Chair Kimberly Hendricks will convene a public meeting of the PEBB Board on Tuesday, March 17, 2020, at 9:30 a.m. The meeting will be held in the boardroom of the Health Licensing Office at 1430 Tandem Ave., Ne, Suite 180, Salem, Oregon.

PEBB BOARD AGENDA
MARCH 17, 2020

I. 9:30 a.m. –9:35 a.m. Attachment 1 **ACTION**	**Welcome & Approval of February 19, 2020 meeting minutes** *Kimberly Hendricks, Chair*
II. 9:35 a.m. – 10:35 a.m. Attachment 2	**Medical, Dental, Vision Renewals – Round 2** *Nick Albert and Emery Chen, Mercer Health and Benefits, LLC*
III. 10:35 a.m. – 12:20 p.m. Attachments 3, 3a and 3b	**Carrier Definitive Proposals for Meeting 3.4% Cap. - Medical** *Kaiser; Dr. Keith Bachman, PEBB Medical Director and Sophary Sturdevant, Executive Account Manager*
11:05 a.m. – 11:20 a.m.	***BREAK***
	Carrier Definitive Proposals for Meeting 3.4% Cap. - Medical *Moda; Dr. Jim Rickards, Senior Medical Director, Bill Dwyer, Director of Analytics, Carly Rodriguez, Director of Clinical Innovation and Erica Hedberg, Senior Account Executive* *Providence Medical Plans; Robert Gluckman. MD, MACP, Chief Medical Officer*
IV. 12:20 p.m. – 12:35 p.m. Attachments 4 and 4a **ACTION**	**Hospital Cap Rules: Approve to file as Temporary Rules & Local Government Rules; Approve to file Notice of Proposed Rule** *Margaret Smith-Isa, Program Development Coordinator* *April Kelly, Program Benefits and Services Coordinator*
V. 12:35 p.m. – 12:45 p.m. **ACTION**	**COVID 19 Benefit Coverage** *Ali Hassoun, Director*

VI. 12:45 p.m. – 12:50 p.m. **Public Comment and Other Business**

- Open Enrollment Report (Handout A)

Adjourn

Public Employees' Benefit Board
Meeting Minutes
February 18, 2020

The Public Employees' Benefit Board held a regular meeting on February 18, 2020, at the DHS Health Licensing Office, Suite 180, 1430 Tandem Ave. Ne, Salem, Oregon 97301. Chair Kimberly Hendricks called the meeting to order at 10:00 a.m.

Attendees

Board Members:
Kimberly Hendricks, Chair
Shaun Parkman, Vice Chair
Kim Harman (phone)
Dana Hargunani
Siobhan Martin
Jeremy Vandehey (phone)

Board Members Excused/Absent:
Senator Betsy Johnson (non-voting member)
Representative Andrea Salinas (non-voting member)
Mark Perlman

PEBB Staff:
Ali Hassoun, Director
Damian Brayko, Deputy Director
Rose Mann, Board Policy and Planning Coordinator
Margaret Smith-Isa,
Glenn Baly, Program Policy Liaison
Rebecca Aparicio, Executive Assistant

Consultants:
Emery Chen, Mercer Health and Benefits, LLC
Nick Albert, Mercer Health and Benefits, LLC
Michael Garrett, Mercer Health and Benefits, LLC

I. Call to order, welcome new Board member and approval of January 21, 2020 Board meeting minutes (Attachment 1)

Chair Kimberly Hendricks called the meeting to order welcomed new Board member Kate Nass. Chair Hendricks called for a motion to approve the January 21, 2020 Board meeting minutes.

MOTION

Siobhan Martin moved to approve the minutes from January 21, 2020 PEBB Board meeting. Dana Hargunani seconded the motion. The motion carried 5 - 0.

II. Double Coverage Surcharge (Attachments 2 and 2a)

Ali Hassoun and PEBB staff reviewed proposals for the double-coverage surcharge.

MOTION

Siobhan Martin moved to approve Option B of a $5.00 surcharge for PEBB subscribers (not dependents) only. Dana Hargunani seconded the motion. The motion carried 5 - 0.

III. Renewal Responses – Round 1 – Attachment 3

Emery Chen and Nick Albert, Mercer Health and Benefits LLC presented information and led the Board in discussion on renewal responses for the 2021 plan-year.

IV. Carrier Health Assessment Reports on Health Coaching– Attachments 4, 4a and 4b

Kaiser Permanente; Kay Zimmerli, Senior Workforce Health Consultant, Keith Bachman, MD, PEBB Medical Director and Sophary Sturdevant, Executive Account Manager

Moda; Jessica Culver, Senior Manager of Population Health

Providence; Megan Thompson, Health Management Consultant and Chelsea Warren, Health Coach Supervisor

V. Other Business/ Public Comment

There being no public comment nor further business to come before the Board, Chair Kimberly Hendricks adjourned the meeting at 12:35 p.m.

Attachment 2

2021 Round 2 Renewal Review

Oregon Public Employees' Benefit Board
PB Attachment 2
March 17, 2020

Nick Albert
Emery Chen

Photo by everett mcintire on Unsplash

Agenda

- Financial Overview
  - Composite Rate
  - Carrier Fee/Premium Increases
  - Trend & Utilization Review
- Medical Renewal Considerations
- Non-medical Renewal Considerations
- The Standard Life/Disability Renewal
- Appendix

Guiding Principles

Triple Aim	**Improve the quality of care**		**Improve the patient experience**		**Deliver care more efficiently**	
STATE OF OREGON Office of the Governor KATE BROWN	Improving Behavioral Health systems & increase value and pay for performance		Address social determinants of health and equity		Maintain a sustainable cost growth	
OHA Guiding Principles	**Access**	**Innovation with accountability**	**Patient-centered**	**Health equity**	**Collaborative partnerships**	**Social determinants of health**
PEBB Vision	An innovative delivery system in communities statewide that uses evidence-based medicine to maximize health and use dollars wisely	A focus on improving quality and outcomes, not just providing health care	Promotion of health and wellness through consumer education, healthy behaviors, and informed choices	Accessible and understandable information about costs, outcomes, and other health data that is available for informed decision-making	Appropriate provider, health plan and consumer incentives that encourage the right care at the right time and place	Benefits that are affordable to employers and employees

Health Plan Success Measure Areas

Patients

Delivery System

Plan Sponsor and Administrator

Financial Overview

Composite Rates
Historical & Projected

Year	Composite Rate Using Prior Year's March Census	% Change	Composite Rate Using Plan Year's March Census	% Change From Prior Composite
2014	$1,333.58		$1,327.47	
2015	$1,321.53	-0.9%	$1,313.06	-1.5%
2016	$1,356.47	2.6%	$1,347.31	2.0%
2017	$1,416.93	4.5%	$1,405.13	3.6%
2018	$1,464.20	3.3%	$1,452.68	2.5%
2019	$1,513.98	3.4%	$1,495.83	2.2%
2020 (w/Premium Tax and 2.676% funding assessment)	$1,594.86	5.3%		
2021 (Prior to potential funding assessment)	$1,633.24	2.4%		

- Projected composite rate is below the 3.4% limitation
  - PEBB has approximately $10.4M buffer projected for 2021

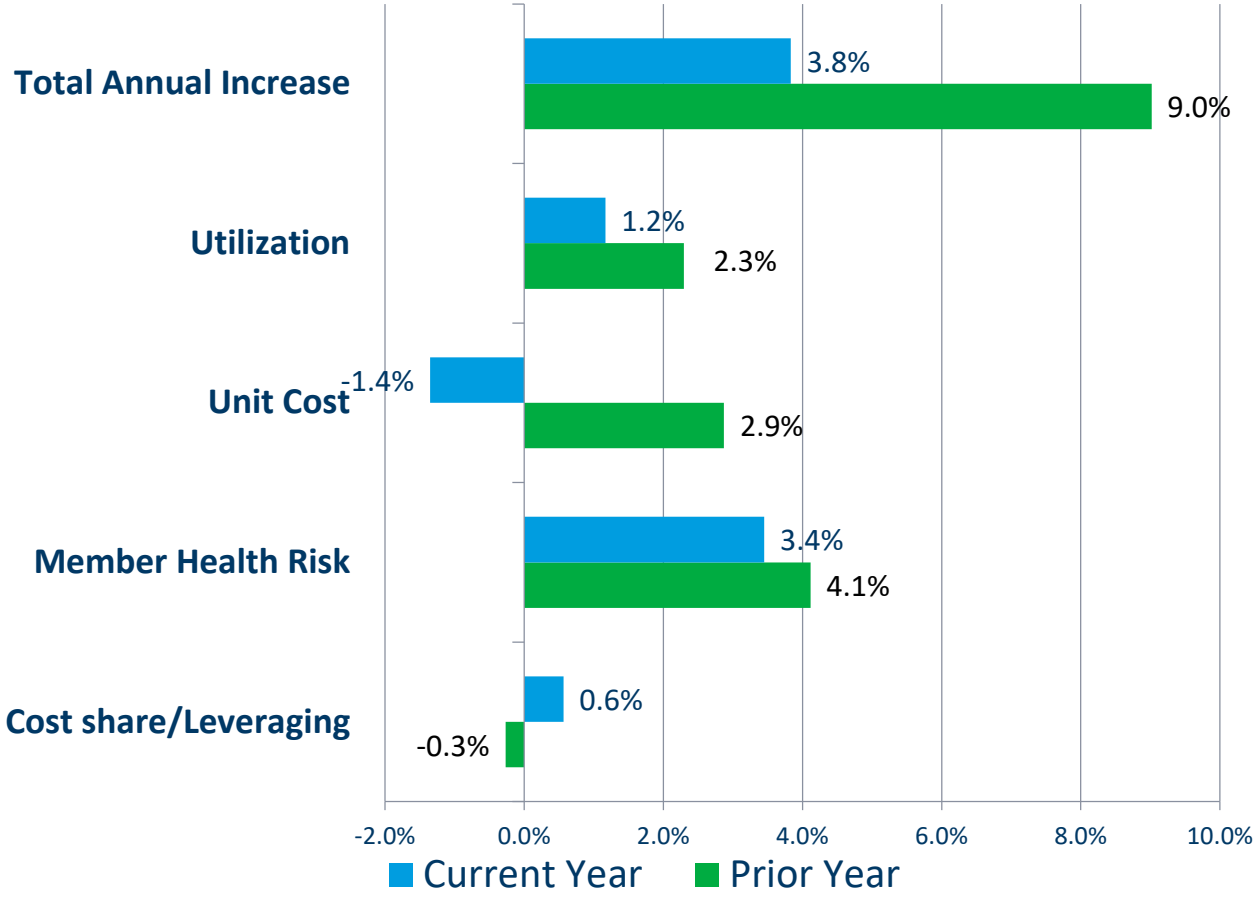
Renewal Overview
Summary of Coverages

Carrier	Line of Coverage	Admin Fee Increase	Premium /Accrual Rate Increase	Total Projected 2021 Active Premiums	Plan's Share of Composite Increase
Providence - Statewide	Medical / Rx	2.7%	6.3%	$380,100,000	1.1%
Providence - Choice	Medical / Rx	2.8%	5.1%	$318,200,000	0.7%
Kaiser	Medical / Rx	n/a	3.4%	$181,500,000	0.3%
Moda	Medical / Rx	1.9%	6.2%	$102,300,000	0.3%
Moda / DDOR	Dental	1.0%	2.5%	$47,500,000	0.1%
Willamette Dental Group	Dental	n/a	0.9%	$8,800,000	0.0%
Kaiser	Dental	n/a	0.0%	$15,700,000	0.0%
VSP	Vision	0.0%	1.3%	$10,900,000	0.0%
The Standard	Basic Life	n/a	0.0%	$600,000	0.0%
Total				**$1,065,600,000**	2.4%

Carrier	Line of Coverage	Fee Increase
ASI	Flex	0.0%
BHS	COBRA / Retiree Admin	0.0%
Cascade Centers	EAP	0.0%

Coverage is not included in the composite rate

Trend & Utilization by Plan
Providence Choice



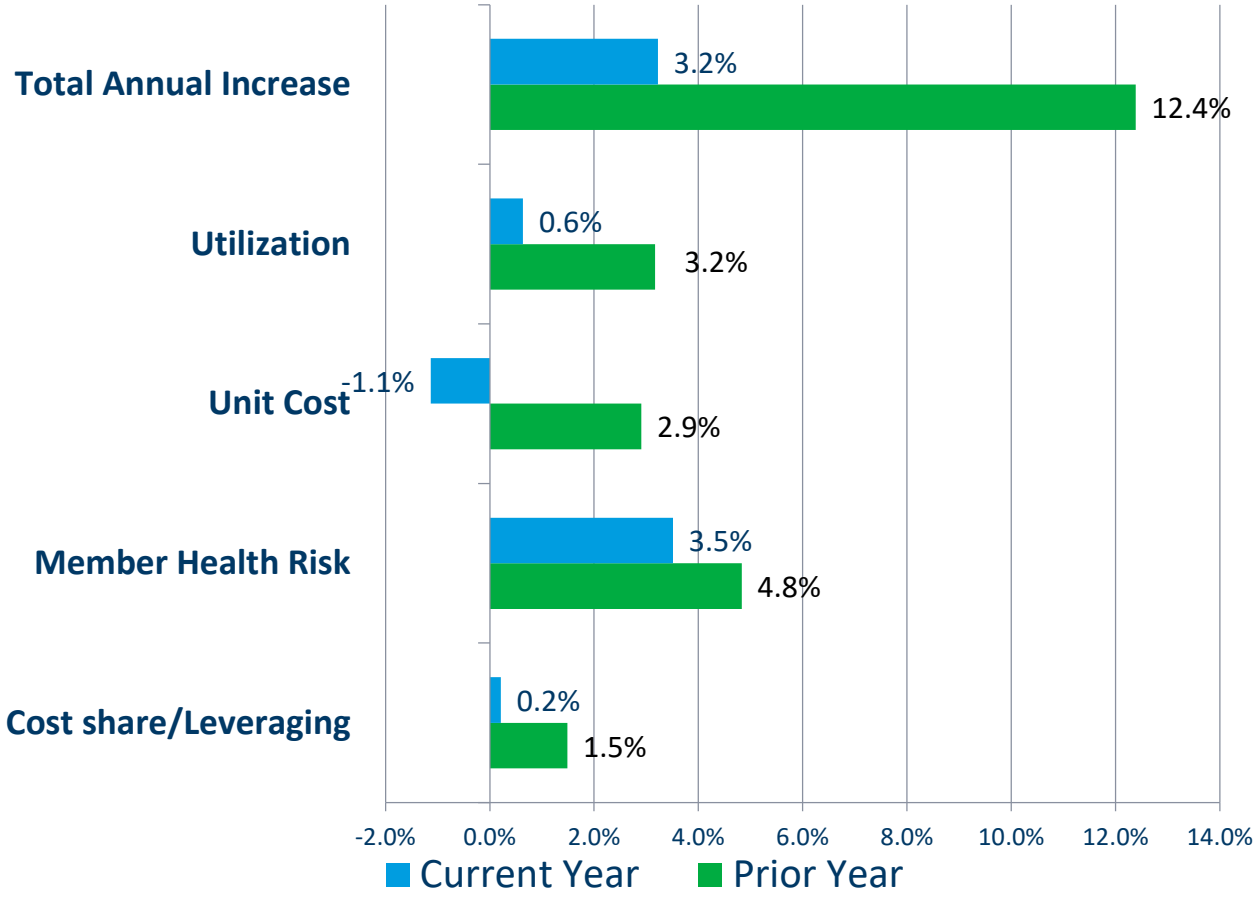
Fee & Premium Increase:

- Admin: 2.8%
- Premium: 5.1%

Key Cost Drivers:

1. Rx specialty drug utilization
2. Inpatient maternity cost
3. Outpatient specialty drug utilization

Trend & Utilization by Plan
Providence Statewide



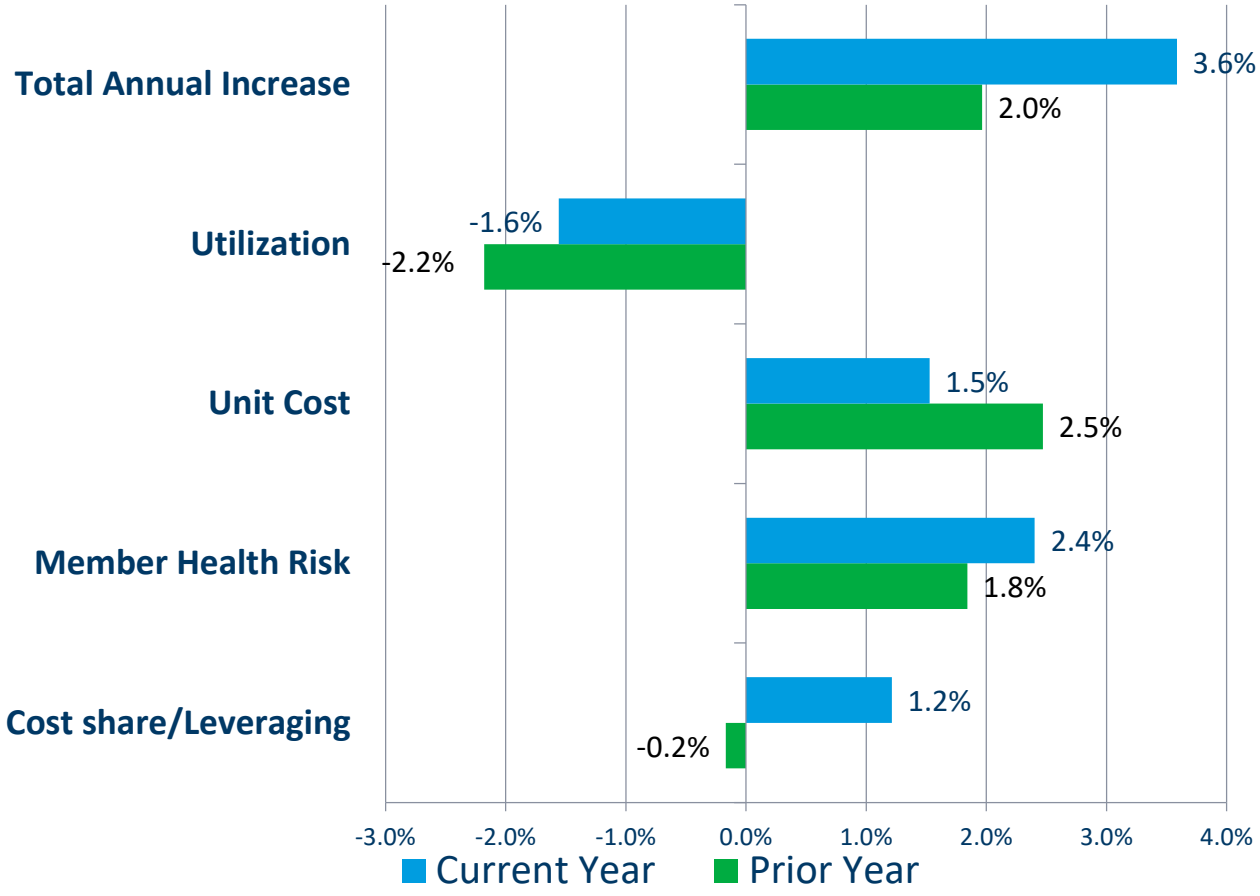
Fee & Premium Increase:

- Admin: 2.7%
- Premium: 6.3%

Key Cost Drivers:

1. Rx specialty drug utilization
2. Outpatient specialty drug utilization
3. Professional specialty drug utilization

Trend & Utilization by Plan
Moda



Fee & Premium Increase:

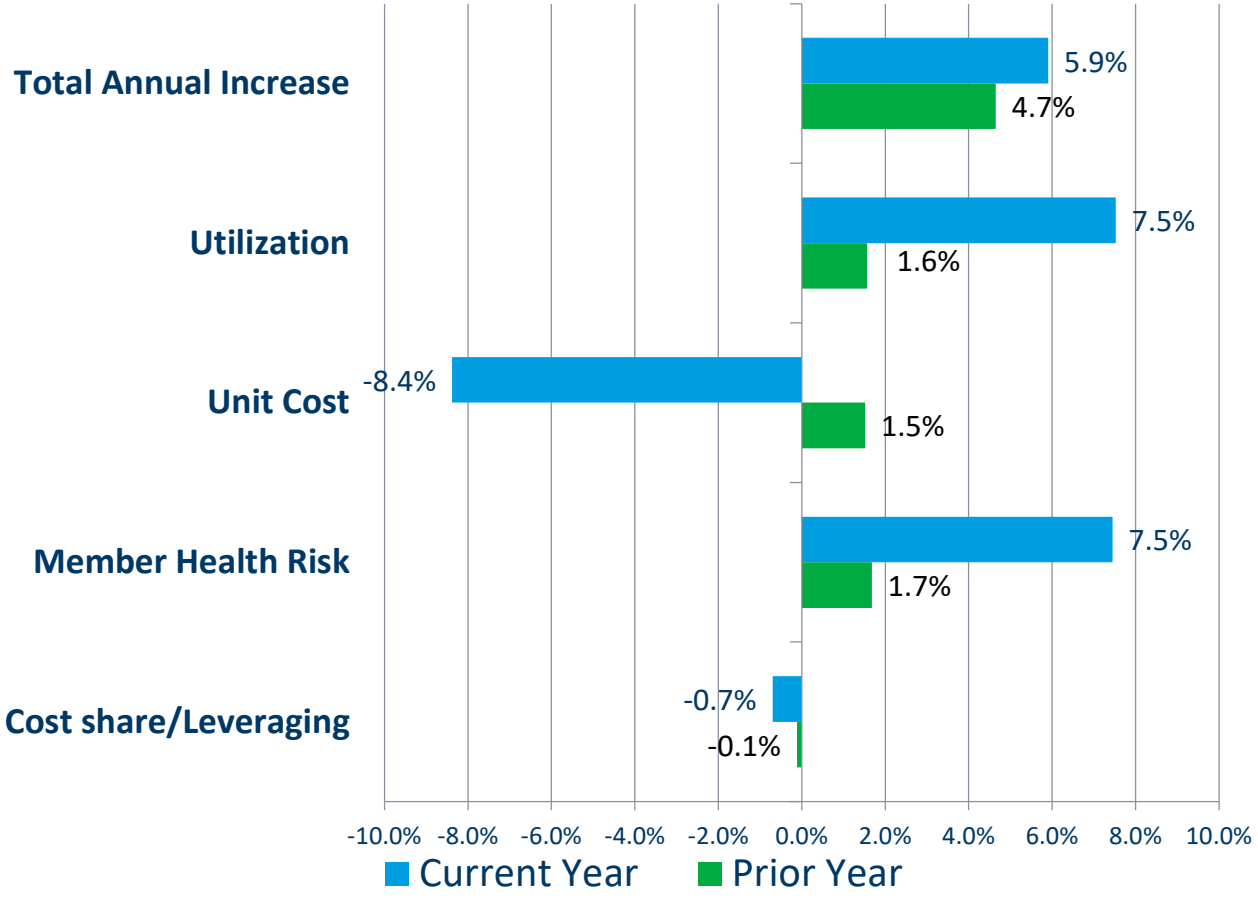
- Admin: 1.9%
- Premium: 6.2%

Key Cost Drivers:

1. Professional specialty drug cost
2. Rx specialty drug cost
3. Physician non-specialty office visits

Trend & Utilization by Plan

Kaiser — HMO and Deductible



Fee & Premium Increase:

- Admin: n/a
- Premium: 3.4%

Key Cost Drivers:

1. Rx specialty drug utilization
2. Inpatient maternity utilization
3. Outpatient mental health utilization

Medical Renewal Considerations

2

Medical Renewal
Questions

Long-Term Strategy

- Oncology drug neutral site of care
- Centers of Excellence (COE)
- Expert Medical Opinion (EMO)
- Digital Health Point Solutions

Items that may be available for 2021, but more likely will be part of the medical RFP

Tactical Considerations for 2021

- Massage therapy
- Fertility Benefits
- Carrier specific changes:
  - PHP: eviCore (delegated prior authorization)
  - Kaiser: vision benefit

Tactical issues; Board will make decisions for 2021 renewal

Long-Term Strategy
Summary of Key Considerations and Carrier Feedback

	Providence (PHP)	Moda	Kaiser (KP)
Oncology Site of Care Steerage	• PHP recommends specific supportive oncology meds for site of care program; dependent on which hospitals are approved for the program	• Recommends a phased approach for oncology site of care steerage, starting with "supportive" oncology medications	• Not asked of Kaiser as care is already directed to appropriate site due to integrated system
Center of Excellence (COE)	• Does not recommend a formal COE program at this time • Many Providence Hospitals perform as COE-"like" functions	• Does not have an existing COE • Moda is willing to partner/build with PEBB specifications	• KP offers internal and external COEs regionally and nationally, which aligns to the best-practices Mercer would expect from COEs
Expert Medical Opinion (EMO)	• PHP does not have a formal EMO program at this time, but would be willing to partner with an outside vendor should PEBB pursue that route	• Moda does not have a formal EMO program at this time, but is looking into a vendor partner with clinical nurses as case managers and physician led teams	• EMOs are not utilized by KP; The Permanente Group physicians work closely with members and other providers on treatment plans

Carriers will be presenting on their cost containment strategies later during this Board meeting

