Promoting Better Quality and Decreasing Costs in Health Care

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Pragmatic solutions to public policy concerns

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Background

The value of the health services provided in the State of Washington can be greatly improved by instituting policies that increase quality and decrease health care costs. It is estimated that overuse, underuse, mis-use and non-use are found in 20-30% of all prescriptions, visits, procedures and hospitalizations in health care.[1] Some working in this area believe this figure may actually be higher, given the startling lack of knowledge by many health care professionals as to what truly is effective and what is ineffective – and even often harmful – health care practices. Quality of care and safety are compromised when resources are used inappropriately. There is uncertainty in health care, and many clinicians tend to overuse services to reduce their uncertainty and reduce pressure from patients to provide what may be inappropriate services. This uncertainty is increased when we do not have systems to evaluate the science and if we have not made that information useful and usable for health care leaders, clinicians, patients and others. When valid, relevant and usable information is available in a clinical setting, better decisions are made, technology is used more appropriately, outcomes are improved and the quality of care is improved. In many instances, costs also go down.

Our national problems with health care have been widely recognized. The Committee on Quality of Health Care in America at the Institute of Medicine has stated that there is a gap between the health care Americans have and the care they should have. According to *Crossing the Quality Chasm*, Americans cannot count on receiving care that meets their needs and is based on the best scientific knowledge. The system has fallen short on translating knowledge into practice, applying new technology safely and appropriately, and enabling the patient to function as the center of care. One key problem is that much poor research gets published in the medical literature and can provide misleading – and sometimes harmful – recommendations. Further, data show that clinicians, pharmacists and nurses lack skills in evaluating the scientific evidence. Their pre-test scores for a simple evidence-based medicine quiz suggest that as many as 74 percent of these health care professionals may lack these needed skills, which has a direct impact on patient care.[2] The performance of the health care system varies considerably and does not make

[1] Consensus Statement - September 16, 1998. The Urgent Need to Improve Health Care Quality Institute of Medicine National Roundtable on Health Care Quality JAMA. 1998;280:1000-1005.

[2] Personal communication, The Delfini Group, LLC.

the best use of available resources.[3] There is significant variation in medical practice and its resultant spending across the country, and research suggests that regions with higher spending do not provide better quality of care, and in fact, perform worse in some preventive care measures, at least for Medicare patients.[4] Moreover, underuse of evidence-based care practices has been found in high-cost regions of the country, suggesting that greater spending does not improve compliance with recommendations[5] or appropriate use of science.

States have many incentives to control costs and improve quality of care for their residents; to reduce pain, suffering and disability; and to improve longevity and work productivity. In addition, the potential exists to reduce the financial costs of inappropriately used care, poor quality care and medical errors. Washington State purchases care for a sizable share of the market through programs such as Medicaid, the Basic Health Plan, State employee and retiree plans, the State Children's Health Insurance (SCHIP) and other State programs for uninsured and vulnerable populations. Medicaid, by itself, represents an ever increasing 15% of the Washington State budget - at a time when the State faces a large and ongoing budget crisis.[6] The private insurance market is also in crisis as employers and individuals struggle to retain comprehensive coverage in a time of increasing costs. As reported recently in the Washington Post, "The number of Americans who lack health insurance climbed by 5.7 percent in 2002, to 43.6 million, the largest single increase in a decade. Health policy experts expected the number…to grow, but many expressed surprise at the breadth and depth of the increase."[7] The authors believe that this is attributable to employer reduction in health care benefits. This has the potential to even further impact State expenditures.

Washington State has leverage to change the way health care is delivered to State beneficiaries and can be an example to the private sector. The State purchases through managed care and directly from providers and, therefore, has the ability to institute processes that can change the system to better meet the current and future needs of beneficiaries and employees. The State has a conflict that impels it to take a leadership position with this issue – it is constrained by an inflexible tax system and it has a commitment to its beneficiaries. That resulting tension speaks even further to the need to reduce waste and improve the quality of purchased services.

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[3] Institute of Medicine, *Crossing the Quality Chasm,* (Washington, D.C: National Academy Press, 2001), 1.

[4] Elliott S. Fisher et al, "The Implications of Regional Variations in Medicare Spending. Part 1: The Content, Quality, and Accessibility of Care," *Annals of Internal Medicine*, 138, (2003): 273-287.

[5] John E. Wennberg, Elliott S. Fisher, and Jonathan S. Skinner, "Geography and the Debate Over Medicare Reform," *Health Affairs*, (February 2002): W99, Web Exclusive.

