSTF subsequently recommended against all prostate

[Return to Annotation Table](#)

[Return to Table of Contents](#)

cancer screening (*U.S. Preventive Services Task Force, 2011 [Systematic Review]*), the ICSI work group felt that although there may be limited benefit of screening, there was still insufficient evidence to actively discourage or refuse this service.

The optimal frequency of screening and the degree of PSA elevation that would warrant further evaluation has not been determined. The cancer detection yield declines rapidly with more frequent testing (*Roobol, 2007 [Moderate Quality Evidence]*); screening every two to four years may provide the same benefit as screening every year.

#### **Benefits of screening**

Earlier detection of prostate cancer offers the potential of treating the disease more effectively at an earlier stage, although the clinical significance of this may be relatively small (*Schröder, 2009 [Moderate Quality Evidence]*). The prostate cancer mortality rate has decreased since the prostate-specific antigen testing became widespread, although it is unclear if there is a direct relationship.

#### **Harms of screening**

Screening is associated with important harms primarily frequent false-positives results leading to undue anxiety and unnecessary biopsies. False-positive results may ultimately occur in 10%-15% of men being regularly screened, with at least half of these undergoing one or more biopsies (*Andriole, 2009 [Low Quality Evidence]*). Up to 30% of men experience at least moderate discomfort following biopsy (*Peyromaure, 2002 [Low Quality Evidence]*), although significant complications (infection, urinary retention, bleeding) occur less than 1% of the time (*Andriole, 2009 [Low Quality Evidence]*; *Raaijmakers, 2002 [Low Quality Evidence]*). While the use of higher PSA thresholds, serial PSA measurements, or ultrasound, among others, have been proposed as potential strategies to prevent unnecessary biopsies, they are not well defined or proven.

The greatest potential for harm, however, is related to the potential cascade of treatment events following PSA testing and a positive biopsy (*Roberts 2002; [Low Quality Evidence]*). The detection of any prostate cancer, whether aggressive or non-aggressive, very frequently leads to either definitive surgical treatment or radiation therapy, so that harms associated with treatment (e.g., erectile dysfunction, urinary incontinence) must be considered as harms associated with screening. A strategy of "watchful waiting" or "active surveillance" of low risk cancers may have the potential to prevent many unnecessary interventions, but this process is also not fully defined or of proven benefit.

#### **Shared decision-making**

Because of the ambiguous balance of benefits and risk of harm for prostate screening, shared decision-making offers a strategy for reaching a decision consistent with patient preferences and values. Despite disagreement in other areas, a shared decision-making approach is encouraged by many organizations such as the U.S. Preventive Services Task Force, the American Cancer Society and the American Urological Society. All men should routinely be given the opportunity to actively participate in the decision about whether or not to undergo prostate cancer screening and PSA testing, the age of initiation, the frequency of screening, and at what age they should discontinue screening. This requires a structured process and tools to assure that the patient has opportunity to understand the potential benefits, harms and limitations of testing. The decision should also take into account the patient's age, life expectancy, personal values, concerns and individual circumstances. Many tools and decision aids are available to more efficiently deliver the necessary information outside of the context of the traditional face-to-face office visit (*Stacey, 2011 [Systematic Review]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## **37. Sexually Transmitted Infection Counseling (Level III)**

Please note that this guideline discusses primary prevention of sexually transmitted infections through the adoption of safer sexual practices. It does not address patient education messages after an sexually transmitted infection is diagnosed.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

**Recommendation:**

- Counseling regarding sexual behaviors to prevent sexually transmitted infections could be recommended.

**Efficacy**

There is good evidence that behavioral counseling involving multiple visit interventions is effective in reducing the incidence of sexually transmitted infections for higher-risk adults. There is insufficient evidence to show efficacy for less-intense interventions and low-risk patients (*Lin, 2008b [Systematic Review]*).

**Burden of suffering**

Sexually transmitted infections continue to increase in incidence resulting in significant morbidity and health care costs in the United States. According to the 2007 Sexually Transmitted Diseases Surveillance by the Centers for Disease Control and Prevention, there are an estimated 19 million new sexually transmitted infections each year, with almost half of those in individuals between the ages of 15 and 24.

**Counseling messages**

Empathy, confidentiality and a nonjudgmental, supportive attitude are important when discussing issues of sexuality. Messages should be delivered both verbally and in the form of educational materials. Clinicians can play an important role by reinforcing and clarifying educational messages, providing literature and community resource references and dispelling misconceptions about unproven modes of transmission.

Some messages might include:

- Abstinence is the most effective means to decrease sexually transmitted infection risk, and there is increased risk of contracting sexually transmitted infections associated with multiple partners.
- A mutually monogamous relationship with a partner known not to be infected is effective in decreasing sexually transmitted infection risk.
- Encourage safer sexual practices, including regular use of latex condoms. Even under optimal conditions, however, condoms are not always efficacious in preventing transmission.
- Avoid sexual contact with high-risk partners (e.g., intravenous drug users, commercial sex workers, and persons with numerous sexual partners).
- Emphasize that alcohol/drug use is associated with high-risk sexual behavior.
- Inform women at risk that female barrier contraceptive methods (e.g., diaphragm or cervical cap) can reduce the risk of sexually transmitted infections.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 38. Sexually Transmitted Infection Screening (Other than Chlamydia) (Level III)

**Recommendation:**

- Screening for sexually transmitted infections other than chlamydia could be recommended.

The Centers for Disease Control revised their recommendation for HIV screening, recommending patients ages 13 to 64 years in all health care settings be screened after informing the patient that testing will be performed unless the patient declines (*Centers for Disease Control and Prevention, 2006 [Low Quality Evidence]*).

The work group reviewed the evidence and because of a continuing lack of trials of the benefits of screening average-risk patients, consensus is to retain HIV screening as a Level III service at this time.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### **Efficacy**

There is insufficient evidence to recommend universal screening of average-risk persons for HIV (*Chou, 2005 [Low Quality Evidence]*) and gonorrhea (*Glass, 2005 [Systematic Review]*; *Potterat, 1987 [Low Quality Evidence]*).

Benefits versus harms are unknown for genital herpes simplex and syphilis, but with the increasing prevalence of these infections, work group consensus is to also place these as Level III services.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## **39. Skin Cancer Screening and Counseling (Level III)**

### **Recommendation:**

- Screening and counseling to prevent skin cancer could be recommended.

### **Efficacy**

There is insufficient evidence to recommend for or against routine screening for skin cancer in the primary care setting. Evidence is lacking on reduction of morbidity and mortality for whole body examination by a primary care clinician, and accuracy of screening is limited and inconsistent (*Wolff, 2009a [Low Quality Evidence]*).

Evidence-based reviews do not show sufficient evidence that physician counseling prevents skin cancer (*Lin, 2011 [Systematic Review]*). Fair-quality randomized, controlled trials suggest that counseling interventions may modestly increase self-reported sun-protective behaviors and decrease indoor tanning (*Lin, 2011 [Systematic Review]*). However, it remains uncertain whether these effects translate into meaningful behavior change that results in the prevention of skin cancer or sunburns. There is no evidence that such counseling results in harm, although data on potential harm is sparse and of limited quality.

The use of sunscreen may show modest benefit in preventing squamous cell carcinoma. One recent trial found that daily application of sunscreen over a five-year period appeared to reduce the incidence of new primary melanomas for up to 10 years after the end of the trial (*Green, 2011 [Moderate Quality Evidence]*). It is the first study to provide clear evidence for reduction in the incidence of melanoma after regular application of sunscreen in adults. No trial to date has demonstrated a benefit of sunscreen use specific to the prevention of basal cell carcinoma.

### **Burden of suffering**

Skin cancer is the most common type of cancer in the United States, and sun exposure is a known strong risk factor for skin cancer. Intermittent sun exposure, particularly in childhood, is associated with an increased risk for all types of skin cancer. Excess sun exposure, including intermittent sunburn in childhood, should be a preventable risk factor.

### **Counseling messages**

Although there is not sufficient evidence to recommend routine total body exams, it is prudent for clinicians to examine the skin when the opportunity arises during a physical examination.

While the effectiveness of counseling has not been established, counseling does appear to modestly increase sun-protective behaviors. Given the association between intermittent sun exposure, particularly in childhood, and risk of skin cancer, counseling patients to avoid excess sun exposure is reasonable.

The recommended counseling messages include:

- Avoidance of sun between the hours of 10 a.m. and 4 p.m.
- Use of protective clothing when outdoors

[Return to Annotation Table](#)

[Return to Table of Contents](#)

- Use of sunscreen that blocks both UVA and UVB
- Avoidance of sunlamps and tanning equipment
- Practice of skin self-examination

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 40. Thyroid Dysfunction Screening (Level III)

Screening for hypothyroidism via TSH/Thyroxine could be recommended. At this time, there is insufficient evidence to recommend universal screening for thyroid disease in asymptomatic individuals. Thyroid disease prevalence is higher in women and persons with Down syndrome, and increases with age. Clinicians should remain alert to subtle symptoms and signs of thyroid dysfunction in this population ( *Helfand, 2004 [Low Quality Evidence]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## Preventive Services That Are Not Supported by Evidence and Not Recommended (Level IV)

Level IV services are those with low predictive value and/or uncertain beneficial action for true positives. They may also be a combination of insufficient evidence, potential for harm in treatment, no defined benefit and/or overuse.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 41. Coronary Heart Disease Routine Screening (Level IV)

### Recommendation:

- This guideline recommends against routine screening with resting electrocardiogram (ECG), exercise treadmill test (ETT) or electron-beam computerized tomography (EBCT) scanning for coronary artery calcium in adults at low risk for CHD events.

