



CENTER FOR HEALTH AND SAFETY
IN THE WORKPLACE



***Quality of Medical Care
in Workers Compensation:
A California Demonstration Project***

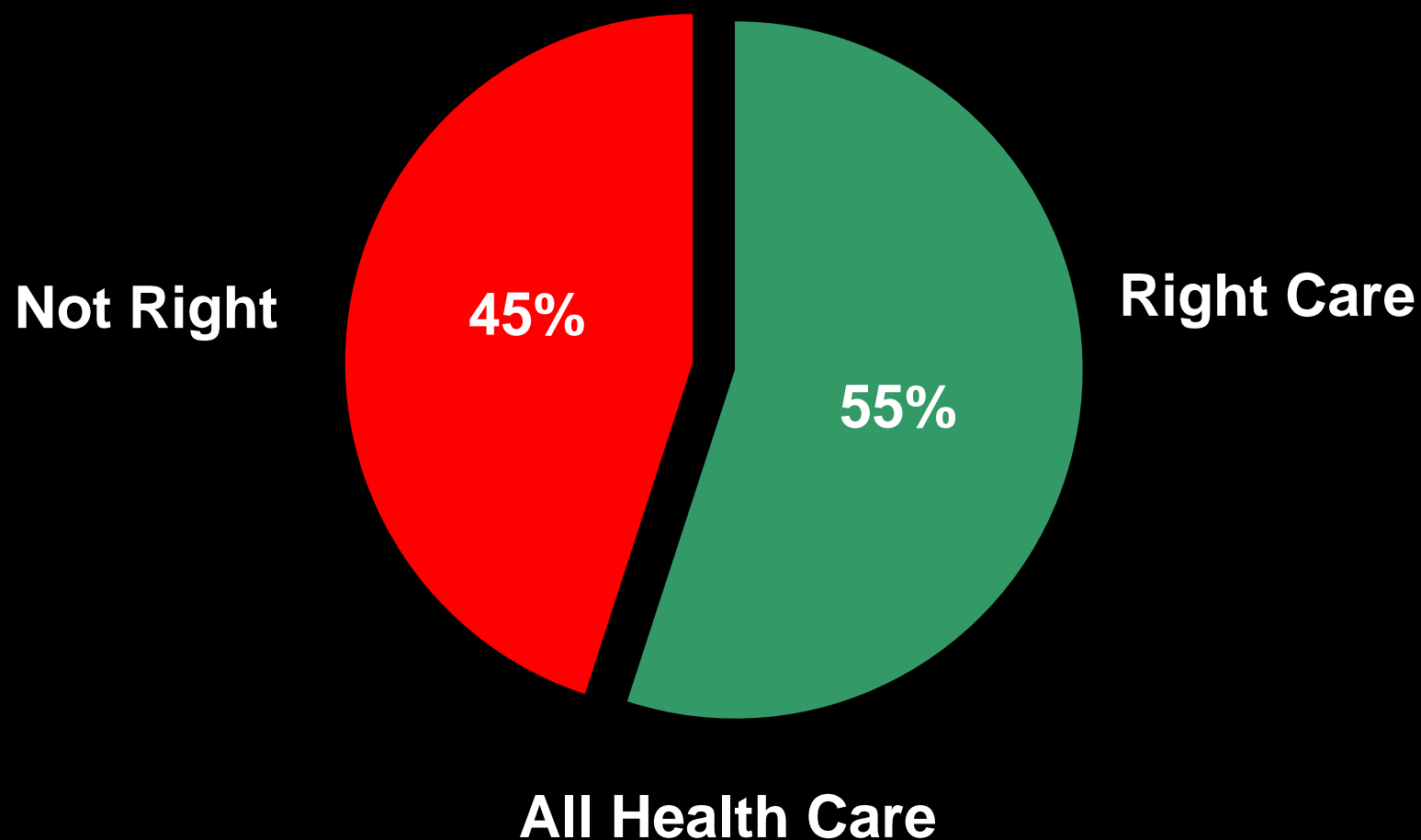
Phase I Study Results

**Teryl Nuckols, MD, MSHS
Steven Asch, MD, MPH**

Outline

- ➔ • Importance of quality of care in WC**
- Introduction to quality measures**
- Development of quality measures for carpal tunnel syndrome**
- Next Steps**

A Landmark RAND Study Found U.S. Patients Receive Right Care Only About Half the Time