[6] Riley P. *State Health Policy Responses to Recessions (1970-2002).* May 2002.

7 Ceci Connolly, Washington Post Staff Writer Tuesday, Sept 30, 2003

The focus of this initiative is to assist Washington State in finding and using research on evidence-based care and to guide their purchasing and regulatory decisions in providing services that are known to impact the quality of care and in identifying unnecessary variations, practices that provide marginal benefit for the expense, practices that simply cannot be afforded or harmful practices.

The following framework[8] is recommended to strengthen Washington State's role in improving effective purchasing and quality of care[9]:

> Purchase **effective, evidence-based care** as determined by the best available scientific evidence, which has been found to be valid and evaluated to provide value. For example, the State should utilize good evidence in making purchasing decisions such as evidence-based diabetes care recommendations which are shown to improve life expectancy and decrease hospitalizations. And it is as important for policymakers to apply the evidence on what doesn't work as well as the evidence on what does. Many practices have gone into widespread use without good evidence of effectiveness, and of these, many have been shown to result in tremendous harms, such as increasing mortality or significantly reducing quality of life. An example of this is the use of two drugs, encainide and flecanide, to suppress irregular heartbeats following heart attacks. The drugs were successful in suppressing premature heartbeats and so physicians believed they would benefit patients, but these drugs actually resulted in a 5% increase in mortality. The problem was that the use of these drugs became standard practice before there was evidence of patient benefit. Following a well, done randomized controlled trial, physicians stopped using these drugs to treat heart rhythm disorders after heart attack.

Improve the practice of **preference-sensitive care**, so that consumers can make choices based on the best clinical evidence along with their own personal values and preferences. Preference-sensitive care is defined as clinical services for which there are at least two alternative treatment options for many patients or where the ratio between benefits and harms is narrow enough that individual patients may have varying preferences. Sometimes this occurs because the optimal course of care is not always known and straight-forward (e.g., treatment of breast cancer) or this can occur when there are sufficient trade-offs between benefits and harms, such as is the case with prostate cancer screening to name one example. Many care decisions necessitate consideration of options, preferences, life-style adjustments and other implications, which requires effective communication between the practitioner and consumer to determine the best course of action in a particular situation. Research suggests that currently treatment

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[8] John E. Wennberg, Elliott S. Fisher, and Jonathan S. Skinner, "Geography and the Debate Over Medicare Reform," *Health Affairs*, (February 2002): W96-114, Web Exclusive.

[9] National Academy of State Health Policy, personal communication 2003

decisions for discretionary procedures are often influenced by medical opinion as opposed to patient preference.[10] Educating people and providers on the choices available to them will improve the availability of personally satisfactory care for people in the State.

- Manage **unproven services**, defined as care for which evidence is less well established. Much has been written about the extent to which the supply of health care services leads to use, oftentimes inappropriate, and overuse. Some of the use is induced by practitioners (e.g., lab, x-ray, specialist care) and in other instances it is by consumer demand or use (e.g., emergency room, use of antibiotics). For example, the degree of medical care intensity for patients with chronic disease varies greatly across the country, although no benefit in functional status or quality of life has been associated with greater intensity of care.[11]

  Manage practices found to be of **marginal benefit for the expense or practices that cannot be afforded**. Examples of this include lung volume reduction surgery for patients with emphysema and use of COX-II inhibitors.

  Eliminate practices for which there is **evidence of harm**. High-dose chemotherapy combined with bone marrow transplant is a very recent example where costs and harms ran high. Patient demand made this a standard of care until this was studied in randomized controlled trials, and the harms were identified.

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There have been efforts around the world to address and improve the application of evidence to the variability of services provided in health care. For example[12]

- The Veterans Administration Medical Advisory Panel and Pharmacy Benefits Management Strategic Healthcare Group use an evidence-based approach for developing clinical practice guidelines and other clinical recommendations, which have been lauded by the IOM.
- Providence Health System in Oregon has utilized an evidence-based approach in making formulary decisions. They have reported improved decision-making and cost savings from this approach.
- Group Health Cooperative has used explicit criteria to make determinations regarding new technologies and has found that most new technologies they evaluate do not pass evidence-based criteria for effectiveness.
- The National Institute for Clinical Excellence (NICE), part of the National Health Service in Britain, is attempting to provide patients, health professionals and the public with authoritative, robust and reliable guidance

[10] Ibid.: W101, Web Exclusive.

[11] Ibid.: W104, Web Exclusive.