### Efficacy

The use of ECG, ETT or EBCT for screening of low-risk asymptomatic adults for coronary artery disease can lead to false-positive tests, producing expense and physical/psychological damage without evidence of benefit. While these tests may detect a small number of individuals at increased risk of coronary heart disease or with coronary artery stenosis, there is not evidence that this detection for low-risk adults ultimately improves outcomes (*Fowler-Brown, 2004 [Systematic Review]*). The use of these tests for screening in adults at increased risk for coronary heart disease events continues to be reviewed and currently shows insufficient evidence to recommend for or against screening in this population and is out of the scope of this guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 42. Diabetes Routine Screening (Level IV)

### Recommendation:

- This guideline recommends against screening asymptomatic patients who are at low risk for diabetes. For more information on risk assessment, see the ICSI [Diagnosis and Management of Type 2 Diabetes Mellitus in Adults](#) guideline (*Strong Recommendation*).

### Efficacy

There continues to be no evidence on harms and benefits for patients with diabetes that was identified from a screening program. According to a 2008 evidence review for the U.S. Preventive Services Task Force

[Return to Annotation Table](#)

[Return to Table of Contents](#)

(updating their 2003 statement), there have been no randomized controlled trials of the effects of screening asymptomatic people for type 2 diabetes mellitus (Norris, 2008 [Low Quality Evidence]). They also found that "no study directly compared treatment effects between screen-detected and clinically-detected diabetic persons, nor have studies to date reported treatment effects in a screen-detected cohort with diabetes." Therefore, the U.S. Preventive Services Task Force continued to give diabetes screening an I rating for insufficient evidence (U.S. Preventive Services Task Force, 2008 [Systematic Review]). With this recommendation, they also modified their 2003 statement recommending screening low-risk asymptomatic adults with hypertension or hyperlipidemia by dropping the recommended screen for hyperlipidemia and making their hypertensive recommendation specific to "sustained blood pressure greater than 135/80." However, since this guideline is only for people with no special risk factors, this is not a recommendation we can act on. There may be patients with high risks, and this should be based on a risk assessment. See the ICSI [Diagnosis and Management of Type 2 Diabetes Mellitus in Adults](#) guideline.

The 2008 U.S. Preventive Services Task Force statement noted that screening tests accurately detect type 2 diabetes, and short-term harms appear small, but the longer-term effects are unknown. This statement came out within days of the publication of the ACCORD and ADVANCE trials of intensive treatment for type 2 diabetes, which raised serious questions about the harms of specific strategies chosen to reduce glycated hemoglobin levels intensively to levels under 7.0% (The Action to Control Cardiovascular Risk in Diabetes Study Group, 2008 [High Quality Evidence]; The ADVANCE Collaborative Group, 2008 [High Quality Evidence]; Dluhy, 2008 [Low Quality Evidence]). The potential that screened patients might be subject to intensive therapy increases the theoretical risk for such patients. Finally, there is already considerable pressure on clinicians to treat diabetes intensively and on patients to be tested for diabetes, so a guideline that recommended screening in the absence of evidence would only further increase the likelihood of random screening and the risk of potential harm.

#### **Related guideline**

[ICSI Diagnosis and Management of Type 2 Diabetes Mellitus in Adults](#) guideline.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

### **43. Other Lab Testing (Routine) (Level IV)**

#### **Recommendation:**

This guideline recommends against blood chemistry panels, hemoglobin/hematocrit screening, urinalysis and other routine lab testing without suspected clinical grounds.

#### **Efficacy**

Most evaluations of benefit have concluded that in a well population, multiple chemical tests find few unsuspected conditions and create considerable worry, as well as subsequent diagnosis testing with its own costs and hazards. These tests are often grouped in a 6 to 18 test group or panel and collected without any indication in hopes of identifying diseases on unsuspected clinical grounds. Such screening may be useful for patients suspected of having a serious illness, but even for those patients, the selection of specific tests is usually more efficacious (Romm, 1986 [Low Quality Evidence]; Berwick, 1985 [Low Quality Evidence]). In general, the predictive value and potential benefits of routine urinalysis are uncertain, and the risk of harm and costs from further evaluation of abnormalities are such that this test should not be done without some clinical indication (Rüttimann, 1994 [Moderate Quality Evidence]).

Based on work group consensus, the guideline also recommends against the performance of hemoglobin/hematocrit for anemia screening for all adults without clinical indications. The burden of suffering and the low benefits of detection of anemia in the presymptomatic phase in a low-risk population without clinical indications do not warrant the cost of routine testing. (This argument does not apply to infants and pregnant women.)

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 44. Ovarian Cancer Screening (Level IV)

### Recommendation:

- This guideline recommends against screening of asymptomatic women for ovarian cancer using these modalities: CA 125, ultrasound or bimanual pelvic exam.

### Efficacy

Multiple analyses of the evidence have concluded that there is no evidence that these tests alone or in combination will reduce mortality and morbidity and are not sensitive or specific to diagnosing ovarian cancer (*Grimes, 1993 [Low Quality Evidence]; Schapira, 1993 [Decision Analysis]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 45. Screening for Chronic Obstructive Pulmonary Disease (COPD) with Spirometry (Level IV)

### Recommendation:

- This guideline recommends against spirometry for healthy adults who do not present with any respiratory symptoms to screen for chronic obstructive pulmonary disease (*Strong Recommendation*).

### Efficacy

The U.S. Preventive Services Task Force concluded there is no direct evidence to improve long-term health outcomes. Lin, et al. concluded there is no evidence for clinically significant adverse effects of spirometry, but a baseline percentage of false-positives was suggested from their data review (*Lin, 2008a [Systematic Review]*).

[Return to Annotation Table](#)

[Return to Table of Contents](#)

## 46. Carotid Artery Stenosis Screening with Carotid Ultrasound (Level IV)

### Recommendation:

- This guideline recommends against routine screening for asymptomatic carotid artery stenosis in the general adult population (*Weak Recommendation*).

### Efficacy

The actual stroke and transient ischemic attack reduction from screening asymptomatic patients and treatment with carotid endarterectomy is unknown. Even in the best surgical care, the potential of harm may outweigh the benefit. Treatment of carotid artery stenosis in selected patients by selected surgeons could lead to an approximately 5% absolute reduction in strokes over five years. Thirty-day stroke and death rates from carotid endarterectomy vary from 2.7% to 4.7% in randomized control trials; higher rates have been reported in observational studies (up to 6.7%) (*Wolff, 2007 [R]*). The benefit is limited by a low overall prevalence of treatable disease in the general asymptomatic population and harms from treatment.

[Return to Annotation Table](#)

[Return to Table of Contents](#)

The Aims and Measures section is intended to provide guideline users with a menu of measures for multiple purposes, which may include the following:

- Population health improvement measures
- Quality improvement measures for delivery systems
- Measures from regulatory organizations such as The Joint Commission
- Measures that are currently required for public reporting
- Measures that are part of Center for Medicare Services Physician Quality Reporting initiative
- Other measures from local and national organizations aimed at measuring population health and improvement of care delivery

This section provides resources, strategies and measurement for use in closing the gap between current clinical practice and the recommendations set forth in the guideline.

The subdivisions of this section are:

- Aims and Measures
- Implementation Recommendations
- Implementation Tools and Resources
- Implementation Tools and Resources Table



## **Aims and Measures**

1. Increase the rate of patients up-to-date with Level I preventive services.

Measures for accomplishing this aim:

- a. Percentage of patients age 18 years and older who are screened for alcohol abuse or hazardous and harmful drinking.
- b. Percentage of male patients ages 45-79 years at risk for myocardial infarctions who receive aspirin chemoprophylaxis counseling.
- c. Percentage of female patients ages 55-79 years at risk for ischemic stroke who receive aspirin chemoprophylaxis counseling.
- d. Percentage of female patients ages 50-75 years who have screening for breast cancer every one to two years.
- e. Percentage of female patients ages 21-65 who have screening for cervical cancer every three years.
- f. Percentage of sexually active women age 25 and younger who have screening for Chlamydia.
- g. Percentage of patients ages 50-75 years and older who are up-to-date with colorectal cancer screening.
- h. Percentage of African American patients and American Indian patients, age 45 years and older, who are up-to-date with colorectal cancer screening.
- i. Percentage of patients age 18 and older with blood pressure documented in their medical record (every two years if less than 120/80; every year if 120-139/80-89 Hg).
- j. Percentage of adult patients 18 years and older who are up-to-date with the following immunizations:
  - One Td or Tdap in the last 10 years
  - Varicella – two doses or history of disease up to year 1995
  - PPSV23 for patients 65 and older
  - One influenza
  - Herpes zoster/shingles (patients 60 years and older)
- k. Percentage of male patients, 34 years and older, who have lipid screening every five years.
- l. Percentage of female patients, age 44 years and older, who have lipid screening every five years.
- m. Percentage of patients age 18 years and older who have tobacco status checked at each clinician visit.

*[Return to Table of Contents](#)*

## **Measurement Specifications**

### **Measurement #1a**

Percentage of patients age 18 years and older who are screened for alcohol abuse or hazardous and harmful drinking.

### **Population Definition**

Medical groups may choose to specify age parameters to simplify measurement. Patients age 18 years and older.

### **Data of Interest**

$$\frac{\text{\# of patients screened for alcohol abuse or hazardous/harmful drinking}}{\text{\# of patients 18 years and older}}$$

### **Numerator/Denominator Definitions**

Numerator: Number of patients 18 years and older who are screened for alcohol abuse or hazardous and harmful drinking.

Note: Refer to guideline for recommendation of screening tools.

Denominator: Number of patients 18 years and older.

### **Method/Source of Data Collection**

Review medical records for patients 18 years and older with an office visit with primary care clinician and whether they were screened for alcohol abuse or hazardous and harmful drinking at any visit.

### **Time Frame Pertaining to Data Collection**

Annually.

### **Notes**

This is a process measure, and improvement is noted as an increase in the rate.

[Return to Table of Contents](#)

**Aims and Measures**

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**Measurement #1b**

Percentage of male patients ages 45-79 years at risk for myocardial infarctions who receive aspirin chemoprophylaxis counseling.

**Population Definition**

Male patients age 45-79 years at risk for myocardial infarctions.

