

What Do Employers Need and Want to Know?



Rethinking Health Economics and Evidence Generation

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Let's get to know ourselves



We would like to ask some baselining questions
about economic outcomes



Plans for today

- Introduction to concepts and your decision-making
- Explanation of economic outcomes
- Description of PCORI-funded research
- Discussion of meaningful metrics for employers
- Two case studies to elucidate all of the above

Goals for today

- Have a conversation so PCORI can better understand employer information needs
- Gather feedback to develop guidance for PCORI awardees so *they* can better understand employer information needs

Familiarity with economic outcomes

Do you consider the broader workforce impact of health and healthcare when making benefit decisions?

Not at all

Somewhat

Often

Very often

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- If you are *familiar with but not using economic outcomes* ...
- Is this because of

Can't get the data

Data not relevant to
benefit decision-
making

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Get To Know PCORI®

PCORI

- Nonprofit that funds patient-centered comparative clinical effectiveness research (CER)
- Widely acknowledged as a leader in driving U.S. clinical research to become more patient-centered
- Provides funding for CER, engagement in research, dissemination and implementation and research infrastructure projects





Our Mission

Help people make informed healthcare decisions, and improve healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community

Economic Outcomes

Economic impacts on people that matter to people and to their employers.

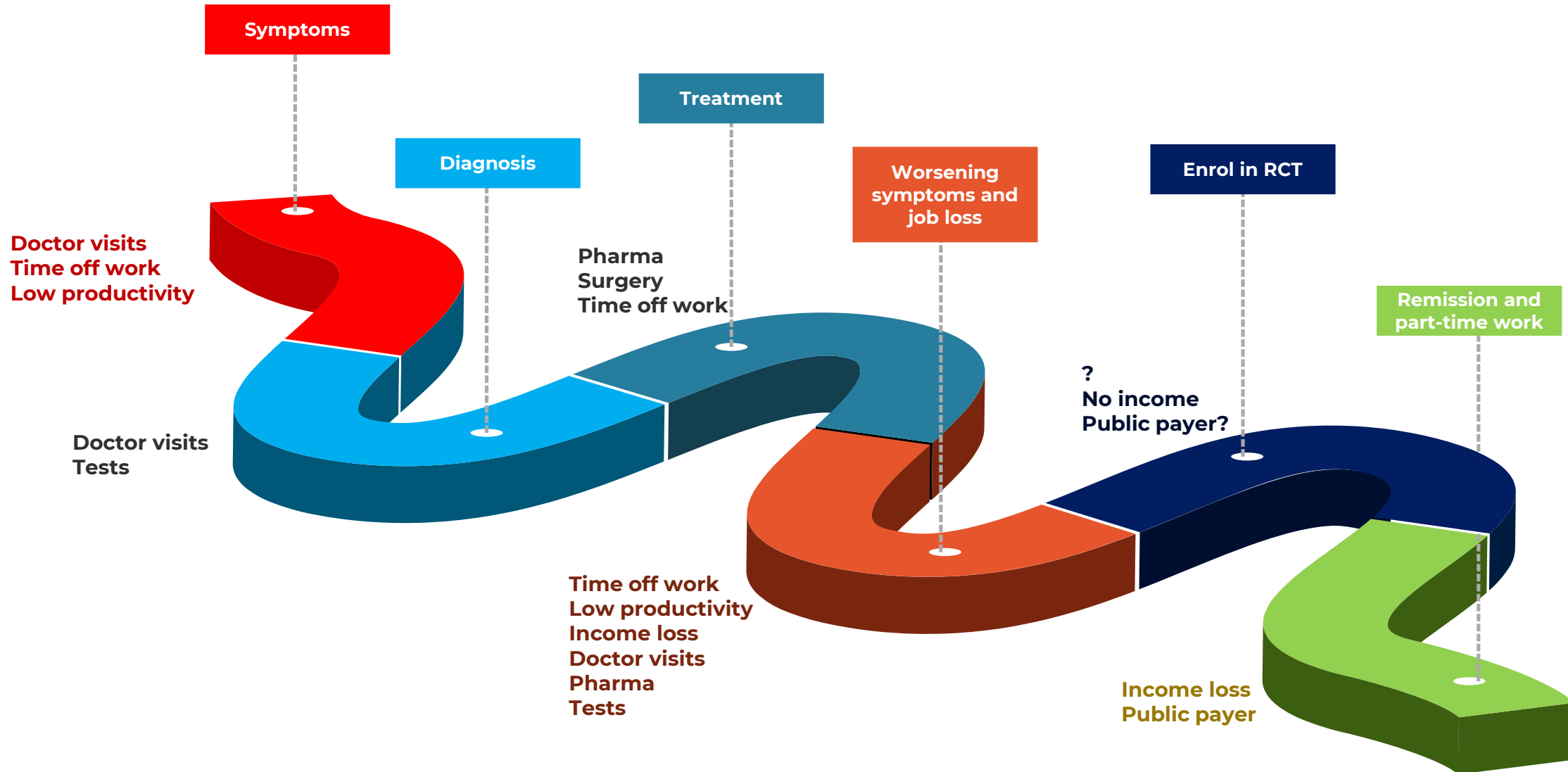


Patient-Centered Burdens and Economic Outcomes (PCBEOs)

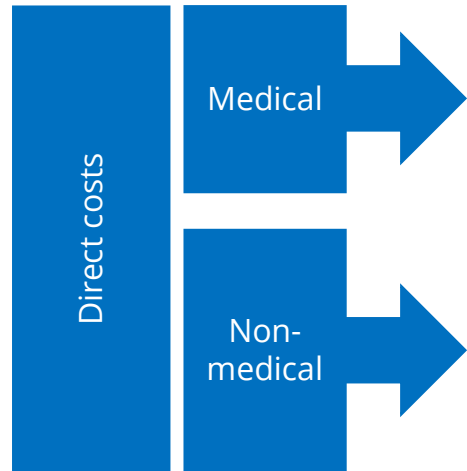
- PCORI encourages its funded researchers to capture the full range of outcomes in comparative effectiveness research, including **economic impacts**
- These can be
 - Directly or indirectly connected to medical care
 - Monetary or non-monetary (financial or non-financial)
 - Tangible or intangible (*intangible = stress, anxiety*)
- They can also be burdens or barriers to accessing care

PCORI allows for a very expansive landscape of costs and economic burdens to be measured.

How we think about the economic impact of health and health care



Economic outcomes in PCORI-funded studies



We are in the process of reviewing our portfolio:

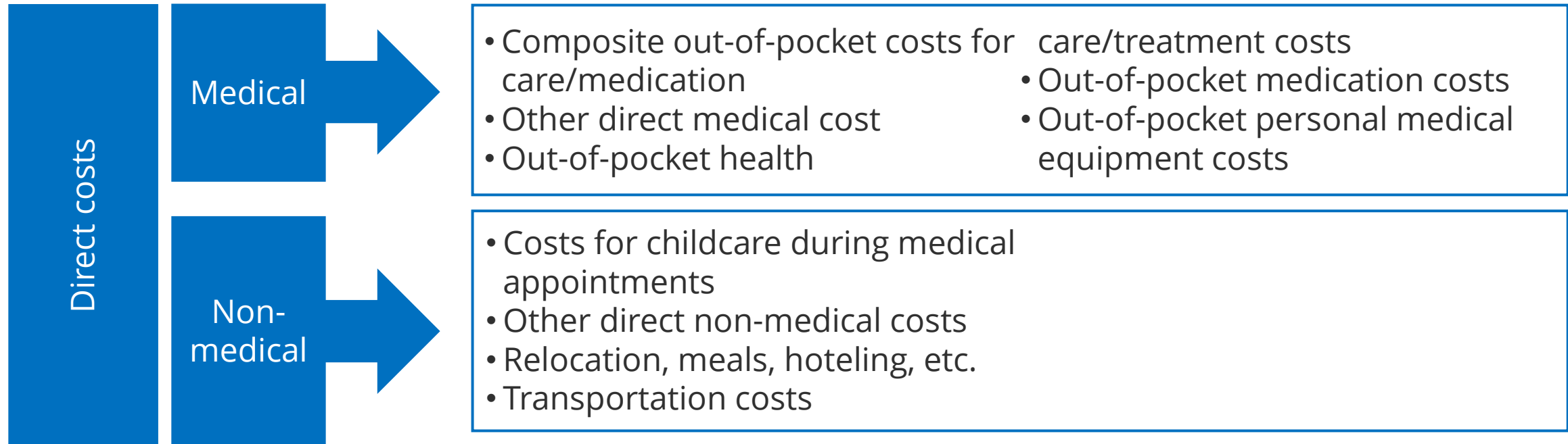
1. Concluded studies, with reports
2. Ongoing studies, with research plans