Medical Renewal Considerations

Fertility Benefits

2a

Current State of Fertility Benefits
PEBB and OEBB

Benefit	PEBB Benefit	OEBB Benefit
Cost Sharing	All INF services covered at 50% Do not apply to the OOPM (for Kaiser, benefit applies to OOPM)	Diagnostic services at standard plan coinsurance Ovulation induction and intrauterine insemination are covered at 50% Pharmacy benefits at standard coinsurance Does not apply to OOPM
Diagnosis	Covered (unless infertility is not the result of a medical condition or is the result of the aging process)	Covered (unless infertility is not the result of a medical condition)
Treatment of Infertility	Covered	Covered, includes surgery to treat the underlying cause of infertility
Ovulation Induction & Intrauterine Insemination	Artificial insemination is covered with a lifetime max of 6 cycles and sperm wash (for Kaiser, 50% coinsurance)	Covered at 50% up to a lifetime max of $15,000
Removal and preservation of oocytes	Not covered	Covered only when there is a diagnosis of cancer and prior to any cancer treatment (Kaiser: not covered)
In-vitro Fertilization and other Advanced Reproductive services	Not covered, including: • IVF – In-vitro Fertilization • ZIFT – Zygote Intra-Fallopian Transfer • GIFT – Gamete Intra-Fallopian Transfer • PGD – Pre-Implantation Genetic Diagnosis • ICSI – Intracytoplasmic Sperm Injection • Ovum microsurgery	Not covered, including: • IVF – In-vitro Fertilization • ZIFT – Zygote Intra-Fallopian Transfer • GIFT – Gamete Intra-Fallopian Transfer • PGD – Pre-Implantation Genetic Diagnosis • ICSI – Intracytoplasmic Sperm Injection • Ovum microsurgery
Infertility medications	Infertility related medications injectable and supplies are covered (Kaiser: oral and injectable infertility meds not covered)	Pharmacy services and supplies related to infertility covered at plan coinsurance up to a lifetime maximum of $10,000
Reversal of voluntary sterilization	Not covered	Not covered
Eligibility for infertility services	Infertility is determined by a demonstrated inability to become pregnant or 3 miscarriages	More complex definition
Donor compensation	Acquisition cost for semen covered Donor semen from donor banks or other providers not covered	Acquisition costs for semen covered No donor compensation for time & efforts
Surrogacy costs	Services for unenrolled surrogate mothers not covered	Services for unenrolled surrogate mothers not covered

PEBB not subject to lifetime max for basic medical treatment of infertility

Advanced reproductive services are NOT covered by either entity

PEBB Rx benefits covered under pharmacy benefit, without $10K cap

MERCER

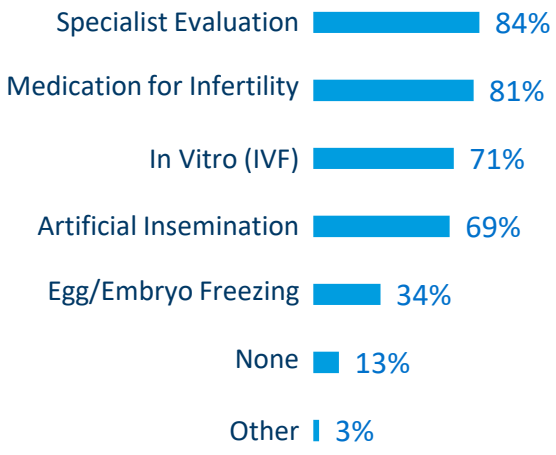
Notes:
1. PEBB infertility definition excludes same sex partners while OEBB does not
2. Infertility medications are not covered for PHP Statewide

Benchmarking on Fertility Benefits

Survey from the National Business Group on Health

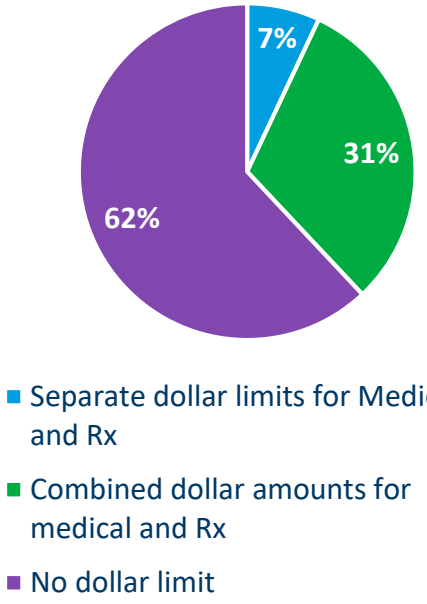
% of Infertility Treatments (With or Without Restrictions) Covered by Health Plans

(Based on 68 respondents)



Types of Dollar Limits in Place for Infertility Treatments

(Based on 55 Respondents)



Lifetime Dollar limits for Infertility Treatment

(Based on 28 Respondents)

Minimum	$5,000
Median	$20,000
Maximum	$75,000
Average	$23,800

Benchmarking data comes from the October 2018 National Business Group on Health survey

Reminder: There are Other Family Friendly Benefits to Consider…

Maternity	Infertility treatment	Fertility Support	Surrogacy	Adoption
Unlimited coverage in number of journeys and pregnancy complications	*Infertility diagnosis and treatment* Assisted reproductive technology (IVF)	*Fertility diagnosis* *Infertility treatment* Fertility care Assisted reproductive technology (IVF) Egg freezing Sperm storage Egg, Sperm Procurement	Surrogate compensation Agency fees Assisted reproductive technology (IVF) Eggs, sperm, embryo donors Gametes and embryo freezing	Travel expenses International services Legal fees Parental Leave
Counseling	**Mental health**	**Medical expenses**	**New born care**	

Currently Covered

Could be reviewed alongside infertility coverage, or added during a later renewal

MERCER

Guiding Principles for Fertility Benefits
Mercer's Recommendation

- Benefits should:
  - Focus on the goal of facilitating healthy babies for all employees wanting a child
  - Reflect the best science and practice
  - Remove unnecessary barriers
  - Be wise stewards of employer and employee dollars
  - Be relevant to all kinds of families regardless of sexual orientation, single or partnered, medical condition
  - In keeping with the American Society of Reproductive Medicine guidelines, single embryo transfer should be encouraged
- To the extent PEBB can align with OHA or the Oregon Office of Equity and Inclusion (OEI), we should do so

Mercer Recommendation

PEBB should conduct a full inclusive benefits review

Mercer is already conducting a transgender benefits review, ensuring those services align with WPATH standards of care for all carriers

Inclusive benefits typically include IVF and other Advanced Reproductive Techniques (ARTs)

PEBB could add coverage for IVF and ARTs in 2021

1st Stage (2021)

Pending final composite increase, Mercer suggests adding IVF and other ARTs for 2021:

IVF – In-vitro Fertilization
ZIFT – Zygote Intra-Fallopian Transfer
GIFT – Gamete Intra-Fallopian Transfer
PGD – Pre-Implantation Genetic Diagnosis
ICSI – Intracytoplasmic Sperm Injection
Ovum microsurgery
eSET – Elective Single Embryo Transfer
Assisted Hatching

2nd Stage (2022+)

Full inclusive benefits review to start after renewals are finalized, with benefits to be implemented for 2022 plan year

Include adoption, surrogacy, and other fertility support

MERCER

In-Vitro Fertilization and Advanced Reproductive Techniques
Cost Estimate

- Possible benefit design:

Coverage for:	Benefit	Composite Impact[1]
In-vitro Fertilization and other Advanced Reproductive services • IVF — In-vitro Fertilization • ZIFT — Zygote Intra-Fallopian Transfer • GIFT — Gamete Intra-Fallopian Transfer • PGD — Pre-Implantation Genetic Diagnosis • ICSI — Intracytoplasmic Sperm Injection • Ovum microsurgery • eSET — Elective Single Embryo Transfer • Assisted Hatching	Combined medical / Rx maximum of $25,000 Does not accrue towards OOPM	+0.3% +$3,550,000

[1] Includes additional maternity costs for members who are successful with their treatment

MERCER

Medical Renewal Considerations

Other Tactical Considerations

2b

Tactical Considerations
Massage Therapy Benefit

- Massage therapy was added as a covered benefit effective January 1, 2020 under the alternative care benefit, subject to a $1,000 benefit maximum
- Book of business benefit for alternative care, including massage, is $1,500
- Providence reported 6,464 unique Choice enrollees used the alternative care benefits, with 374 members meeting the maximum (5.8%)
- Moda reported 0.39% of their total enrollees reached the $1,000 maximum

Pricing Impact — $1,500 maximum		
Plan	**Premium Impact**	**Composite Impact**
Choice[1]	$1,600,000	0.1%
Moda	$500,000	0.0%
Kaiser Deductible[2]	$50,000	0.0%
Total Impact	**$2,150,000**	**0.2%**

Mercer's Recommendation

- PHP and Moda book of business alternative care benefit is $1,500
  - Kaiser's norm is $1,000
- If budget allows, Mercer would recommend increasing the alternative care maximum to $1,500
- Keep the existing visit-limitations in place for massage

[1] Statewide plan has 60-visit limit for alternative care, with no dollar limit; Massage Therapy coverage was not added to the Statewide plan
[2] Massage therapy was added only to the Kaiser Deductible plan

MERCER

Tactical Considerations
eviCore Medical Necessity Review

- For the January 1, 2020 renewal, PEBB elected to add eviCore physical and occupational therapy medical necessity review after the twelfth visit for both Choice and Statewide
  - Moda already utilizes eviCore, with a review taking place after six visits
- In October 2019, PHP requested to delay implementation to January 1, 2021
- **Based on continuing discussions with Providence, Providence does not feel comfortable implementing this for the PEBB population for the 2021 plan year**

Tactical Considerations

Moda — Specialty Lite & RTBC

Specialty Lite

- Current PEBB benefits limit Specialty medications to a maximum of a 30-day supply
  - Promotes frequent interaction between pharmacists and members
  - Minimizes waste associated with treatment regimen changes
- However, some specialty meds, such as PCSK9 and CGRP inhibitors, don't require the same level of intensive monitoring and support
- Specialty Lite would allow certain specialty medications to be filled for a 9-day supply
- Moda recommends adding this program and applying the 2.5 month copay for each 90-day supply
- **No cost impact**

Real Time Benefit Check (RTBC)

- RTBC is a prescriber decision support service built directly into EMR systems
- RTBC shows member-specific cost and coverage details, including low-cost therapeutic alternative drugs and preferred alterative pharmacies
- System uses actual point-of-sale cost amounts inclusive of accumulators, deductibles, and benefit information
  - Also informs the provider of coverage limits, prior authorization, and/or quantity restrictions
- Moda recommends expanding the pilot and adding to all EMR systems
- **No cost impact**

Mercer Recommendation:

- Accept both programs due to enhanced member experience and no cost impact

Tactical Considerations

Kaiser — Vision Benefits

- Kaiser medical enrollees do not have the ability to enroll in VSP for their vision hardware benefits (vision exams are covered under the medical benefit)
- PEBB and Kaiser have received member feedback stating the $200 allowance (every two years) is inadequate
- Kaiser provided the following enhanced vision hardware options:

Option	Premium Impact	Composite Impact
Current Benefit - $200 allowance / every two years	**n/a**	**n/a**
$200 allowance/year, up to $100 could be used for non-prescription sunglasses or non-prescription digital eyestrain glasses	**$700,000**	**0.07%**
$250 allowance/year, up to $100 could be used for non-prescription sunglasses or non-prescription digital eyestrain glasses	**$1,300,000**	**0.12%**
$300 allowance/year, up to $100 could be used for non-prescription sunglasses or non-prescription digital eyestrain glasses	**$1,400,000**	**0.13%**

Mercer Recommendation

- If budget allows, Mercer recommends increasing the vision hardware benefit to $200 allowance/year and monitor utilization
- Kaiser data indicated approximately 30% of PEBB adult members met the current allowance

Tactical Considerations
Summary of Considerations

- Changes applying to all vendors:

Consideration	Total PEBB Premium Impact	Total PEBB Composite Impact	Mercer Recommendation
Infertility services Coverage of IVF and other "Advanced Reproductive Therapies" up to $25K	**$3,550,000**	**0.3%**	Pending final composite increase, Mercer suggests adding IVF and other ARTs for 2021
Alternative Care Maximum Increase alternative care benefit maximum to $1,500	**$2,150,000**	**0.2%**	If budget allows, Mercer would recommend increasing the alternative care maximum to $1,500

- Vendor-specific changes

Consideration	Plan	Premium Impact	Composite Impact	Mercer Recommendation
Specialty Lite	Moda	n/a	n/a	Accept
Real-Time Benefit Check	Moda	n/a	n/a	Accept
Vision hardware allowance • $200 allowance / year	Kaiser	+$700,000	+0.07%	Accept, pending final composite increase

Non-Medical Renewal Considerations

Non-Medical Renewals
Moda / Delta Dental

- Currently, late enrollees have a 12-month waiting period for Basic and Major Services and a 24-month waiting period for Orthodontia services

	PPO		Premier	Part-Time
	In-Network	Out of Network	Participating	Participating
Deductible	$50 / $150	$50 / $150	$50 / $150	$50
Annual Max	$1,750	$1,750	$1,750	$1,250
Diagnostic / Preventive	0%, no deductible	10%, no deductible	0%, no deductible	0%
Basic and Maintenance	20%-year 1 10%-year 2 0%-year 3	30%	20%	50%
Crowns	50%	50%	50%	50%
Implants	50%	50%	50%	Not covered
Dentures	50%	50%	50%	50%
Orthodontia	50%, up to $1,500	50%, up to $1,500	50%, up to $1,500	Not covered

12-month waiting period

24-month waiting period

Non-Medical Renewals
Moda / Delta Dental

- Moda provided options to reduce and eliminate the waiting periods

Option	Claims Impact	Composite Impact
Orthodontia waiting period • **Reduce from 24 to 12**	• Part-Time – n/a • Premier - +0.1% • PPO - +0.3%	**$100,000** **0.01%**
Orthodontia waiting period • **Eliminate**	• Part-Time – n/a • Premier– 0.25% • PPO - 0.75%	**$200,000** **0.02%**
Basic & Major waiting period • **Eliminate**	• Part-Time – +1.5% • Premier - +1.0% • PPO - +1.0%	**$500,000** **0.04%**

Mercer Recommendation

- Eliminating or reducing waiting periods would:
  - Promote timely access to necessary dental/ortho services
  - Improved member experience
- Closer alignment between Moda and WDG reduces anti-selection

Non-Medical Renewals
Kaiser Dental

- Kaiser has proposed the following clarifications for the 2021 plan year:

Changes and Rational	Impact on utilization and premium
Kaiser is clarifying a limitation to the dental implant services benefit. Implant maintenance procedures when prostheses are removed and reinserted are limited to dental implants placed by a Permanente Dental Associates participating dentist	Minimal to no utilization impact No premium impact
Kaiser is modifying the coverage description for tooth restorations to clarify that the benefit covers amalgam fillings on back teeth and composite (tooth color) fillings on front teeth	Minimal to no utilization impact No premium impact
The definition of "Spouse" will be modified to include a person who is validly registered as the members' domestic partner under the laws of another state	Minimal to no utilization impact No premium impact

- A complete list of final contract changes will be provided in April
- **The Board will be required to accept/deny these changes**

Non-Medical Renewals
Willamette Dental

- Underwriting calculations indicate a slight decrease to current rates
  - WDG recommends holding current rates flat due to the unknown impact of continued increase in membership for the 2020 plan year
- Financials have improved since last renewal:
  - Benefit design modifications, which increased select co-pays
  - Reduction of outside referrals
  - Premium rate increases have caught up to underlying claims experience

Mercer Recommendation

- Final renewal calculations will be available for April Board meeting
- Mercer will review underwriting to ensure PEBB's rates are competitive based on underlying experience

Non-Medical Renewals
VSP

- PEBB is in the middle of a multi-year rate guarantee, through 12/31/2021
  - Fees will remain unchanged at $1.19 PEPM
- **VSP Healthy Innovations Program**
  - Emphasis on member awareness, exceptional provider care, and data collection/sharing
  - Focus on diabetes, hypertension, and high cholesterol, VSP doctors screen and collect patient data that is reported back to VSP through their proprietary claims system
  - VSP tracks exam utilization specific to diabetic members and reaches out to members to encourage routine exams and screenings
  - VSP has partnered with Providence to share data on diabetic members
    - VSP and Moda have been discussing expansion of the data sharing

Non-Medical Renewals
VSP

- VSP also tracks reported cases of chronic conditions for members who have received an eye exam

Category	# of Subscribers	% of Subscribers	# of Dependents	% of Dependents	Total	
Received Eye Exam	18,964		20,922		39,886	
Diabetes	653	3.4%	392	1.9%	1,045	2.6%
Diabetic Retinopathy	58	0.3%	46	0.2%	104	0.3%
Glaucoma	159	0.8%	114	0.5%	273	0.7%
Hypertension	850	4.5%	466	2.2%	1,316	3.3%
High Cholesterol	379	2.0%	211	1.0%	590	1.5%
Macular Degeneration	126	0.7%	76	0.4%	202	0.5%

Mercer Recommendation

- VSP and Moda should continue discussion on sharing data for Moda members who have VSP
- PEBB should continue to explore digital health point solutions to address prevalence of diabetes and hypertension within the population

Non-Medical Renewals
Other Lines of Coverage

- **Cascade Centers — EAP**
  - WholeLife Directions was added effective 7/1/2019
  - Cascade is not increasing their fees for the 7/1/2020 plan year
- **BHS — COBRA and Retiree premium administration**
  - BHS offering a status quo renewal without an increase in fees
- **ASI — Section 125 Flex Spending and Section 132 Commuter Benefits**
  - ASI is not increasing their fees for 2021
  - ASI has worked with PEBB Staff to offer additional communication material for members

The Standard

Preliminary Life & Disability Renewal

The Standard
Preliminary 2021 Renewal — Highlights

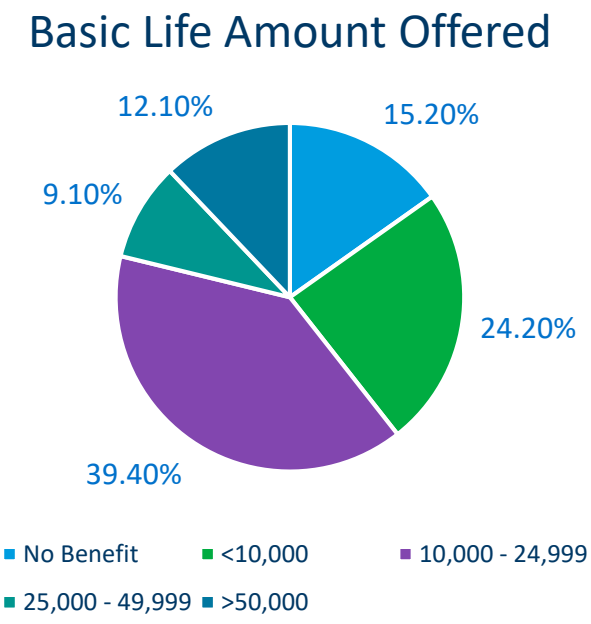
Coverage	Funding	Members	Experience period loss ratio	2021 Renewal Increase
Basic Life	PEBB	All employees	50.2%	0%
Optional Life / Dependent Life	Employee	All employees	66.7%	0%
Voluntary AD&D	Employee	All employees	30.5%	0%
Short Term Disability	Employee	All employees	95.2%	+8.7%
Long Term Disability	Employee	All employees	• Plan 1: 116.0% • Plan 2: 104.6% • Plan 3: 117.5% • Plan 4: 164.3%	• Plan 1: 0% • Plan 2: 0% • Plan 3: +9.8% • Plan 4: +10.7%

- **Overall increase across all PEBB plans is 4%, with a 2-year rate guarantee**
  - If The Standard is able to renew with an aggregate increase close to 4%, they are willing to extend the rate guarantee an additional year, to make it a 3-year guarantee
- For an average employee enrolled, the cost increase would result in:
  - STD + LTD Plan 3: $9.61 per month, or $115.32 per year
  - STD + LTD Plan 4: $5.17 per month, or $62.04 per year

Not shown: Continued Life Insurance for grandfathered disabled employees, Portability for former employees & spouses with terminal liability, and OSU Grandfathered Optional Life Insurance

The Standard
Basic Life Insurance Benefit Consideration

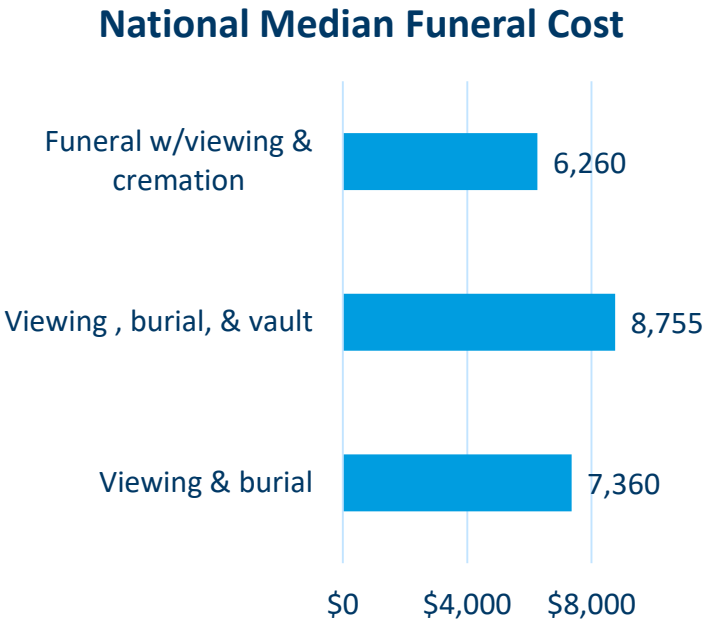
- PEBB's current Basic Life benefit is a **flat $5,000**
  - Based on The Standard's book of business, flat benefits are the most common for government organizations, but the amounts differ
- Increasing the Basic Life amount to a **flat $10,000**



Current ($5K):		**$10K:**
$0.18 / 1,000	→	$0.16 / 1,000
($0.90 PEPM)		($1.60 PEPM)

MERCER

The Standard
Funeral Cost Benchmarking



- Estimates **do not include** the cost of cemetery/vault, monument or market, nor miscellaneous charges such as flowers, obituary notices, or officiating clergy

- In Oregon, the average cost of a traditional funeral is $7,775 (including casket and vault)
  - Does not include cemetery costs which can range between $1,500 and $2,500
- **Total price for a traditional funeral in Oregon could cost at least $9,000**

The Standard
Next Steps

- Mercer will coordinate with our in-house Life & Disability practice to review the renewal and ensure we agree with The Standard's proposed rate increases
- Mercer will present final negotiated renewal with options for the Board during the April or May Board meeting

Appendix

5

How to Save Money in Healthcare

Pay Less for Services

- Favorable contracted rates via health plans or vendor contract terms
- Site neutral payment
- Prospective payment system (PPS), like diagnosis related groups (DRGs) for hospitalizations
- Implement formulary with generics
- Steerage, such as COEs and narrow networks
- Implement reference based pricing, usually based on Medicare fee schedule

Pay for Fewer Services

- Avoid non-value add services, e.g., the Waste Calculator and Choosing Wisely
- Avoid service duplication
- Implement efficient bundles
- Increase scrutiny for fraud, waste, and abuse detection and avoidance
- Increase focus with prior authorization and medical management

Need Fewer Services

- Effective programs to support healthy behaviors and resiliency
- Decreasing risk factors for disease and injury
- Early identification of health conditions
- Maximize chronic condition management
- Proactive population health management
- Systematic implementation of evidence-based clinical guidelines
- Meaningfully address the impact of adverse childhood experiences (ACEs)

Renewal Planning — 2020 Through 2022 and Beyond

2020	2021	2022 and Beyond
• Funding remains above costs so large changes are not required • Considerable Staff and Board resources will be devoted to Consultant RFP to be released later this year – Initial medical RFP planning starts after selection of consultant • Initial renewal questions focused on Bridge Strategies for care delivery: – Site of care for oncology – COEs – EMO – Digital Health Solutions – Emergency Department coding – Benefit tweaks – Performance guarantees – Status of Value Based Payments	• Projected costs are slightly above PEBB funding requiring small changes to remain at the 3.4% limitation • Ongoing planning for medical RFP to be released in early 2022: – Continual development of requirements for the new health plan – Updated quality metrics and performance guarantees • Major changes to the medical plans for 2022 plan year are unlikely	• Projected costs are significantly above PEBB funding requiring large changes to the plans unless steps are taken to bend the cost curve • Release of RFP for new medical plan • Selection and implementation of medical plan(s) starting in 2023

Long-Term Strategy
Oncology Site of Care Steerage

	Providence (PHP)	Moda	Kaiser (KP)
Oncology Site of Care Steerage	• PHP recommends specific supportive oncology meds for site of care program; dependent on which hospitals are approved for the program	• Recommends a phased approach for oncology site of care steerage, starting with "supportive" oncology medications	• Not asked of Kaiser as care is already directed to appropriate site due to integrated system

Mercer's Point of View and Recommendation

- Data shown to the IWG indicates potential savings from redirecting care to lower cost settings
  - Mercer supports steerage when drugs can be safely administered to a lower-cost site of care
- Mercer recommends following carrier recommendations on the oncology drugs that can be safely transferred to a lower-cost site of care

Long-Term Strategy
Center of Excellence (COE)

	Providence (PHP)	Moda	Kaiser (KP)
COE	• Does not recommend a formal COE program at this time • Many Providence Hospitals perform as COE-"like" functions	• Does not have an existing COE or EMO relationships • Moda is willing to partner/build with PEBB specifications	• KP offers internal and external COEs regionally and nationally, which aligns to the best-practices Mercer would expect from COEs

Mercer's Point of View and Recommendation

- Implement COE for total joint replacement
- Adopt The Bree Collaborative report and recommendations for specifications of the COE:
  - ✓ Screening for medical appropriateness
  - ✓ Shared decision-making
  - ✓ High quality facilities and professionals
  - ✓ Payment adjustments based on member experience and quality metrics
  - ✓ Warranty

Long-Term Strategy
Expert Medical Opinion (EMO)

	Providence (PHP)	Moda	Kaiser (KP)
EMO	• PHP does not have a formal EMO program at this time, but would be willing to partner with an outside vendor should PEBB pursue that route	• Moda does not have a formal EMO program at this time, but is looking into a vendor partner with clinical nurses as case managers and physician led teams	• EMOs are not utilized by KP; The Permanente Group physicians work closely with members and other providers on treatment plans

Mercer's Point of View and Recommendation

- Carriers can partner with EMO vendors of their choice, but the EMO's should incorporate the following:
  - ✓ Use of the Health Evidence Review Commission Coverage Guidelines and Reports
  - ✓ Systematic incorporation of shared decision making with members
  - ✓ Reviewers are board-certified physicians licensed in Oregon
  - ✓ Routine offering of peer-to-peer consultation by the EMO reviewers with the treating physicians
  - ✓ Reporting on the reviewed cases with the plan, including the decision by the member regarding medical care that will be sought after the EMO review
  - ✓ Coordination and integration with the utilization management process by the health plans to reduce member and physician abrasion and confusion