**Data of Interest**

$$\frac{\text{\# of patients who receive aspirin chemoprophylaxis counseling}}{\text{\# of patients at risk for myocardial infarction}}$$

**Numerator/Denominator Definitions**

Numerator: Number of male patients age 45-79 years at risk for myocardial infarctions who receive aspirin chemoprophylaxis counseling.

Denominator: Number of male patients age 45-79 years at risk for myocardial infarctions.

**Method/Source of Data Collection**

Review medical records for male patients age 45-79 years at risk for myocardial infarctions, with an office visit with primary care clinician and whether they received aspirin chemoprophylaxis counseling at any office visit.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1c**

Percentage of female patients ages 55-79 years at risk for ischemic stroke who receive aspirin chemoprophylaxis counseling.

**Population Definition**

Female patients age 55-79 years and at risk for ischemic stroke.

**Data of Interest**

$$\frac{\text{\# of patients who receive aspirin chemoprophylaxis counseling}}{\text{\# of patients at risk for ischemic stroke}}$$

**Numerator/Denominator Definitions**

Numerator: Number of female patients age 55-79 years at risk for ischemic stroke who receive aspirin chemoprophylaxis counseling.

Denominator: Number of female patients age 55-79 years at risk for ischemic stroke.

**Method/Source of Data Collection**

Review medical records for female patients age 55-79 years at risk for ischemic stroke, with an office visit with primary care clinician and whether they received aspirin chemoprophylaxis counseling at any office visit.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1d**

Percentage of female patients ages 50-75 years who have screening for breast cancer every one to two years.

**Population Definition**

Female patients age 50-75 years.

**Data of Interest**

$$\frac{\text{\# of patients who were screened for breast cancer}}{\text{\# of female patients age 50-75 years}}$$

**Numerator/Denominator Definitions**

Numerator: Number of female patients age 50-75 years who were screened for breast cancer every one to two years.

Denominator: Number of female patients age 55-75 years.

**Method/Source of Data Collection**

Review medical records for female patients age 50-75 years and whether they had breast cancer screening done anytime between one to two years since the last screening.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1e**

Percentage of female patients ages 21-65 who have screening for cervical cancer every three years.

**Population Definition**

Female patients ages 21-65 years.

**Data of Interest**

$$\frac{\text{\# of patients who were screened for cervical cancer}}{\text{\# of female patients ages 21-65 years}}$$

**Numerator/Denominator Definitions**

Numerator: Number of female patients ages 21-65 years who were screened for cervical cancer every three years.

Denominator: Number of female patients ages 21-65 years.

**Method/Source of Data Collection**

Review medical records for female patients ages 21-65 years and whether they had cervical cancer screening done every three years since the last screening.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1f**

Percentage of sexually active women age 25 years and younger who have screening for Chlamydia.

**Population Definition**

Female patients age 25 years and younger who are sexually active.

**Data of Interest**

$$\frac{\text{\# of patients who were screened for Chlamydia}}{\text{\# of sexually active women 25 years and younger}}$$

**Numerator/Denominator Definitions**

Numerator: Number of female patients who have screening for Chlamydia.

Denominator: Number of female patients age 25 years and younger and sexually active.

**Method/Source of Data Collection**

Review medical records for female patients age 25 years and younger and sexually active. Determine whether they had Chlamydia screening done.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

## Aims and Measures

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### Measurement #1g

Percentage of patients ages 50-75 years and older who are up-to-date with colorectal cancer screening.

### Population Definition

Patients ages 50-75 years.

### Data of Interest

$$\frac{\text{\# of patients with colorectal cancer screening up-to-date}}{\text{\# of patients ages 50-75 years}}$$

### Numerator/Denominator Definitions

Numerator: Number of patients ages 50-75 years having one or more of the following screenings:

- Fecal occult blood test yearly
  1. Annual guaiac-based fecal occult blood test with high test sensitivity for cancer, or
  2. Annual fecal immunochemical test with high test sensitivity for cancer
- Flexible sigmoidoscopy every five years
- Computed tomographic colonography every five years
- Colonoscopy every 10 years

Denominator: Number of patients ages 50-75 years.

### Method/Source of Data Collection

Review medical records for patients ages 50-75 years and whether they had colorectal cancer screening done per guideline.

### Time Frame Pertaining to Data Collection

Annually.

### Notes

This is a process measure, and improvement is noted as an increase in the rate.

[Return to Table of Contents](#)



## **Aims and Measures**

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### **Measurement #1h**

Percentage of African American, American Indian or Alaska Native patients age 45 years and older who are up-to-date with colorectal cancer screening.

### **Population Definition**

Patients of African-American, American Indian or Alaska Native ethnicity and age 45 years and older.

### **Data of Interest**

$$\frac{\text{\# of patients with colorectal cancer screening up-to-date}}{\text{\# of patients age 45 years and older and African American, American Indian or Alaska Native}}$$

### **Numerator/Denominator Definitions**

Numerator: Number of patients age 45 years and older having one or more of the following screenings:

- Fecal occult blood test yearly
  1. Annual guaiac-based fecal occult blood test with high test sensitivity for cancer, or
  2. Annual fecal immunochemical test with high test sensitivity for cancer
- Flexible sigmoidoscopy every five years
- Computed tomographic colonography every five years
- Colonoscopy every 10 years

Denominator: Number of patients age 45 years and older, and African American, American Indian or Alaska Native.

### **Method/Source of Data Collection**

Review medical records for patients age 45 years and older and whether they had colorectal cancer screening done per guideline.

### **Time Frame Pertaining to Data Collection**

Annually.

### **Notes**

This is a process measure, and improvement is noted as an increase in the rate.

[Return to Table of Contents](#)

**Aims and Measures**

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**Measurement #1i**

Percentage of patients age 18 years and older with blood pressure documented in the medical record (every two years if less than 120/80, every year if 120-139/80-89 Hg).

**Population Definition**

Patients age 18 years and older.

**Data of Interest**

$$\frac{\text{\# of patients with blood pressure documented in the medical record}}{\text{\# of patients age 18 years and older}}$$

**Numerator/Denominator Definitions**

Numerator: Number of patients age 18 years and older who had blood pressure documented in the medical record (every two years if less than 120/80, every year if 120-139/80-89 Hg).

Denominator: Number of patients age 18 years and older.

**Method/Source of Data Collection**

Review medical records for patients age 18 years and older with primary care clinician visit. Review whether they had blood pressure documented in the medical record (every two years if less than 120/80, every year if 120-139/80-89 Hg) at any office visit.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

## Aims and Measures

### Measurement #1j

Percentage of adult patients 18 years and older who are up-to-date with the following immunizations:

- One Td in the last 10 years
- Varicella – two doses or history of disease up to year 1995
- PPSV23 for patients 65 and older
- One influenza within last year
- Herpes zoster/shingles (patients 60 years and older)

### Population Definition

Patients age 18 years and older during the specified measurement period.

### Data of Interest

$$\frac{\text{\# of patients who are up-to-date with immunizations}}{\text{\# of patients age 18 years and older}}$$

### Numerator/Denominator Definitions

Numerator: Number of patients who are up-to-date with following immunizations:

- One Td in the last 10 years
- Varicella – two doses or history of disease up to year 1995
- PPSV23 for patients 65 and older
- One influenza
- Herpes zoster/shingles (patients 60 years and older)

Denominator: Number of patients 18 years and older during the specified measurement period. Measurement period can be monthly, quarterly or annual.

### Method/Source of Data Collection

Select patients who were 18 years and older within the specified measurement period. Measurement period can be monthly, quarterly or annual.

If using paper records, select a minimum of 30 records to review.

Review medical records to determine whether patients were up-to-date with immunizations.

### Time Frame Pertaining to Data Collection

The suggested measurement period is annual.

### Notes

This is a process measure, and improvement is noted as an increase in the rate.

[Return to Table of Contents](#)

**Aims and Measures**

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**Measurement #1k**

Percentage of male patients age 34 years and older who have lipid screening every five years.

**Population Definition**

Male patients age 34 years and older.

**Data of Interest**

$$\frac{\text{\# of patients with lipid screening}}{\text{\# of male patients age 34 years and older}}$$

**Numerator/Denominator Definitions**

Numerator: Number of male patients age 34 years and older who had lipid screening every five years.

Denominator: Number of male patients age 34 years and older.

**Method/Source of Data Collection**

Review medical records for patients age 34 years and older and whether they had lipid screening done every five years since the last screening.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1**

Percentage of female patients age 44 years and older who have lipid screening every five years.

**Population Definition**

Male patients age 44 years and older.

**Data of Interest**

$$\frac{\text{\# of patients with lipid screening}}{\text{\# of female patients age 44 years and older}}$$

**Numerator/Denominator Definitions**

Numerator: Number of female patients age 34 years and older who had lipid screening every five years.

Denominator: Number of female patients age 44 years and older.

**Method/Source of Data Collection**

Review medical records for female patients age 44 years and older and whether they had lipid screening done every five years since the last screening.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

**Aims and Measures**

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**Measurement #1m**

Percentage of patients age 18 years and older who have tobacco status checked at each clinician visit.

**Population Definition**

Patients age 18 years and older.

**Data of Interest**

$$\frac{\text{\# of patients with tobacco status checked at each clinician visit}}{\text{\# of patients visits to the clinician}}$$

**Numerator/Denominator Definitions**

Numerator: Number of patients age 18 years and older who have tobacco status checked at each clinician visit.

Denominator: Number of patients age 18 years and older with clinician visits.

**Method/Source of Data Collection**

Review medical records for patients age 18 years and older who had visits with primary care clinician and whether they had tobacco status checked at each clinician visit.

**Time Frame Pertaining to Data Collection**

Annually.

**Notes**

This is a process measure, and improvement is noted as an increase in the rate.

*[Return to Table of Contents](#)*

## Implementation Recommendations

Prior to implementation, it is important to consider current organizational infrastructure that address the following:

- System and process design
- Training and education
- Culture and the need to shift values, beliefs and behaviors of the organization.