In order to determine where we are capturing economic outcomes and for which stakeholders.



Economic outcomes in PCORI-funded studies



Economic outcomes in PCORI-funded studies

Indirect burdens



- Lost income/wages
- Miles travelled to medical care
- Time in health care (hospital LOS, time to attend appointments)
- Time off school
- Time off work
- Time spent navigating insurance or billing
- Time spent providing unpaid caregiving
- Time travelling to medical care
- Time, other (other PCBEO time outcome not listed)

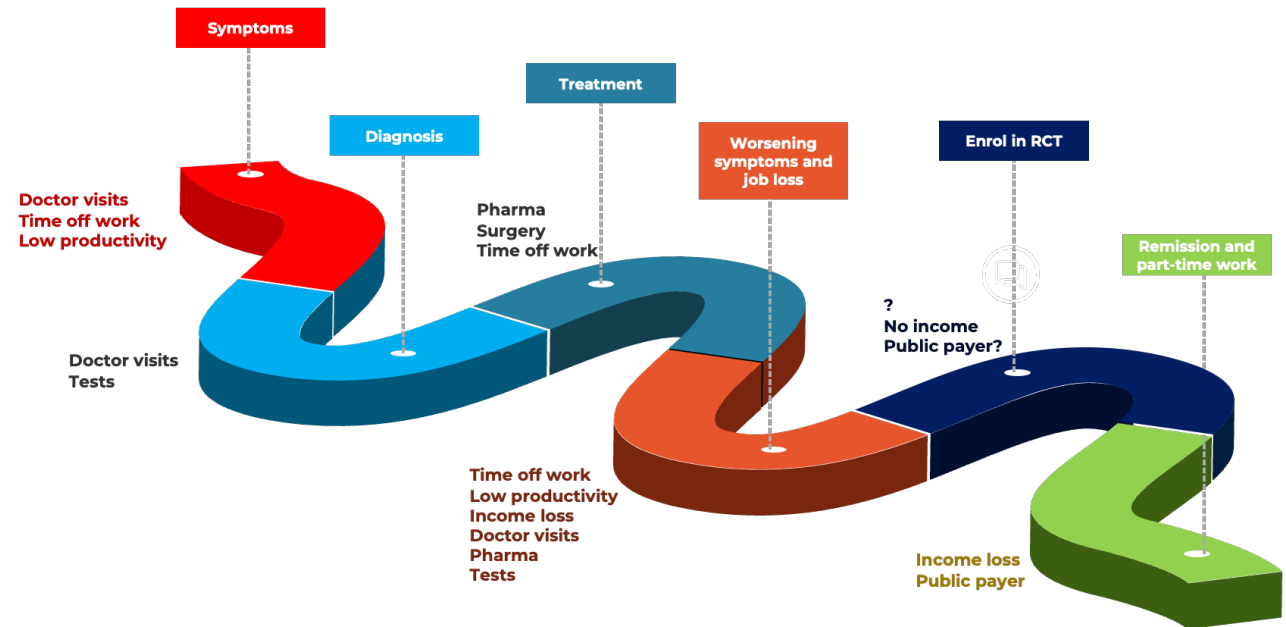
Economic outcomes in PCORI-funded studies