[12] Personal communication, The Delfini Group, LLC.

on current "best practice" by conducting audits and producing evidence-based clinical practice guidelines.
(http://www.nice.org.uk/Cat.asp?pn=professional&cn=toplevel&ln=en)

Organizations and groups all over the world have reported success in the use of evidence-based principles and tools to improve care and health outcomes—uncomplicated urinary tract infection in low risk, healthy adult women[13], the use of antibiotics[14,15], improved immunization rates[16], appropriate use of CT scans,[17] and cancer care[18] to name a few. Successful implementation depends upon leadership, the creation of an evidence-based culture and work components such as processes and tools that facilitate the necessary steps of the 5 "A"s of evidence-based medicine:
Ask, Acquire, Appraise, Apply, "A"s Again.

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[13] Stuart ME, Macuiba J, Heidrich F, Farrell RG, Braddick M, Etchison S. Successful implementation of an evidence-based clinical practice guideline: acute dysuria/urgency in adult women. HMO Pract. 1997 Dec;11(4):150-7.

[14] Akalin HE. Surgical prophylaxis: the evolution of guidelines in an era of cost containment. J Hosp Infect. 2002 Jan;50 Suppl A:S3-7.

[15] Wilson SD, et al. An evidence-based clinical pathway for bronchiolitis safely reduces antibiotic overuse.Am J Med Qual. 2002 Sep-Oct;17(5):195-9.
PMID: 12412948 [PubMed - indexed for MEDLINE]

[16] Doyle DM, Dauterive R, Chuang KH, Ellrodt AG. Translating evidence into practice: pursuing perfection in pneumococcal vaccination in a rural community. Respir Care. 2001 Nov;46(11):1258-72; discussion 1273-5.

[17] Lal NR, Kazerooni EA, Bree RL. Development and implementation of an appropriateness guideline for use of CT in cases of suspected intraabdominal abscess. Acad Radiol. 2000 Sep;7(9):711-6.

[18] Kirsh WD, Lee R. Disease management. Decreasing cost and increasing patient satisfaction: the implementation of a cancer disease management program. Manag Care Interface. 1999 Aug;12(8):65-8.

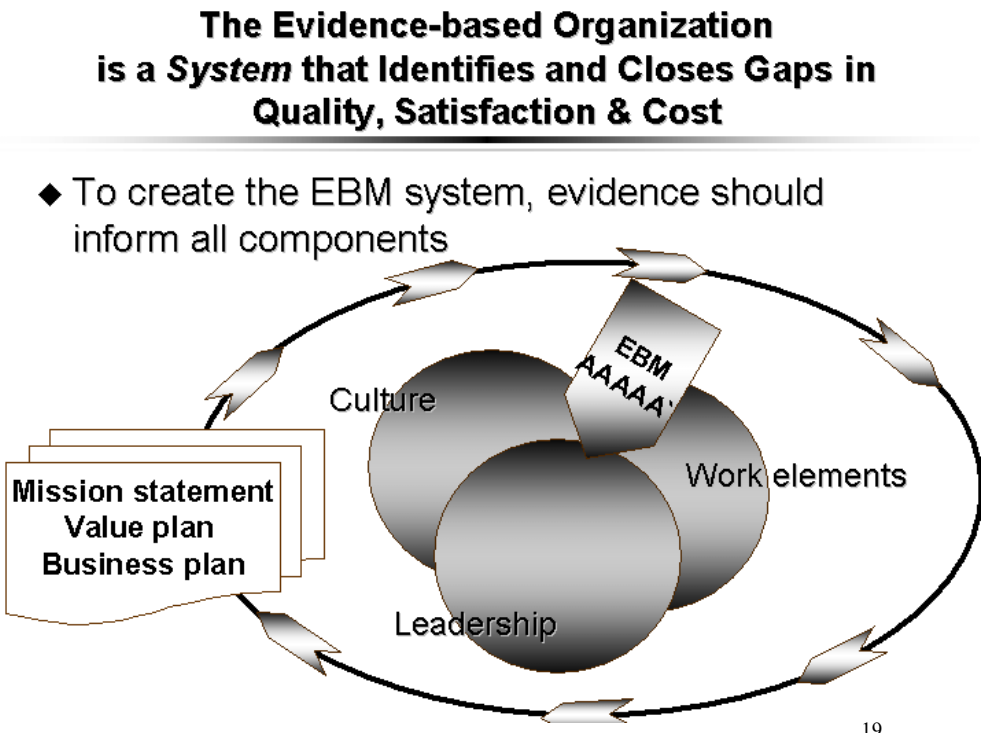

Figure 1. © Delfini Group, LLC, 2003. All rights reserved worldwide. [19]