The following system changes were identified by the guideline work group as key strategies for health care systems to incorporate in support of the implementation of this guideline:

- Prioritization and implementation of preventive services should be part of the overall system and should include the following:
  - Practice preventive services at every clinic opportunity while addressing high-priority services.
  - Individualize preventive services; regularly assess patient risk factors.
  - Provide resources around lifestyle change and available community resources.
- Develop a plan for staff and clinician education around preventive services and organizational goals for implementation of preventive services (should also include education around "level" of service and the rationale behind each level).
- For those organizations having EMR, develop a decision support component that will generate reminders for preventive services in order to support completion of recommended Level I services.
- For those organizations with a paper medical record, create a "tickler" system that will generate reminders for preventive services in order to support completion of recommended Level I services.
- Develop a "catch-up" plan for those patients who are not on time with services by creating a tracking system that allows for periodic medical record audits to identify patient gaps in preventive services.
- Develop a collaborative relationship with patients in order to activate/motivate them to practice preventive health.
- Place throughout the facility patient education materials that focus on preventive services and the importance of each. Materials may include, but are not limited to, posters, pamphlets, videos and available Web sites, as well as services available in the community.
- Develop a process for encouraging the elderly that it is important for them to be accompanied by a family member/caretaker at each visit.

*[Return to Table of Contents](#)*

# Implementation Tools and Resources

## Criteria for Selecting Resources

The following tools and resources specific to the topic of the guideline were selected by the work group. Each item was reviewed thoroughly by at least one work group member. It is expected that users of these tools will establish the proper copyright prior to their use. The types of criteria the work group used are:

- The content supports the clinical and the implementation recommendations.
- Where possible, the content is supported by evidence-based research.
- The author, source and revision dates for the content is included where possible.
- The content is clear about potential biases and when appropriate conflicts of interests and/or disclaimers are noted where appropriate.

*[Return to Table of Contents](#)*



## Implementation Tools and Resources Table

Author/Organization	Title/Description	Audience	Web Sites/Order Information
Agency for Health Research and Quality	The Guide to Clinical Preventive Services: Provides the latest available recommendations on preventive interventions – screening tests, counseling, and immunizations – for more than 80 conditions. (These recommendations are made by the U.S. Preventive Services Task Force.)	Patients and Families; Health Care Professionals	<a href="http://www.ahrq.gov/clinic/prevenix.htm">http://www.ahrq.gov/clinic/prevenix.htm</a>
American Academy of Family Physicians	American Academy of Family Physicians: Professional information on clinical care research, practice management and policy.	Health Care Professionals	<a href="http://www.aafp.org">http://www.aafp.org</a>
American Cancer Society	American Cancer Society: A nationwide, community-based voluntary health organization that provides resources on cancer prevention.	Patients and Families; Health Care Professionals	<a href="http://www.cancer.org">http://www.cancer.org</a>
American Dental Association	American Dental Association: Provides fact sheets and frequently asked questions on the topic of oral health.	Patients and Families; Health Care Professionals	<a href="http://www.ada.org">http://www.ada.org</a>
American Dietetic Association	American Dietetic Association: Provides food and nutrition information that is reliable and useful. Registered dietitians prepare the site.	Patients and Families; Health Care Professionals	<a href="http://www.eatright.org">http://www.eatright.org</a>
American Heart Association	American Heart Association: Healthy heart and stroke prevention information.	Patients and Families	<a href="http://www.heart.org/HEARTORG">http://www.heart.org/HEARTORG</a>
Centers for Disease Control and Prevention	Prostate Cancer Screening: A Decision Guide. It is a decision aid available in both English and Spanish.  Prostate Cancer Screening: A Decision Guide for African Americans. This decision aid is specific for African Americans.	Patients and Families; Health Care Professionals	<a href="http://decisionaid.ohri.ca/Azsumm.php?ID=1211">http://decisionaid.ohri.ca/Azsumm.php?ID=1211</a>  <a href="http://decisionaid.ohri.ca/Azsumm.php?ID=1236">http://decisionaid.ohri.ca/Azsumm.php?ID=1236</a>
Centers for Disease Control and Prevention	Centers for Disease Control and Prevention: Comprehensive site provides information on immunizations and CDC prevention guidelines.	Patients and Families; Health Care Professionals	<a href="http://www.cdc.gov">http://www.cdc.gov</a>

[Return to Table of Contents](#)

**Implementation Tools and Resources Table**

Author/Organization	Title/Description	Audience	Web Sites/Order Information
Centers for Disease Control and Prevention	Immunization Contraindications: A guide designed to help immunization clinicians determine what common symptoms and conditions should contraindicate vaccination and which ones should not. It supersedes the 2000 <i>Guide to Contraindications to Childhood Vaccination</i> and, unlike that and previous guides, contains information on all licensed U.S. vaccines, not just pediatric vaccines.	Health Care Professionals	<a href="http://www.cdc.gov/vaccines/recs/vac-admin/contraindications.htm">http://www.cdc.gov/vaccines/recs/vac-admin/contraindications.htm</a>
Centers for Disease Control and Prevention	Centers for Disease Control: The Web site gives an overview of the problem of older adult falls and how they can be prevented. In addition, the Web site provides resources/ education materials and suggestions for decreasing falls in elderly patients.	Patients and Families; Health Care Professionals	<a href="http://www.cdc.gov/injury/index.html">http://www.cdc.gov/injury/index.html</a>
Health Dialog	Is a PSA test right for you?  A decision aid for men not diagnosed with cancer who are considering having a prostate specific antigen (PSA) test.	Patients and Families; Health Care Professionals	<a href="http://www.healthdialog.com">http:// www.healthdialog.com</a>  Non-Health Dialog members can learn about how to purchase a video, by calling 800-966-8405.
Healthwise	This decision aid is for men considering a PSA test.  It is publicly available for free from a number of Web sites, the URL for only one of them is listed.	Patients and Families; Health Care Professionals	<a href="http://www.healthwise.org">http:// www.healthwise.org</a>
Healthfinder	Healthfinder: A to Z health information, organization, and health care topics.	Patients and Families	<a href="http://www.healthfinder.gov">http://www.healthfinder.gov</a>
Mayo Clinic	Prostate cancer screening: Should you get a PSA test? A decision aid for men considering a prostate specific antigen screening.	Patients and Families; Health Care Professionals	<a href="http://www.mayoclinic.com/health/prostate-cancer/HQ01273">http://www.mayoclinic.com/health/prostate-cancer/HQ01273</a>
Mayo Clinic	Mayo Clinic: Provides information on current hot topics and provides the opportunity to ask a Mayo specialist your questions.	Patients and Families; Health Care Professionals	<a href="http://www.mayoclinic.com">http://www.mayoclinic.com</a>
Medical College of Wisconsin	Online tool to assess 10-year coronary heart disease and stroke risk.	Health Care Professionals	<a href="http://www.mcw.edu/calculators/CoronaryHeartDiseaseRisk.htm">http://www.mcw.edu/calculators/CoronaryHeartDiseaseRisk.htm</a>

[Return to Table of Contents](#)

**Implementation Tools and Resources Table**

<b>Author/Organization</b>	<b>Title/Description</b>	<b>Audience</b>	<b>Web Sites/Order Information</b>
National Cancer Institute	Risk assessment tool to estimate a woman's risk of developing invasive breast cancer.	Patients and Families; Health Care Professionals	<a href="http://www.cancer.gov/bcrisk-tool/">http://www.cancer.gov/bcrisk-tool/</a>
National Heart, Lung, and Blood Institute	National Heart, Lung, and Blood Institute: Education to reduce illness and death from coronary heart disease related to high cholesterol.	Patients and Families; Health Care Professionals	<a href="http://www.nhlbi.nih.gov/about/ncep">http://www.nhlbi.nih.gov/about/ncep</a>
National Institute of Alcohol Abuse and Addiction	National Institute of Alcohol Abuse and Addiction: A pocket guide for alcohol screening and brief intervention.	Patients and Families; Health Care Professionals	<a href="http://www.niaaa.nih.gov">http://www.niaaa.nih.gov</a>
National Institutes of Health	National Institutes of Health: This user-friendly site helps you start a search for health information by directing you to some credible databases.	Patients and Families; Health Care Professionals	<a href="http://www.nih.gov">http://www.nih.gov</a>
National Safety Council	Minnesota Safety Council – Fall Prevention Checklist: A Web site created by the Minnesota Safety Council, a private, not-for-profit organization, dedicated to keeping Minnesotans safe from unintentional injuries ("accidents").	Patients and Families; Health Care Professionals	<a href="http://www.mnsafetycouncil.org/seniorsafe/falls/index.cfm">http://www.mnsafetycouncil.org/seniorsafe/falls/index.cfm</a>
Olmsted County (Minnesota)	Cardiovision 2020: A Community health initiative involving a team of health professionals and community partners to improve heart health in Olmsted County.	Patients and Families; Health Care Professionals	<a href="http://www.healthylivingrochester.org">http://www.healthylivingrochester.org</a>
Patient Health Questionnaire (PHQ) Screeners	A diagnostic tool for mental health disorders used by health care professionals that is quick and easy for patients to complete. Created by Robert L. Spitzer, MD, Kurt Kroenke, MD, and colleagues at Columbia University.	Health Care Professionals	<a href="http://www.phqscreeners.com">http://www.phqscreeners.com</a>
QuitNet	Provides fact sheets on all aspects of tobacco cessation, including motivational e-mails, chat rooms, and links to local organizations that provide support to individuals.	Patients and Families	<a href="http://www.quitnet.com">http://www.quitnet.com</a>
Quitplan	Provides free tobacco cessation services.	Patients and Families	<a href="https://www.quitnow.net/quit-plan/">https://www.quitnow.net/quit-plan/</a>