Intangible
burdens

- 
- Changes in financial situation due to healthcare costs/ reduced income from care including change in spending habits, food insecurity, inability to meet monthly expenses
 - Composite financial burden score/question
 - Decreased social life or quality-of-life due to medical costs
 - Delaying or forgoing medical care or medications due to cost
 - Diminished savings, assets, or household wealth due to medical costs/care
 - Fear and anxiety about future ability to afford medical treatments
 - Hindered career advancement, change in employment status, or early retirement
 - Medical debt
 - Other intangible burden
 - Stress and anxiety caused by medical costs (i.e., financial toxicity)
 - Use of financial assistance program or borrowing money to pay for care

Economic outcomes in PCORI-funded studies

- PCORI is observing limited inclusion of economic outcomes, and not the breadth/coverage of outcomes we've just discussed
- Our workshop today is to help us
 - Develop increasingly richer guidance
 - To support more robust inclusion of the economic outcomes that matter to employers.



What do you believe should count?

What do you believe should count when assessing the impact of health and health benefits?

- What *inputs* do you believe should count?
- What *outputs and outcomes* do you believe should count?

Personal out-of-pocket costs	Absenteeism	Disability	Retention	Employee experience/ QoL
Utilization	Presenteeism/ productivity	Caregiving obligations	Workforce exit	Other impacts What are we missing?

Economic Outcomes Measurement

What are *meaningful metrics*?



Principles for the Consideration of the Full Range of Outcomes Data in PCORI-Funded Research

1. Patient & Caregiver Focus
2. Stakeholder Relevance
3. Appropriate Data Collection
4. Enhance Relevance Through Economic Analyses



Principles for the Consideration
of the Full Range of Outcomes Data
in PCORI-Funded Research

March 9, 2021

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Impact analyses for multi-stakeholder needs

- PCORI has supported case studies in the past that seek to show an expansive, multi-stakeholder set of metrics



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ORIGINAL ARTICLE

A Randomized Trial Comparing Antibiotics with Appendectomy for Appendicitis

Author: The CODA Collaborative* [Author Info & Affiliations](#)

Published October 5, 2020 | N Engl J Med 2020;383:1907-1919 | DOI: 10.1056/NEJMoa2014320
VOL. 383 NO. 20 | Copyright © 2020

Abstract

BACKGROUND

Antibiotic therapy has been proposed as an alternative to surgery for the treatment of appendicitis.

METHODS

We conducted a pragmatic, nonblinded, noninferiority, randomized trial comparing antibiotic therapy (10-day course) with appendectomy in patients with appendicitis at 25 U.S. centers. The primary outcome was 30-day health status, as assessed with the European Quality of Life–5 Dimensions (EQ-5D) questionnaire (scores range from 0 to 1, with higher scores indicating better health status: noninferiority margin, 0.05 points). Secondary

- Subjects assigned half to surgery and half to antibiotics.
- One month after treatment, general health was no worse for patients assigned to receive antibiotics than it was for those assigned to receive surgery.
- Three months after treatment, 29 percent of patients treated with antibiotics went on to receive surgery.
- Also, after three months, compared with patients who received surgery, those who received antibiotics:
 - Were more likely to have had a hospital stay right after treatment
 - Were more likely to have had an emergency room (ER) visit after treatment
 - Spent slightly more time in the hospital for complications or to have surgery after treatment
 - Missed fewer days of work

Impact analyses for multi-stakeholder needs

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Expanding antibiotics uptake from 20% to 50% of patients results in:

13,323 additional hours of travel time

639,682 fewer forgone work hours for patients and caregivers

\$31,695,246 saved forgone wages and travel costs

Saving **\$192 million** in medical and indirect costs with **27,410** fewer appendectomies performed.