Long-Term Strategy
Digital Health Point Solutions

A digital health solution is the convergence of digital technologies with health, healthcare, living, and society to enhance the efficiency of healthcare delivery while making medicine more personalized and precise

- Digital health solutions have the potential for:
  - Increasing access to treatment and support with 24/7/365 availability
  - Allowing for real time support when the member needs it
  - Integrating between benefit programs and providers
  - Increasing customized education using artificial intelligence for a member's specific needs
- Each of PEBB's carriers has varying level of expertise/relationships with these solutions
- If PEBB were interested in exploring further, **Mercer would recommend:**
  - Identify the specifications for the priorities and success metrics for these digital health solutions
  - Create arrangements with digital health solutions that will optimize meaningful and sustained engagement

2021 Round 1 Proposals
Medical

Kaiser
Medical

Preliminary – Round 1

FULL-TIME HMO RATES	2020	2021
Employees	$791.38	$818.48
Employee & Spouse/Partner	$1,582.77	$1,636.97
Employee & Children	$1,345.35	$1,391.42
Employee & Family	$2,136.74	$2,209.91
Child Only	$636.30	$658.09

FULL-TIME HMO NON-HEM RATES	2020	2021
Employees	$784.89	$811.77
Employee & Spouse/Partner	$1,569.80	$1,623.56
Employee & Children	$1,334.30	$1,379.99
Employee & Family	$2,119.21	$2,191.78
Child Only	$631.09	$652.70

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Kaiser Part-Time
Medical

Preliminary – Round 1

PART-TIME HMO RATES	2020	2021
Employees	$669.95	$692.89
Employee & Spouse/Partner	$1,339.90	$1,385.78
Employee & Children	$1,138.89	$1,177.89
Employee & Family	$1,808.85	$1,870.79
Child Only	$538.67	$557.12

PART-TIME HMO NON-HEM RATES	2020	2021
Employees	$659.77	$682.36
Employee & Spouse/Partner	$1,319.56	$1,364.75
Employee & Children	$1,121.60	$1,160.01
Employee & Family	$1,781.40	$1,842.40
Child Only	$530.49	$548.66

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Kaiser Deductible
Medical

Preliminary – Round 1

FULL-TIME DEDUCTIBLE RATES	2020	2021
Employees	$726.39	$751.27
Employee & Spouse/Partner	$1,452.80	$1,502.55
Employee & Children	$1,234.88	$1,277.17
Employee & Family	$1,961.29	$2,028.45
Child Only	$587.86	$607.99

FULL-TIME DEDUCTIBLE NON-HEM RATES	2020	2021
Employees	$717.38	$741.95
Employee & Spouse/Partner	$1,434.80	$1,483.94
Employee & Children	$1,219.55	$1,261.31
Employee & Family	$1,936.98	$2,003.31
Child Only	$577.09	$596.85

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Kaiser Deductible Part-Time
Medical

Preliminary – Round 1

PART-TIME DEDUCTIBLE RATES	2020	2021
Employees	$599.03	$619.55
Employee & Spouse/Partner	$1,198.08	$1,239.10
Employee & Children	$1,018.36	$1,053.23
Employee & Family	$1,617.40	$1,672.79
Child Only	$518.01	$535.74

PART-TIME DEDUCTIBLE NON-HEM RATES	2020	2021
Employees	$589.41	$609.59
Employee & Spouse/Partner	$1,178.80	$1,219.16
Employee & Children	$1,001.97	$1,036.28
Employee & Family	$1,591.38	$1,645.88
Child Only	$509.58	$527.03

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Moda
Medical

Preliminary – Round 2

FULL-TIME (HEM/NON-HEM)	2020	2021
Employees	$722.05	$766.70
Employee & Spouse/Partner	$1,444.10	$1,533.41
Employee & Children	$1,227.49	$1,303.40
Employee & Family	$1,949.54	$2,070.10
Child Only	$613.74	$651.69

PART-TIME (HEM/NON-HEM)	2020	2021
Employees	$587.85	$624.20
Employee & Spouse/Partner	$1,175.70	$1,248.41
Employee & Children	$999.35	$1,061.15
Employee & Family	$1,587.19	$1,685.36
Child Only	$499.67	$530.57

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Statewide
Medical

Preliminary – Round 2

STATEWIDE FULL-TIME (HEM/NON-HEM)	2020	2021
Employees	$829.36	$881.73
Employee & Spouse/Partner	$1,658.71	$1,763.47
Employee & Children	$1,409.91	$1,498.95
Employee & Family	$2,239.27	$2,380.68
Child Only	$704.95	$749.48

STATEWIDE PART-TIME (HEM/NON-HEM)	2020	2021
Employees	$673.73	$716.28
Employee & Spouse/Partner	$1,347.47	$1,432.55
Employee & Children	$1,145.36	$1,217.67
Employee & Family	$1,819.09	$1,933.95
Child Only	$572.67	$608.84

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

Providence Choice
Medical

Preliminary – Round 2

CHOICE FULL-TIME (HEM/NON-HEM)	2020	2021
Employees	$694.72	$730.02
Employee & Spouse/Partner	$1,389.45	$1,460.04
Employee & Children	$1,181.03	$1,241.03
Employee & Family	$1,875.76	$1,971.05
Child Only	$590.52	$620.52

CHOICE PART-TIME (HEM/NON-HEM)	2020	2021
Employees	$562.99	$591.60
Employee & Spouse/Partner	$1,125.98	$1,183.20
Employee & Children	$957.08	$1,005.72
Employee & Family	$1,520.07	$1,597.33
Child Only	$478.54	$502.86

- Prior to PEBB admin, consultant commission, and funding assessment
- Includes 2% premium tax

2021 Round 1 Proposals
Non-Medical

Delta Dental of Oregon
Dental

Preliminary – Round 2

PREMIER	2020	2021
Employees	$58.03	$59.48
Employee & Spouse/Partner	$116.06	$118.96
Employee & Children	$98.65	$101.12
Employee & Family	$156.68	$160.60
Child Only	$49.33	$50.56
PPO	**2020**	**2021**
Employees	$53.62	$54.96
Employee & Spouse/Partner	$107.24	$109.92
Employee & Children	$91.15	$93.43
Employee & Family	$144.77	$148.39
Child Only	$45.58	$46.72
PART-TIME	**2020**	**2021**
Employees	$41.76	$42.80
Employee & Spouse/Partner	$83.53	$85.61
Employee & Children	$71.00	$72.77
Employee & Family	$112.76	$115.57
Child Only	$35.50	$36.38

- Prior to PEBB admin and consultant commission

MERCER

Kaiser
Dental

Preliminary – Round 1

FULL-TIME	2020	2021
Employees	$64.43	$65.00
Employee & Spouse/Partner	$128.86	$130.00
Employee & Children	$109.54	$110.51
Employee & Family	$173.97	$175.51
Child Only	$51.93	$52.39

PART-TIME	2020	2021
Employees	$48.05	$48.48
Employee & Spouse/Partner	$96.10	$96.96
Employee & Children	$81.69	$82.42
Employee & Family	$129.74	$130.90
Child Only	$38.68	$39.03

- Prior to PEBB admin and consultant commission

Willamette Dental Group (WDG)
Dental

Preliminary – Round 1

FULL-TIME/PART-TIME	2020	2021
Employees	$55.85	$55.85
Employee & Spouse/Partner	$111.70	$111.70
Employee & Children	$95.00	$95.00
Employee & Family	$150.85	$150.85
Child Only	$47.45	$47.45

- Prior to PEBB admin and consultant commission

Vision Service Plan
Vision

Preliminary – Round 2

BASE PLAN	2020	2021
Employees	$8.50	$8.61
Employee & Spouse/Partner	$17.00	$17.22
Employee & Children	$14.45	$14.64
Employee & Family	$22.95	$23.25
Child Only	$7.23	$7.32
PLUS PLAN	**2020**	**2021**
Employees	$14.88	$15.07
Employee & Spouse/Partner	$29.75	$30.14
Employee & Children	$25.29	$25.61
Employee & Family	$40.16	$40.68
Child Only	$12.64	$12.81

- Prior to PEBB admin and consultant commission
- Includes revision to plan relativities

Cascade Centers
Employee Assistance Program

Preliminary – Round 1

MODEL	2020	2021 (THROUGH 6/30/21)
3-Visit	$1.04	$1.04
5-Visit	$1.33	$1.33
WholeLife Directions	$0.18 (effective 7/1/2019)	$0.18 (effective 7/1/2019)

- WholeLife Directions was added effective July 1, 2019
- The Board decided the additional charge for WholeLife Directions will be paid through the PEBB stabilization reserve for the first year
- Effective July 1, 2020, the PEPM cost for WholeLife Directions will be passed to the agencies

ASIFlex
Flexible Spending Account Administration

Preliminary – Round 1

ITEM	2020	2021
Set Up Fee • Initial Plan Year • Renewal Plan Year	Waived	Waived
Monthly Administration Per Participant Per Month (PPPM)	$2.95	$2.95
Optional ASIFlex Card PPPM • Replacement or additional card sets	Included • $5.00 billed to participant FSA	Included • Included
Employee Communication • PDF documents • WebEx group meetings • Onsite Enrollment Meetings	 • No Charge • No Charge • $250 per day, plus travel expenses	 • No Charge • No Charge • $250 per day, plus travel expenses

- No plan design changes for 2021

BenefitHelp Solutions

COBRA, Retiree, Semi-Independent and Self-Pay Administration

Preliminary – Round 1

ITEM	2020	2020
Per Service Option	• Service Representative – $1,000 per month ($750 COBRA; $250 Retiree) • Qualifying Event Letter – $4.00 per letter • Per COBRA Continuant – $7.25 per month • Per Retiree – $7.25 per month • Open Enrollment Questionnaire – $3.15 per letter	• Service Representative – $1,000 per month ($750 COBRA; $250 Retiree) • Qualifying Event Letter – $4.00 per letter • Per COBRA Continuant – $7.25 per month • Per Retiree – $7.25 per month • Open Enrollment Questionnaire – $3.15 per letter

- Self-Pay (Foster Parents, etc.) enrollees are charged $10.30 per family for eligibility and premium administration
- No plan design changes for 2021

The Standard

Life & Disability

2021 RATES GUARANTEE THROUGH DECEMBER 31, 2023

	Covered Lives	2020 Rates	2021 Rates	% increase
Basic Life				
• Active	52,464	$0.180 / 1,000	$0.180 / 1,000	0.0%
• Judicial	512	$0.280 / 1,000	$0.280 / 1,000	0.0%
• Dependent	29,894	$1.290 per member	$1.290 per member	0.0%
Optional Life				
• Employee	32,444	Step Rates	Step Rates	0.0%
• Spouse/Partner	15,143	Step Rates	Step Rates	0.0%
• Child	23,418	$0.75 per member	$0.75 per member	0.0%
Voluntary AD&D				
• Employee	11,880	$0.02 per member	$0.02 per member	0.0%
• Family	14,958	$0.034 per member	$0.034 per member	0.0%
Disability				
Short Term Disability	29,500	0.69%	0.75%	+8.7%
LTD 1 (60% 90 EP)	13,534	0.54%	0.54%	0.0%
LTD 2 (60% 180 EP)	5,536	0.19%	0.19%	0.0%
LTD 3 (66 2/3% 90 EP)	4,989	1.12%	1.23%	+9.8%
LTD 4 (66 2/3% 180 EP)	4,363	0.28%	0.31%	+10.7%

The Standard

Life & Disability

2021 RATES GUARANTEE THROUGH DECEMBER 31, 2023

OPTIONAL EMPLOYEE & OPTIONAL SPOUSE LIFE		
Age bands	Non-Tobacco Rate (Per $1,000)	Tobacco Rate (Per $1,000)
< 25	$0.042	$0.067
25-29	0.050	0.078
30-34	0.065	0.101
35-39	0.072	0.111
40-44	0.079	0.122
45-49	0.124	0.187
50-54	0.183	0.275
55-59	0.347	0.504
60-64	0.539	0.777
65-69	1.045	1.460
70-74	1.712	2.300
75+	1.722	2.300

ADDITIONAL VOLUNTARY EMPLOYEE & SPOUSE LIFE — OSU CLOSED GROUP	
Age bands	Rate Per $5,000
0-29	$0.440
30-34	$0.490
35-39	$0.670
40-44	$1.020
45-49	$1.640
50-54	$2.560
55-59	$4.410
60-64	$6.840
65-69	$11.910

The Standard

Life & Disability

2021 RATES GUARANTEE THROUGH DECEMBER 31, 2023

OPTIONAL RETIREE LIFE	
Age bands	**Rate Per $1,000**
Under 50	$0.270
50-54	$0.405
55-59	$0.495
60-64	$0.675
65-69	$1.350
70-74	$2.250
75-79	$3.375
80-84	$5.130
85 and over	$7.380

OPTIONAL PORTED LIFE	
Age bands	**Rate Per $1,000**
< 25	$0.044
25-29	$0.052
30-34	$0.067
35-39	$0.074
40-44	$0.081
45-49	$0.126
50-54	$0.185
55-59	$0.348
60-64	$0.540
65-69	$1.036
70-74	$1.680
75+	$1.680

Board Decisions for 2020 Plan Year
May 21, 2019 Meeting

VENDOR/PLAN	COVERAGE	BOARD DECISION
Providence Choice	Medical	• Physical/Occupational Therapy medical necessity review after the twelfth visit • Expand spinal manipulation to include massage therapy without eviCore review • Adding coverage for medically necessary varicose vein surgery
Providence Statewide	Medical	• Physical/Occupational Therapy medical necessity review after the twelfth visit • Adding coverage for medically necessary varicose vein surgery
Moda	Medical	• Expand spinal manipulation to include massage therapy without eviCore review • Adding coverage for medically necessary varicose vein surgery • Adding the Pharmacy Benefit Optimization Program. For drugs covered under this program, the pharmacy copay will change to $10 (was $100 for these specialty medications)
Kaiser HMO	Medical	• Remover ophthalmology from services accessible without a referral
Kaiser Deductible	Medical	• Remover ophthalmology from services accessible without a referral • Include coverage for massage therapy; add alternative care benefit to the part-time plans
Delta Dental of Oregon	Dental	• Allow once per space per quadrant as a lifetime benefit • Deny indirectly fabricated post and core in addition to a crown unless more than half of the coronal tooth structure is missing • Retrograde fillings by the same dentist within a two-year period • Osseous surgery is limited to two quadrants per date of service • Separate charge for post operative care done within 30 days following oral surgery is included in the charge of the original surgery • Composite restoration in posterior tooth is covered. Inlays are an optional service and the alternate benefit will now be composite filing. • Brush biopsy is covered in a 12-month period
Willamette Dental Group	Dental	• Dental implants will be covered up to an annual max of $1,500 with a limit of one tooth space per year
VSP	Vision	• Add SunCare to both the Base and Buy-up plan • Adjust the relativities between the plans
Cascade Centers	EAP	• Add WholeLife Directions effective July 1, 2019; the additional charge will be paid through the PEBB stabilization reserve for the first year. Effective July 1, 2020, the cost will be passed to the agencies.

welcome to brighter

KAISER PERMANENTE NORTHWEST

OREGON PEBB RENEWAL 2021

Presented by:
Keith Bachman MD, PEBB Medical Director
Sophary Sturdevant, Executive Account Manager

Board attachment 3
March 17, 2020

KAISER PERMANENTE®

Agenda

- 2021 Renewal Drivers/Risk Score/Highlights
- Cost Containment Strategies
- Strategies for Improving Coding Quality

KAISER PERMANENTE®

2021 Renewal

KAISER PERMANENTE®

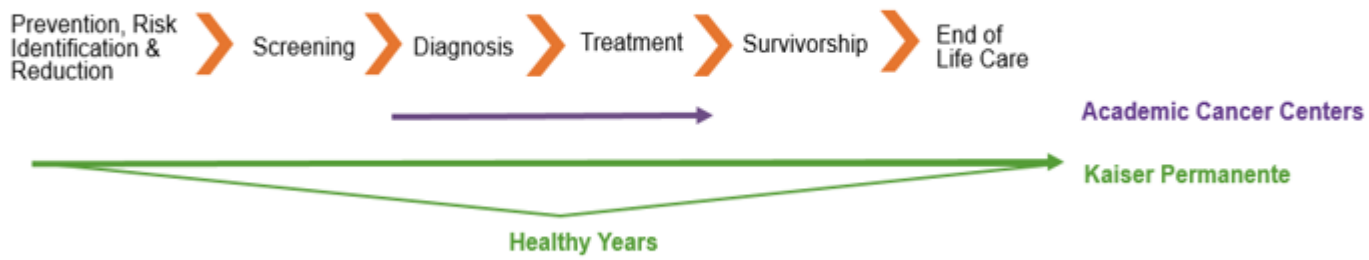
Addressing Mercer’s Findings

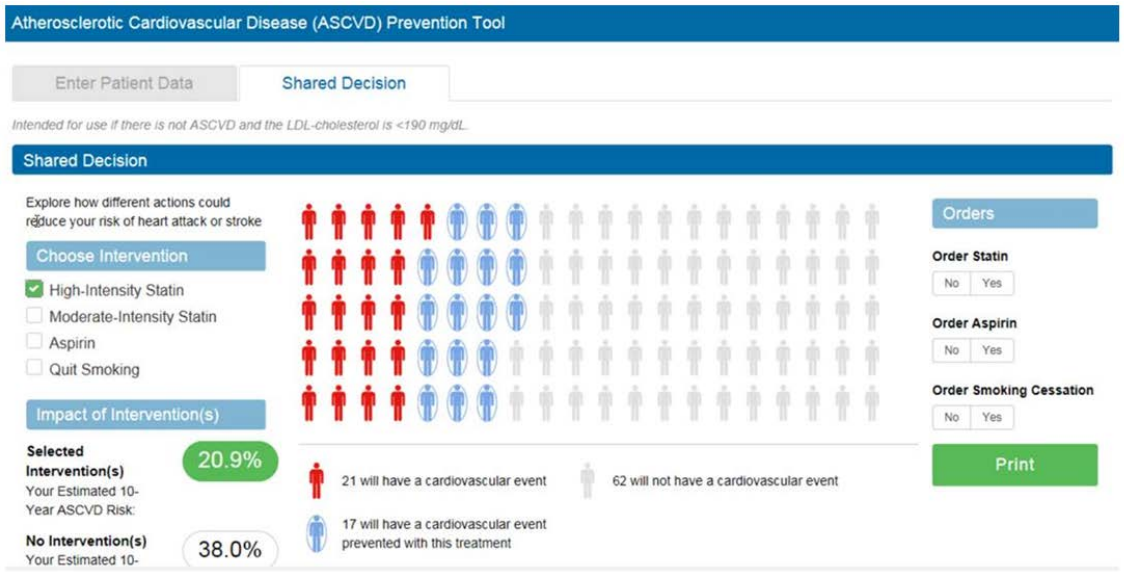
- Trend Drivers
  - ✓ 0.8% increase in Specialty Drug Utilization
  - ✓ 0.7% increase in Mental Health Services Utilization
- Increase Risk Scores
- Renewal Highlights

KAISER PERMANENTE®

2021 Renewal Highlights - COEs

- ✓ Pre-screening to ensure member meets criteria and fitness for procedure
- ✓ Shared decision making
- ✓ Dedicated team of professionals
- ✓ Demonstrated positive clinical, financial, and member experience outcomes
- ✓ Performing based on evidence-based clinical guidelines
- ✓ Follow-up with the member's primary care physician
- ✓ Provide quality metrics
- ✓ Offer a warranty on the procedures performed
- ✓ Offer the service in a bundled payment format





2021 Renewal Highlights – Site of Service

- Managed through our care model
- Mandatory program with special circumstance exceptions
- Protocols are built into our system
- Physicians/specialists/care managers monitoring utilization for contracted hospitals and repatriating as appropriate

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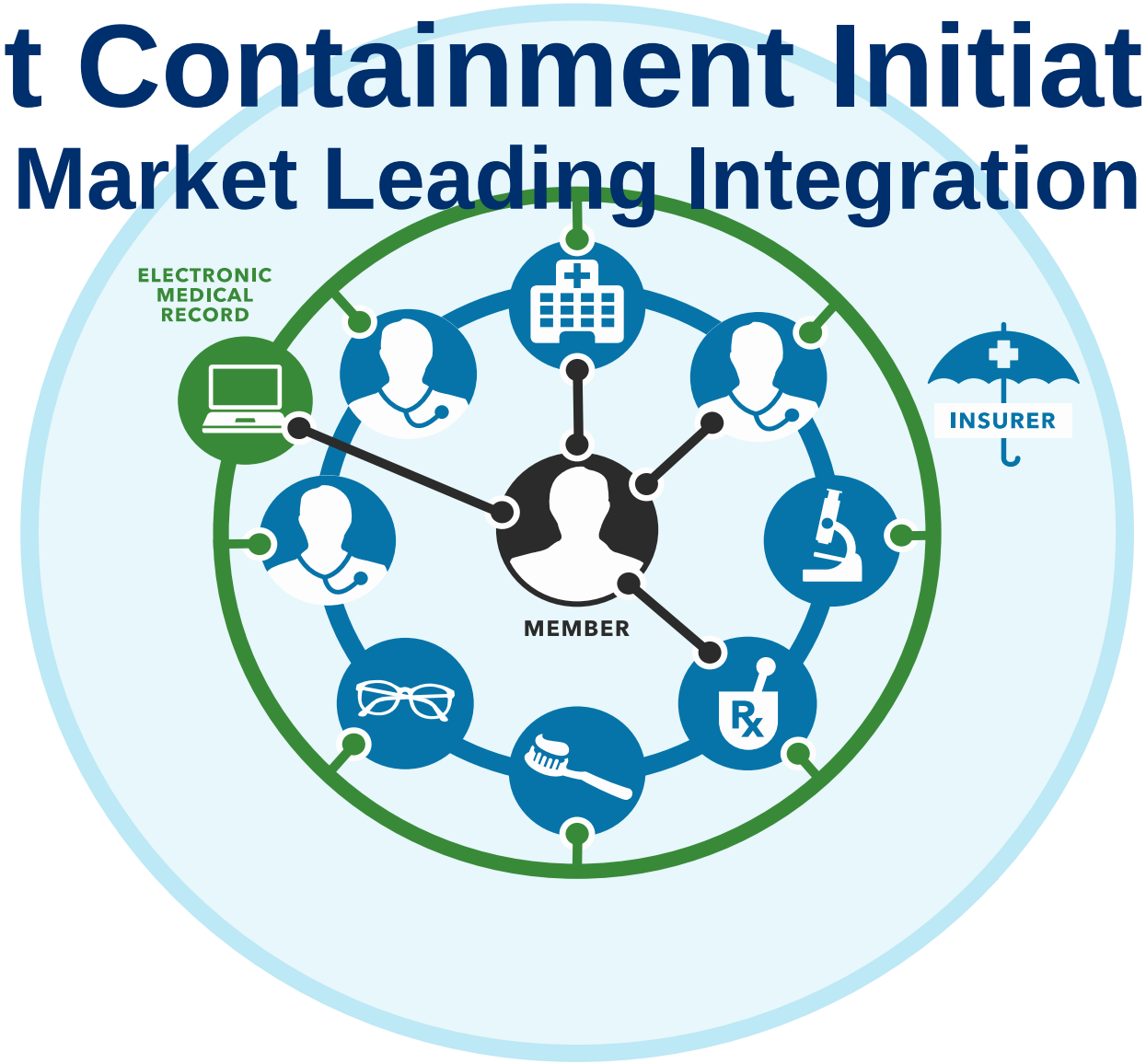
Cost Containment Strategies

KAISER PERMANENTE®

Cost Containment Initiatives

Market Leading Integration



KAISER PERMANENTE®

Cost Containment Initiatives
Decreasing Utilization

Decreasing Variation
- ***Wait Don't Waste***
- streamlining surgical equipment
- Projected $8M Savings

Decreasing Low Value Care
- ***Imaging Wisely***
- Reducing low value MRI Use
- Ankle MRI, Shoulder MRI, Spine MRI
- Projected $2M Savings

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Cost Containment Initiatives
Lowering Costs

Lowering cost per service

- Ambulatory Surgery Center
  - ✓ Right Case, Right Place
- Home Recovery
- Brookside as an Alternative for inpatient external MH/SA

Lower outpatient cost/Increasing convenience and Access to Care

- Continue expanding telemedicine

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Cost Containment Initiatives
Pharmacy

Managing Costs and Quality

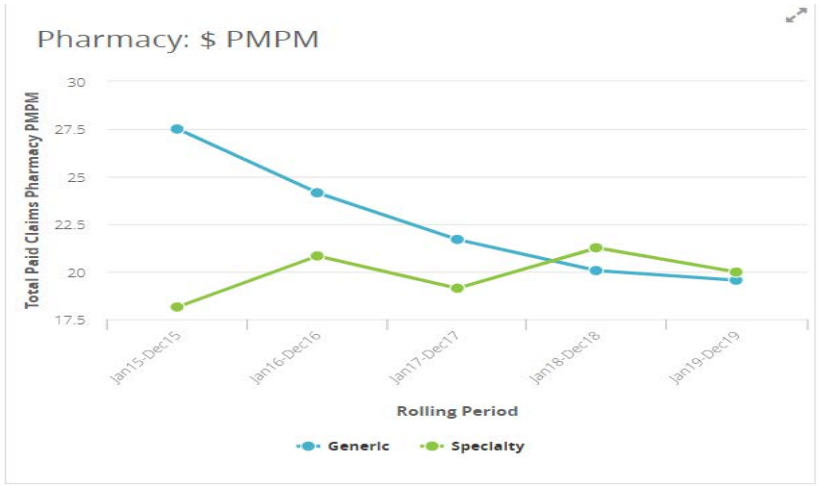
- Generic Utilization
- Effective Specialty Management:
  - Anti-inflammatories
  - Psoriasis
  - HIV and HIV Prevention
- Infused/clinically administered medications (biosimilars)
- Mail Order

Your generic prescription rate

	Your group	National average
Generic	92.7%	90.0%
Brand name	7.3%	10.0%

Your Rx delivery method

	Your group	National average
Mailed	43.3%	5.0%
Picked up at pharmacy	56.7%	95.0%



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Claims Coding

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Ensuring Coding Quality

- Addressing Emergency Room Upcoding
- Policies that support Coding Accuracy (Internal/External)
- DRG Hospital Coding: Payment Integrity