*[Return to Table of Contents](#)*

**Implementation Tools and Resources Table**

Author/Organization	Title/Description	Audience	Web Sites/Order Information
Shape-Up America	Provides self-assessment tools, information about the benefits of becoming more active, suggestions about different ways to approach adding physical activity, and assistance with overcoming barriers.	Patients and Families; Health Care Professionals	<a href="http://www.shapeup.org">http://www.shapeup.org</a>
State of California	Fall Prevention Center of Excellence: Official Web site of the <i>Fall Prevention Center of Excellence</i> . Their mission is to identify best practices in fall prevention and to help communities offer fall prevention programs to older people who are at risk of falling.	Patients and Families; Health Care Professionals	<a href="http://www.stopfalls.org">http://www.stopfalls.org</a>
Substance Abuse and Mental Health Services Administration	Information on programs and publications for improving the quality and availability of substance abuse prevention, alcohol and drug addiction treatment, and mental health services. Includes information on the CAGE-AID screening tool.	Health Care Professionals	<a href="http://www.samhsa.gov">http://www.samhsa.gov</a>
University of Sydney, Australia	Online screening mammography decision aid for women aged 40+.	Patients and Families; Health Care Professionals	<a href="http://www.mammogram.med.usyd.edu.au/">http://www.mammogram.med.usyd.edu.au/</a>
U.S. Department of Agriculture	My Pyramid: Games and posters about good nutrition and activities for kids. "My Pyramid Plan" and "Inside the Pyramid" provide development of individual personal nutrition and activity plans.	Patients and Families; Health Care Professionals	<a href="http://www.mypyramid.gov">http://www.mypyramid.gov</a>
United States Department of Agriculture (USDA)	The Food and Nutrition Information Center: This site is sponsored by the United States Department of Agriculture (USDA). It is very user friendly and filled with current information on almost any nutrition topic.	Patients and Families; Health Care Professionals	<a href="http://www.nal.usda.gov/fnic/">http://www.nal.usda.gov/fnic/</a>
U.S. Department of Health and Human Services	Healthy People 2010: Comprehensive site provides information on Healthy People 2010. Leading health indicators, guidelines, data and health information are given.	Patients and Families; Health Care Professionals	<a href="http://www.healthypeople.gov">http://www.healthypeople.gov</a>

*Return to Table of Contents*

**Implementation Tools and Resources Table**

<b>Author/Organization</b>	<b>Title/Description</b>	<b>Audience</b>	<b>Web Sites/Order Information</b>
U.S. Food and Drug Administration	This is a reliable and up-to-date site. It provides the most recent information available.	Patients and Families; Health Care Professionals	<a href="http://www.fda.gov">http://www.fda.gov</a>
WellShare International	Educational Web site to improve the health of women, children and their communities. Includes health education videos for Somali women.	Patients and Families; Health Care Professionals	<a href="http://www.wellshareinternational.org">http://www.wellshareinternational.org</a>
Western States Stroke Consortium	Online tool to assess 10-year coronary heart disease and stroke risk.	Health Care Professionals	<a href="http://www.westernstroke.org/PersonalStrokeRisk1.xls">http://www.westernstroke.org/PersonalStrokeRisk1.xls</a>

*Return to Table of Contents*

The subdivisions of this section are:

- References
- Appendices

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Links are provided for those new references added to this edition (author name is highlighted in blue).

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[Return to Table of Contents](#)

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[Return to Table of Contents](#)



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[Return to Table of Contents](#)

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[Return to Table of Contents](#)

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[Return to Table of Contents](#)

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[Return to Table of Contents](#)

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[Return to Table of Contents](#)

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[Return to Table of Contents](#)

## Appendix A – Counseling Messages

Behavioral counseling interventions in clinical settings are a potential important means of addressing prevalent health-related behaviors – such as lack of physical activity, poor diet, substance (tobacco, alcohol and illicit drug) use and dependence, and risky sexual behavior – that underlie a substantial proportion of preventable morbidity and mortality in the United States (*Whitlock, 2002 [Low Quality Evidence]*).

### Appropriate Counseling Approaches

The work group recommends that implementation of the preventive services guideline be tied to a system to perform risk assessment of patients, so that counseling can be individualized to a patient's risks and needs.

### WHO Is to Counsel and Educate

Counseling and educational messages are to be provided by the primary care clinician, nurse or other health professional or educator. About 80% of the population identifies a health care clinician as a source of care. Thus, physicians have special opportunity to take advantage of teachable moments to provide health advice. Given physician's time constraints, they may be limited to stressing the need to meet with another health care professional for more detailed information.

### HOW to Effectively Deliver Messages

A wide variety of counseling and education messages is recommended for various reasons. The recommendation is to spread the messages across several visits when possible so as not to overwhelm the patient or the clinician. Delivering them all in one visit or setting may be overwhelming; therefore, it is desirable to spread out the messages across several visits whenever possible.

Multiple factors and perceptions may be associated with a patient's readiness to change. Communicating in a direct manner and making clear recommendations are encouraged. Recognition of health risks and physician's concerns may heighten the patient's awareness.

- For the patient considering change, assess perception of the importance and build on this in a nonjudgmental way. "How important is it for you to..." or "How confident are you that you can..." may help assess motivation and strategies for further counseling.
- For the patient who doesn't perceive there is a problem or isn't ready to change, provide new information or indicate a willingness to help when he or she is ready.

Another goal is to communicate that the patient can contact the clinician and other health care professionals for resources whenever he or she is interested in more information.

### The Five A's

The U.S. Preventive Services Task Force Counseling and Behavioral Interventions Work Group has recommended a construct known as the "five A's" as a way to structure health behavior interventions in the health care setting.

- **Assess:** Ask about/assess behavioral health risk(s) and factors affecting choice of behavior change goals/methods.
- **Advise:** Give clear, specific and personalized behavior change advice, including information about personal health harms/benefits.
- **Agree:** Collaboratively select appropriate treatment goals and methods based on the patient's interest in and willingness to change the behavior.

[Return to Table of Contents](#)



**Appendix A – Counseling Messages**

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- **Assist:** Using behavior change techniques (self-help and/or counseling), aid the patient in achieving agreed-upon goals by acquiring the skills, confidence and social/environmental supports for behavior change, supplemented with adjunctive medical treatments when appropriate (e.g., pharmacotherapy for tobacco dependence, contraceptive drugs/devices).
- **Arrange:** Schedule follow-up contacts (in person or by telephone) to provide ongoing assistance/support and to adjust the treatment plan as needed, including referral to more intensive or specialized treatment.

*(Whitlock, 2002 [Low Quality Evidence])*

*[Return to Table of Contents](#)*

**BACK**

## Appendix B – ICSI Shared Decision-Making Model

# ICSI Institute for Clinical Systems Improvement

The technical aspects of Shared Decision-Making are widely discussed and understood.

- **Decisional conflict** occurs when a patient is presented with options where no single option satisfies all the patient's objectives, where there is an inherent difficulty in making a decision, or where external influencers act to make the choice more difficult.
- **Decision support** clarifies the decision that needs to be made, clarifies the patient's values and preferences, provides facts and probabilities, guides the deliberation and communication and monitors the progress.
- **Decision aids** are evidence-based tools that outline the benefits, harms, probabilities and scientific uncertainties of specific health care options available to the patient.

However, before decision support and decision aids can be most advantageously utilized, a Collaborative Conversation™ should be undertaken between the provider and the patient to provide a supportive framework for Shared Decision-Making.

### Collaborative Conversation™

A collaborative approach toward decision-making is a fundamental tenet of Shared Decision-Making (SDM). The Collaborative Conversation™ is an inter-professional approach that nurtures relationships, enhances patients' knowledge, skills and confidence as vital participants in their health, and encourages them to manage their health care.

Within a Collaborative Conversation™, the perspective is that both the patient and the provider play key roles in the decision-making process. The patient knows which course of action is most consistent with his/her values and preferences, and the provider contributes knowledge of medical evidence and best practices. Use of Collaborative Conversation™ elements and tools is even more necessary to support patient, care provider and team relationships when patients and families are dealing with high stakes or highly charged issues, such as diagnosis of a life-limiting illness.

The overall framework for the Collaborative Conversation™ approach is to create an environment in which the patient, family and care team work collaboratively to reach and carry out a decision that is consistent with the patient's values and preferences. A rote script or a completed form or checklist does not constitute this approach. Rather it is a set of skills employed appropriately for the specific situation. These skills need to be used artfully to address all aspects involved in making a decision: cognitive, affective, social and spiritual.

**Key communication skills** help build the Collaborative Conversation™ approach. These skills include many elements, but in this appendix only the questioning skills will be described. (For complete instruction, see O'Connor, Jacobsen "Decisional Conflict: Supporting People Experiencing Uncertainty about Options Affecting Their Health" [2007], and Bunn H, O'Connor AM, Jacobsen MJ "Analyzing decision support and related communication" [1998, 2003].)

#### 1. Listening skills:

**Encourage** patient to talk by providing prompts to continue such as "*go on, and then?, uh huh,*" or by repeating the last thing a person said, "*It's confusing.*"

[Return to Table of Contents](#)

**Paraphrase content of messages shared by patient** to promote exploration, clarify content and to communicate that the person's unique perspective has been heard. The provider should use his/her own words rather than just parroting what he/she heard.

**Reflection of feelings** usually can be done effectively once trust has been established. Until the provider feels that trust has been established, short reflections at the same level of intensity expressed by the patient without omitting any of the message's meaning are appropriate. Reflection in this manner communicates that the provider understands the patient's feelings and may work as a catalyst for further problem solving. For example, the provider identifies what the person is feeling and responds back in his/her own words like this: *"So, you're unsure which choice is the best for you."*

**Summarize the person's key comments** and reflect them back to the patient. The provider should condense several key comments made by the patient and provide a summary of the situation. This assists the patient in gaining a broader understanding of the situations rather than getting mired down in the details. The most effective times to do this are midway through and at the end of the conversation. An example of this is, *"You and your family have read the information together, discussed the pros and cons, but are having a hard time making a decision because of the risks."*

**Perception checks** ensure that the provider accurately understands a patient or family member, and may be used as a summary or reflection. They are used to verify that the provider is interpreting the message correctly. The provider can say *"So you are saying that you're not ready to make a decision at this time. Am I understanding you correctly?"*

## 2. Questioning Skills

**Open and closed questions** are both used, with the emphasis on open questions. Open questions ask for clarification or elaboration and cannot have a yes or no answer. An example would be *"What else would influence you to choose this?"* Closed questions are appropriate if specific information is required such as *"Does your daughter support your decision?"*

Other skills such as summarizing, paraphrasing and reflection of feeling can be used in the questioning process so that the patient doesn't feel pressured by questions.