Also there is significant benefit in taking results of evidence-based work out to patients directly through the use of information, decision and action aids which they can use in conjunction with their providers or which they may be able to use autonomously. O'Conner et al report on the benefits of providing patients with evidence-based decision aids, describing significant reductions (10 to 30%), for example, in the rates of the most invasive surgical procedures (hysterectomy, mastectomy, prostatectomy, discectomy, coronary bypass surgery) without adversely impacting health or satisfaction outcomes for those patients opting for a more conservative approach. They state, "…decision aids have the potential to prevent overuse of preference sensitive options…" 20

There are barriers the State must overcome to successfully implement this policy. According to a recent roundtable with State officials conducted by the National Academy for State Health Policy (NASHP), these barriers include lack of processes for accessing, summarizing and interpreting evidence-based data along with political barriers that create obstacles to implementing policy change. Moreover, in many areas of practice and care no conclusive body of evidence-based science exists, and purchasers are left struggling to make value-based purchasing decisions in the midst of powerful lobbying forces.[21]

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[19] From The Delfini Group, LLC. (Michael Stuart, MD & Sheri Strite) www.delfini.org. Accessed 09-13-03 at http://www.delfini.org/delfiniQI.htm

[20] O'Connor, A, F Légaré, D Stacy. "Risk communication in practice: the contribution of decision aids." BMJ. 27 September 2003;327:736-740.

[21] NASHP 2003 conference

Strategy

To assist State executive branch officials, legislators, private purchasers, consumers and others in responding to these challenges, the Rainier Institute proposes a comprehensive strategy to enable the public and private interests in Washington State to participate in "closing the quality chasm" and better control costs.

At a high-level view, the process is three-fold. The first phase starts with assessing the literature and determining benefits and harms of a new or existing technology. The steps in this process are literature search and filtering for strength of study design, critical appraisal of the literature and a determination about the usability of the evidence. If the technology has proven evidence of effectiveness and is determined to be usable, it moves to the next stage as a potentially beneficial service. If it is unproven, further evaluation should be entertained and appropriate research encouraged. If there is evidence of no benefit and/or evidence of harms, that too should be determined.

The second phase examines the costs of the service or procedure. Evaluating the costs at this point enables an assessment of value of a technology or new medicine. The value of a service is assessed by comparing the net benefits of a service or technology compared to its net harms considering the impact on health, the patient perspective, satisfaction and cost.

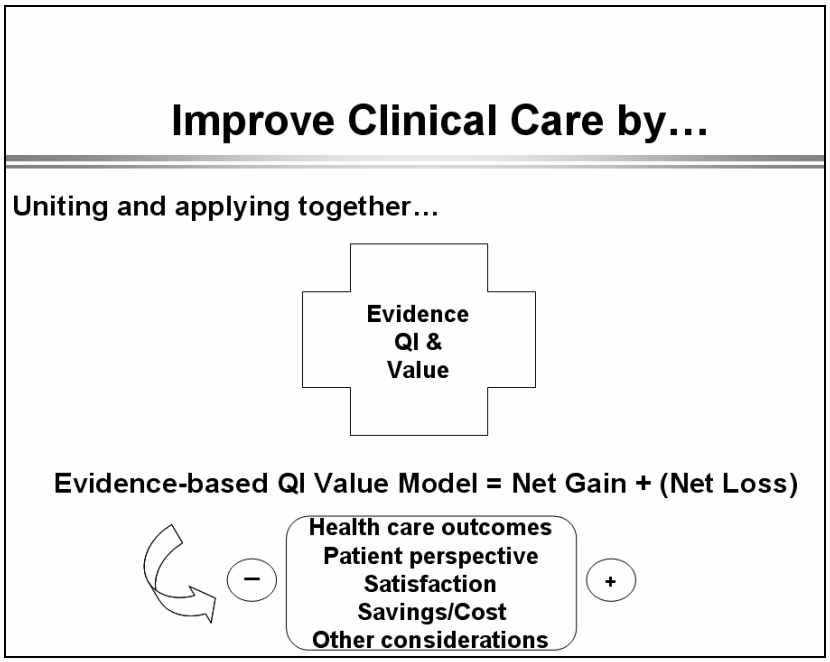

Figure 2. © Delfini Group, LLC, 2003. All rights reserved world.