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Summary

- Member Focus
- High Quality, Affordable Health Care
- Strong Partnerships

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APPENDIX

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RECENT INNOVATIVE APPROACHES TO HEALTH CARE

Social Determinants of Health
Mental Health Care tools
Continued Pharmacy innovations

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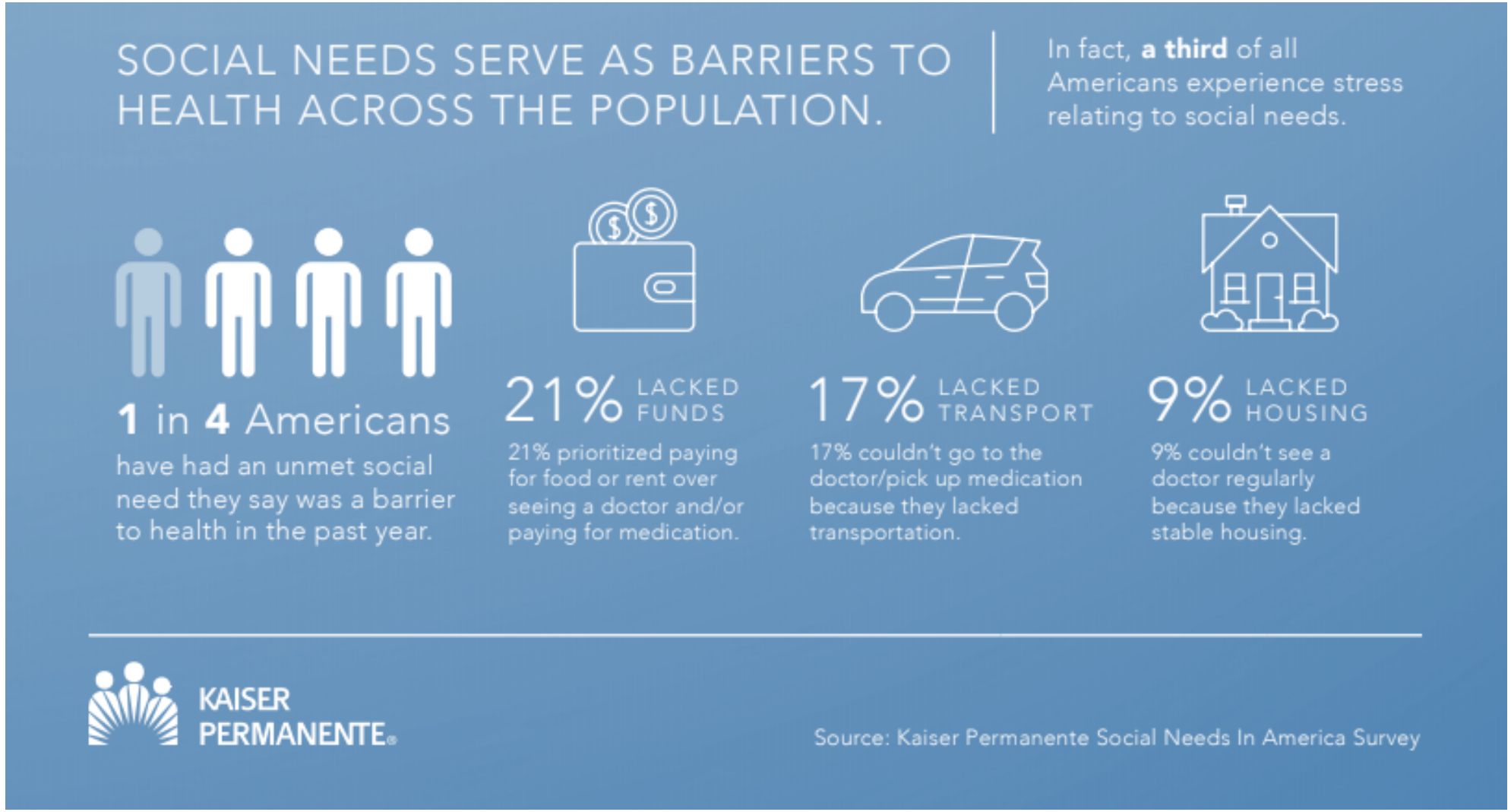
ADDRESSING SOCIAL NEEDS



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INTRODUCING THRIVE LOCAL

Resource Directory

Online platform allows users to search and filter for community resources.

Resources updated regularly by contracted vendor

Community Partner Networks

Community Based Organizations (CBOs) outside of KP use vendor platform

KP users send and track referral to Community Partner network

Technology Platform

Closed loop referrals

Bidirectional exchange of information between KP and Community Network

Integration of KP HealthConnect and kp.org

Together, these components **provide integrated clinical and social care,** supported by **data integration** and **partnerships** with the community

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Thrive Local will facilitate comprehensive, coordinated services in our communities

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UNITE US

Thrive Local is a partnership between Kaiser Permanente and Unite Us.

Thrive Local will...

Connect health care and social services providers to deliver integrated care

Empower organizations across communities to work together through a **shared technology platform** that connects individuals to an array of services

In **3 years** Thrive Local aims to be available to all **12.3 million KP members** and **68 million people** in the communities KP serves

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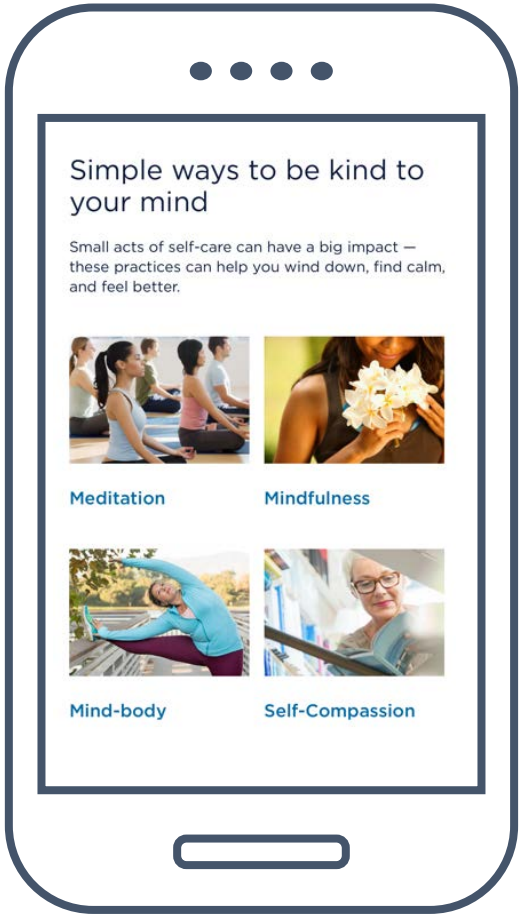
MENTAL HEALTH CARE

EXPANDING DIGITAL SELF-CARE TOOLS & RESOURCES

Evidence-based self-help tools to address mild symptoms, distress, and emotional health.

- Articles
- Audio activities
- Videos
- Self-assessment tools
- Digital app
- Many more digital self-care resources to come



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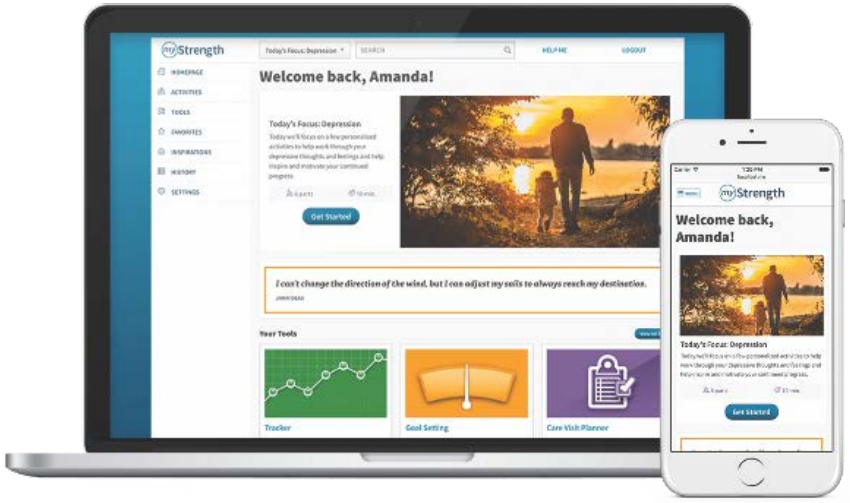
DIGITAL APP: myStrength

Cognitive Behavioral Therapy-based program offering guided programs and tools for a range of mental health needs.

Most myStrength content is packed up into goal-based “pathways” or “programs” to help members tackle specific challenges.

- Controlling Anxiety
- Managing Depression
- Reducing Stress
- Practicing Mindfulness & Meditation
- Improving Sleep
- Balancing Intense Emotions
- Managing Chronic Pain



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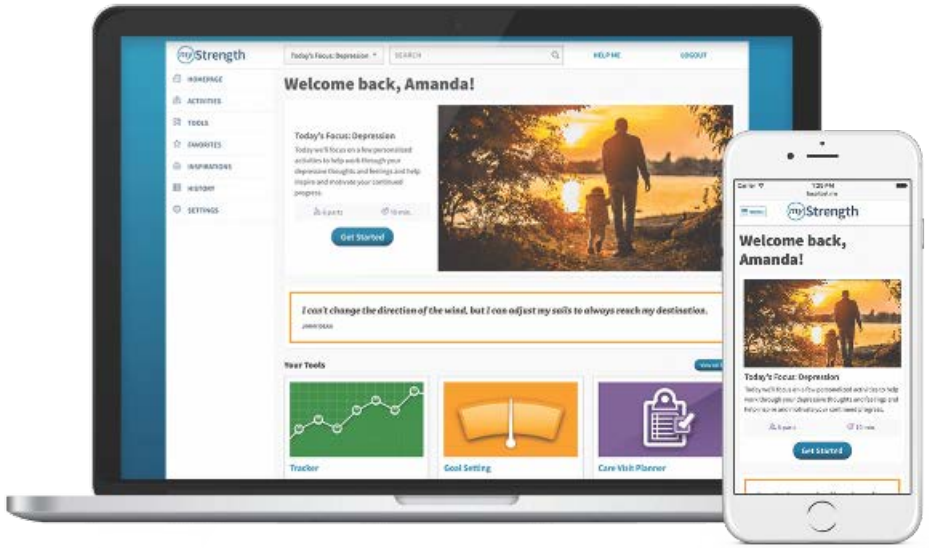
EXPANDING DIGITAL SELF-CARE TOOLS & RESOURCES

Members now have more access to valuable self-care tools and content to support mental health and emotional well-being. At no additional cost, members gain access to a wealth of resources and support at their fingertips.

Features include:

- Audio, video and articles
- Tools for desktop, tablet and smartphone
- Proven clinical models
- Unlimited access
- Guidance and support
- Personalized experience
- Available at no cost to members



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PHARMACY ADVANTAGE

- Clinical coordination
  - Pharmacists working alongside physicians on care teams
- Strategic purchasing power
  - Benefit design and formulary alignment
- Seamless medication monitoring
  - Pharmacy and electronic health record integration
- Evidence-based prescriptions and formulary alignment
  - Guidelines built into EHR to guide optimal prescribing
- Specialty drug knowledge
  - National Specialty Pharmacy

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SPECIALTY DRUG MANAGEMENT

- Effective specialty drug management
- Early adoption of biosimilar drugs

KAISER PERMANENTE NATIONAL SPECIALTY PHARMACY

- Access to limited and exclusive products through Kaiser Permanente pharmacy
- Clinical reviews and case management

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BIOSIMILARS

- Highly similar to another approved biological medicine
- Same pharmaceutical quality, safety and efficacy standards
- Drive price discounts
- Increase treatment options

GENERIC DRUGS

- Manufactured to same high-quality standards as brand product
- Often made on the same production line
- “Authorized Generics” — some Kaiser Permanente generics are the brand-name product!
- Bioequivalence — no difference between brand and generic in how they are taken up in the human body
- Can do the same job for less money

*Kaiser Permanente mail order pharmacy data; January 1, 2019 – December 31, 2019. In 2019, our Medicare Part D (SA) adherence rates for oral diabetes medications and hypertension medications (ACE/ARBs) was 92%, and diabetes adherence = 90%.

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MAIL ORDER PHARMACY

- Convenient for members
- Order via phone, app, or website
- Savings — 90-day supply for the price of 60

CONTINUOUS IMPROVEMENT

- Streamlined order process
- Faster delivery times
- Same-day delivery pilot program

*Kaiser Permanente mail order pharmacy data; January 1, 2019 – December 31, 2019.

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COVID-19 Update

Keith Bachman MD, PEBB Medical Director
Sophary Sturdevant, Executive Account Manager
Board Attachment #

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Update from Care Delivery

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Health Plan Updates

- Cost shares waived for medically necessary screening and testing
- Updates on KP.org
- Member FAQ (version 4)
- Leveraging Telehealth (video) and Digital Health (eVisits)

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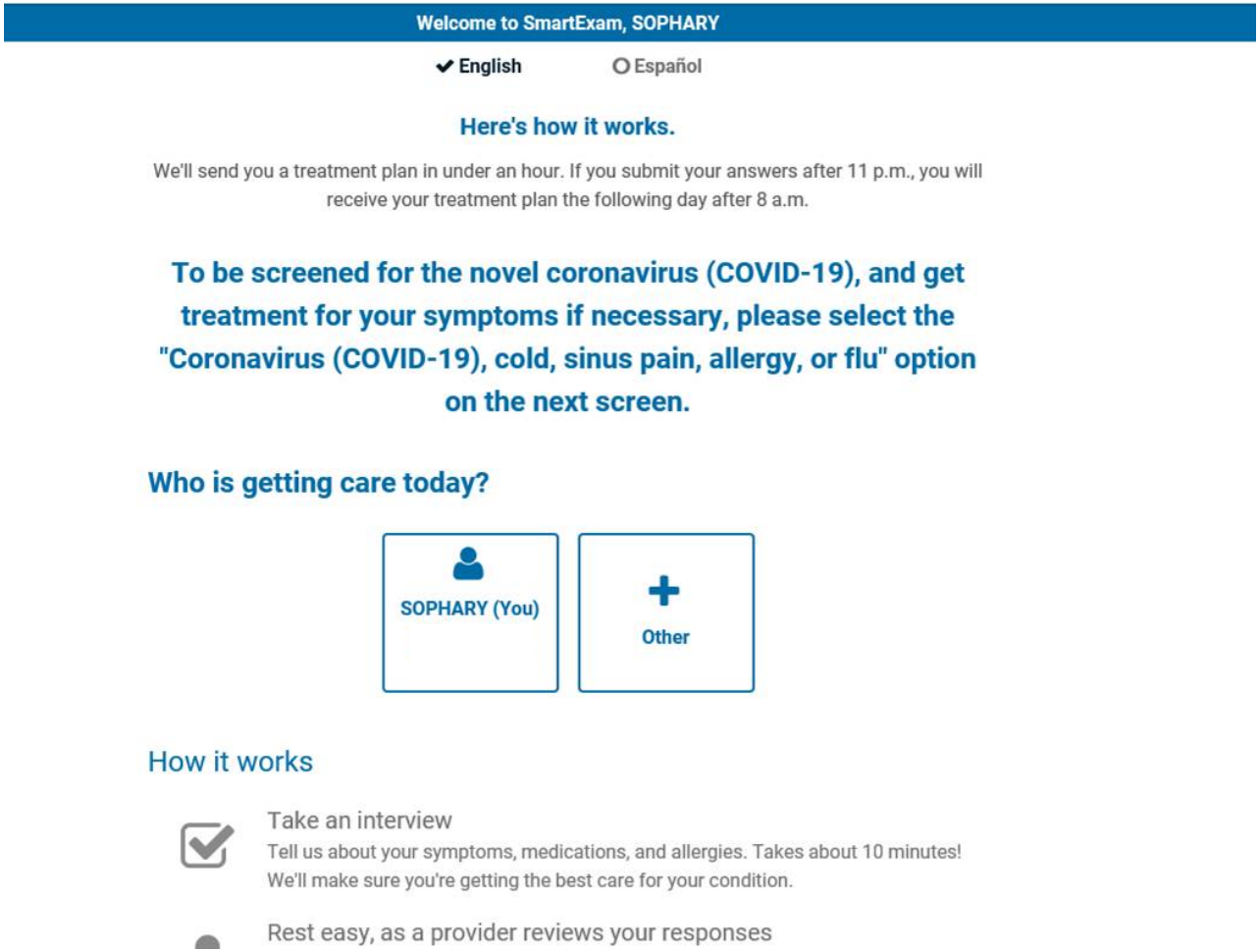
eVisit



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National Institutes of Health

Kaiser Permanente Washington Health Research

Recruitment

Identity Individuals for the study

Research

13 Months

Outcomes

Vaccine

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Appendix

NOVEL CORONAVIRUS 101

You may be feeling concerned about the coronavirus, also referred to as COVID-19, which has been in the news. If so, you're not alone. Here is some helpful information about the virus, and what you can do to protect yourself.

What is coronavirus?

The new coronavirus, which causes a disease known as COVID-19, is a contagious virus that can cause a fever, cough, and shortness of breath. The symptoms are like the common cold, but it can lead to a more serious illness.

What are the symptoms?

The most common symptoms are fever, cough, and shortness of breath.

What do I do if I have these symptoms?

If you develop these or any flu-like symptoms, we're here to help.

- **If you are 18 or older, try an e-visit** to get online care and advice for cold, cough, and flu; be screened for coronavirus; and get treatment for your symptoms if necessary.
  - To get started, sign in to the Kaiser Permanente app or **kp.org**.
- Call **1-800-813-2000** (TTY **711**) to talk to an Advice Nurse 24/7.

How is coronavirus spread?

Coronavirus is spread through contact with other people who have the virus. Some of the ways it is spread are:

- Coughing and sneezing
- Close contact with others who have the virus
- Touching surfaces with the virus, then touching your eyes or mouth without washing your hands

What can I do to protect myself?

You should follow the basic steps that are recommended to prevent the spread of colds or the flu.

- Avoid close contact with people who are sick.
- Wash your hands with soap and water regularly for at least 20 seconds.
  - Alcohol hand sanitizers are also effective.
- Try not to touch your eyes, nose, and mouth with unwashed hands.
- Cough or sneeze into a tissue or your elbow. If you use a tissue, wash your hands afterwards.
- Stay home when you are sick (except to get medical care). Keep sick children home from school.
- Clean and disinfect frequently touched objects and surfaces.

Is there a vaccine for coronavirus?

There is no specific vaccine or treatment for coronavirus. Like the flu, most people will recover on their own.

Where can I get the most updated information from Kaiser Permanente?

For the most up to date information and answers to frequently asked question, please visit **kp.org**.

To get care, sign in to the Kaiser Permanente app, visit **kp.org/getcare**, or call us at **1-800-813-2000** (TTY **711**).

GET IT ON Google Play | Download on the App Store

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Delta Dental of Oregon & Alaska

COVID-19

PEBB Board Update

Moda's framework

Internal cross departmental COVID-19 taskforce meeting daily

- Member education & communication
- Supporting provider network & access
- Customer service & care management
- Moda employee's & operations

Member benefits

- Cost share waived for Covid-19 testing and associated office visits
- Refill too soon edits deactivated to allow members to get early refills and have medication on stock
- OHSU virtual visits available with no member cost sharing

Member education & communication

Virtual resources

- Moda home page
- MyModa.com
- Information posted on our modahealth.com/pebb website
- Websites link to COVID-19 page with current information
- Email sent to members and entities with link to COVID-19 website
- Blog post on our *Community Page* at modahealth.com features the latest information about accessing benefits if you feel you are infected

Moda/PEBB website

Enjoy better care for better cost from *one* health insurance provider — Moda Health and Delta Dental of Oregon. We've got great plans specially created to meet the needs of busy, hardworking PEBB members just like you, and your family.

pebb
Public Employees' Benefit Board

With a Moda Synergy Plan, you'll enjoy:

- Care close to home from In-network providers in Oregon, Washington and Idaho. OHSU, Legacy Health, Adventist Health and many more hospital systems are in the network!
- Alternative care with a NEW massage benefit
- No referrals for in-network specialist visits
- Caring customer service to help you every step away
- Your Member Dashboard, myModa — a personalized member website, which includes access to health tools and professional help online and by phone

Covid-19: What you need to know

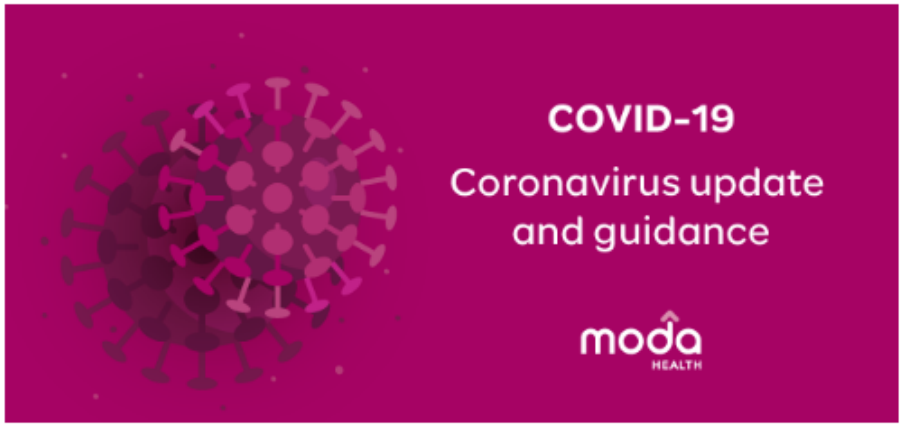
We have received questions and concerns about the novel coronavirus (respiratory illness) called COVID-19.

If you think you have been exposed to the virus, call your doctor immediately or schedule a virtual visit. Your standard benefits apply, so there is no cost associated for a virtual visit.

Otherwise, practice everyday habits to help prevent the spread of viruses and keep up to date with the latest information.

Learn more

COVID-19: What you need to know



Moda has received questions and concerns about the novel coronavirus (respiratory illness), COVID-19. COVID-19 is a new coronavirus that has not previously been seen in humans.

How to protect yourself

According to the Center for Disease Control (CDC), there is currently no vaccine to prevent COVID-19. However, knowing that Coronaviruses are a large family of viruses that usually cause mild respiratory illnesses such as the common cold and flu, everyday preventive actions that help spread respiratory viruses are the first step in protecting yourself and those around you.

- Wash your hands often with soap and water for at least 20 seconds. Use an alcohol-

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Provider network & access

- Assessing provider and facility access challenges
- Ensuring appropriate access to testing
- Supporting remote visits & telehealth resources
- Working with Primary Care Medical Home/PCP360 providers to help guide care
- World Health Organization added new codes for providers and labs for purposes of testing ICD10 & HCPCS
- Updated our claims workflow to address new codes

Telehealth resources

OHSU Virtual Visits

- Moda works in close coordination with its telemedicine partner OHSU to ensure appropriate access to telemedicine visits via mobile, laptop or desk top devices
- OHSU is working to steer the community to Virtual Visit-Urgent Care program if they suspect they've contracted the virus rather than presenting at urgent care or the ED

Medical Home Primary Care Providers

- Moda's contracted network of providers including medical homes in the PCP360 program available to OEBB members, are able to bill for and deliver telemedicine as a covered benefit

24/7 Nurse Line

- Moda provides access to a 24/7 nurse line where members can call to receive advise on a variety of conditions, including concerns regarding developing health issues

eDoc

- Virtual email platform available to members to ask non-emergent conditions ranging from physical to dental from a variety of professionals including physicians and behavioral health providers, among others

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Customer service & care management

- Staff are committed to working with members to help them understand and navigate telemedicine resources available to them
- Using consistent messaging with members – OHA/WHA/CDC
- Staff will assist members identifying access to care based on member needs
- Directing members to virtual care resources - direct links to the OHSU telemedicine site from MyModa and/or directly via the OHSU website

Moda employee's & operations

- Emails have been sent to clients, alerting them to the resources we have on our websites and any contingency plans for keeping work moving should employees need to work from home
- Advised them that we are monitoring local and national government policies, e.g. Oregon Health Authority and the Governor's office and following their guidance
- Ensuring appropriate Work From Home capabilities & policies
- Internal staff education on disease spread prevention

Thank You

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DELTA DENTAL

Delta Dental of Oregon & Alaska

moda HEALTH

DELTA DENTAL

Delta Dental of Oregon & Alaska

Moda

PB Attachment 3a March 17, 2020

Pharmacy

Pharmacy initiatives

- Oncology medication management
  - Site of Care
  - Proposed benefit changes
- Other 2020-2021 benefit considerations
  - “Specialty Lite”

Oncology Medication Management

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Background

- Rapidly increasing cost and utilization trends for oncology drugs
- Significant variability in cost depending on site of service
- Oncology medications: Supportive vs. therapeutic
- Existing Site of Care program (non-oncology)
  - Through prior authorization, mandatory steerage of select specialty medications from hospital outpatient to provider office or home settings
  - Impacts new and existing utilizers
  - Exceptions: medical necessity, access, age, cost

Oncology Site of Care

- Oncology program considerations:
  - Supportive oncology medications ± chemotherapeutic oncology medications
  - New starts vs. existing utilizers
  - Voluntary vs. mandatory program

Benefits	Challenges
• Potential lower member out of pocket cost* • Cost-savings / avoidance • Convenient care • Program structure and benefit language in place	• Oncology regimens can be complex • Not all home infusion providers support oncology medications • Member disruption / provider pushback • Variability in low cost sites

*See additional benefit change consideration

Recommendations

- Phase I:
  - Add select supportive oncology medications to existing mandatory program as soon as possible (2H 2020)
    - Pegfilgrastim (brand and biosimilars), Prolia/Xgeva
      - 3 current utilizers
    - Premium impact: -0.033%
  - Consider eliminating home infusion member cost sharing 1/1/21
    - Premium impact: +0.10%

- Phase II:
  - Expand program to therapeutic oncology
    - Focus on single drug regimens
    - Avoid drugs with pre-medication, pre-treatment lab, or resuscitation equipment needs
  - Mandatory program impacting new starts only
  - Timeline: TBD
  - Premium impact: TBD

Other Benefit Considerations

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“Specialty Lite”