Verbal tracking, referring back to a topic the patient mentioned earlier, is an important foundational skill (Ivey & Bradford-Ivey). An example of this is the provider saying, *"You mentioned earlier..."*

## 3. Information-Giving Skills

**Providing information** and **providing feedback** are two methods of information giving. The distinction between providing information and giving advice is important. Information giving allows a provider to supplement the patient's knowledge and helps to keep the conversation patient centered. Giving advice, on the other hand, takes the attention away from the patient's unique goals and values, and places it on those of the provider.

Providing information can be sharing facts or responding to questions. An example is *"If we look at the evidence, the risk is..."* Providing feedback gives the patient the provider's view of the patient's reaction. For instance, the provider can say, *"You seem to understand the facts and value your daughter's advice."*

## Additional Communication Components

Other elements that can impact the effectiveness of a Collaborative Conversation™ include:

- Eye contact
- Body language consistent with message
- Respect

[Return to Table of Contents](#)

**Appendix B – ICSI Shared Decision-Making Model**

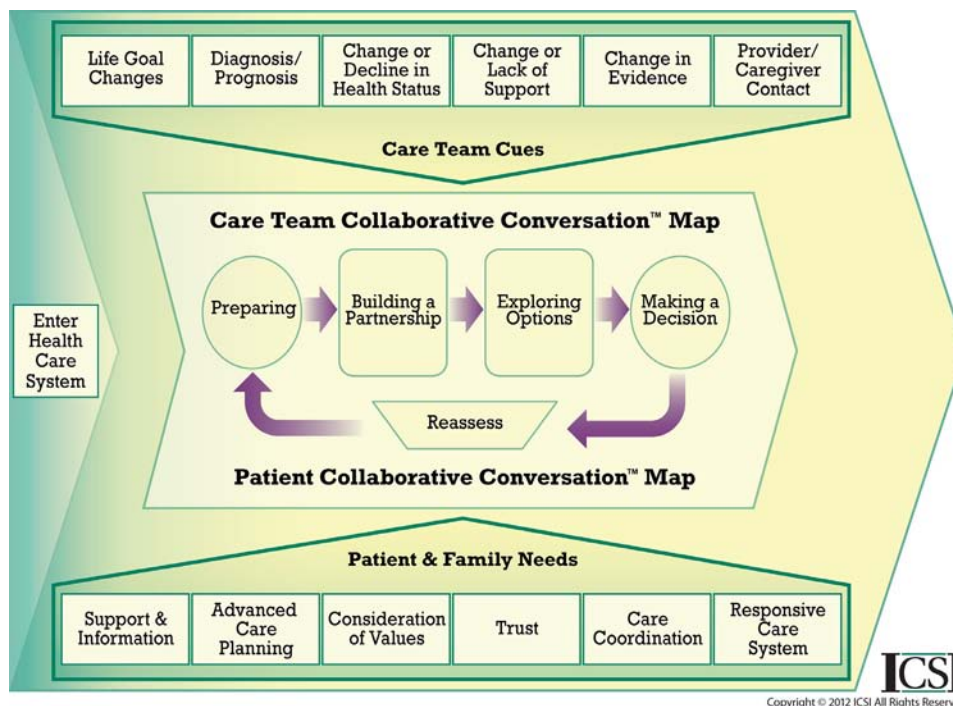
- Empathy
- Partnerships

Self-examination by the provider involved in the Collaborative Conversation™ can be instructive. Some questions to ask oneself include:

- Do I have a clear understanding of the likely outcomes?
- Do I fully understand the patient's values?
- Have I framed the options in comprehensible ways?
- Have I helped the decision-makers recognize that preferences may change over time?
- Am I willing and able to assist the patient in reaching a decision based on his/her values, even when his/her values and ultimate decision may differ from my values and decisions in similar circumstances?

**When to Initiate a Collaborative Conversation™**

A Collaborative Conversation™ can support decisions that vary widely in complexity. It can range from a straightforward discussion concerning routine immunizations to the morass of navigating care for a life-limiting illness. Table 1 represents one health care event. This event can be simple like a 12 year-old coming to the clinic for routine immunizations, or something much more complex like an individual receiving a diagnosis of congestive heart failure. In either case, the event is the catalyst that starts the process represented in this table. There are cues for providers and patient needs that exert influence on this process. They are described below. The heart of the process is the Collaborative Conversation™. The time the patient spends within this health care event will vary according to the decision complexity and the patient's readiness to make a decision.



Regardless of the decision complexity there are cues applicable to all situations that indicate an opportune time for a Collaborative Conversation™. These cues can occur singularly or in conjunction with other cues.

[Return to Table of Contents](#)

### **Cues for the Care Team to Initiate a Collaborative Conversation™**

- **Life goal changes:** Patient's priorities change related to things the patient values such as activities, relationships, possessions, goals and hopes, or things that contribute to the patient's emotional and spiritual well-being.
- **Diagnosis/prognosis changes:** Additional diagnoses, improved or worsening prognosis.
- **Change or decline in health status:** Improving or worsening symptoms, change in performance status or psychological distress.
- **Change or lack of support:** Increase or decrease in caregiver support, change in caregiver, or caregiver status, change in financial standing, difference between patient and family wishes.
- **Change in medical evidence or interpretation of medical evidence:** Providers can clarify the change and help the patient understand its impact.
- **Provider/caregiver contact:** Each contact between the provider/caregiver and the patient presents an opportunity to reaffirm with the patient that his/her care plan and the care the patient is receiving are consistent with his/her values.

Patients and families have a role to play as decision-making partners, as well. The needs and influencers brought to the process by patients and families impact the decision-making process. These are described below.

### **Patient and Family Needs within a Collaborative Conversation™**

- **Request for support and information:** Decisional conflict is indicated by, among other things, the patient verbalizing uncertainty or concern about undesired outcomes, expressing concern about choice consistency with personal values and/or exhibiting behavior such as wavering, delay, preoccupation, distress or tension. Generational and cultural influencers may act to inhibit the patient from actively participating in care discussions, often patients need to be given "permission" to participate as partners in making decisions about his/her care.

Support resources may include health care professionals, family, friends, support groups, clergy and social workers. When the patient expresses a need for information regarding options and his/her potential outcomes, the patient should understand the key facts about options, risks and benefits, and have realistic expectations. The method and pace with which this information is provided to the patient should be appropriate for the patient's capacity at that moment.

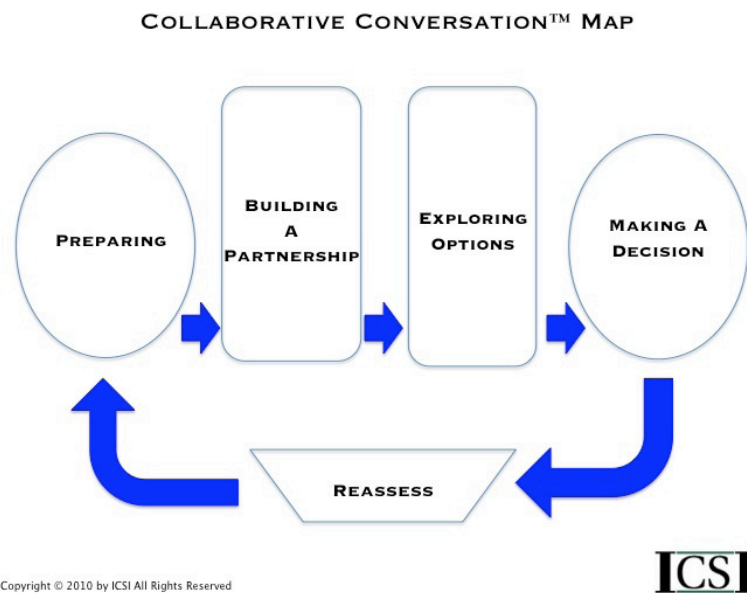
- **Advance Care Planning:** With the diagnosis of a life-limiting illness, conversations around advance care planning open up. This is an opportune time to expand the scope of the conversation to other types of decisions that will need to be made as a consequence of the diagnosis.
- **Consideration of Values:** The personal importance a patient assigns potential outcomes must be respected. If the patient is unclear how to prioritize the preferences, value clarification can be achieved through a Collaborative Conversation™ and by the use of decision aids that detail the benefits and harms of potential outcomes in terms the patient can understand.
- **Trust:** The patient must feel confident that his/her preferences will be communicated and respected by all caregivers.
- **Care Coordination:** Should the patient require care coordination, this is an opportune time to discuss the other types of care-related decisions that need to be made. These decisions will most likely need to be revisited often. Furthermore, the care delivery system must be able to provide coordinated care throughout the continuum of care.

[Return to Table of Contents](#)

## Appendix B – ICSI Shared Decision-Making Model

- **Responsive Care System:** The care system needs to support the components of patient- and family-centered care so the patient's values and preferences are incorporated into the care he/she receives throughout the care continuum.

The Collaborative Conversation™ Map is the heart of this process. The Collaborative Conversation™ Map can be used as a stand-alone tool that is equally applicable to providers and patients as shown in Table 2. Providers use the map as a clinical workflow. It helps get the Shared Decision-Making process initiated and provides navigation for the process. Care teams can use the Collaborative Conversation™ to document team best practices and to formalize a common lexicon. Organizations can build fields from the Collaborative Conversation™ Map in electronic medical records to encourage process normalization. Patients use the map to prepare for decision-making, to help guide them through the process and to share critical information with their loved ones.