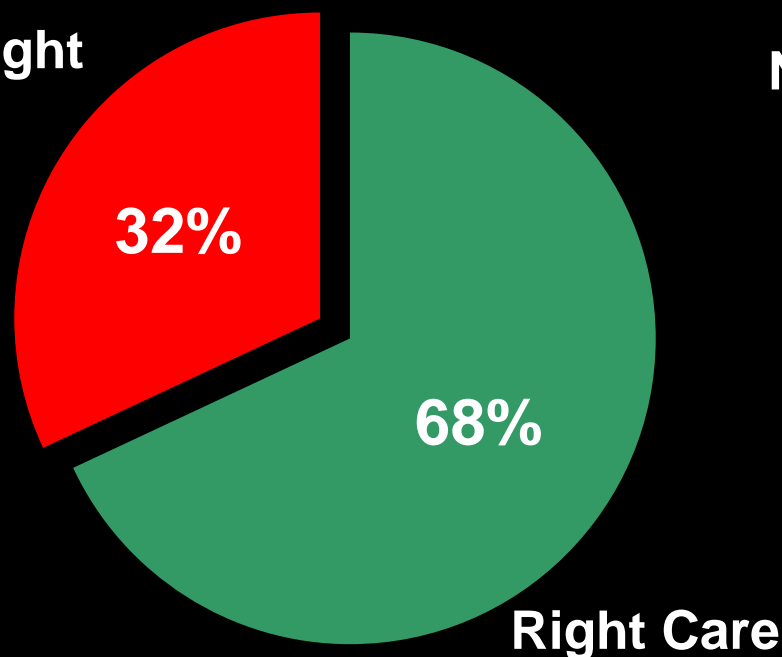


RAND Source: RAND, McGlynn 2003.

A Third to Half of U.S. Patients With Back or Joint Injuries Do Not Receive the Right Care