- Background:
  - Current benefit limits specialty medications to a maximum 30-day supply
  - Specialty pharmacies provide high-touch member support services, care coordination, and monitoring
  - Some specialty medications require more intensive support than others
- Proposed change:
  - Update benefit language to permit 90-day fills for select specialty medications
  - Examples could include: PCSK9s, CGRPs, others
- Premium impact: No premium impact

Claims Cost Management

Overview of claims cost management

- What drives claim payment?
- Moda Embedded solutions
- Moda CM^2 Strategy
  - Vendors and Moda driven
  - Additional cost for some programs
- What's new?
- Savings

Claim payment methodology

- What drives claim payment?
  - Provider contracts
  - Benefits
  - Moda reimbursement policies

Core system-embedded processes

- Core system-Embedded processes
  - Network pricing
    - CMS based rules for those contracts tied to Medicare reimbursement
  - Benefit application
  - Clinical editing
    - Enhanced in 2018 with quarterly update process in place

CM² services

Category	2017	2018	2019
Out of Network Claims Repricing	$4,859,636	$4,006,510	$2,874,026
Healthy Directions	$1,539,505	$2,187,979	$1,946,555
Enhanced Clinical Editing	$2,477,410	$1,981,344	$1,544,153
Provider Integrity Program (PIP)	$2,619,239	$1,357,378	$2,667,296
TPL Cost Avoidance and Subrogation Recovery	$7,900,147	$7,337,270	$7,498,453
Hospital Audit Savings	$11,175,128	$8,267,662	$11,811,582
COB Recovery	$0	$0	$207,940
Total	**$30,571,065**	**$25,138,143**	**$28,550,005**

Moda 360

Moda360: Increases coordination

- A health support platform that allows a 360° view of the member
- Single front door for members
- PEBB dedicated team of navigators and advocates
  - Navigators have basic medical knowledge
- Enhanced member support advances CCM 2.0.
  - Moda360 strengthens the member's relationship with their PCP360 and supports the member as they manage their health
- Expanded role in helping members navigate the healthcare system
  - Ex. Claims/billing issues, appeals, scheduling appointments, clinical opportunities

Moda360: Supporting members

- Expanded role in helping members navigate the healthcare system
  - Ex. Claims/billing issues, appeals, scheduling appointments, clinical opportunities
- Understanding plan benefits
- Direct members, and increase engagement, in Moda and PEBB programs
- Remind members about preventive screenings like colorectal cancer screening
- Examples of how Moda supports members:
  - Assist members with prior authorization
  - Reaching out to providers

Moda360: Supporting members

- **Telemedicine Expansion** – Text based digital network of licensed providers offering real-time diagnosis and treatment for urgent medical conditions 24/7
- **Digital Behavioral Health Clinic** – Virtual solution offering an app-based treatment program for depression and anxiety
- **Diabetes Care** –Enhanced technology-enabled diabetes management and support
- **Social Determinates of Health (SDoH)**

Moda360: Future phases

- Expand scope of enhanced chronic condition support
  - Hypertension
  - Others
- Evaluate and recommend the inclusion of best in class point solutions
  - Expert medical opinion
  - Others
- Expand scope of navigators to better enable them to assist members with navigating the complex healthcare system
- Using SDoH data, develop programs to more effectively address physical and mental health needs of PEBB members.
  - Including proactive outreach to members
- Measures of success – Work with PEBB to identify measures for evaluating success of Moda360

Moda 360: Pricing

Description	PEPM	Comments
Moda administration	$5.73	Fixed monthly administrative fees
Per engaged member fees	$2.94	Variable fees based on engaged members
Claims offset	($5.96)	Savings from diabetes care and telemedicine
Net impact	$2.71	Net impact on 2020-21 premium

Next Steps:

- Further discussion at April Board meeting
- Implement Moda360 effective 1/1/2021

Thank You

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DELTA DENTAL

Delta Dental of Oregon & Alaska

PROVIDENCE Health Plan

A presentation for

PEBB Board 2021 Renewal Strategies

March 17, 2020

Your Providence team

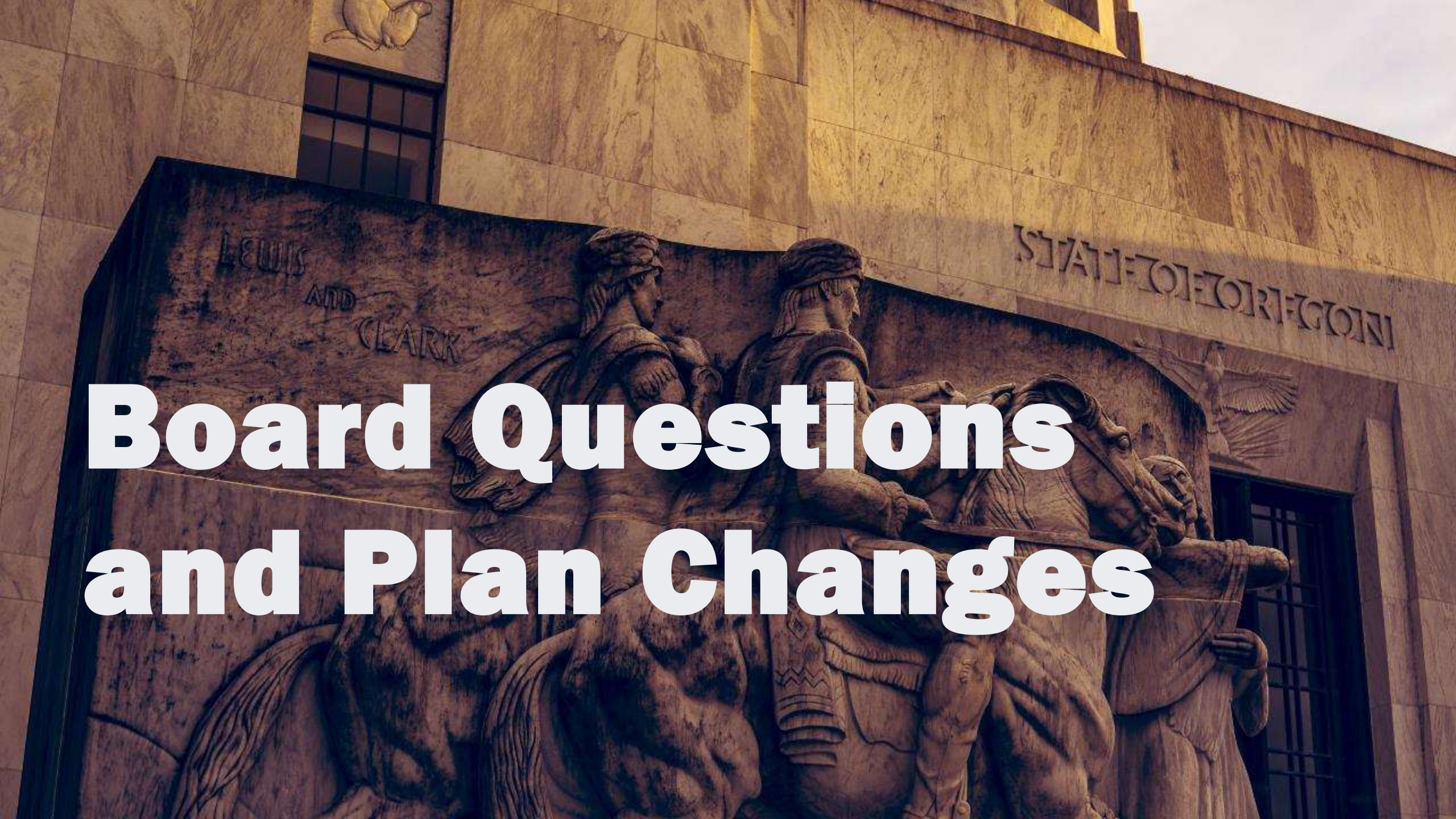
Brad Garrigues
Chief Sales & Marketing Officer

Bob Gluckman, MD
Chief Medical Officer

Cash Spencer
Manager, ASO Account Services

COVID - 19 Preparation

- Business continuity plans are in place to prevent degradation in service levels
  - Initiated remote work strategies
  - Confirmed vendor partner readiness
- We are waiving all cost sharing out-of-pocket costs for testing services related to COVID-19
- Encouraging the use of 90-day supply of medication through mail order pharmacy or home delivery
- Allow early refills for most medications



Board Questions and Plan Changes

Administrative Fee Proposal

- **PEBB Statewide Plan 2021 (PEPM)**
  - Base Admin $43.66
  - Triple Aim Incentive* $13.63
- **PEBB Choice Plan 2021 (PEPM)**
  - Base Admin $62.24
  - Triple Aim Incentive* $13.20

+2.75%

*Triple aim incentive earned based on meeting cost, service, and experience measures

Hospital Fee Changes

- **Historical trends managed at a rate below 3.4%**
  - Total cost of care initiatives drive efficiency
- **Hospital contracting strategies as a result of SB 1067**
  - Projected savings to PEBB: $31 million
- **Providence hospitals in aggregate:**
  - Net reimbursements have, on average, been historically below 200%
  - Calibrated with SB 1067 for 2020. Net result remains below 200%
  - Providence hospitals offer the lowest facility rate in-network
- **Cost saving strategies implemented to achieve these results**

Outpatient Infusion Site of Care

- **Voluntary Program - current**
  - In place since 2015
  - Transition to lower cost site of care, such as home infusion, when clinically appropriate
  - Transition based on proactive outreach by specialty team for highest cost meds
  - 2019 Savings: $1.9 million
- **Mandatory Program – 2020**
  - Prior Authorization on site of care
  - Several major hospitals have matched the home infusion rate
  - Expansion of home infusion network to support
  - Anticipated PEBB savings: ~ $3 million in additional savings

Long-term Cost Containment Strategies

Providence's proposed strategies for saving money in health care

Pay Less for Services

- **Medical necessity review for joint replacements in the hospital**
  - Implementing 2nd quarter 2020
- **Policies to direct care out of hospital based facilities**
  - Site of care initiatives
- **Optum High Dollar Claim Review**
  - Additional forensic review applied to high dollar claims
- **Real time benefit check – projected savings based on early experience in 2020**
  - 2020 projected savings*: $730,000
  - 2021 projected savings*: $1,200,000

*conservative saving based on new technology; savings are estimates only based on early experience. There is potential for significantly more savings.

Site of Care – Oncology Focus

- **Oncology – Supportive Care Medications**
  - Already included in mandatory site of care program
    - Colony stimulating factor (CSF) - Ex: Procrit, Neupogen, and biosimilars
    - Bone health modifiers – Ex: Xgeva, zoledronic acid
  - PEBB Savings = ~ $1 million (*included in $3 million total SOC program savings*)
- **Oncology – Chemotherapeutic Regimens**
  - At this time, not considered standard of care due to complex regimens, monitoring requirements and safety concerns
  - PHP Home Infusion Network can support in future
    - Access to select chemo medications
  - Potential Savings ~ $ 2 million
- **Providence oncology services cost less than community based providers**

Pay for Fewer Services

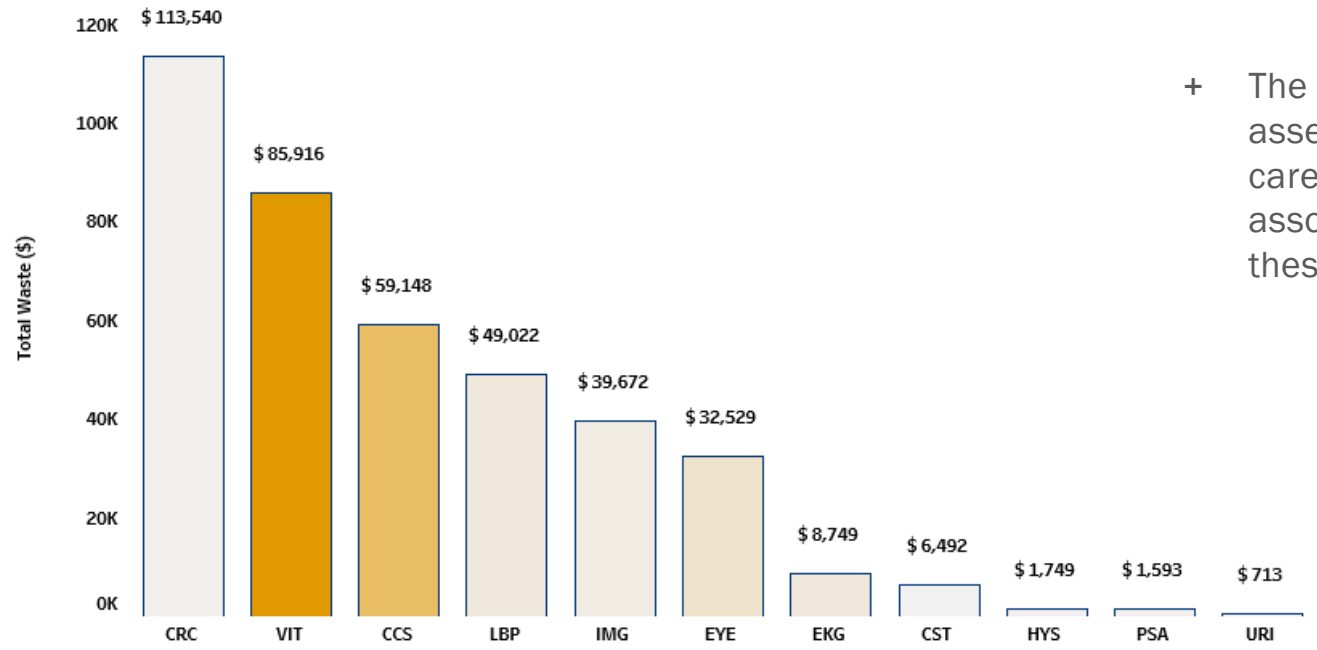
- **Avoid non-value add services and duplication**
  - Choosing Wisely
- **Centers of Excellence and narrow networks**
  - Spine Care Continuum
  - Engage Comagine and OHLC around standardized collection of patient reported outcomes and shared decision making processes
- **Better Health Care for Oregonians Initiatives**
  - Many initiatives already in place with Providence

Choosing Wisely

PMG Choosing Wisely Dashboard - Entity View: 3/1/18 - 2/28/19

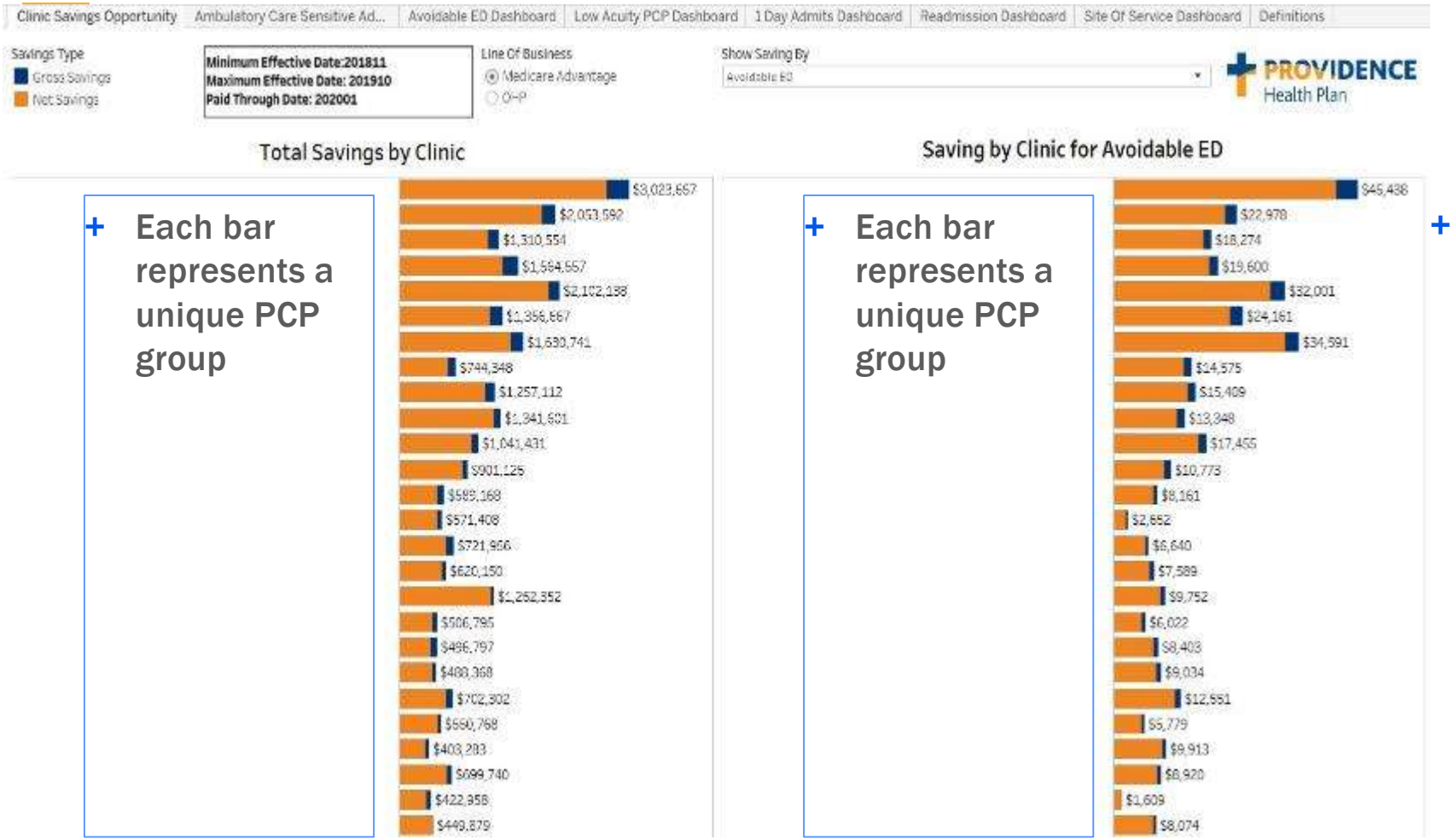
Line of Business	Total Waste
Commercial	$399,124
Medicaid	$53,859
Medicare	$405,367
Grand Total	$858,350

Practice Name	PCP Name	Line of Business	Choose an Inefficiency Metric
(All)	(All)	Commercial	Total Waste ($)



+ The Choosing Wisely tool assesses low-value health care services and the waste associated with the overuse of these services.

Opportunity Analysis

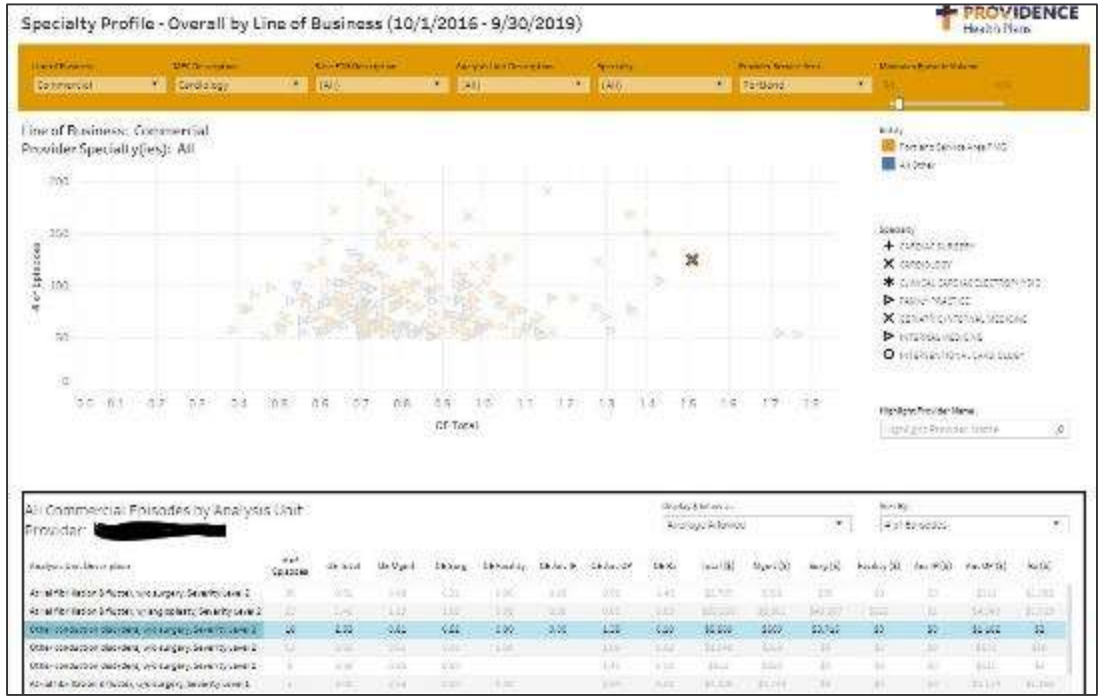


+ Each bar represents a unique PCP group

+ Each bar represents a unique PCP group

+ **Shows potential savings in the following areas:**
  + Avoidable ED
  + Ambulatory Care Sensitive Conditions
  + IP Readmissions
  + Optimal Site of Service
  + One Day Admissions
  + Low Acuity PCP visits

Specialty Profiles



+ Helps identify specialists who's costs tend to be outlier compared to peers
+ Analysis is at the ETG episode level
+ Ensures apples-to-apples comparisons across episodes of care and severity
+ Controls for geography, specialty type, number of episodes, and line of business

Need Fewer Services

- **Effective programs to support healthy behaviors and resiliency**
  - Integrated behavioral health co-located with health care services
  - Behavioral health concierge
- **Decreasing risk factors for disease and injury**
  - Strategic account management program and PCP profiling
- **Early identification of health conditions**
  - Enhanced identification and stratification of the population
- **Maximize chronic condition management**
  - Robust care management and disease management programs
- **Proactive population health management**
  - Piloting a solution that mines data to identify member's gaps in social determinants of health
- **Systematic implementation of evidence-based clinical guidelines**
  - Rapid implementation when guidelines change
- **Meaningfully address the impact of adverse childhood experiences (ACEs)**
  - Trained in trauma-informed care
  - Proactive pediatric care management

PROVIDENCE Health Plan

Claims Coding Strategies

- Providence's proposed strategies for addressing and improving quality of claims coding

Coding Quality Initiatives

Implement Optum ED Analyzer Tool for PEBB

- Price= 20% contingency fee of savings (or $196,000)
- Gross Savings = $980,000
- Net Savings =$784,000

Potential downside:

- Increased provider appeals
- Increased administrative fees related to the appeals

Fraud, Waste, and Abuse Efforts

- **Healthcare Fraud Shield software Post-Payment implementation by the end of 2020 will provide over 800 analytics to identify FWA.**
  - SIU to validate new leads
  - Investigate
  - Mitigate, recover monies, educate providers, refer to law enforcement as appropriate
  - Use learnings from these investigations to prevent future FWA
- **Institute Pre-Payment analytics early 2021 to prevent known FWA schemes.**
  - Audit claims prior to processing
  - Deny claims
  - Educate providers
  - Terminate or refer to regulators as appropriate

FWAShield

One Platform. Fully Integrated. Single Sign On.

FWAShield
Advanced FWA software platform that promptly integrates new and emerging fraud rules.

PreShield
Healthcare Fraud Shield's pre-payment detection system.

PostShield
Healthcare Fraud Shield's post-payment detection system. PreShield™ and PostShield™ work together to improve the success of your FWA efforts.

CaseShield
Healthcare Fraud Shield's unique case management system that works cohesively with both PreShield™ and PostShield™.

QueryShield
A powerful ad-hoc querying tool fully integrated into FWAShield™ suite.

RxShield
Powerful analytics for pharmacy and medical fraud, waste and abuse

19

Key Advantages of the FWAShield Platform

PROVIDENCE Health Plan

- FWAShield has finely tuned expert rules that provide very specific known patterns of fraud, waste and abuse with detailed explanations of how to pursue the next steps during an investigation.