The third phase requires placing the gathered information into a broader framework of legal considerations, patient acceptability and other intangibles. This only works if the first two phases have been completed so that this last phase can be undertaken with enough knowledge to make reasonable and responsible decisions. The details of these three phases can be easily described and understood using the process steps for the 5 "A"s (See Figure 3).

This process includes the important steps of monitoring and updating to ensure that the process continually improves the quality and cost of the service being provided.

Figure 3: The Process Steps for the 5 "A"s of Evidence-based Medicine

Ask & Acquire	1. Identify gaps, uncertainties and potential opportunities - ➔ **Select or reject projects** 2. Apply systematic strategies to obtain evidence; filtering for strength of the study design and for relevance ➔ **Reject if No Potential for Good Evidence or Problems with Relevance**
Appraise	3. Assess the amount of work needed – adapt content or develop own project from evidence available 4. Critically appraise studies and content for validity ➔ **Pass/fail** 5. Examine results of valid studies and content ➔ **Pass/fail** 6. Summarize and synthesize 7. Assess impacts of proposed change a. Create evidence-based estimates of local quality and cost outcomes ➔ **Pass/fail** b. Assess potential program change (including implementation and measurement) c. Perform analysis of economic and non-economic changes (legal, patient acceptability etc.), including sensitivity analyses d. Summarize and decide ➔ **Pass/fail**
Apply	8. Create information and decision aids 9. Implement
Appraise	10. Measure and report
AAAA Again ➔	11. Cycle back through the 4 "A"s to update and improve

Policy Proposal

1. Establish a State-focused technology review process that is independent of the government and is under the direction of a policy board composed of private and public interests. (Note: the use of technology throughout this paper refers to services, processes and technologies that are used in caring for people with medical problems or used to prevent those problems.)
    a. Establish an oversight policy board composed of five to seven members appointed by the governor to act as a buffer between politics and the outcomes of a newly established technology review committee (described in 1b below). The oversight policy board members would be divided between representatives of State health purchasing agencies (e.g., DSHS and HCA) and representatives from business, insurers and providers. A majority of the members would be from the private sector. This policy board will appoint the members of the technology review committee, assure funding for the process, oversee the administration of the policy board and set policy concerning dissemination of the findings of the policy board. Dissemination would include informing State and private purchasers along with providing consumer-accessible information.
    b. The technology review committee would be appointed by the policy board and be composed of independent physicians, pharmacists, nurses, health services researchers, and/or others with demonstrated expertise in applying evidence-based clinical improvement techniques; have no conflicts of interest concerning the issues being discussed; and have independent judgment to determine committee findings. They will apply a structured process to ensure that they use a systematic and rigorous approach to assess the information and determine three possible outcomes.
        I. There is good evidence for use of the service, process or technology in certain circumstances (the effective services mentioned above). The committee should determine in what circumstances there is and is not information supporting its use. If there is more than one effective process or technology for the same problem, the committee will note this (the preference-sensitive services mentioned above).
        II. There is evidence that the service, process or technology is not beneficial and is harmless or harmful.
        III. There is insufficient evidence as to the benefit of the service, process or technology. In this circumstance, the supply of this technology may be managed so as to use it as appropriately as possible. These services should be identified and placed on a research agenda so as to focus the efforts of researchers, providers, purchasers and consumers in the State to decrease the uncertainty of unproven services.

The committee will gather information either directly or from other assessment programs which are found to apply a similarly rigorous process to make a determination about effectiveness and value.

2. Provide outcomes of the technology review committee to both private (businesses and insurers) and public (BHP, PEBB, and Medicaid) purchasers of health care in the State so that they can use this information in determining:
   a. The health services provided for their beneficiaries within the scope of federal limits.
   b. The focus of their quality improvement activities.
   c. Which services they should strive to eliminate from their benefits for being proven ineffective or harmful, or not cost effective or otherwise not providing value. [22]
3. Create recommendations to help State purchasers ensure that their direct purchased and contracted care conform to the standards developed from this work.
4. Mount broad educational campaigns focusing on purchasers and patients informing them of the outcomes of the assessments.
5. Encourage these purchasers to support the research agenda developed by the technology assessment committee by working with researchers and other purchasers to reduce uncertainty and by supporting the clinical patient care costs of their beneficiaries if they are engaged in a defined and approved research projects.
6. Encourage other purchasers to participate with the State in using the information developed in this process and to participate in furthering the research needed.
7. Costs could be analyzed and weighed against potential benefit by individual purchasers. A statewide process to do this cost analysis could be developed cooperatively if needed.
8. The non-financial issues (legal, patient satisfaction etc.) would also be assessed at the plan, purchaser, or community level where these decisions are more appropriately made.