A **\$332 million** increase in post-index health care costs, as well as **149** missed appendiceal cancer cases that are not diagnosed.

These cost-savings are driven by a **\$493 million** reduction in initial appendicitis treatment costs and by a **\$32 million** reduction in patient and caregiver indirect costs.

Work-oriented economic impacts

- People live in a system of decision-making that includes other stakeholders with broader and/or adjacent perspectives
- E.g., if a person is compelled to take time off work,
 - They may lose income directly (e.g., with shift work)
 - They may lose income indirectly (i.e., lost vacation time)
 - *Their employer* may lose productivity through absenteeism and presenteeism
- This with no consideration to direct medical or other care costs or cost-sharing.

Work-oriented economic impacts

- One example is the outcome measure for Work Productivity and Activity Impairment (WPAI)
- Reilly Associates Health Outcomes Research.
<http://www.reillyassociates.net> (as of 16 August 2026).

Work Productivity and Activity Impairment (WPAI)



Work Productivity and Activity Impairment Questionnaire: General Health V2.0 (WPAI:GH)

The following questions ask about the effect of your health problems on your ability to work and perform regular activities. By health problems we mean any physical or emotional problem or symptom. *Please fill in the blanks or circle a number, as indicated.*

- 1) Are you currently employed (working for pay)? _____NO _____YES
If NO, check "NO" and skip to question 6.

The next questions are about the **past seven days**, not including today.

- 2) During the past seven days, how many hours did you miss from work because of your health problems? *Include hours you missed on sick days, times you went in late, left early, etc., because of your health problems. Do not include time you missed to participate in this study.*

_____HOURS

- 3) During the past seven days, how many hours did you miss from work because of any other reason, such as vacation, holidays, time off to participate in this study?

_____HOURS

- 4) During the past seven days, how many hours did you actually work?

_____HOURS *(If "0", skip to question 6.)*

Work Productivity and Activity Impairment (WPAI)



5) During the past seven days, how much did health problems affect your productivity while you were working?

Think about days you were limited in the amount or kind of work you could do, days you accomplished less than you would like, or days you could not do your work as carefully as usual. If health problems affected your work only a little, choose a low number. Choose a high number if health problems affected your work a great deal.

Consider only how much health problems affected productivity while you were working.

Health problems
had no effect on
my work

0 1 2 3 4 5 6 7 8 9 10

Health problems
completely prevented
me from working

CIRCLE A NUMBER

Work Productivity and Activity Impairment (WPAI)



6) During the past seven days, how much did health problems affect your ability to do your regular daily activities, other than work at a job?

By regular activities, we mean the usual activities you do, such as work around the house, shopping, childcare, exercising, studying, etc. Think about times you were limited in the amount or kind of activities you could do and times you accomplished less than you would like. If health problems affected your activities only a little, choose a low number. Choose a high number if health problems affected your activities a great deal.

Consider only how much health problems affected your ability to do your regular daily activities, other than work at a job.

Health problems
had no effect on
my daily
activities

0 1 2 3 4 5 6 7 8 9 10

Health problems
completely prevented
me from doing my
daily activities

CIRCLE A NUMBER

An example of the WPAI

- A 2018 study into lower back pain
- The use did not include hours working/not working
- Reflects our ongoing work to help applicants better understand the needs of all decision-makers.



PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE
FINAL RESEARCH REPORT

Can Using Patient Reports of Low Back Pain Help to Better Direct Patients to Treatments?