Provider	Member	Pharmacy	Prescriber
• Upcoding • Services not rendered • Medically Unnecessary Services • Unbundling • Excessive Billing • Misrepresentation • Unlicensed • Sanctioned Providers • Providers with invalid NPIs	• Diversion • Doctor Shopping • ER Shopping • Abuse • Ineligible Members • Deceased Members	• Brand vs. Generic • Compound Medications • Inappropriate Refills • Collusion • Emerging Drug Spending	• Inappropriate Schedule II Prescriber • Not medically supported prescriptions • Prescribing for oneself • Therapeutic Class outliers • Overprescribing • Overprescribing Morphine Equivalency • Collusion

PROVIDENCE
Health Plan

Thank You

Appendix

Supplemental information to support our presented material

2018 & 2019 PEBB Specific Financial Improvement Initiatives

Estimated incremental allowed dollar savings of PHP's internal Financial Improvement Initiatives

Area	2018	2019
Pharmacy	$4,700,000	$4,100,000
UM, Payment Policy and Other	$1,400,000	$1,600,000
Total	$6,100,000	$5,700,000

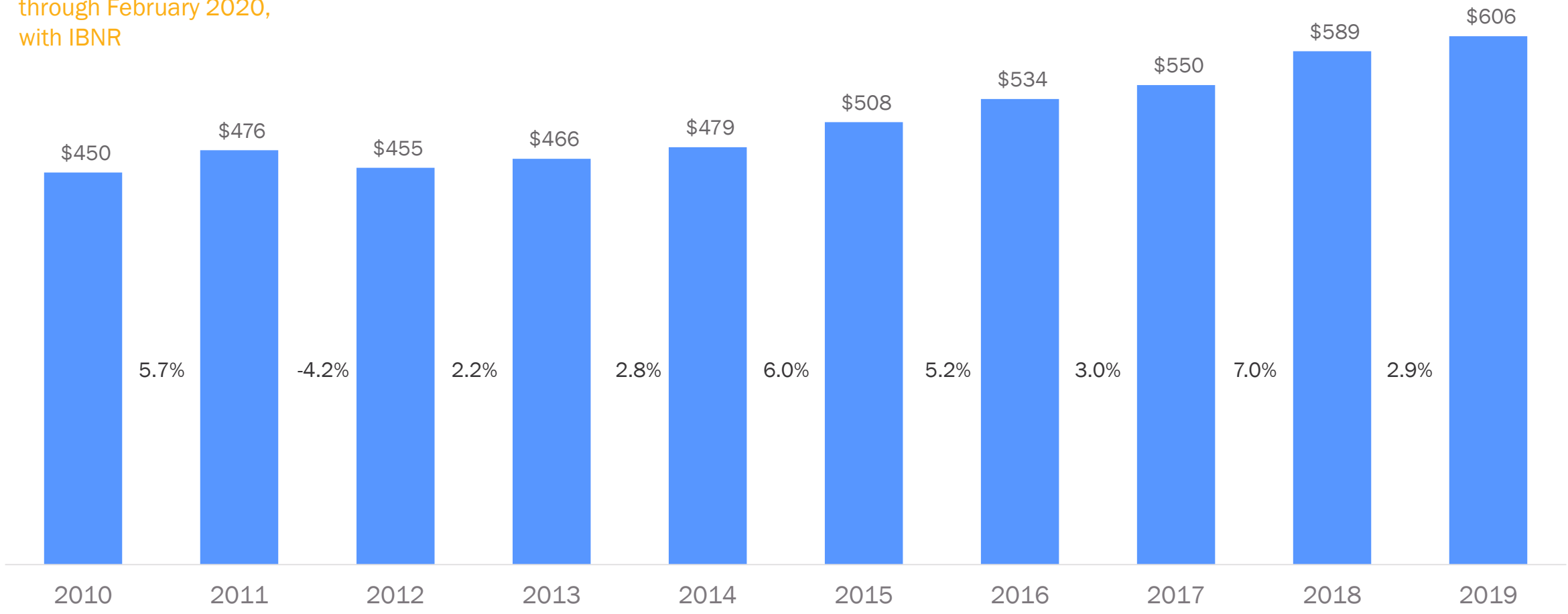
Among the initiatives are:

- Steer maintenance medication from 30 to 90 day scripts
- Rebate enhancements
- Specialty pharmacy price renegotiation
- Implementation of Clinical Editing System
- Vitamin and UDA Medical Policy
- Reference base pricing for out of network services

Historical Trends – Allowed PMPM

Incurred Jan-Dec, Paid through February 2020, with IBNR

Impact of risk arrangements, not quantified below, will reduce the recent year trends



2012 RX Rebates were used as a conservative estimate of both 2010 and 2011 rebates

PEBB PMPM Amount Allowed, Risk Adjusted

PMPM Amount Allowed, Risk Adjusted			
Group	2017	2018	2019
PEBB Choice Not net of rebates	$568.92	$593.34	$590.18
PEBB Statewide Not net of rebates	$611.77	$646.12	$658.36
PEBB Total Net of Rx Rebates	$580.28	$605.46	$606.47

Change in PMPM Amount Allowed, Risk Adjusted		
Group	2017 to 2018	2018 to 2019
PEBB Choice Not net of rebates	4.3%	-0.5%
PEBB Statewide Not net of rebates	5.6%	1.9%
PEBB Total Net of Rx Rebates	4.3%	0.2%

January - December, paid through Feb 2020, with IBNR

Risk normalized to 2019 PEBB Total

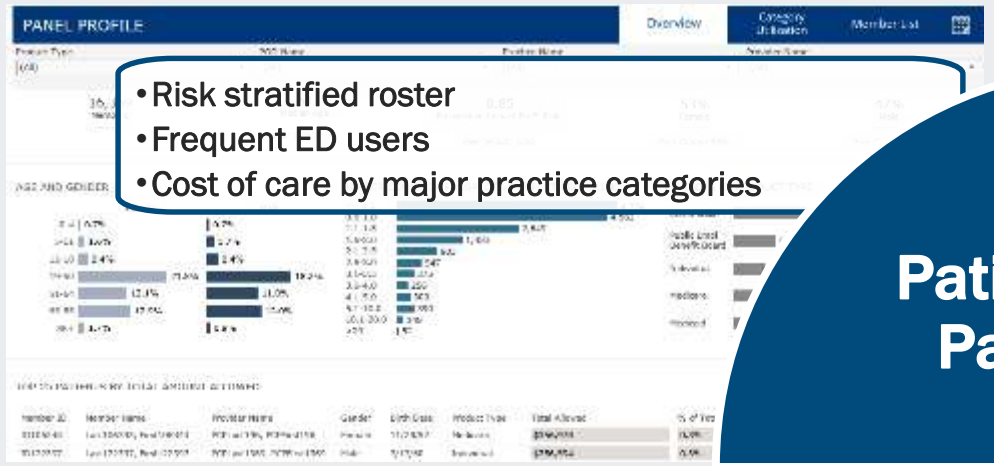
2019 NCQA rating:

Framework for head-to-head comparisons

Lower Performance ≤1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 Higher Performance

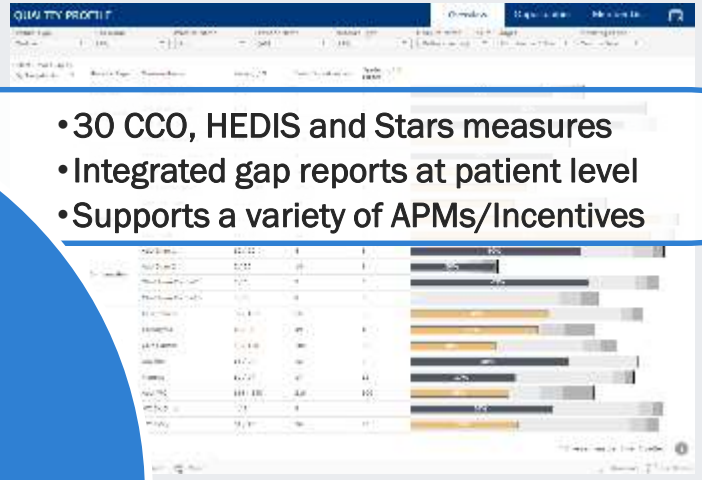
Rating	Plan Name	Type	Consumer Satisfaction	Prevention	Treatment
4.5	Kaiser Foundation Health Plan of the Northwest, Inc.	HMO	2.0	4.5	4.0
4.0	Providence Health Plans - Oregon	PPO	2.0	3.5	4.0
3.5	Cigna Health and Life Insurance Company - Oregon	PPO	2.0	3.0	3.0
3.5	Moda Health Plan, Inc. (Oregon)	PPO	2.0	3.0	3.5
3.5	Regence BlueCross BlueShield of Oregon	PPO	2.5	2.5	3.0
3.5	United HealthCare Services, Inc. (Oregon)	PPO	1.0	3.5	3.5
3.5	UnitedHealthcare Insurance Company (Oregon)	PPO	1.0	3.5	3.5
3.0	Aetna Life Insurance Company (Oregon)	PPO/EPO	2.0	1.5	3.0
3.0	PacificSource Health Plans - Oregon	PPO	2.0	3.0	3.0

PCP Profiles: Timely, actionable data



- Risk stratified roster
- Frequent ED users
- Cost of care by major practice categories

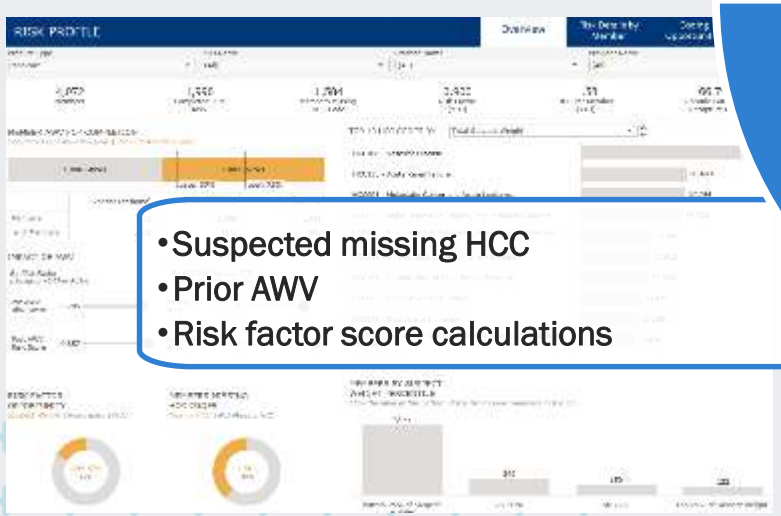
Patient Panel



- 30 CCO, HEDIS and Stars measures
- Integrated gap reports at patient level
- Supports a variety of APMs/Incentives

Quality

Member Search



- Suspected missing HCC
- Prior AWV
- Risk factor score calculations

Risk

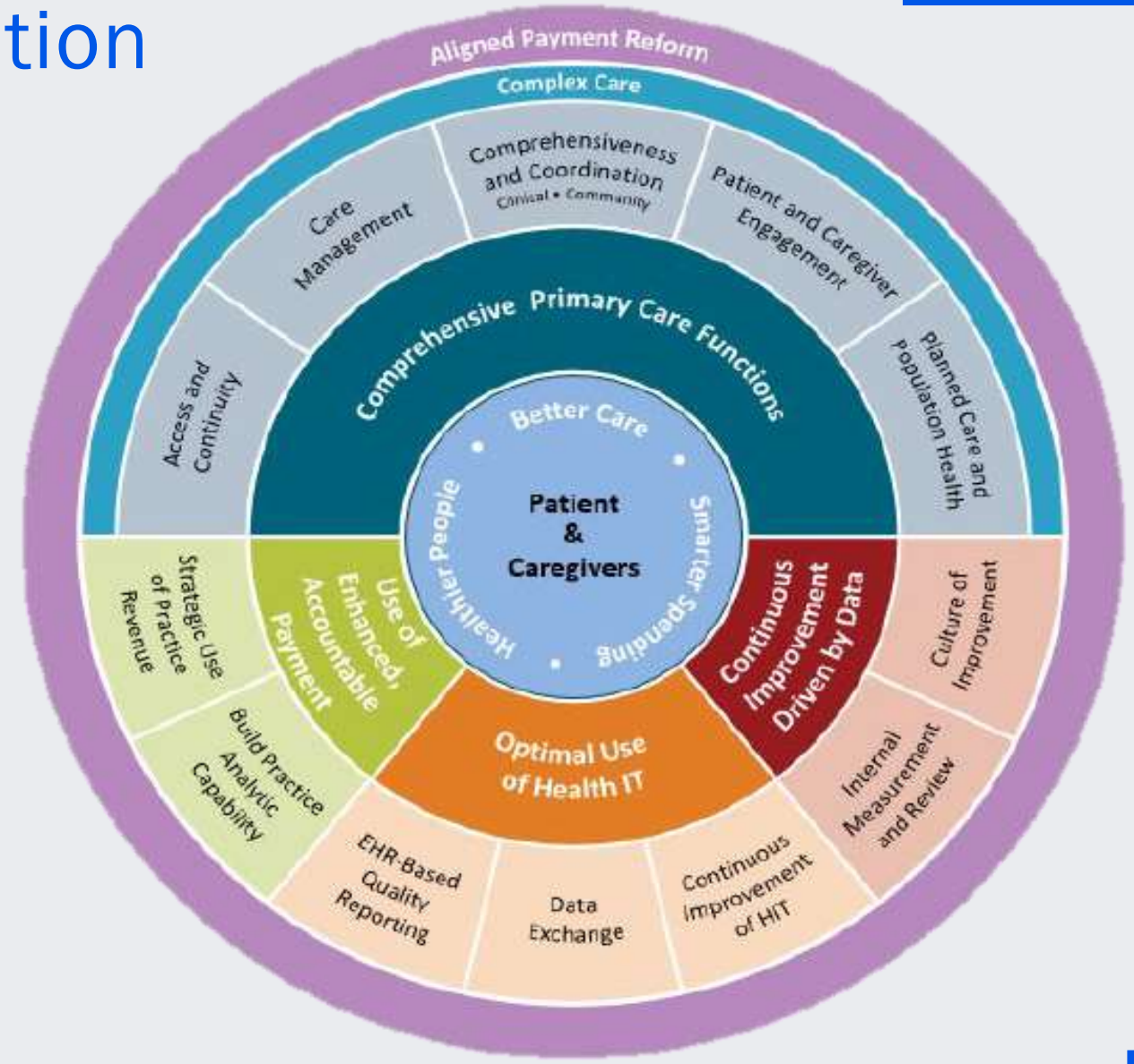
- Comparison to geo peers: utilization, price, avoidable ED, ACSC readmits

Efficiency

Primary care transformation

What this mean to patients?

- Enhanced capabilities in the primary care clinics
- Availability of high-value primary care interventions that are not supported by typical fee-for-service payment models
- Affordability
  - CPC+ brings federal transformation dollars to Oregon



Providence Spine Care Continuum Explanation

Background Information

In 2012-2013, a few key spine leaders came together a solution to get patients to the right provider at the right time.

Problem: Most patients with MRI and CT orders were being simultaneously referred to a neurosurgeon or orthopedic spine surgeon to review their imaging results. The language on the imaging reports are scary to patients, its normal to have age related degenerative changes, and providers felt that surgeons should be involved upstream to indicate when patients didn't need to see a surgeon. There were also instances in which patients with an emergent symptom needs to be triaged into a surgeons office sooner to preserve neurologic function and some patients were getting serial spinal injections..

Solution: At the time that advanced imaging is ordered by a PCP, offer expert virtual consult from spine specialist to correlate imaging, provide treatment recommendations to PCP, with RN navigation to provide education, shared decision making, and monitor outcomes.

Spine Care Continuum (SCC) Logistics

There is currently of team of nurse navigators and intake specialists that manage patients across the continuum of care. We track our patient's data in a database. We have onboarded 35 PMG PCP clinics from the North Coast to Gresham, North Portland to Wilsonville.

1. **Patient Capture:** The team receives a list of patients that have had an MRI or CT of the spine ordered by one of our PMG PCP clinics. The RN navigator reviews the chart to see if the patient meets criteria and sends a message to the PCP.

   Inclusion criteria:

   - MRI/CT of the spine for spine condition within last 6 months
   - Insurance: PHP commercial lines, PHP Medicare, and Medicare A&B.
   - PCP at onboarded PCP clinic
   - Patient lives in Oregon

   Exclusion criteria:

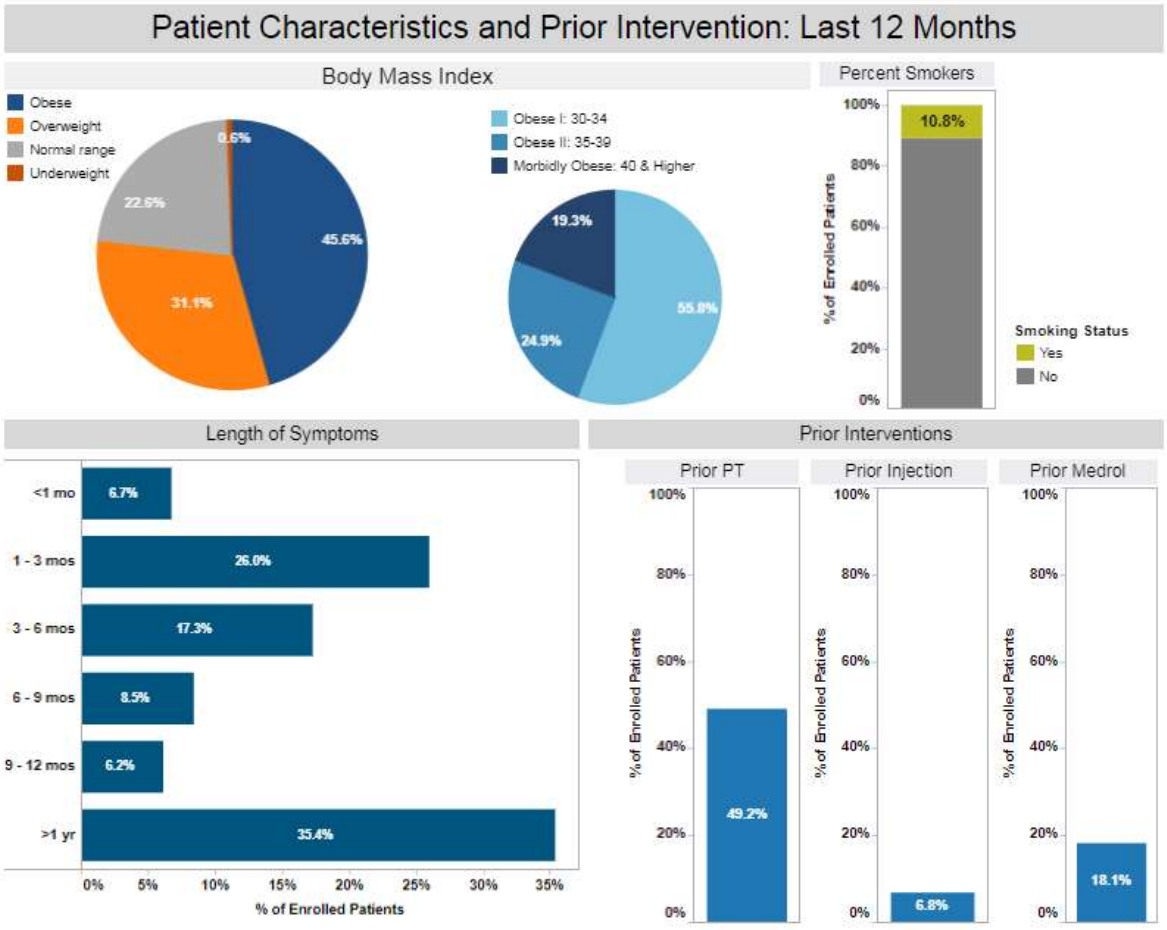
   - Diagnosis of dementia
   - Work-up for cancer, MS
   - Second opinion consult

2. **Patient Enrollment:** If the PCP agrees to enrollment, the SCC team reaches out to the patient to offer enrollment.

Year	2013	2014	2015	2016	2017	2018	2019
# Patients	7	14	517	875	683	593	593

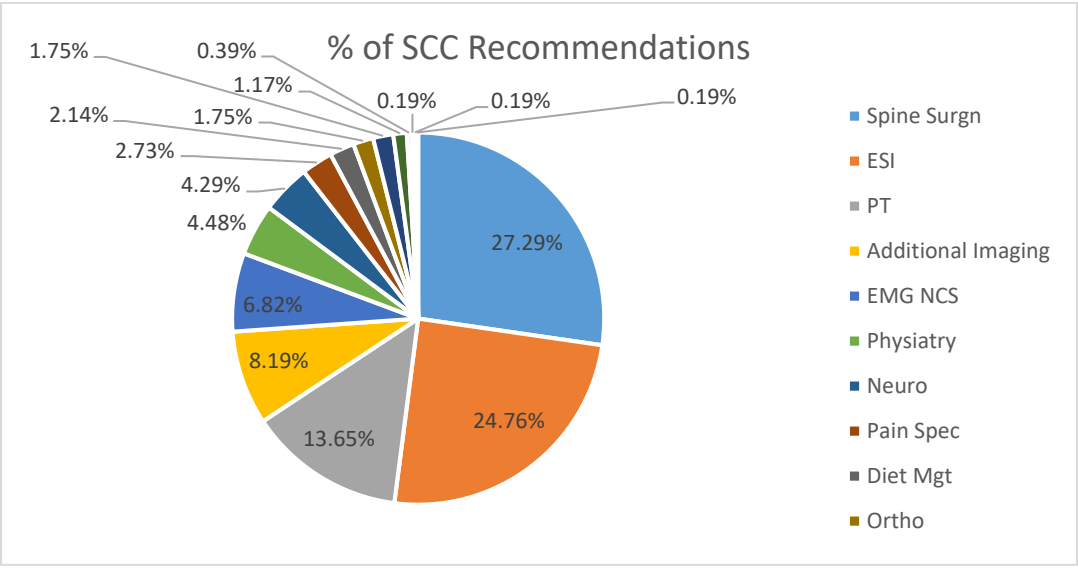
3. **Intake:** The patient answers a series of scripted questions around their back and/or neck symptom history, which takes about 30 minutes. Symptoms, prior treatments, goals of care, patient reported outcomes. The RN reviews the symptoms and triages for urgency. The history is forwarded to the SCC reviewer once the imaging is complete.

a. Prior to intake these are the demographic characteristics we find (essentially similar patterns over the years) – high incidence of chronic pain, ~50% of pts have tried PT for this episode in last year.



4. **Review & Recommendations.** The SCC reviewer reviews the history and imaging and documents impression, treatment recommendations, and writes a summary of key findings. The RN transcribes this into the EPIC note and routes to the PMG PCP for approval.

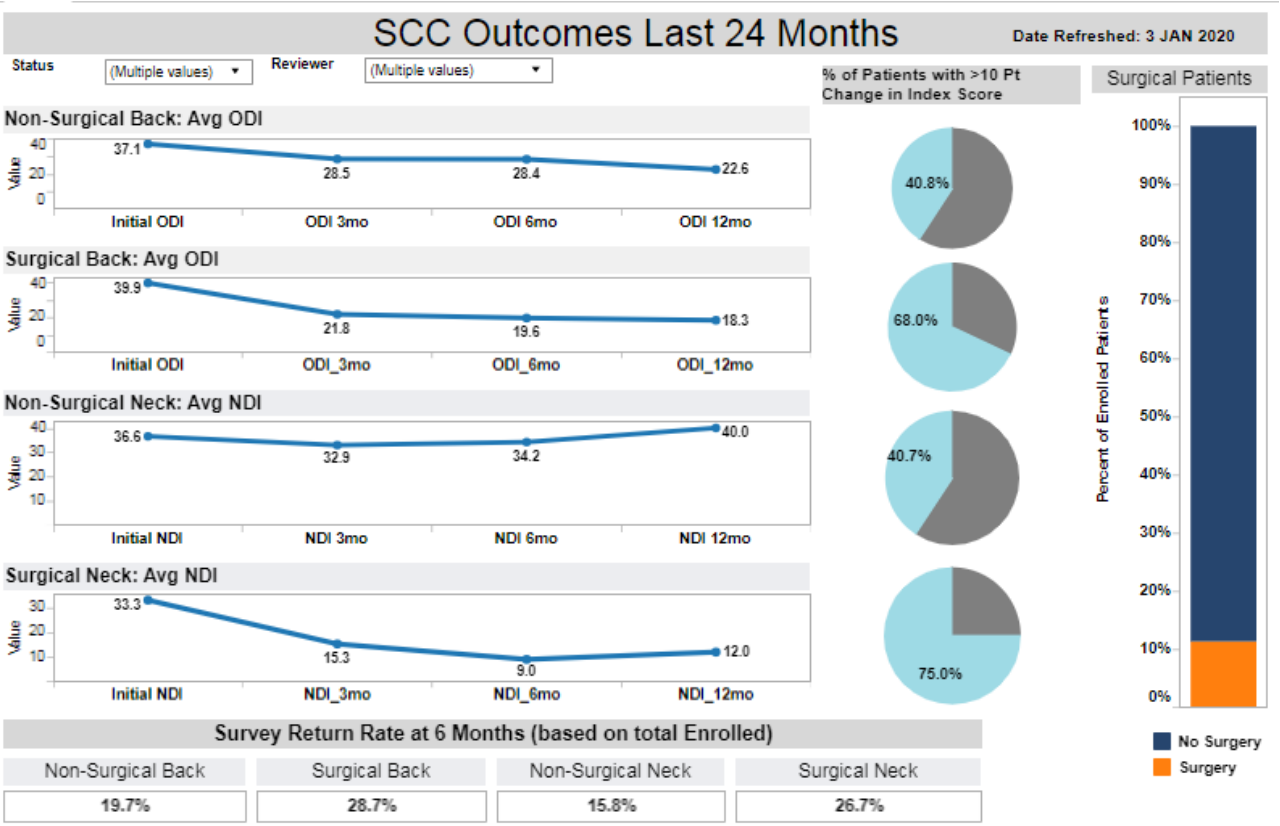
Year	2017	2018	2019
# Reviews	740	574	595



5. **Initial Care Coordination.** The PCP reviews the recommendations and directs the treatment plan. Many times they direct their medical assistant to call the patients with results in next steps. The SCC RN navigator reviews the recommendations, explains scary MRI terms, provides coaching and shared decision making when able, and reviews patient's goals of care and how to prepare for the next step. The navigator tracks the patient through their initial treatment steps and calls the patient after each consult. If the patient has been requested to have additional imaging or EMG/nerve conduction study, the patient may be sent for re-review.

6. **Ongoing Navigation.** The RN navigator follows the patient over time until their treatment is complete or the patient no longer needs support. We track surgical rate and compliance with recommendations.

7. **Outcomes.**
   a. **Surgical rate.** Surgical rate has remained ~10-14%.
   b. **Patient Reported Outcomes.** We capture patient reported outcomes for our spine patients at intake, 3 months, 6 months, and 12 months (surgical and non-surgical). These are mailed surveys, so the return rate is low and there is some selection bias.



   c. **Patient Satisfaction.** We collect patient satisfaction scores at 6 months. Given we are a virtual clinic, they do confuse us with some of the pain providers, and some still expect that surgery is the answer.
   2019 survey response = 132; Overall Response = 659
   Net Promoter Score (Strongly Agree/Agree) = 53% for 2019 and 45.8% for all years

	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
SCC Satisfaction Questions	**2019**	**Overall**	**2019**	**Overall**	**2019**	**Overall**	**2019**	**Overall**	**2019**	**Overall**
Satisfaction with RN navigator calls	65.2%	49.9%	25.0%	31.4%	6.1%	9.1%	0.0%	1.8%	0.0%	0.9%
Satisfaction with information and support	52.3%	46.0%	34.1%	32.6%	7.6%	11.2%	3.8%	4.2%	0.0%	1.4%
Overall satisfaction with spine care	47.0%	41.7%	33.3%	32.8%	11.4%	13.5%	2.3%	3.9%	0.8%	2.3%
Would recommend this spine program to my friends & family	52.3%	44.6%	33.3%	32.9%	6.8%	12.3%	2.3%	3.2%	0.0%	1.8%

nrhi
Network for Regional Healthcare Improvement

Getting to Affordability

Healthcare Affordability: Data is the Spark, Collaboration is the Fuel

Section I: Benchmark Overview

Section II: Benchmarking Methodology

November 8, 2018

Acknowledgments

Support for this report was provided by the Robert Wood Johnson Foundation.
The views expressed here do not necessarily reflect the views of the Foundation.

CONTRIBUTORS

Network for Regional Healthcare Improvement (NRHI)
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Judy Loren

THE FOLLOWING ORGANIZATIONS CONTRIBUTED DATA AND ANALYSIS FOR THIS PROJECT.