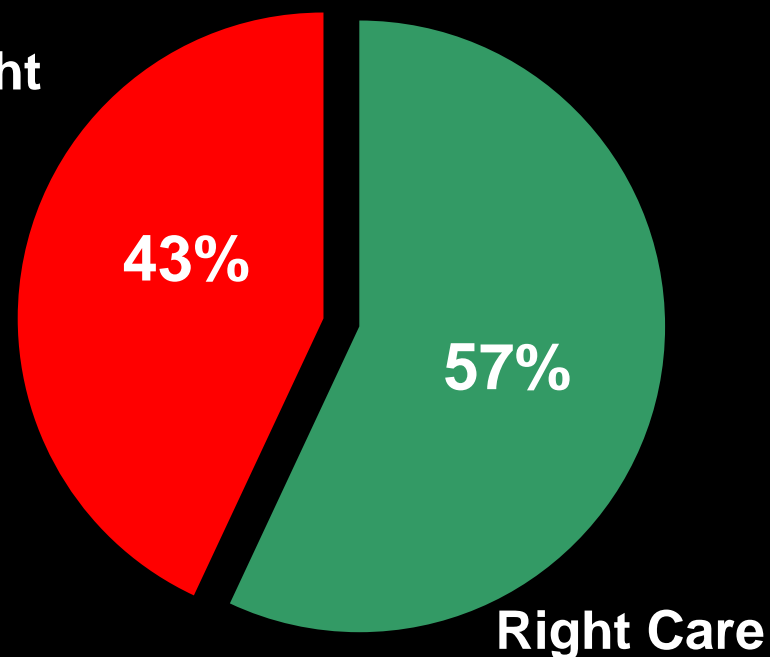
Low Back

Not Right



Shoulder & Knee

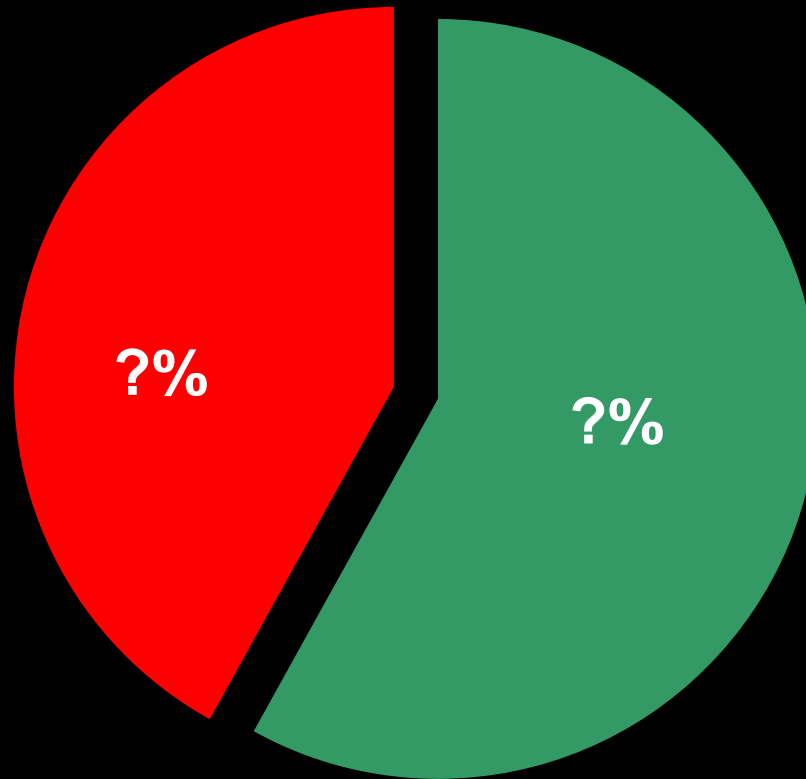
Not Right



All Health Care

Many Injured Workers Probably Do Not Get the Right Care Either

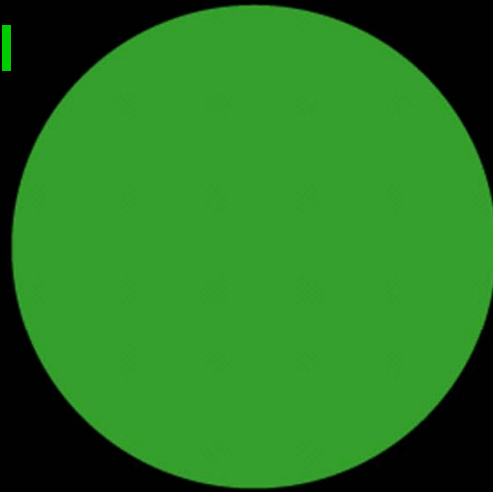
Not Right



Right Care

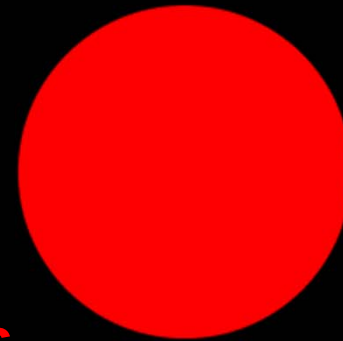
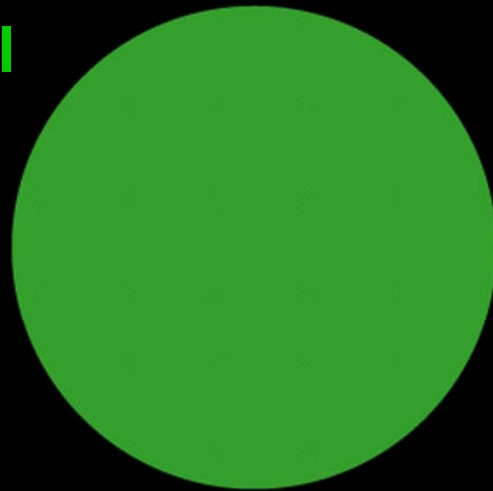
The Two Principal Quality Problems, Overuse and Underuse, Often Occur Simultaneously

Care that could
produce substantial
benefit



The Two Principal Quality Problems, Overuse and Underuse, Often Occur Simultaneously

Care that could
produce substantial
benefit

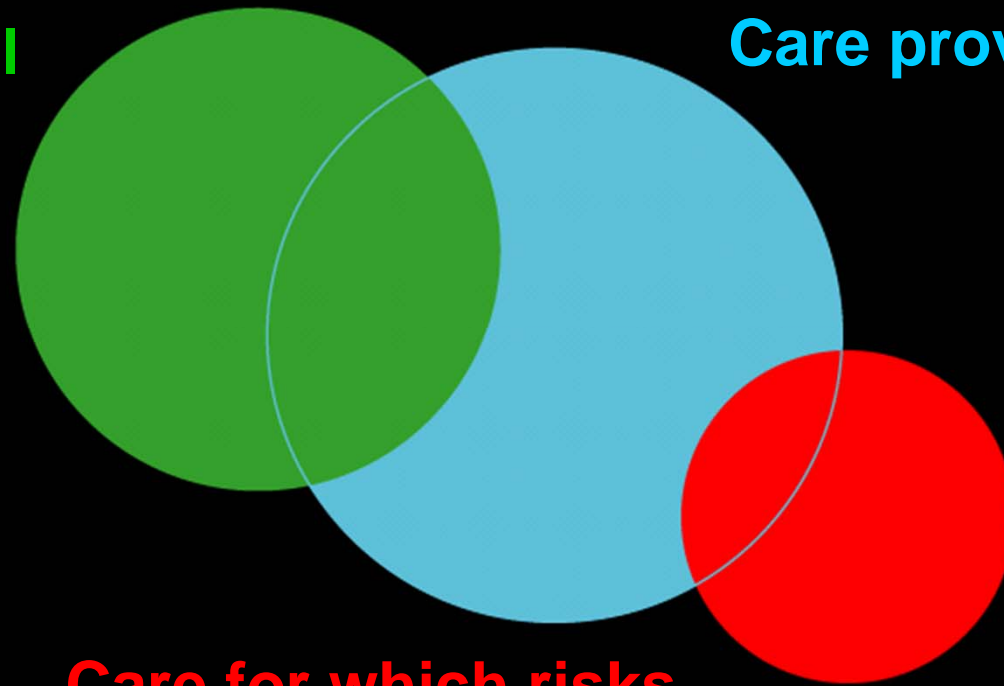


Care for which risks
outweigh benefits

The Two Principal Quality Problems, Overuse and Underuse, Often Occur Simultaneously