Dan Cherkin, PhD¹; Benjamin Balderson, PhD¹; Rob Wellman, MS¹; Clarissa Hsu, PhD^{1,2}; Karen J. Sherman, PhD¹; Sarah C. Evers, MPH¹; Rene Hawkes, BS¹; Andrea Cook, PhD¹; Martin D. Levine, MD³; Diane Piekara, PT⁴; Pam Rock, PT⁴; Katherine Talbert Estlin, MD⁵; Georgie Brewer⁹; Mark Jensen⁹; Anne-Marie LaPorte⁹; John Yeoman⁹; Gail Sowden, MSc⁶; Jonathan C. Hill, PhD⁶; Nadine E. Foster, DPhil⁶

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⁹Patient Partner

Original Project Title: Evaluation of a Patient-Centered Risk Stratification Method for Improving Primary Care for Back Pain

PCORI ID: 398

HSRProj ID: 20143334

ClinicalTrials.gov ID: NCT02286141

To cite this document, please use: Cherkin D, Balderson B, Wellman R, et al. (2018). *Can Using Patient Reports of Low Back Pain Help to Better Direct Patients to Treatments?* Patient-Centered Outcomes Research Institute (PCORI). <https://doi.org/10.25302/11.2018.CER.398>

Use of WPAI is ongoing

- Three currently funded awards are also measuring productivity with the WPAI, including time off work
- This is just one example of where we can generate data that are consistent and coherent, accretive, generalizable *and specific*
 - Comparing Two Ways To Treat Patients With Rheumatoid Arthritis
 - Comparing Antibiotics and Over-the-Counter Treatments for Acute Sinus Infections
 - Comparing Digital Therapy, Trazodone and Daridorexant for Menopause-Related Insomnia Symptoms

What would you use?

- What would you use in decision-making?
 - Final Research Reports?
 - Impact analyses?
 - Results directly from the study, or do they need to be replicated or recontextualized
 - Is it a matter of general applicability vs specific for, e.g., value-based contracting?
- Is there are trade-off/what is the trade-off between *findings*, *learnings*, and *data*?

What is realistically available today?

What are employers (you!) measuring?

- What data do you have?
- Where are the gaps and silos?

- What do you trust?
- Where are you relying on vendor estimates or assumptions rather than your own information?

Case studies: making a benefits decision



Case study: glucagon-like peptide-1 (GLP-1) medications

- Originally for Type 2 diabetes
- Now used more widely in weight loss
- Creating complex financial decisions for employers and employer-sponsored health plans
- Originally high (now variable) and persistent costs
- Require ongoing use, hence high recurring monthly costs
- Even with copays, there is increasing stress on premiums
- Benefits include health, productivity, and *retention of staff*
- Trade-offs against medical costs, employer ROI, obesity costs
- Consideration of timeframes of benefit vs employment
- Consideration of digital firewalls and HIPAA

Case study: glucagon-like peptide-1 (GLP-1) medications



- There is no general cost-benefit or ROI
- There are likely employer or plan-specific
- Similarly, management strategies vary:
 - plan limits
 - prior authorization
 - direct-to-employer prescription plans
 - FSAs and HRAs

Where do employers find the information they need for the decisions they need to make?

Case study: gene therapy

- One-off, up-front prices into millions of dollars
- No guarantee of durable or curative effect
- Individually rare, but collectively increase use is applying pressure to premiums
- For small employers, even a handful strain reserves and balance sheets
- Benefits can be tremendous – e.g., curing hemophilia in adults or SMA in children
- With employee tenure, how does the employer determine their benefit?
- Consideration of digital firewalls and HIPAA

Case study: gene therapy

- There is no general cost-benefit or ROI
- There are likely employer or plan-specific
- Similarly, management strategies vary:
 - Limit benefits – including to prevent adverse selection
 - Group carve-outs
 - Relying on stop-loss
 - Outcome-based risk-sharing agreements

Where do employers find the information they need for the decisions they need to make?

Wrap-up, learnings, and next steps



- Themes that have emerged
 - Employer priorities
 - Outcomes
 - Outcome measures
 - Knowledge gaps.

Next steps

- PCORI's employer economic outcomes guidance
- Come see us at the *Annual Forum of the National Alliance of Healthcare Purchaser Coalitions!*
- Seek out additional opportunities to see economic outcomes here at IBI's forum
- Be in touch.