Center for Improving Value in Health Care | Colorado
HealthInsight Oregon | Oregon
HealthInsight Utah | Utah
Maine Health Management Coalition | Maine *
Maryland Health Care Commission | Maryland
Midwest Health Initiative | St. Louis, Missouri
Minnesota Community Measurement | Minnesota

THE FOLLOWING ORGANIZATIONS PARTICIPATED AS DEVELOPMENT SITES.

Greater Detroit Area Health Council | Michigan
HealthInsight Nevada | Nevada
HealthInsight New Mexico | New Mexico
Health Care Improvement Foundation | Philadelphia
Integrated Healthcare Association | California
Massachusetts Health Quality Partners | Massachusetts
The Health Collaborative | Ohio
The University of Texas Health Sciences Centers at Houston | Texas
Virginia Health Information | Virginia
Washington Health Alliance | Washington
Wisconsin Health Information Organization | Wisconsin

ABOUT THE NETWORK FOR REGIONAL HEALTHCARE IMPROVEMENT (NRHI)

The Network for Regional Healthcare Improvement (NRHI) is a national organization representing more than 30 member regional health improvement collaboratives (RHICs) and state/regional affiliated partners. These multi-stakeholder organizations are working in their regions and collaborating across regions to transform the healthcare delivery system. They share the goal of improving the patient experience of care, including quality and satisfaction; improving the health of populations; and reducing the per-capita cost of healthcare. The RHICs are accomplishing this transformation by working directly with physicians and other healthcare providers, provider organizations, commercial and government payers, employers, consumers, and other healthcare-related organizations. Both NRHI and its members are non-profit, non-governmental organizations. For more information about NRHI, visit www.nrhi.org.

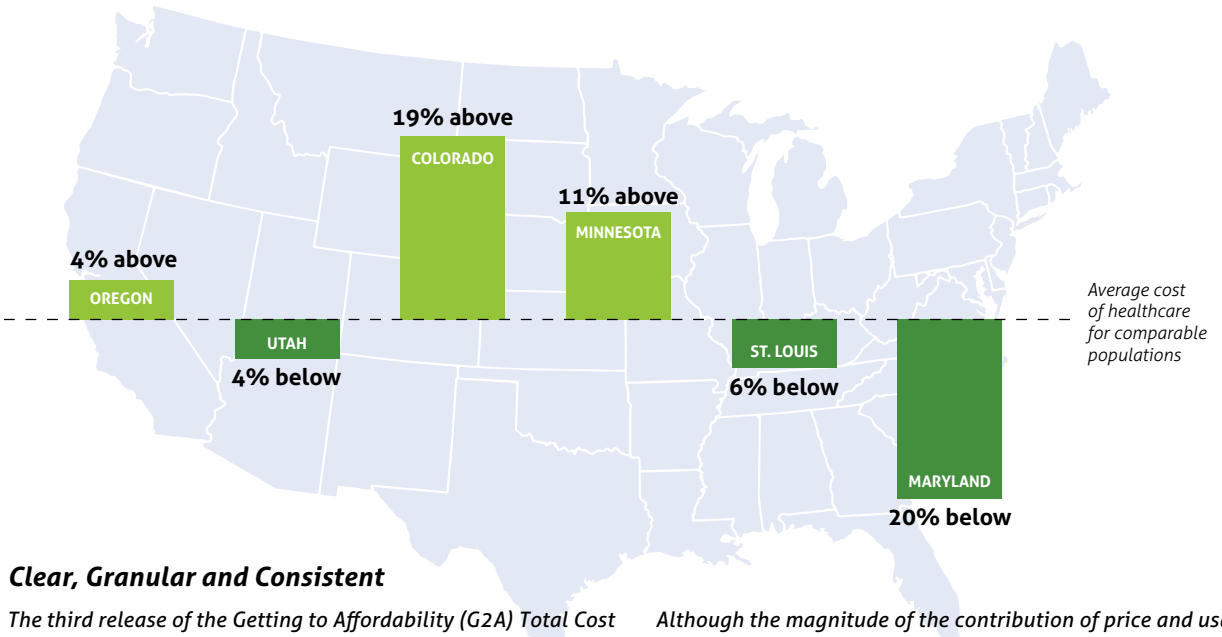
ABOUT THE ROBERT WOOD JOHNSON FOUNDATION

For more than 45 years the Robert Wood Johnson Foundation has worked to improve health and health care. We are working alongside others to build a national Culture of Health that provides everyone in America a fair and just opportunity for health and well-being.

For more information, visit www.rwjf.org.
Follow the Foundation on Twitter at www.rwjf.org/twitter or on Facebook at www.rwjf.org/facebook.

The Getting to Affordability team dedicates this report to Linda Bartnyska, Director of Analysis and Information Services at the Maryland Health Care Commission. Linda's contributions went far beyond her knowledge of, and dedication to, healthcare cost measurement. Linda's quiet leadership and steady presence were appreciated by every member of the team. She is greatly missed.

* Maine Health Management Coalition participated in Phases I and II and is now known as the Healthcare Purchaser Alliance of Maine



Clear, Granular and Consistent

The third release of the Getting to Affordability (G2A) Total Cost of Care (TCOC) benchmarks continues to highlight variation in the underlying drivers of healthcare costs across regions. Once again, it finds that although price is the driver of both higher and lower healthcare costs in some geographies, utilization makes the difference in others.

Although the magnitude of the contribution of price and usage varies year to year, the relativity has remained constant. This consistency reinforces the stability of this measure and its utility in informing changes in policy and care delivery.

Rising healthcare costs, and the underlying causes and attempts to rein them in is at the forefront of the news. This unsustainable trend is causing emotional distress and financial harm to individuals, communities and our country.

The Network for Regional Healthcare Improvement (NRHI) recognizes that credible, digestible information that quantifies and compares overall healthcare costs at the depth and granularity necessary for providers, policymakers, payers, purchasers and patients to act is essential. Through the Getting to Affordability (G2A) initiative NRHI and its members have taken on this challenge. They have leveraged the power of the nationally-standardized HealthPartners Total Cost of Care (TCOC) measure set to deliver this critical information to stakeholders in six regions across the country and have spread promise of cost transparency to an additional twelve regions.

A contagion of curiosity has spread across the country during the five-year G2A initiative. A dozen additional regions now benefit from the strong foundation built. The promise of measuring and reporting TCOC with a standardized approach that provides valuable information to various stakeholders has spread, carrying the proof that cost transparency can be achieved.

However, the data alone is not sufficient to guide new models of care delivery and payment. RHICs' multi-stakeholder forums leverage collaboration, healthy tension and intelligence from local healthcare leaders who understand the markets they serve. The result is greater confidence in the accuracy of the data and that the information gained will be used for good purposes.

Data is the spark, collaboration is the fuel

In healthcare, there's little question that the costs are too high. As the National Academy of Medicine has long reported, a third or more of spending does nothing to improve health. Because of these and many other factors, we simply do not receive the healthcare we deserve for the dollars we spend.

A barrier to overcoming these realities has been the lack of a credible approach for quantifying overall healthcare cost, utilization and price that could simultaneously empower national understanding, inspire state and regional policy change, paying for what matters and promote care delivery transformation. There are accepted methods to measure some elements of cost and utilization. However, they lack the breadth, depth and granularity necessary to be actionable to providers, policymakers, payers, purchasers and patients.

Overcoming these barriers requires three inputs. 1) Reliable, standardized measures of cost, price and resource use that could be applied across different populations such as states, regions, provider practices, health plan memberships, and employer workforces. 2) High-quality data sets with transparent cost information including the amount paid for services. 3) A detailed and well-documented process to ensure consistency in data processing and analysis and in turn, results.

NRHI is a national membership organization of more than 30 RHICs and state partners across the United States. These multi-stakeholder organizations are working in their regions and collaborating across regions to transform the healthcare delivery system to improve health, reduce price and eliminate waste.

NRHI and its members long recognized the need for high-quality, comparative data on healthcare spending. Working collaboratively and with the support of the Robert Wood Johnson Foundation, they began to produce it. Beginning in 2013, NRHI intensified its focus on making healthcare more affordable through an initiative now known as Getting to Affordability or G2A. Supporting six of its members in measuring and reporting on differences in total cost of care and the impact of price and resource use has been a core part of this work.

"The way we receive healthcare in the United States is broken, and as a result Americans are paying too much and are less healthy than other developed nations," said NRHI Executive Director, Healthcare Affordability Ellen Gagnon. "There are ways we can work together to change the system, but we need trusted data to focus our collective efforts and measure our shared success."

FIVE YEARS OF NRHI TOTAL COST OF CARE MEASUREMENT:

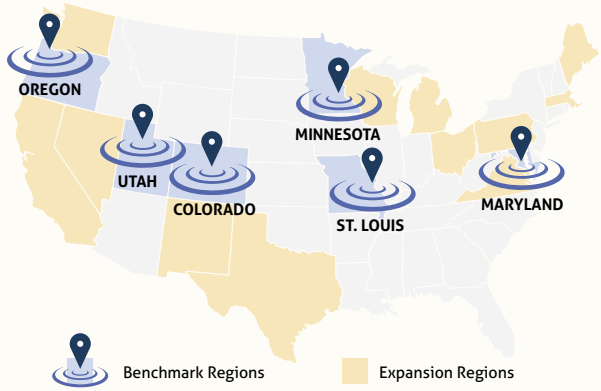
- **Goal:** Explore whether data from multiple states, multi-payer and all-payer claims datasets could be processed and analyzed with sufficient standardization to achieve comparable results across states and regions.
- **Outcome:** Over the last five years, RHICs and state partners participating in total cost of care measurement have collaborated to produce three reports comparing their performance against one another and developed state, regional and local results to inform policy and practice. Consistency across the three measurement periods suggest the project's extensive efforts to standardize data collection, measurement, and analysis processes has produced reliable, comparable results across the regions.
- **Goal:** Utilize this data to share information on differences in total cost and its components—utilization and price—to inspire a national discussion of cost drivers and remedies.
- **Outcome:** Featured in publications such as Health Affairs, Modern Healthcare and Forbes and at leading conferences including AcademyHealth's Datapalooza, ACG System International Conference and the National Association of Health Data Organizations' annual meeting, NRHI's work in total cost of care measurement is providing meaningful contributions to the national dialogue on affordability.
- **Goal:** Produce local, actionable results that could be shared in different ways with providers, health plans, employers and the public to inform conversations about the local drivers impacting cost and how they could be addressed.
- **Outcome:** It's estimated that, for each year of the benchmark, healthcare cost information on over 5 million patients attributed to approximately 20,000 individual physicians has been calculated and shared. NRHI members are providing comparative cost data to state legislatures and state agency leaders, physician practices, health plans, leading national employers and in some regions, consumers. The information is used to inform strategy, shape policy and support interventions.

RHICs' ability to access, understand and utilize claims data for the purposes of cost measurement and their experience bringing together diverse stakeholders to act on the results, made them an ideal home for the first national project to develop a total cost of care benchmark across the participating regions.

Before the project began, it was clear previous attempts to reduce costs often had a balloon effect. Market pressure squeezed the balloon to save in one part of the system, such as emergency department use or imaging, but the balloon expanded elsewhere, resulting in the same high healthcare costs. Deflating the balloon would require an understanding of what's behind the total cost of care and monitoring to ensure overall costs are reduced. Through Getting to Affordability's multi-region analysis of total cost of care and its drivers, NRHI found striking variation between regions. While some national studies find that pricing is the biggest driver of healthcare cost increases, that is not true everywhere. More granular analyses make it possible to identify differences by market.

Achieving affordability will require the data and collaborations necessary to address all components of cost. Despite intensive work by providers to ensure appropriate utilization of resources, total cost of care may remain high as prices increase to make up for decreased utilization.

An Expanding Influence



Advancing cost transparency in benchmark regions is producing a ripple effect across the country. If cost transparency was achieved in the 12 expansion regions, it is estimated that reporting on an additional 55 million commercially-covered lives, could ignite meaningful change by providers, purchasers, payers, patients and policymakers.

Source: Fact Finder ***2012-2016 American Community Survey 5-Year Estimates***

GATHERING, ANALYZING THE DATA

The regions base the analysis on data collected via the claims databases they steward. To produce comparable results, extensive standardization is critical. This work utilizes the Total Cost of Care (TCOC) and Total Care Relative Resource Value™ measures developed by HealthPartners which were first endorsed by the National Quality Forum in 2012 and again in October 2017. NRHI members work closely with each other and a technical advisor to standardize the application of these measures, including the risk adjustment methodology, and analyze the reasonableness of results.

"At the end of the day I think it's fairly remarkable," said Norman Thurston, Director of the Office of Health Care Statistics, which partners with HealthInsight Utah on the project. "One reason that it was successful was that so many people spent so much time worrying about the minutiae of the process."

Of course, none of this work would be possible without high-quality claims data and either supportive regulatory environments or highly engaged health plans

and self-insured employers that allow this data to be used in ways that illuminate opportunities to drive improvements in cost, quality, and utilization. Statewide all payer claims databases are typically created by a state mandate. They systematically collect healthcare claims data, such as medical, pharmacy, eligibility, and provider data, from a variety of payer sources. Three of the six RHICs participating in this project use data provided voluntarily by health plans.

Minnesota Community Measurement (MNCM) partners with leading Minnesota health plans to provide a unique data set. In this model, each payer applies the HealthPartners methodology to its own data. Then, MNCM aggregates all of the plans' data and analyzes. Then the data is sent to NRHI for the national benchmark. MNCM also produces extensive public information for the community, including patients, providers and payers. Medical group data enables local comparisons and gives consumers information on cost differences.

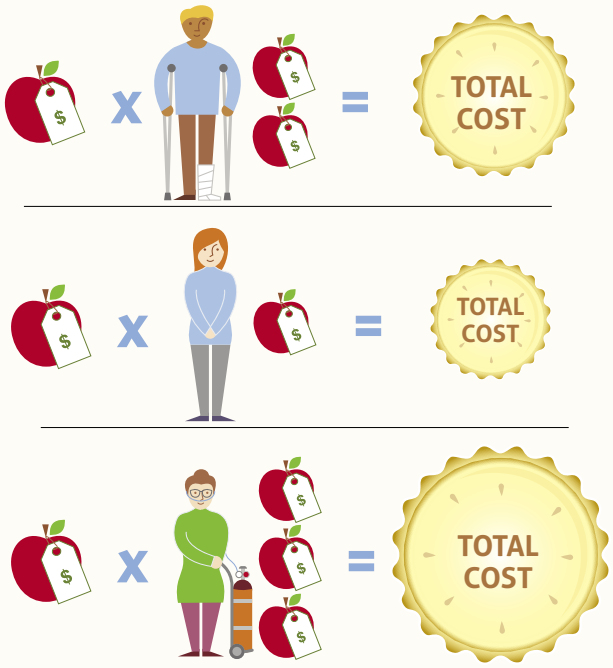
"The data shuts down anecdotal conversations and opens peoples' eyes," says Jonathan Mathieu, Vice President of Data and Delivery at the Center for Improving Value in Health Care (CIVHC), the RHIC serving the state of Colorado.

COSTS VARY, CONSISTENTLY

With three national total cost of care benchmark reports complete, some trends have begun to emerge.

- In each of the three benchmarks, Maryland was the lowest cost of the regions. In the most recent year, the total cost index varied from 20 percent below the benchmark for Maryland, to 19 percent above the benchmark for Colorado, the highest cost region. As shown in Table 1, similar differences for these same states were observed in previous reporting periods. Further, the ordering of the four RHICs participating in all three of the total cost of care benchmark periods has remained consistent.

Price x Utilization = Total Cost



Price (PI) *Utilization (RUI)* *Total Cost Index (TCI)*

The Total Cost Index (TCI) can be separated into two components, the Resource Use Index (RUI) and the Price Index (PI). By breaking TCI into these component parts, we're able to ascertain whether observed cost differentials are a result of above (or below) average resource use, prices paid for services, or a combination thereof. And when standardized, high-quality data is available in multiple regions, it's possible to make meaningful cost comparisons at the state, local and national levels, identify outliers, and better understand where to look for the underlying causes of those differentials.

Risk Adjusted Total Cost and Resource Use Compared to the Average:
Commercial Population 2016
Combined Attributed and Unattributed

Measure	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
Risk Score	-7%	15%	-1%	-2%	4%	-9%
TCI	19%	-20%	11%	4%	-6%	-4%
RUI	5%	-7%	7%	-10%	10%	-5%
Price Index	13%	-14%	4%	16%	-15%	1%

Note: This is the midpoint of the ranges created from the sensitivity analysis and represents the percent above or below the risk adjusted average across all regions. View the full range of results in Table 1 on page 21.

- Prices and care delivery patterns vary across states and within states across markets. Those variations drive differences in cost.
- Showing differences in price, cost and resource use gives stakeholders a framework to consider the roles of policies, demographics and market factors in steering healthcare costs.
- Consistency in year-over-year total cost of care results, despite some differences in the underlying populations, reflect the regional norms in care delivery and pricing.
- Most regions tend to have the same higher price and/or higher utilization service lines year over year.
- Pharmacy pricing showed the least variability, which is largely a result of the influence of a few, large pharmacy benefit managers and pharmaceutical manufacturers' national pricing policies. It's also important to note that many of the new and expensive specialty medicines are being administered and represented in the medical expense so they may not be reflected in the pharmacy service line results.

Ben Steffen, Executive Director of the Maryland Health Care Commission (MHCC), said the results showing Maryland as the lowest cost are not surprising. For more than 35 years, Maryland has operated the nation's only all-payer hospital rate regulation program. In 2014, this program was expanded. Under the new model, the state agreed to limit all-payer per capita hospital growth, including inpatient and outpatient care, to 3.58 percent. In addition, Maryland agreed to limit annual Medicare per capita hospital cost growth to a rate lower than the national annual per capita growth rate per year for 2015-2018. This year, the program was expanded to physicians and nursing homes and extended until 2023. Steffen said the total cost of care methodology is different from the methodology used by the Centers for Medicare and Medicaid Services. However, he said, the results from this project may point to the all-payer model having a positive impact for the commercially-insured as well.

STAKEHOLDER ENGAGEMENT DEEPENS UNDERSTANDING OF THE DATA

NRHI members' standardized process, granular data and strong connections to stakeholders allow them to dig into the "why" and reveal how variations in care delivery and local prices contribute to the significant cost differences. The process also highlights differences in underlying populations and how risk adjustment impacts the numbers. This knowledge enables stakeholders to take steps to address the specific issues facing their states and regions.

In four of the six regions, some service lines reported higher prices or resource use than the benchmark and other service lines reported lower prices or resource use than the benchmark. Colorado reported a higher price than the benchmark for all service lines and Oregon reported lower resource use than the benchmark for all service lines.

In all three sets of results, Oregon prices, outside of pharmacy costs, have consistently been higher than the benchmark while resource use has been lower. In contrast, in St. Louis, prices have consistently been shown to be lower than other regions. However, resource use in St. Louis has consistently been higher.

The relatively lower prices shown in this data is consistent with previous years' benchmark reports and other information about the St. Louis healthcare market that its RHIC, the Midwest Health Initiative, (MHI) has reviewed over time, said Louise Probst, MHI Executive Director.

"The cost of living here is so much more reasonable than a lot of places so you wouldn't expect our costs to be as high," Probst said. "But the other side of cost is utilization. In St. Louis, we tend to have a slightly older population and higher rates of utilization than other markets".

The HealthPartners Total Cost of Care measure set allows regions to analyze the total cost of inpatient care, outpatient care, professional services and pharmacy, compare themselves to others, and better understand the price and utilization factors driving those costs.

The Oregon and St. Louis divergence described above was most dramatic in outpatient care where St. Louis' use of outpatient care was 53 percentage points higher than Oregon but its prices were 54 percentage points lower. Similarly, for inpatient care, prices were 48 percentage points lower in

Comparing Participants in All Three Years

Year to Year Comparison of Total Cost of Care
Compared to Average
Commercial Population 2014 – 2016
Combined Attributed and Unattributed

Only Participants With Data For All Three Years

Measure	Maryland	Minnesota	Oregon	Utah
Total Cost				
2014	-16%	11%	7%	0%
2015	-12%	11%	4%	0%
2016	-17%	14%	7%	-1%
Rank				
2014	1	4	3	2
2015	1	4	3	2
2016	1	4	3	2

Note: This table will differ from the values in other tables, which reflect the six participants used in 2016. The 2015 and 2016 values represent the midpoint of the ranges created from the sensitivity analysis.

Rank Order: 1 = Lowest; 4 = Highest

All Participants For All Three Years

Measure	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
Total Cost						
2014	—	-14%	14%	10%	-10%	2%
2015	17%	-16%	7%	0%	—	-4%
2016	19%	-20%	11%	4%	-6%	-4%
Rank						
2014	—	1	5	4	2	3
2015	5	1	4	3	—	2
2016	6	1	5	4	2	3

Note: Differences in Total Cost are due to the changes in the average caused by differing participants. The 2015 and 2016 values represent the midpoint of the ranges created from the sensitivity analysis.

Rank Order: 1 = Lowest; 6 = Highest

St. Louis than Oregon but resource use was 29 percentage points higher. All of the results are provided on a risk-adjusted basis.

Across states, inpatient care had the greatest variation in price in all three of the benchmark periods. Colorado's hospital prices were 31 percent higher than the average, compared to 23 percent below average in St. Louis, in the most recent period. During the most recent period, the same differential was reported for outpatient care as well across the two regions.

Outpatient care also showed the greatest differences in resource use, with Maryland coming in 26 percent below average and St. Louis coming in 29 percent above average. Professional services had the least variation in resource use across the regions.

INFORMING HEALTHCARE COST POLICY

HealthInsight Oregon, one of the original RHICs participating in the project, has been sharing the information with providers, payers and policymakers for several years. Legislators have convened several workgroups addressing various components related to cost. HealthInsight Oregon is frequently called in to present the total cost of care data to help inform policy.

"We're often called upon as having local expertise and a true and tried methodology," said Meredith Roberts Tomasi, Associate Executive Director for HealthInsight Oregon. "Legislators see this data as an important source of information as they consider how to create a higher-value healthcare system for our state."

She said Oregon has consistently shown higher prices and lower resource use. This year, the trend was most prominent in outpatient care. Last year, it was more evident in inpatient and professional. She thinks the legislature may focus on prices in light of this year's results, and a recent recommendation from a legislative taskforce to take a multi-stakeholder statewide approach to total cost of care across service areas.

Detailed Analysis—Deeper Insights

Total Cost of Care by Service Category
Commercial Population 2016
Combined Attributed and Unattributed

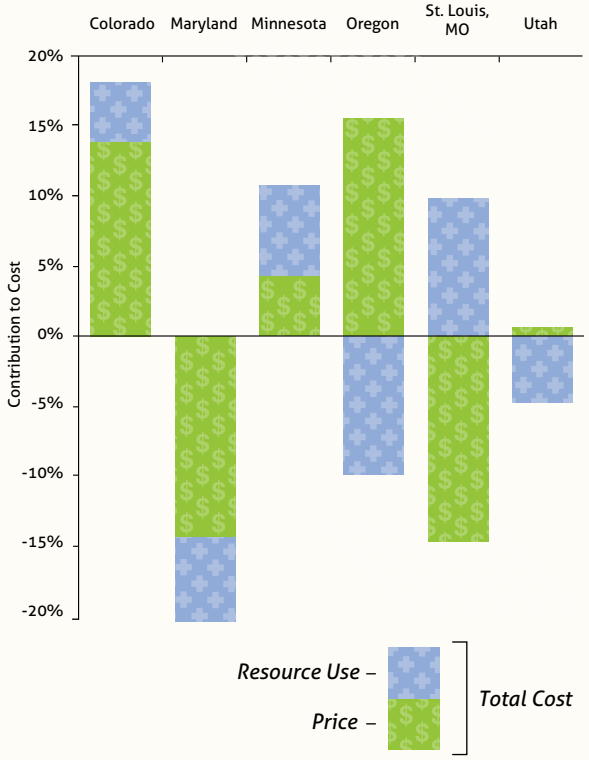
Measure	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
Total Cost						
Overall	19%	-20%	11%	4%	-6%	-4%
Inpatient	21%	-27%	12%	5%	-13%	8%
Outpatient	34%	-34%	3%	0%	1%	5%
Professional	2%	-16%	30%	18%	-22%	-9%
Pharmacy	28%	-3%	-10%	-16%	15%	-14%
Resource Use						
Overall	5%	-7%	7%	-10%	10%	-5%
Inpatient	-8%	-10%	9%	-16%	13%	13%
Outpatient	17%	-26%	6%	-24%	29%	3%
Professional	-4%	2%	17%	-3%	-5%	-8%
Pharmacy	22%	-4%	-16%	-7%	21%	-17%
Price						
Overall	13%	-14%	4%	16%	-15%	1%
Inpatient	31%	-19%	3%	25%	-23%	-4%
Outpatient	15%	-11%	-3%	32%	-22%	3%
Professional	7%	-18%	11%	22%	-17%	-1%
Pharmacy	5%	1%	7%	-10%	-5%	4%

Note: This is the midpoint of the ranges created from the sensitivity analysis and represents the percent about or below the risk adjusted average across all regions.
View the entire Table 2 on page 23

Data from the project has been persuasive to the Colorado legislature as well. CIVHC, the RHIC which participates in the NRHI project on behalf of Colorado, looked at regional variation across the state and triangulated the data against other publicly available sources. CIVHC consistently found the state's high use of outpatient services and the high prices of those services have the greatest impact on its total cost. To highlight their findings, CIVHC developed and distributed a white paper to the Colorado legislature and other stakeholders so policymakers, providers and purchasers could better understand how the cost of care in Colorado compares to other states and consider policy changes to impact those costs. In response to strong interest, CIVHC staff presented to legislators, legislative staff and interns, and a conversation began to emerge. They started to move past discussing what the problem is and began talking about how to fix it.

"Now we have a problem in outpatient cost," said Cari Frank, Vice President of Communications and Marketing at CIVHC. "So, what are we going to do about it? It takes out the guesswork and people start to focus on the solution."

Untangling the Cost Drivers



The size of the bars represents the impact of price and resource use on the total cost. As seen in the above graphic (based on Table 3 on page 24), price and resource use played different roles in the variation of total cost by state.