Care that could
produce substantial
benefit

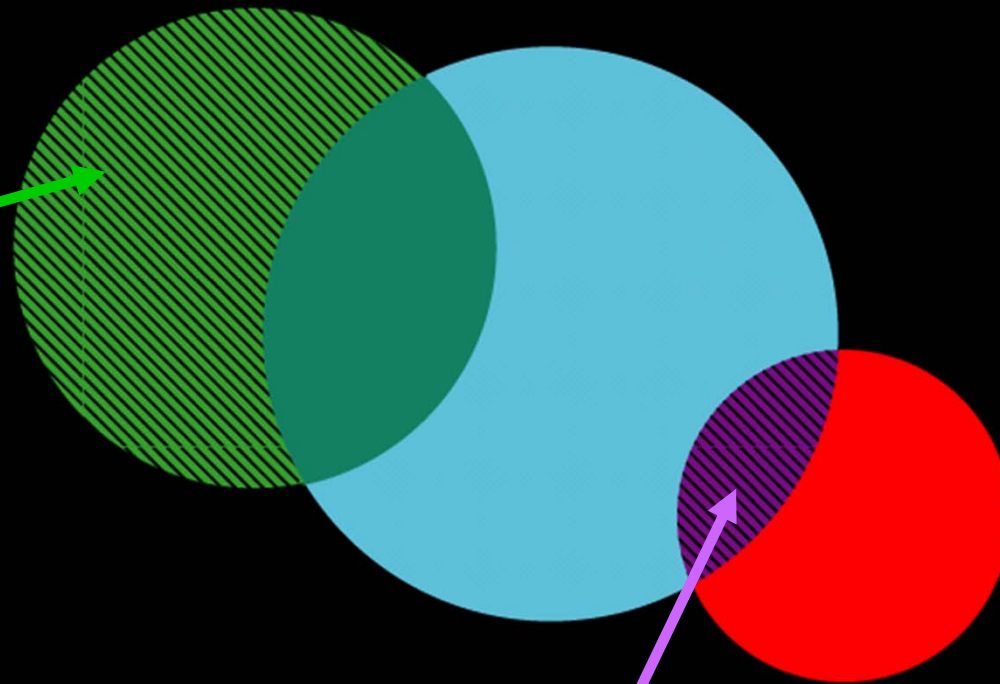
Care provided



Care for which risks
outweigh benefits

The Two Principal Quality Problems, Overuse and Underuse, Often Occur Simultaneously

Underuse:
46% of Patients



Overuse:
11% of Patients

Overuse and Underuse Are Costly to Workers and Employers

Overuse

- Workers' health is not likely to improve—and may decline
 - Medical costs are unnecessary
-

Underuse

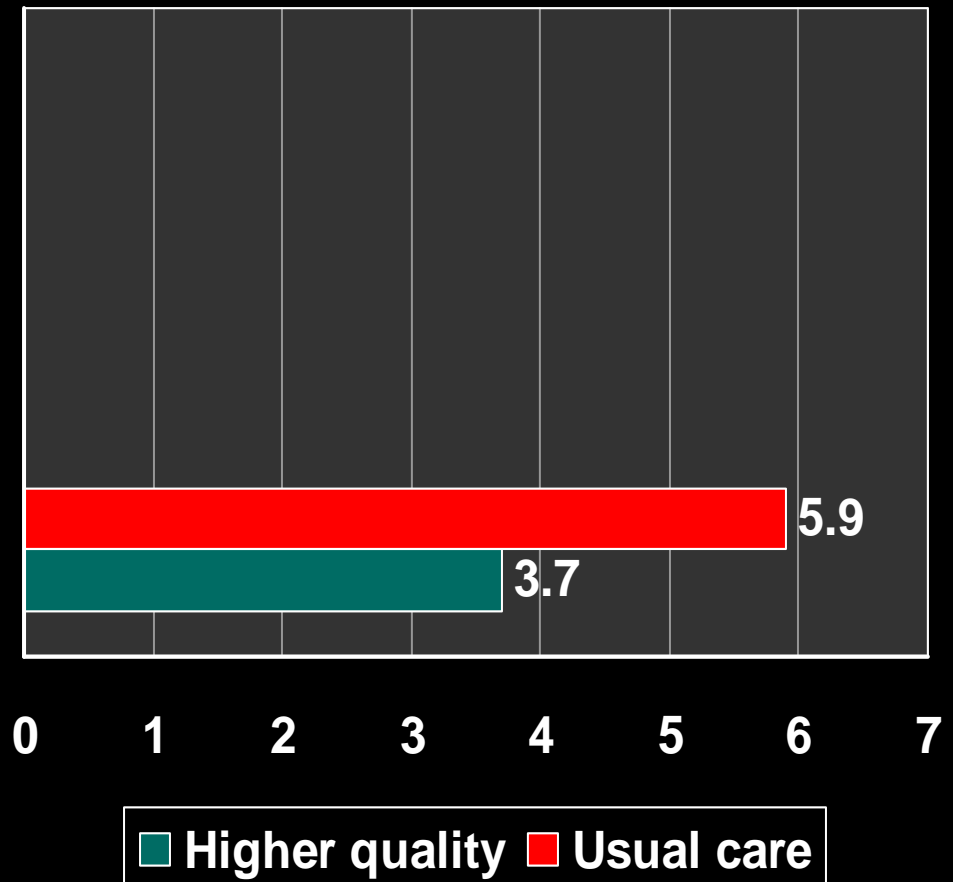
- Workers' health is not likely to improve
 - Increases temporary and permanent disability
 - Creates need for more care
- Costs to payors increase

In One Randomized Trial, Better Care Reduced Time on Temporarily Disability by 37%

Medical & Disability Costs
(\$1,000s)

PD (% of Claims)

TD (Weeks)