### Evaluating the Decision Quality

Adapted from O'Connor, Jacobsen "Decisional Conflict: Supporting People Experiencing Uncertainty about Options Affecting Their Health" [2007].

When the patient and family understand the key facts about the condition and his/her options, a good decision can be made. Additionally, the patient should have realistic expectations about the probable benefits and harms. A good indicator of the decision quality is whether or not the patient follows through with his/her chosen option. There may be implications of the decision on patient's emotional state such as regret or blame, and there may be utilization consequences.

Decision quality can be determined by the extent to which the patient's chosen option best matches his/her values and preferences as revealed through the Collaborative Conversation™ process.

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**ICSI** Institute for Clinical  
Systems Improvement

8009 34th Ave. South, Suite 1200 • Bloomington, MN 55425 • Phone: 952-814-7060 • [www.icsi.org](http://www.icsi.org)

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[Return to Table of Contents](#)

**BACK**

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## Appendix C – Alcohol Use Disorders Identification Test (AUDIT) Structured Interview

Question	Score				
	0	1	2	3	4
How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times/month	2-3 times/week	4 or more times/week
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7-9	10 or more
How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
How often during the last year have you found that you were unable to stop drinking once you had started?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
How often during the last year have you failed to do what was normally expected from you because of drinking?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
How often during the last year have you been unable to remember what happened the night before because you had been drinking?	Never	Less than monthly	Monthly	Two to three times per week	Four or more times a week
Have you or someone else been injured as a result of your drinking?	Never	Yes, but not in the last year (2 points)		Yes, during the last year (4 points)	
Has a relative or friend, doctor, or other health worker been concerned about your drinking or suggested you cut down?	Never	Yes, but not in the last year (2 points)		Yes, during the last year (4 points)	

\*The minimum score (for non-drinkers) is 0 and the maximum score is 40. A score of 8 or more indicates a strong likelihood of a hazardous or harmful alcohol consumption.

Reprinted with permission from Saunders JB, Aasland OG, Babor TF, de la Fuente JR and Grant M. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption II. *Addiction* 1993; 88: 791-804.

[Return to Table of Contents](#)

## **Appendix D – Injury Prevention Counseling Messages**

Most injury prevention measures lack sufficient evidence on the effectiveness of counseling for adults to recommend providing counseling. However, screening and brief counseling for problem drinking (Level I) have been shown to reduce hazardous drinking and are likely to reduce alcohol-related injuries. Similarly, screening and brief intervention to promote tobacco cessation (Level I) are likely to reduce cigarette-related fire injuries.

### **Bicycle Safety**

- Reinforce always wearing an approved safety helmet when riding a bicycle.
- To enhance safety, follow safety rules (look carefully for traffic, signal turns, etc.), avoid riding in heavy motor vehicle traffic, wear light-colored and reflective clothing, and install a light on your bicycle.

### **Fire Prevention**

- Install smoke detectors and test them biannually.
- Discuss the use of "911" for fire emergencies.
- Cigarettes used by adults are the leading cause of ignition in fatal house fires; avoid smoking near bedding or upholstery.
- Discuss the fact that residential fires occur more frequently in the winter due to the use of portable heaters, fireplaces and Christmas trees.
- Matches, lighters and smoking materials should be handled safely and shouldn't be available to children. They also present a high risk for the elderly.
- Discuss the importance of a family fire escape plan with a predesignated meeting location outside of home.

### **Motor Vehicle Safety**

- Discuss always wearing a safety belt when driving or riding in a car (Minnesota Statute 169.686).
- Do not drive or ride in a motor vehicle when the driver is under the influence of alcohol or drugs.

*Return to Table of Contents*

**BACK**



ICSI has long had a policy of transparency in declaring potential conflicting and competing interests of all individuals who participate in the development, revision and approval of ICSI guidelines and protocols.

In 2010, the ICSI Conflict of Interest Review Committee was established by the Board of Directors to review all disclosures and make recommendations to the board when steps should be taken to mitigate potential conflicts of interest, including recommendations regarding removal of work group members. This committee has adopted the Institute of Medicine Conflict of Interest standards as outlined in the report, *Clinical Practice Guidelines We Can Trust* (2011).

Where there are work group members with identified potential conflicts, these are disclosed and discussed at the initial work group meeting. These members are expected to recuse themselves from related discussions or authorship of related recommendations, as directed by the Conflict of Interest committee or requested by the work group.

The complete ICSI policy regarding Conflicts of Interest is available at <http://bit.ly/ICSICOI>.

### **Funding Source**

The Institute for Clinical Systems Improvement provided the funding for this guideline revision. ICSI is a not-for-profit, quality improvement organization based in Bloomington, Minnesota. ICSI's work is funded by the annual dues of the member medical groups and five sponsoring health plans in Minnesota and Wisconsin. Individuals on the work group are not paid by ICSI but are supported by their medical group for this work.

ICSI facilitates and coordinates the guideline development and revision process. ICSI, member medical groups and sponsoring health plans review and provide feedback but do not have editorial control over the work group. All recommendations are based on the work group's independent evaluation of the evidence.

*[Return to Table of Contents](#)*

## Disclosure of Potential Conflicts of Interest

**Charles Bass, MD (Work Group Member)**

Family Physician, HealthPartners Medical Group and Regions Hospital  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: None  
Financial/Non-Financial Conflicts of Interest: None

**Susan Diem, MD, MPH (Work Group Member)**

Assistant Professor of Medicine and Adjunct Assistant Professor of Epidemiology, Internist, University of Minnesota Physicians  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: Received grant money to her institution from the national Institute on Aging for testosterone replacement in older men.  
Financial/Non-Financial Conflicts of Interest: None

**Andrea Gravelly, RN, MAN, CPNP (Work Group Member)**

Pediatric Nurse Practitioner, Pediatrics, South Lake Pediatrics  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: None  
Financial/Non-Financial Conflicts of Interest: None

**Lisa Harvey, RD, MPH (Work Group Member)**

Director, Health Education, Park Nicollet Health Services  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: Receives grant money to institution from the Mayo Clinic related to decision support.  
Financial/Non-Financial Conflicts of Interest: None

**Michael Maciosek, PhD (Work Group Member)**

Research Investigator, HealthPartners Research Foundation, HealthPartners Health Plan  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: Receives grant money to his institution from Robert Wood Johnson Foundation, Centers for Disease Control and National Institute for Health for preventive services, disease management and cancer treatment.  
Financial/Non-Financial Conflicts of Interest: None

**Kimberly McKeon, MD (Work Group Member)**

Obstetrician and Gynecologist, Olmsted Medical Center  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: None  
Financial/Non-Financial Conflicts of Interest: None

**Leslie Milteer, PA-C (Work Group Member)**

Physician Assistant, Multicare Associates  
National, Regional, Local Committee Affiliations: None  
Guideline-Related Activities: None  
Research Grants: None  
Financial/Non-Financial Conflicts of Interest: None

[Return to Table of Contents](#)

**Jessica Morgan, RN, CNP (Work Group Member)**

Nurse Practitioner, Family Practice, Essentia Health

National, Regional, Local Committee Affiliations: Board member for Birthing Ways-Doula Connection; term expired January 2012.

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

**Peter Rothe, MD, FACP (Work Group Member)**

Internist, Geriatrics and Hospice, Health Partners Medical Group and Regions Hospital

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

**Leonard Snellman, MD (Work Group Member)**

Pediatrician, White Bear Lake Medical Center, HealthPartners Medical Group and Regions Hospital

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: ICSI Respiratory Illness in Children and Adults

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

**Leif Solberg, MD (Work Group Member)**

Director Care Improvement Research, Family Medicine, HealthPartners Research Foundation

National, Regional, Local Committee Affiliations: Board member for HealthPartners Research Foundation.

Guideline-Related Activities: None

Research Grants: Consultant for AHRQ, National Institute for Health and for the grants funded by them related to PCMH, depression and mental health; all monies paid to institution.

Financial/Non-Financial Conflicts of Interest: None

**Christina Storlie, DPT (Work Group Member)**

Physical Therapist, Pediatrics, Gillete Children's Specialty Healthcare

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: Received travel/accommodation expenses reimbursed to her from Strategic Development of Jamaica for work done in Kingston, Jamaica.

**Patricia Vincent, MD (Work Group Member)**

Physician, Family Practice, Northwest Family Physicians

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

**John Wilkinson, MD (Work Group Leader)**

Consultant, Department of Family Medicine, Assistant professor of Family Medicine, Mayo Clinic and Mayo Foundation

National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None

Research Grants: None

Financial/Non-Financial Conflicts of Interest: None

[Return to Table of Contents](#)

All ICSI documents are available for review during the revision process by member medical groups and sponsors. In addition, all members commit to reviewing specific documents each year. This comprehensive review provides information to the work group for such issues as content update, improving clarity of recommendations, implementation suggestions and more. The specific reviewer comments and the work group responses are available to ICSI members at <http://bit.ly/PrevSvcs>.

The ICSI Patient Advisory Council meets regularly to respond to any scientific document review requests put forth by ICSI facilitators and work groups. Patient advisors who serve on the council consistently share their experiences and perspectives in either a comprehensive or partial review of a document, and engaging in discussion and answering questions. In alignment with the Institute of Medicine's triple aims, ICSI and its member groups are committed to improving the patient experience when developing health care recommendations.

*[Return to Table of Contents](#)*

## **Acknowledgements**

### **ICSI Patient Advisory Council**

The work group would like to acknowledge the work done by the ICSI Patient Advisory Council in reviewing the Preventive Services for Adults and thank them for their feedback on routine preventive services.

### **Invited Reviewers**

During this revision, the following groups reviewed this document. The work group would like to thank them for their comments and feedback.