Discussion

This process is powerful if applied broadly. It can be used to help design the basic benefits that are provided by public programs and private insurers. In fact, to not use this process is to not know about the effectiveness and value of new technologies and drugs. It should be emphasized that much in medicine has been based on observational studies – for example, studies in which subjects choose an intervention (e.g. women choose to take estrogen after menopause) and outcomes are compared to people who do not choose the intervention (e.g., women who do not choose to take hormone replacement therapy). The problem with basing therapy on this type of study is that it cannot show cause and effect relationships. In the estrogen example above, numerous studies reported a 40% to 70% decreased incidence of coronary artery disease. When valid randomized controlled trials were performed – which is the only study design that can allow conclusions regarding cause and effect – it became clear that there was no benefit. In fact there were harms such as increased risk of breast cancer.

[22] This information could be used to improve competitive bidding for technologies and services when there are more than one equally effective technology available.

Oregon is approaching their State purchasing of health services using a similar method. The State government looks at the effectiveness of services relative to cost and other factors to develop a benefit package based on including the most effective services and excluding ineffective services. They have reworked this list using a rigorous evidence-based approach.

This proposal builds on the process we have put in place in Washington for assessing pharmaceuticals and purchasing medications that are both high quality and low cost. Pharmaceuticals are important, but a small part of the technology that affects quality and drives the costs in our health care system. While pharmaceuticals are the fastest rising costs, in fact hospital and physician spending accounts for more than half of all health spending.[23]

Indeed, using known evidence effectively and projecting impacts of practice change, such as cost, satisfaction and other considerations, will benefit consumers, public and private purchasers, and providers of care. Developing a broad statewide approach to this will improve the quality of care for the State's beneficiaries. Waste will be reduced. Private purchasers can learn from these examples and improve their purchasing of services for people throughout the State. Having a broad based understanding of what works and what doesn't will make the work of providers and purchasers more effective and will protect the health of consumers.

Appendix A

Evidence and Usability Scale

Grade of Usability	Strength of Evidence
● **Grade A: Useful**	The weight of the evidence appears sufficient to use in making health care decisions. • Evidence from well-designed and conducted systematic reviews ***might*** fall into this category. Suggestion is to do a careful analysis of the review and the studies included. • Several well-designed and conducted studies that consistently show similar results o For therapy and diagnostic studies: RCTs. In some cases a single, large well-designed and conducted RCT may be sufficient. o For natural history and prognosis: Cohort studies
⊙ **Grade B: Possibly Useful**	The weight of the evidence ***might*** be sufficient to use in making health care decisions.

[23] *Source:* CMS, Office of the Actuary, National Health Statistics Group

	• The evidence is strong enough to conclude that the results are probably valid; however, study results from multiple studies are inconsistent or the studies may have some (but not lethal) threats to validity. • Evidence from well-designed and conducted systematic reviews ***might*** fall into this category. Suggestion is to do a careful analysis of the review and the studies included. • Evidence from at least one well-designed and conducted RCT (cohort studies for natural history and prognosis; for diagnosis, valid studies assessing test accuracy for detecting a condition when there is evidence of effectiveness from valid, applicable RCTs.) • Evidence from at least one well-designed and conducted non-randomized, controlled study.
○ **Grade U: Uncertain Usefulness**	The weight of the evidence is sufficiently uncertain to urge caution regarding its use in making health care decisions. • This may be due to uncertain validity due to methodology (enough threats to validity to raise concern – our suggestion would be to **not** use such a study). • Or this may be due to uncertain applicability due to results (good methodology, but questions due to size, applicability of results or other issue). These latter studies may be useful and should be viewed in the context of the weight of the evidence.
X Grade X: Not Useful	The evidence reviewed has lethal threats to validity or other problems (e.g., applicability) and should not be used in making health care decisions.

About the Rainier Institute

The Rainier Institute is a non-partisan progressive think tank founded by retired Governor Booth Gardner, former Congressman and Washington Department of Transportation Director Sid Morrison and former State Supreme Court Justice Phil Talmadge.

Formed in 2001 out of a desire to respond to Washington State's lack of public policy clarity and leadership, our board includes policy experts and officials from all three branches of state and local government. The Rainier Institute uses a variety of progressive and pragmatic methods to implement meaningful solutions to problems affecting Washington State residents. Current work is focused on public education, health care, tax reform, initiative reform, and children's services.

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