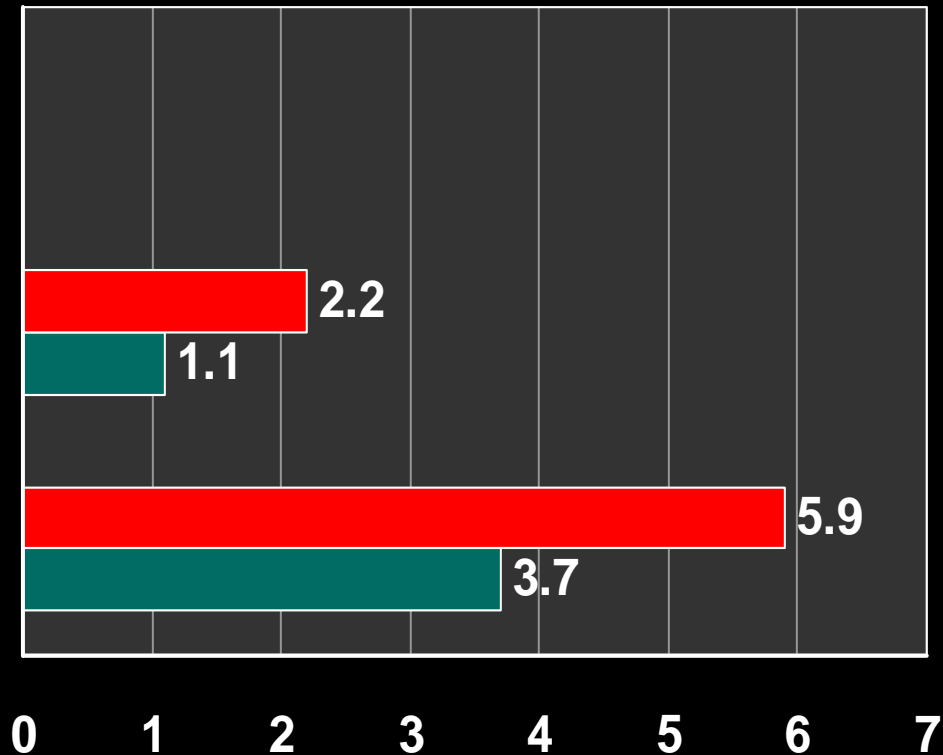


Better Care Reduced the Number of Temporarily Disabled Workers Who Became Permanently Disabled by 50%

Medical & Disability Costs
(\$1,000s)

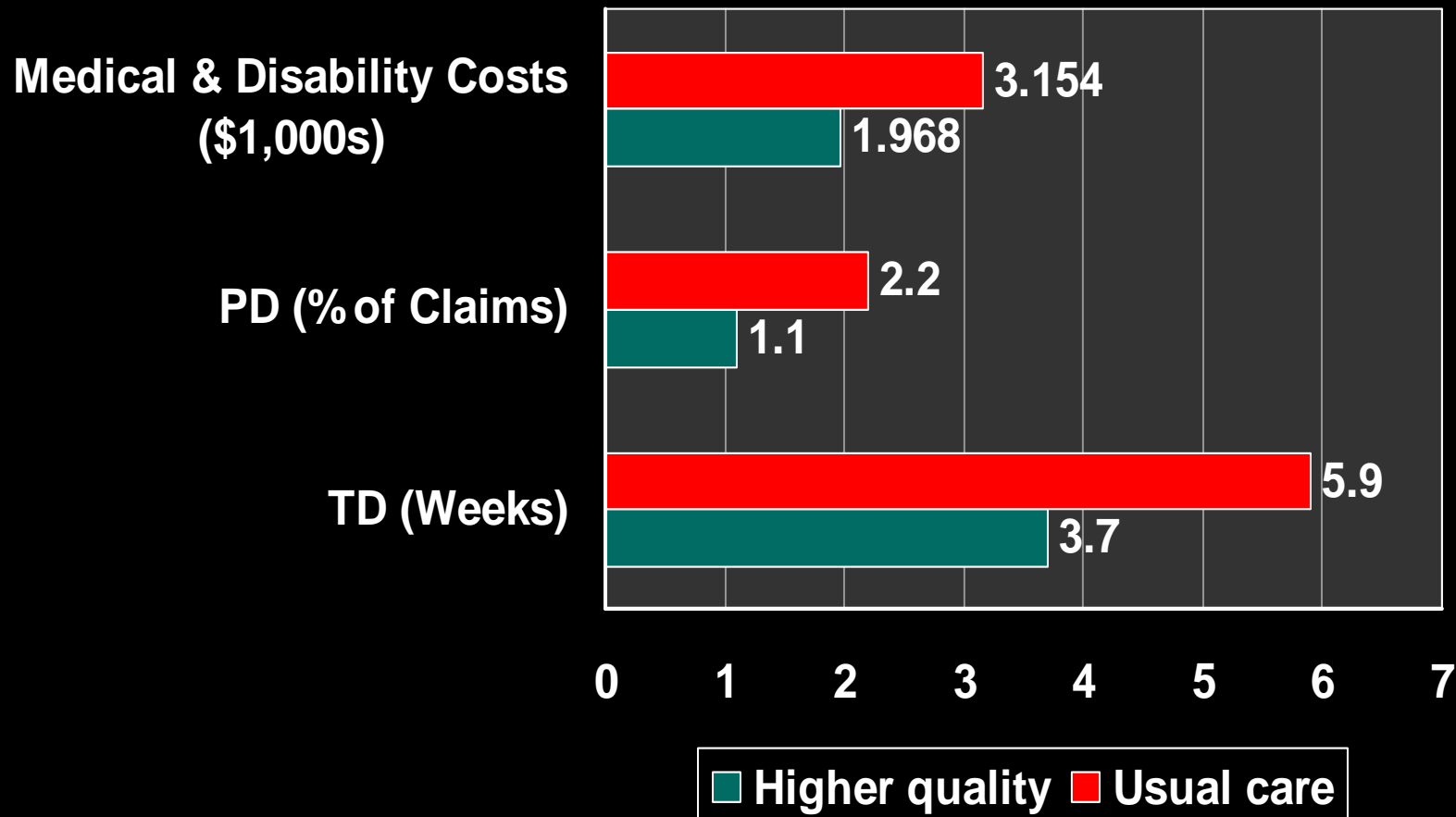
PD (% of Claims)