CentraCare, St. Cloud, MN  
HealthPartners Health Plan  
Integrity Health Network, Duluth, MN  
Marshfield Clinic, Marshfield, WI  
Mayo Clinic, Rochester, MN

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<b>Original Work Group Members</b>		
Julie Abbott, MD <i>Internal Medicine</i> <b>Mayo Clinic</b>	Bonnie Hemming, RN, MS, CNP <i>Nursing</i> <b>Group Health, Inc.</b>	Mark Rabinovich, MD <i>Pediatrics</i> <b>Group Health, Inc.</b>
David Abelson, MD <i>Internal Medicine</i> <b>Park Nicollet Medical Center</b>	Erik Linck, MD <i>Family Practice</i> <b>Park Nicollet Medical Center</b>	Andy Rzepka, MD <i>Pediatrics</i> <b>Park Nicollet Medical Center</b>
Gail Amundson, MD <i>Internal Medicine</i> <b>Group Health, Inc.</b>	Sharon McDonald, RN, PhD <i>Measurement Advisor</i> <b>ICSI</b>	Leif Solberg, MD <i>Family Practice, Work Group Leader</i> <b>Group Health, Inc.</b>
June Bentrup <i>BHCAG Representative</i> <b>Cargill, Inc.</b>	Kris Ohnsorg, RN, MPH <i>Facilitator</i> <b>ICSI</b>	Paul Terry, PhD <i>Health Education</i> <b>Park Nicollet Medical Foundation</b>
Stan Greenwald, MD <i>Ob/Gyn</i> <b>Park Nicollet Medical Center</b>	Ruth Peterson <i>Member Representative</i>	John M. Wilkinson, MD <i>Family Practice</i> <b>Mayo Clinic</b>
Karla Grenz, MD <i>Family Practice</i> <b>Comprehensive Medical Care</b>		

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- References were evaluated using the GRADE methodology 2011
- Focused update to the Prostate Cancer Screening (Level III) Annotation # 36 was completed in January 2012

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[Return to Table of Contents](#)

**Contact ICSI at:**

8009 34th Avenue South, Suite 1200; Bloomington, MN 55425; (952) 814-7060; (952) 858-9675 (fax)  
Online at <http://www.ICSI.org>

## Document History

Preventive Services for Adults has had three guidelines merged into its content.

### Domestic Violence

The Domestic Violence guideline was drafted between February and June 1995. The last release of this guideline was the 10th Edition in 2006, prior to being merged with the Preventive Services for Adults guideline.

The original scope of this guideline was to address the detection of individuals at risk for, or presenting with, signs of domestic violence and the institution of education and emergency planning programs. The target population for this guideline includes adolescents through senior victims or potential victims of partner abuse and violence from all ethnic groups, including heterosexual and same-sex relationships. Domestic violence occurs with either men or women as perpetrators, victims, or both, whether in heterosexual or same-sex relationships.

### Original Work Group Members

Michael Cline, MD <i>Family Practice</i> <b>Ramsey Family Physicians</b>	David Ernsberger, PhD <i>Mental Health</i> <b>MinnHealth Family Physicians</b>	Leonard Schlossberg, MD <i>Internal Medicine</i> <b>Ramsey Clinic</b>
Kris Dario, RN <i>Primary Care Nurse</i> <b>Ramsey Family Physicians</b>	Margaret Healey, PhD <i>Measurement Advisor</i> <b>Park Nicollet Medical Foundation</b>	Lynda Sisson, MD <i>Family Practice</i> <b>Mayo Clinic</b>
Cyndee Daughtry, MSW <i>Home Care</i> <b>HealthPartners</b>	Pat Lam <i>EAP Representative</i> <b>Cargill</b>	Becky Thyken <i>BHCAG Representative</i> <b>Rosemount Aerospace</b>
Bryon Dockter, RN, MSA <i>Facilitator</i> <b>The Bryter Group</b>	Richard P. Madden, DDS <i>Dental</i> <b>HealthPartners</b>	Peggy Trezona, MS, RN, CS <i>Mental Health, Work Group Leader</i> <b>HealthPartners</b>
Dianne Eggen, RN, MPH <i>Health Education</i> <b>HealthPartners</b>	Mario Petrini, MD <i>Ob/Gyn</i> <b>Park Nicollet Clinic</b>	Therese Zink, MD, MPH <i>Family Practice</i> <b>HealthPartners</b>

[Return to Table of Contents](#)

**Preventive Counseling and Education**

The Preventive Counseling and Education guideline was drafted between January and July 1994, with the first release for implementation in 1995. The last release of the guideline was in June 2004, prior to being merged with the Preventive Services guidelines.

The original scope of this guideline was targeted to all low-risk, asymptomatic children and adults with an emphasis on identifying counseling opportunities. The guideline generally did not address the needs of pregnant women or individuals with chronic disorders. It was intended to be a tool to assist in the prioritization of counseling needs and opportunities.

<b>Original Work Group Members</b>		
Julie Abbott, MD <i>Preventive Medicine, Work Group Leader</i> <b>Mayo Clinic</b>	LaRee Rowan, LPN <i>Adult Nursing</i> <b>River Valley Clinics</b>	Susan Sullivan, PhD <i>Health Education</i> <b>Park Nicollet Medical Foundation</b>
Richard Frame <i>BHCAG Representative</i> <b>Cargill</b>	Andrew Rzepka, MD <i>Pediatrics</i> <b>Park Nicollet Medical Center</b>	Arlene Travis, MD <i>Family Practice</i> <b>Park Nicollet Medical Center</b>
Sharon McDonald, RN, PhD <i>Measurement Advisor</i> <b>ICSI</b>	Jamie Santilli, MD <i>Family Practice</i> <b>Park Nicollet Medical Center</b>	Alberto Zenti, MD <i>Family Practice</i> <b>Comprehensive Medical Care</b>
Peter Rothe, MD <i>Internal Medicine</i> <b>Group Health, Inc.</b>	Mary Shelerud, RN <i>Facilitator</i> <b>Mayo Clinic</b>	

**Tobacco Use Prevention and Cessation for Adults and Mature Adolescents**

The Tobacco Use Prevention and Cessation for Adults and Mature Adolescents guideline was drafted between July and September 1993. It was first released for implementation in May 1994, and the last revision occurred in 2004 during the tenth revision cycle; after this point the content was incorporated into the Preventive Services guideline.

The original scope of the guideline was to define the appropriate interventions in the clinic setting for identification of tobacco-use status in adults and mature adolescents, and provision of counseling and assistance in tobacco-use cessation.

<b>Original Work Group Members</b>		
Renee Compo, RN, CNP <i>Ob/Gyn Nurse Practitioner</i> <b>HealthPartners</b>	Marlys Lickteig, LPN <i>Nursing</i> <b>Park Nicollet Clinic</b>	Donald A. Pine, MD <i>Family Practice</i> <b>Park Nicollet Clinic</b>
Sandra Dahl <i>BHCAG Representative</i> <b>Honeywell, Inc.</b>	John R. Meurer, MD <i>Pediatrics</i> <b>Park Nicollet Clinic</b>	Michael Schoenleber, MD <i>Family Practice</i> <b>HealthPartners</b>
David Klevan, MD <i>Internal Medicine</i> <b>HealthPartners</b>	Jane A. Norstrom <i>Health Education</i> <b>Park Nicollet Medical Foundation</b>	Leif I. Solberg, MD <i>Measurement Advisor, Work Group Leader</i> <b>HealthPartners</b>
Thomas E. Kottke, MD <i>Cardiology</i> <b>Mayo Clinic</b>	Kris Ohnsorg, RN, MPH <i>Facilitator</i> <b>ICSI</b>	



## **ICSI Document Development and Revision Process**

### **Overview**

Since 1993, the Institute for Clinical Systems Improvement (ICSI) has developed more than 60 evidence-based health care documents that support best practices for the prevention, diagnosis, treatment or management of a given symptom, disease or condition for patients.

### **Audience and Intended Use**

The information contained in this ICSI Health Care Guideline is intended primarily for health professionals and other expert audiences.

This ICSI Health Care Guideline should not be construed as medical advice or medical opinion related to any specific facts or circumstances. Patients and families are urged to consult a health care professional regarding their own situation and any specific medical questions they may have. In addition, they should seek assistance from a health care professional in interpreting this ICSI Health Care Guideline and applying it in their individual case.

This ICSI Health Care Guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.

### **Document Development and Revision Process**

The development process is based on a number of long-proven approaches and is continually being revised based on changing community standards. The ICSI staff, in consultation with the work group and a medical librarian, conduct a literature search to identify systematic reviews, randomized clinical trials, meta-analysis, other guidelines, regulatory statements and other pertinent literature. This literature is evaluated based on the GRADE methodology by work group members. When needed, an outside methodologist is consulted.

The work group uses this information to develop or revise clinical flows and algorithms, write recommendations, and identify gaps in the literature. The work group gives consideration to the importance of many issues as they develop the guideline. These considerations include the systems of care in our community and how resources vary, the balance between benefits and harms of interventions, patient and community values, the autonomy of clinicians and patients and more. All decisions made by the work group are done using a consensus process.

ICSI's medical group members and sponsors review each guideline as part of the revision process. They provide comment on the scientific content, recommendations, implementation strategies and barriers to implementation. This feedback is used by and responded to by the work group as part of their revision work. Final review and approval of the guideline is done by ICSI's Committee on Evidence-Based Practice. This committee is made up of practicing clinicians and nurses, drawn from ICSI member medical groups.

### **Implementation Recommendations and Measures**

These are provided to assist medical groups and others to implement the recommendations in the guidelines. Where possible, implementation strategies are included that have been formally evaluated and tested. Measures are included that may be used for quality improvement as well as for outcome reporting. When available, regulatory or publicly reported measures are included.

### **Document Revision Cycle**

Scientific documents are revised every 12-24 months as indicated by changes in clinical practice and literature. ICSI staff monitors major peer-reviewed journals every month for the guidelines for which they are responsible. Work group members are also asked to provide any pertinent literature through check-ins with the work group midcycle and annually to determine if there have been changes in the evidence significant enough to warrant document revision earlier than scheduled. This process complements the exhaustive literature search that is done on the subject prior to development of the first version of a guideline.

*[Return to Table of Contents](#)*