TD (Weeks)



■ Higher quality ■ Usual care

And Better Care Reduced Medical and Disability Costs by 37%



Improving the Quality of Medical Care Would Benefit Both Workers and Employers

Workers

- Better care can improve recoveries
- Reducing temporary and permanent disability would decrease economic losses

Employers

- Lack of recovery can create a need for more medical care in the long run
- Reducing temporary and permanent disability would decrease economic losses

Outline

- **Importance of quality of care in WC**
- ➔ • **Introduction to quality measures**
- **Development of quality measures for carpal tunnel syndrome**
- **Next Steps**

To Measure Quality, One First Needs Quality-of-Care Measures

- **Explicit, measurable standards for care**
 - **Purpose**
 - **Permit objective evaluations of the extent to which current practice meets standards**
 - **Ensure that results can be compared fairly among organizations or providers**
 - **Attributes**
 - **Relevant, scientifically sound, and feasible for measurement**
 - **Defined in detail: qualifying terms, time frames, patient eligibility, etc**

There Are Three Ways To Evaluate Quality of Care

Resources → **Actual Care** → **Outcomes**



Evaluating Outcomes Is Important But Does Not Tell Providers What to Do Differently

Resources → Actual Care → Outcomes



Pros

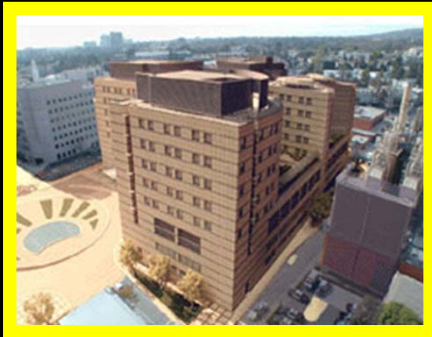
- What workers and employers care about

Cons

- Provides no insight into causes of variation
- Variation often due to “Case mix”
- Time lag between care and outcomes

Resources Are Very Indirect Measures of Quality

Resources → Actual Care → Outcomes



Pros

- The public values access to technology and specialists

Cons

- Does not ensure resources are used appropriately
- Many problems involve failing to provide basic care correctly

Evaluating Actual Care Is Most Informative

Resources → Actual Care → Outcomes



Pros

- Identifies problems and needed changes
- Supports comparisons even when patient populations differ
- Minimal time lag
- Providers often support rigorous measures

Cons

- Rather complicated—and costly

Process-oriented quality measures are related to but different from medical treatment guidelines

| Characteristic | Quality-of-Care Measures | Guidelines |
|-----------------------|---|--|
| Definition | Quantitative tools that indicate performance | Sources of recommendation |
| Purpose | Measure quality of medical care | Consolidate information |
| Language | Rigid: distinguish “right” and “wrong” care | Flexible: acknowledge the “gray zone” of uncertain appropriateness |
| Complexity | Simplistic algorithms that provide clear scoring instructions | Acknowledge medical complexity and patient preferences |
| Accountability | Penalties or rewards based on performance | Usually <i>advisory</i> (<i>not in some WC settings</i>) |

Source: Walter 2004

Outline

- **Importance of quality of care in WC**
- **Introduction to quality measures**
- ➔ • **Development of quality measures for carpal tunnel syndrome**
- **Next Steps**

***To date, our study has achieved
the following objectives***

Objectives

- **Develop quality-of-care measures for carpal tunnel syndrome**
- **Pilot test the measures in WC provider and payor organizations**
- **Place measures and supporting tools in public domain**
- **Develop a project that would assess quality of care and its relationship to clinical and economic outcomes in WC**

A Public-Private Partnership Made This Project Possible

- **Funding Support**

- California Commission on Health and Safety and Workers' Compensation
 - Funding and assistance in developing the project
 - Funding to perform the project
- Zenith Insurance

- **Partners-in-Kind**

- Kaiser Permanente Northern California Regional Occupational Health
- California State Compensation Insurance Fund

We Developed 77 Quality Measures for Carpal Tunnel Syndrome

- **Step 1:** multidisciplinary research team developed draft measures from guidelines and literature
- **Step 2:** multidisciplinary panel of 11 national experts in carpal tunnel syndrome rated the measures
- **Step 3:** RAND/UCLA team created a tool that supports use the measures
- **Step 4:** Kaiser Permanente Northern California Regional Occupational Health and California State Compensation Insurance Fund pilot tested the measures

The measures address diverse aspects of care, emphasizing occupational issues

- **31 Address Diagnosis and Non-operative Management**
 - History and physical examination
 - Medications, splints
 - Activity modification and return to work planning
- **6 Address Electrodiagnostic Tests**
- **18 Indications for Carpal Tunnel Surgery**
 - When surgery is necessary
 - When surgery is inappropriate
- **22 Address Care Before, During, and After Surgery**

Let's look at some examples

Delays in Diagnosing CTS Are Common and Increase Disability

- **In one Washington State study of CTS claims:**
 - Half of the claims were initially filed for other conditions
 - In 20% of the claims, CTS was not diagnosed until more than 3 months after the WC claim was first filed
 - The longer the delay until the CTS diagnosis, the longer the disability tended to be

Source: Daniell 2005

One Measure Specifically Addresses Delays in Recognizing CTS Symptoms

- **New symptoms characteristic of CTS should lead to suspicion**

IF a patient complains of any of the following symptoms: Paresthesias, numbness, or tingling on 1st to 3rd fingers or palm

THEN a suspicion of CTS should be documented in the medical record at the initial evaluation of those symptoms

BECAUSE early diagnosis of CTS would lead to earlier intervention

Splints Are Often Positioned Poorly, Which Actually Worsens Symptoms

- **WRONG:** Many splints come out of the box in a position of 20-30 degrees of wrist extension, and use of a wrist splint in extension worsens CTS
- **RIGHT:** Splints should be placed in neutral position
IF a patient with CTS is prescribed a splint, THEN the chart should document that the splint was positioned so that the wrist is neutral (neither extension >10 degrees or flexed)

Several Measures Address Work-Relatedness, Activity, and Return to Work Planning

Measure Titles

New CTS diagnosis requires detailed occupational history

New CTS diagnosis requires assessment of occupational factors

New CTS diagnosis requires assessment of non-occupational factors

Exacerbating activities should be identified when CTS limits functioning

Rationale for work-association should be documented

Patients diagnosed with CTS should be educated about the condition

Exposures to vibration, force, and repetition should be minimized

Work-associated CTS symptoms require prompt follow-up

Work status should be monitored when CTS appears work associated

Return to work after CTS-related disability requires follow-up assessment

Prolonged CTS-related disability should trigger evaluation

The Measures Addressing Indications for CTS Surgery Have Two Distinct Applications

1. Tools for measuring quality of care: Example

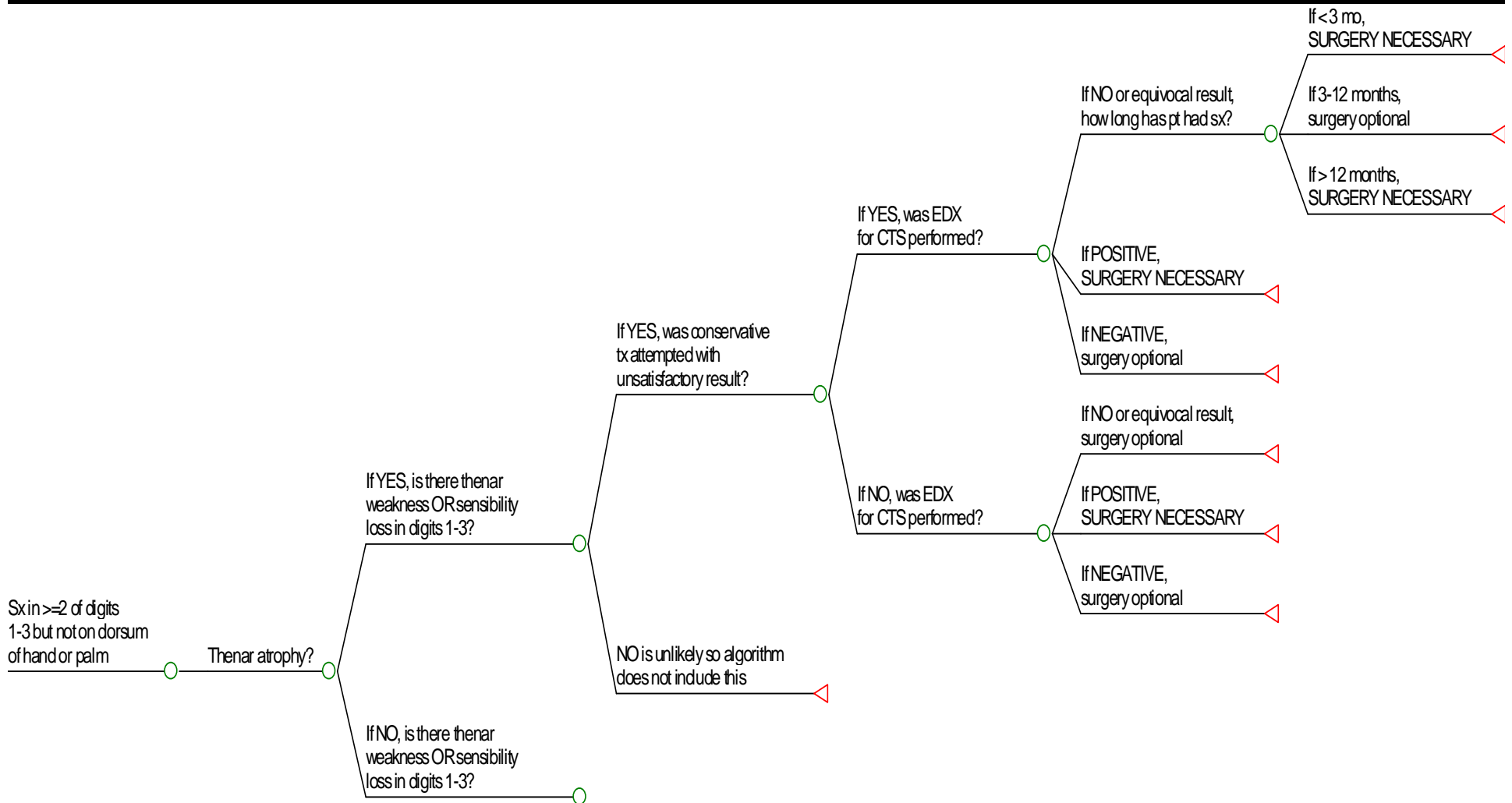
IF a patient has MILD carpal tunnel syndrome present for up to 12 months AND all of the following criteria are met THEN the patient should NOT undergo CTS:

- 1. Conservative therapy has not been attempted or has adequately resolved the patient's symptoms,**
- 2. The presentation is less than "high probability",**
- 3. An electrodiagnostic test is positive for carpal tunnel syndrome**

2. Detailed algorithm for determining when surgery should or should not be performed

- Could supplement ACOEM because the algorithm goes into greater detail than ACOEM does**

The Algorithm Considers Location of Symptoms, Exam Findings, Conservative Therapy, and Electrodiagnostic Tests



Observations from Pilot Testing

Ability of Payors and Providers to Monitor Quality of Care Internally Depends on:

- **Ability to accurately identify patients with CTS or conditions that can mimic CTS**
 - **CPT and ICD-9 codes are ideal**
- **Completeness and organization of medical records**
- **Availability of staff with appropriate skill levels**
 - **Most measures can be rated by nurses and other providers with claims-review backgrounds**
 - **Some measures addressing electrodiagnostic tests and how surgery is performed require physicians in those fields**

Providers and Payors May Want to Use These Measures

- **Advantageous:** Many WC payors are interested in selecting high quality providers for their medical networks
- **Rigorously developed:** Based on the latest guidelines and developed by national experts in the care of CTS
- **Adaptable:** Providers can pick the measures they consider important and choose how to apply them
- **Easy to Use on a Trial Basis:** No special technology or expertise is needed for most of the measures
- **Inexpensive:** Measures are free, start-up costs include training staff
- **Measures Will Become More Useful If Widely Adopted:** Ultimately, report cards could compare provider organizations

Outline

- **Importance of quality of care in WC**
- **Introduction to quality measures**
- **Development of quality measures for carpal tunnel syndrome**
- ➔ • **Next Steps**

Overview of Next Stage in this Project

- **In partnership with Kaiser Permanente Regional Occupational Health in Northern California,**
 - **Measure quality of care for 850 patients with CTS during the first year after claim submission**
- **Assess CTS-related functional status and symptoms at claim submission and 18 months later**
- **Compare the groups receiving the highest and lowest quality care in terms of:**
 - **Changes in function and symptoms over time**
 - **Costs to employers**
 - **Costs to workers**

Publications (Handout Available)

Report Available on RAND Website

- **TK Nuckols, A Griffin, SM Asch, D Benner, et al. RAND/UCLA Quality-of-Care Measures for Carpal Tunnel Syndrome: Data Collection Tools to Use When Applying the Measures. RAND Technical Report.**

Articles Published in Medical Journals

- **KJ Sandin et al. Clinical Quality Measures for Electrodiagnosis in Suspected Carpal Tunnel Syndrome. *Muscle and Nerve*. 2010 Apr;41(4):444-52.**
- **M Maggard et al. Indications for Performing Carpal Tunnel Surgery: Clinical Quality Measures. *Plast Reconstr Surg*. 2010 Jul;126(1):169-79.**
- **TK Nuckols et al. Quality Measures for the Diagnosis and Non-Operative Management of Carpal Tunnel Syndrome in Workers' Compensation Settings. *Journal of Occupational Rehabilitation*. In press.**

Conclusions

- **Quality of care is important in WC and quality measures are needed**
 - Low-quality care impedes recovery and increases cost
 - Carpal tunnel syndrome is a good place to start
- **Provider organizations can use the CTS measures and tools we developed to monitor quality of care**
 - For many payors, it may be more feasible to encourage providers to monitor quality than to assess quality directly
- **We are planning to conduct a major study examining quality, outcomes, and costs**