With its unrestricted funding sources, CIVHC worked with legislators to help inform the development of several bills aimed at increasing healthcare transparency in the state. A key piece of legislation passed. It requires every freestanding outpatient facility—freestanding emergency departments, urgent care centers, imaging centers and others—to bill using its own unique national provider identifier. This change will give CIVHC the ability to identify these various facilities in its dataset rather than have the care provided by those facilities look as though it were provided by a hospital or another facility. The additional data will allow CIVHC to conduct valuable analyses on the care, and the cost of care, delivered by these facilities.

SHARING INFORMATION WITH LOCAL PROVIDERS AND PURCHASERS

Data in Action
Policymakers

Provides meaningful information to inform policy targeted at the actual drivers of healthcare costs.

Variation across states gains the attention of policymakers. However many local stakeholders, particularly those who provide and pay for healthcare, are more interested in local comparisons of medical groups and practice sites. Five of the six regions share detailed total cost of care data with providers. Increasing interest in population health management and value-based contracting have generated increasing interest in the reports over the years.

At MHI in St. Louis, employers were invited to join representatives of the region's leading provider groups for a joint discussion. At the event, MHI shared how each of the groups performed on the total cost of care, utilization and quality measures compared to each other and a regional benchmark.

"We thought the providers would appreciate having the purchaser voice in the room to better understand the need to manage total cost of care," said Patti Wahl, Senior Director of Value-Based Purchasing, who leads the project for MHI. "Everybody can learn together."

Probst added, "Only by all stakeholders coming together to discuss trusted information can we deliver on the promise of higher-value, safer, and more affordable healthcare in our community."

Data in Action
Purchasers

Identification of high-value providers and health plans informs purchaser's benefit network design.

HealthInsight Utah also is working with an employer workgroup to think about the cost information that would be most meaningful to employers and other purchasers and how it should be reported. Another HealthInsight Utah workgroup is focused on developing a consumer-focused website on affordability and a third workgroup is coordinating related data on social determinants of health from sources such as the United Way.

DEMAND FOR COST TRANSPARENCY ON THE RISE

Over the course of the project, with suggestions from local providers and others, several of the RHICs added new metrics and more sophisticated data visualizations to their provider reports. In some cases, they trimmed back information providers found less useful. For example, in Oregon, they have added a quality composite versus total cost index graph. They've also begun

to share trending information, so providers can see how the cost and resource use compares to their peers over time. Utah shares quality data and year-over-year variability at the clinic level.

"We now have people calling us wanting to know where their reports are. That's quite a change," Roberts Tomasi said. "People are paying attention. We've tried to get the word out that public reporting is coming so providers want to understand how they are performing in comparison to other providers."

Utah has also seen an uptick in interest for the total cost of care information, especially from providers and clinic managers who oversee several clinics and can recognize unexplained variability. In addition, these same providers are becoming more willing to share information to improve the accuracy of Utah's master provider list for attribution.

Gunnar Nelson, who has led Total Cost of Care reporting for MNCM since before the NRHI project began, said he's been inspired by the look and content of the HealthInsight Oregon reports, which were originally inspired by reports provided to primary care practices by the Maine Health Management Coalition. Now, MNCM is redesigning its reports to mimic elements of the Oregon report.

Data in Action
Payers

Provides aggregated cost information they wouldn't otherwise have access to and can drive improvement in the market.

Minnesota and Oregon also report data back to their contributing payers, and Colorado is moving in this direction. All said it's a way to provide value back to the payers who spend time and resources sharing the data and who will benefit from a greater understanding of overall market performance .

For the first time this year, the regions added the utilization metrics component of the HealthPartners measure set. The utilization metrics, which include measures of emergency department use, high-cost imaging and length of hospitalizations to name a few, can help providers focus more succinctly on one or two patterns that might be contributing to higher than necessary cost. Utah plans to incorporate the data into its next round of physician reports and tailor each report to the physician group with an emphasis on the utilization metrics of greatest interest. Tables comparing utilization metrics across regions can be found beginning on page 27 of this report.

"We attribute the uptick in TCOC interest in Utah to our efforts to customize summaries for the clinics, highlighting variability in service lines versus last year," said Rita Hanover, a senior analyst at HealthInsight Utah. "We think that taking time to highlight the more detailed utilization variability is well worth the effort and will further increase the ability of the clinics to take action."

Here's one example of how this type of data might be useful. If the HealthPartners measure set finds high outpatient utilization, the next question for a practice is, "What type of outpatient utilization?" The utilization breakdown can help the practices identify areas for further investigation. In this case, the data might suggest high rates of MRIs or emergency department visits. Then, the question moves from, "Where do I look?" to "How do I fix it?"

Data in Action
Providers

Multi-payer reporting enables providers to validate, challenge, and change practice patterns, select high-value specialists, and monitor the impact of change over time.

SPREADING COST TRANSPARENCY TO NEW REGIONS

In addition to the six sites currently contributing to the benchmark, another dozen sites have participated in the project in other ways, including exploring various barriers to reporting on cost such as data availability and stakeholder readiness. These regions have the opportunity to learn from the sites that have gone before them, offer their stakeholders tangible examples of success and offer their own contributions to the collective knowledge base. For many of these sites, the result is the ability to break down technical barriers to reporting. For others, the focus is on engaging stakeholders to assess or broaden support for total cost of care reporting. Across a wide array of market structures, political environments and data infrastructures, RHICs have worked with their regional partners to find solutions to make progress in achieving cost transparency.

Virginia Health Information (VHI), an APCD and RHIC, had Data Submission and Use Agreements between itself and participating health insurance plans that restricted the use of actual allowed amounts submitted. As part of its work to revise these agreements to add TCOC reporting as an approved use, VHI hosted a series of professionally-facilitated meetings that included hearing about project successes and lessons learned from HealthInsight Oregon. With this intensive stakeholder engagement as an underpinning, VHI and its legal counsel determined that VHI could move forward with using actual allowed amounts within the TCOC calculation if authorized through an official vote of its APCD Advisory Committee. This appeared to be both a faster and less costly approach to resolving the barrier as opposed to amending health plan APCD agreements.

Both the Greater Detroit Area Health Council (GDAHC) and HealthInsight New Mexico hosted regional events where members of the Getting to Affordability project team provided an overview of the measure and what their region has gained through measuring and reporting total cost of care. Stakeholders in both regions now have a greater sense of urgency and are meeting to discuss their

regional strategy for healthcare cost transparency. While each region faces different barriers, both were able to advance healthcare affordability by leveraging and sharing the work done by members of the project team.

Data in Action
Patients

Public reporting raises patient awareness of the variation that exists and informs selection of higher quality, more cost-efficient providers.

At the University of Texas, physicians and researchers came together over many months, even on a Saturday, to think through how the state might begin aggregating medical claims data. The result is Health of Texas, a soon to be launched website providing state and regional comparisons of cost and utilization trends by payer type using a multi-payer claims data set representing an estimated 80 percent of the state's claims data.

In other markets with more capitated payment contracts, regional health improvement collaboratives, including the Wisconsin Health Information Organization, the Washington Health Alliance and the Integrated Healthcare Association, are exploring options on how to value capitated payments in the TCOC measure.

While the nudge of a national project can often help local stakeholders realize the benefits of cost reporting, in other instances strong market dynamics can continue to limit the collection and broad use of this data. In Philadelphia, at the Health Care Improvement Foundation (HCIF), an assessment of stakeholders' readiness for sharing cost-related data found health plans worried it would put their plan at a competitive disadvantage and decrease their overall leverage during provider negotiations. With this knowledge, HCIF is considering other ways to increase cost transparency and partner on other opportunities to address cost drivers.

HealthInsight Nevada is working to align Medicare Advantage payers to engage and understand the interest for a common definition of TCOC. By focusing on Medicare Advantage plans, HealthInsight Nevada wanted to learn what barriers exist for obtaining health plan costs for non-Medicare populations in the future.

The Getting to Affordability project provided an excellent opportunity for The Health Collaborative in Cincinnati, OH to develop a standardized method of measuring and improving how the community pays for care. Ultimately, this will support the region in ensuring better care, smarter spending and healthier people. As trends in healthcare progress towards payment for value, transparency and uniform measurement across the region will assist in accelerating improvement for all stakeholders.

CONTINUING TO ADVANCE COST TRANSPARENCY

Over the last five years, multi-stakeholder partners in 18 regions have worked together to better understand the power of cost transparency. Each region has grown in its ability to understand the availability or quality of potential data and the appetite of stakeholders for measurement and reporting. Throughout the project, participants also have seen continued and growing interest across stakeholders for information related to affordability. Much of this stems from increasing concern regarding the high cost of care and a desire to buy care differently through value-based contracts. With CMS' recent announcement that it will be looking for health systems to take on increasing risk for total cost of care, this interest likely will only grow.

For several of the regions, reporting on Medicare and making more data public will be the next frontiers in the work. All will continue to work collaboratively across stakeholder groups to better understand affordability of care in their regions, the factors driving price and resource use, and opportunities to reduce waste.

Network for Regional Healthcare Improvement (NRHI) recently launched ***Affordable Care Together***, a national campaign that strives to achieve affordable healthcare by focusing on three major drivers: health, price, and waste. A key component of this work is developing a better understanding of the specific relationships across health, price, and waste, in each region and supporting local stakeholders in developing and implementing tailored strategies to increase likelihood of more affordable healthcare.

Affordable Care Together builds on NRHI's Getting to Affordability work. As part of this national campaign, NRHI is inviting national organizations and healthcare advocates interested in taking community action to address healthcare affordability in collaboration with other like minded change agents across the country.

Join the movement—we can achieve Affordable Care Together by improving health, reducing price, and eliminating waste. Stay up to date on the work NRHI and its members are doing to make our healthcare system higher quality and more affordable for everyone by signing up for our email list (http://affordablecaretogether.com/) and following us on Twitter (www.twitter.com/reghealthimp).

nrhi
Network for Regional Healthcare Improvement

Getting to Affordability

Section II: Benchmarking Methodology

Purpose

The Network for Regional Healthcare Improvement (NRHI) has previously published two national annual reports[1] comparing the total cost of care among commercially insured populations. This report, covering healthcare delivered in 2016, is the third installment of these reports. The Benchmarking Methodology Section summarizes the process and results of the second year of NRHI's Total Cost of Care (TCOC): Phase III project (Phase III Year Two)[2]. This installment, similar to the previous reports, used the National Quality Forum (NQF) endorsed HealthPartners TCOC Measure Set[3] to compare commercial data across several regions in the United States. This section provides an in-depth review of the participants, process, and results.

Summary

Phase III Year Two saw several advancements from the previous years. These included increasing the number of participating regions from five to six, adding a review of utilization statistics to the report, and an increase in the number of commercial plans meeting the data quality requirements for inclusion in the report.

Phase III Year Two of the Total Cost of Care project continued to advance healthcare transparency in several ways:

- Regions with different healthcare markets and population demographics were compared;
- Participants produced TCOC measure benchmarks after a careful and thorough data quality review;
- Regions learned more about the contents of their data and improved data quality to refine current and future submission streams;
- Several potential cost drivers were examined for impact;
- Results compared to prior years showed stability, increasing confidence in the TCOC measure set's ability to produce meaningful results despite limitations of the data.

Previously identified data limitations and considerations persisted in Phase III Year Two. These were thoroughly examined and an issue brief was published[4]

1 http://www.nrhi.org/uploads/benchmark_report_final_web.pdf
http://www.nrhi.org/uploads/g2a-benchmark-report-final-web-1.pdf
2 http://www.nrhi.org/uploads/g2a_onepager_r17.pdf
3 https://www.healthpartners.com/hp/about/tcoc/index.html
4 http://www.nrhi.org/uploads/futureconsiderationsforreportingtcoc_r10.pdf

to help navigate them. However, they still pose the potential risk of distorted benchmarks and should be included as caveats in any presentation of the benchmark results.

- Data used to produce measures are not a random sample of the commercial market in each region.
- Claims paid by pharmacy and behavioral health benefit managers may not be included.
- Following HealthPartners TCOC methodology, patient-level costs were truncated at $100,000.
- Substance abuse and other behavioral claims are sometimes excluded from data submissions or aggregated data stores for privacy reasons.
- Variation in provider coding patterns potentially affects risk scores.
- Non-claims payments (e.g. capitation, pay for performance payments) are not in the data stores.
- Data store structure limited data quality control or attempts to correct issues identified during that process for some regions.

Further information about these issues is available in previous publications of the benchmark.

This publication continues to aid in understanding healthcare cost variation among different areas of the country. Cost drivers can be identified by deconstructing per member cost into its individual components. Conceptual cost drivers might include:

- Health status—measured and adjusted for in the TCOC methodology through risk adjustment;
- Differences in services covered by the health benefit plan (e.g., mandated differences by state);
- Patient cost-sharing levels in the benefit plan;
- Utilization rates of health services—measured by the Resource Use Index (RUI);
- Provider reimbursement methods;
- Provider price levels (including influences of cost shifting from other payers and uncompensated care and from market power)—measured by the price index;
- Narrowness of provider networks;
- Wage levels and general cost of living;
- Urbanization and access to healthcare facilities.

While the HealthPartners TCOC methodology addresses some of these issues, there are some that are outside the scope of this project. Further investigation and analysis of cost drivers and their relative impact will help create a clear vision of how these cost drivers are impacting the healthcare costs among regions.

Participants and Process

PARTICIPANTS

The TCOC project, under the leadership of NRHI and through funding from the Robert Wood Johnson Foundation (RWJF), began with five pilot sites in November of 2013. These sites are NRHI member Regional Health Improvement Collaboratives (RHICs) and included:

- Center for Improving Value in Health Care (CIVHC)
- Maine Health Management Coalition (MHMC)[5]
- Midwest Health Initiative (MHI)
- Minnesota Community Measurement (MNCM)
- HealthInsight Oregon

Since 2013 NRHI has expanded to include several other RHICs. These regions can be classified as either Standardized Regions or Developmental Sites. The Standardized Regions contribute data in the creation of the National Benchmark, while Developmental Sites seek to address specific barriers to price transparency. For Phase III Year Two the Standardized Regions included:

- Center for Improving Value in Health Care (CIVHC)
- Midwest Health Initiative (MHI)
- Minnesota Community Measurement (MNCM)
- HealthInsight Oregon
- HealthInsight Utah in partnership with the Utah Department of Health, Office of Health Care Statistics
- Maryland Health Care Commission (MHCC) in partnership with Social and Scientific Systems

The Developmental Sites that participated were:

- Greater Detroit Area Health Council
- HealthInsight Nevada

5 MHMC participated in Phase I benchmarks only and is now known as Healthcare Purchaser Alliance of Maine

- HealthInsight New Mexico
- Health Care Improvement Foundation
- Integrated Healthcare Association
- Massachusetts Health Quality Partners
- The Health Collaborative
- The University of Texas Health Science Center at Houston
- Virginia Health Information
- Washington Health Alliance
- Wisconsin Health Information Organization

Work done by the Developmental Sites expands the TCOC measurement by exploring the use of capitated claims, Medicaid data, and Medicare advantage data, as well as collaborating with stakeholders to achieve greater price transparency. More information and publications on these topics can be accessed through the NRHI Getting to Affordability website[6].

GENERAL PROCESS

Regions participating as Standardized Regions in the Phase III TCOC Year Two benchmarking performed robust data quality assurance and data quality control processes using their data store to determine fitness for TCOC analysis. Improvements in data quality from previous years led to a combined increase of over 600,000 unique members for three of the regions. Data quality tables examining the following characteristics were produced and compared across contributors' data stores as well as across data sources within them:

- Member counts and claim dollars by month
- Members and claims indicating primary insurance
- Payment deduplication
- Procedure code integrity and coverage
- Diagnosis code fields
- Surgical procedure code fields
- Professional place of service
- Inpatient Diagnosis-Related Group
- High cost pharmacy
- Consistency of member ID across claims and eligibility

6 See G2A Case Studies at http://www.nrhi.org/work/multi-region-innovation-pilots/tcoc/

An iterative process between the Technical Advisor and each region addressed most data quality issues. The results presented in this report represent data from each participating Standardized Region that met rigorous data quality, stability, and completeness requirements for supporting the TCOC measure set. The intensive process used to improve data quality yielded final results that improved on Phase I and Phase II. However, limitations remain and provide an important opportunity for future refinement. These limitations can be further examined in the aforementioned prior reports and issue brief.

Results

The analytical results produced by the project include the TCOC measures including the recently added utilization statistics, as well as additional analysis drilling further into the cost drivers underlying the aggregate measures. These results represent multi-payer commercial data for 2016.

TCOC RESULTS

Table 1 shows the Total Cost Index (TCI), the Resource Use Index (RUI), and the Price Index for the six participating Standardized Regions using the commercial population (ages 1–64). The TCI compares total per member per month spending and the RUI focuses on differences in intensity of utilization. Both the TCI and RUI are adjusted for differences in the populations' underlying health status using the Johns Hopkins Adjusted Clinical Groups® System (ACG® System)[7]. The RUI measure and the Price Index allow separate analysis of intensity of utilization and price.

Table 1 and Table 2 display these TCOC measures as ranges. The cost, utilization, and price shown in the first section of this report are derived from the midpoint of the ranges in these tables and displayed as a percentage above or below one. The risk score ranges were determined by conducting a sensitivity analysis on the risk scores and then indexing the results. This analysis considered variation in claim detail across data contributors. After consulting with subject matter experts about the potential effect of variation in claim detail, maximum potential variation was applied to affected risk scores. Some regions experienced higher variation in risk score due to the variation in claim level detail. The risk scores were indexed so that their unweighted average was equal to one. This was done by dividing each region's risk score by the overall unweighted risk score.

7 For more detailed information on the TCOC measure set, including TCI and RUI, see the HealthPartners White Paper: https://www.healthpartners.com/ucm/groups/public/@hp/@public/documents/documents/dev_057649.pdf

The range of indexed risk scores produces ranges in TCI and RUI because these indexes are both risk score adjusted. However, since the Price Index is calculated directly from the TCI and RUI, their risk score adjustments cancel each other out. Hence the Price Index does not vary with the risk score. A region's index is above the risk-adjusted average if the range is greater than one, approximately average if the range spans one, and below average if the range is less than one.

TABLE 1: TOTAL COST INDEX AND RESOURCE USE INDEX: COMMERCIAL POPULATION 2016

	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
Indexed Risk Score	*0.90 – 0.97*	*1.11 –1.19*	*0.98 – 1.01*	*0.96 – 0.99*	*1.02 – 1.05*	*0.89 – 0.92*
TCI	1.15 – 1.23	0.78 – 0.83	1.10 – 1.13	1.03 – 1.06	0.92 – 0.95	0.95 – 0.97
RUI	1.01 – 1.09	0.90 – 0.97	1.05 – 1.09	0.89 – 0.91	1.08 – 1.12	0.94 – 0.97
Price Index	1.13	0.86	1.04	1.16	0.85	1.01

HealthPartners' TCOC measure set is designed to produce results at the primary care practice level. In this scenario, results consist only of those patients who can be attributed to a primary care practice. However, this report compares regions rather than practices. The measures shown here reflect the entire available population regardless of whether individuals visited a primary care provider. Using the entire available population provides the largest possible sample and avoids potential impact on results caused by differences in attribution methodologies across regions. Analysis showed that the regional results based on primary care practice populations did not vary substantially from the TCI, RUI, and Price Index of the entire available population.

It is important to note that the measures are indexed to the non-weighted average of the participating regions. Using the non-weighted averages avoids letting larger regions dominate the average. Furthermore, the indexes are directly impacted by the regions participating in the benchmark. Phase III Year Two added St. Louis, MO (MHI) into the benchmark. Other region's indexes were impacted due to St. Louis' relatively high healthcare resource use and low price. Application of the results should be interpreted with the relative nature of indexes in mind, as well as close attention to the technical data issues and to the insight into interpreting benchmark data as will be discussed.

COST DRIVER EXPLORATION

Measuring and reporting costs of healthcare support providers and policymakers in their efforts to pursue the Triple Aim: higher quality healthcare, with more

satisfied patients, at a lower cost. Once response to the question, "What is the difference in the cost of healthcare in various regions?" have been established, then attention can turn to "Why does it differ?" Answers to this last question will lead to specific strategies that can be employed to reduce cost.

Factors that drive the cost of healthcare can be divided into two main components: those that affect the unit price of services and those that affect the intensity of services used (utilization).

Factors Affecting Commercial Unit Price:	Factors Affecting Utilization:
Provider market power	Health status (morbidity)
Health Plan market power	Physician practice patterns
Cost-shifting	Patient cost-sharing level
Regional cost of living	State mandates
Location of service	Providers in network

Each factor that contributes to differences in cost can be used both as an adjustment in order to isolate the other factors contributing to cost and as an important stand-alone measure for further exploration of potential strategies to reduce healthcare costs. For example, risk scores are used to adjust for basic health status in the regional groups to make costs more comparable. At the same time, an examination of the regional risk scores themselves may be conducted to explore ways for cost reduction through improved health status (lower morbidity) and potentially through policies to improve underlying causes. Similarly, the RUI measure controls for provider prices, allowing a focus on the reduction of certain types of utilization as a way to lower overall cost. Another aspect for additional research and examination is to discover why unit prices vary, including consideration of wage levels, cost of living, urbanization, healthcare access, or provider and payer market power. Improving the collective understanding of the differing cost drivers and contributing factors may provide the most useful results for finding strategies that will reduce costs.

The TCOC results presented in Table 1 begin to break cost into components by showing average indexed risk score, the cost measure adjusted for risk score, and the effect of eliminating unit cost differences through the Total Care Relative Resource Value (TCRRV™) and RUI. The TCOC measure set offers some additional insight into service categories which are displayed in Table 2. As stated above, the results are indexed according to the participants and thus, if year-to-year comparisons are made it should be done with reference to a consistent set of participants.

Table 2 breaks down the components of medical cost by region. As an example of how to interpret this table, notice that St. Louis has a lower than average overall TCI (0.92–0.95). However, their pharmacy TCI is much higher than average (1.13–1.17), which appears to be driven by higher than average utilization (1.19–1.23). This result suggests that while St. Louis seems to be keeping medical costs fairly low, pharmacy utilization can be examined for its relationship to quality of care.

TABLE 2: COMPONENTS OF MEDICAL COST: COMMERCIAL POPULATION 2016

	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
TCI						
Overall	1.15 – 1.23	0.78 – 0.83	1.10 – 1.13	1.03 – 1.06	0.92 – 0.95	0.94 – 0.97
Inpatient	1.17 – 1.26	0.70 – 0.75	1.10 – 1.14	1.04 – 1.07	0.86 – 0.89	1.07 – 1.10
Outpatient	1.29 – 1.39	0.64 – 0.68	1.01 – 1.04	0.99 – 1.02	0.99 – 1.02	1.04 – 1.07
Professional	0.98 – 1.06	0.81 – 0.87	1.28 – 1.32	1.17 – 1.20	0.77 – 0.80	0.90 – 0.92
Pharmacy	1.23 – 1.33	0.94 – 1.00	0.89 – 0.92	0.83 – 0.85	1.13 – 1.17	0.85 – 0.87
RUI						
Overall	1.01 – 1.09	0.90 – 0.97	1.05 – 1.09	0.89 – 0.91	1.08 – 1.12	0.94 – 0.97
Inpatient	0.89 – 0.96	0.87 – 0.93	1.07 – 1.10	0.83 – 0.86	1.11 – 1.15	1.12 – 1.15
Outpatient	1.13 – 1.21	0.71 – 0.76	1.04 – 1.08	0.75 – 0.77	1.27 – 1.31	1.01 – 1.04
Professional	0.92 – 0.99	0.99 – 1.06	1.16 – 1.19	0.95 – 0.98	0.93 – 0.97	0.91 – 0.93
Pharmacy	1.18 – 1.27	0.92 – 0.99	0.83 – 0.86	0.92 – 0.95	1.19 – 1.23	0.82 – 0.84
PRICE INDEX						
Overall	1.13	0.86	1.04	1.16	0.85	1.01
Inpatient	1.31	0.81	1.03	1.25	0.77	0.96
Outpatient	1.15	0.89	0.97	1.32	0.78	1.03
Professional	1.07	0.82	1.11	1.22	0.83	0.99
Pharmacy	1.05	1.01	1.07	0.90	0.95	1.04
PROPORTION OF HEALTHCARE BY PLACE OF SERVICE						
Inpatient	14%	13%	14%	14%	13%	16%
Outpatient	30%	22%	24%	26%	28%	29%
Professional	32%	39%	44%	42%	31%	35%
Pharmacy	24%	27%	18%	18%	27%	20%
Overall	100%	100%	100%	100%	100%	100%

The Overall Healthcare Cost Percentages in the above table shows that there is variation in where healthcare dollars are being spent. This variation is impacted by several different local and regional factors. Continuing the example above, one contribution to St. Louis' high pharmacy usage may be related to the billing practices for specialty medications. In some regions, medication that is administered in a clinical setting is usually procured and billed under the medical benefit. However, there is a growing trend in some regions among self-insured employer and union plans to move specialty medicines out of the medical benefit, whenever the situation allows, and into the pharmacy, where the patient and plan cost is lower. This example serves as a reminder that underlying regional practices can and do have an influence on where and how healthcare dollars are spent.

Table 3, below, explores the cost drivers by breaking the TCI into the RUI and Price Index components[8]. The indexes in the table represent the midpoint of the ranges presented in Table 2. The percentages indicate the contribution to total cost each of the components made. A positive percentage indicates utilization or price is driving cost higher compared to the benchmark, and a negative percentage indicates utilization or price is driving cost lower compared to the benchmark. In some cases, the RUI and the Price Index are working in opposite directions. In those cases, the component that contributes most determines if the cost is above or below average.

TABLE 3. PRICE AND UTILIZATION CONTRIBUTIONS TO TOTAL COST

	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
TCI	1.19	0.80	1.11	1.04	0.94	0.96
RUI	1.05	0.93	1.07	0.90	1.10	0.95
Contribution to TCI	27%	-32%	64%	-39%	40%	-85%
Price Index	1.13	0.86	1.04	1.16	0.85	1.01
Contribution to TCI	73%	-68%	36%	61%	-60%	15%

In order to get a more comprehensive picture when comparing healthcare costs, overall cost of living should be examined. In this report, the Missouri Department of Economic Development's Economic Research and Information Center (MERIC) was used to help provide this perspective. Table 4 shows MERIC's 2016 Health Cost of Living Index[9] along with the TCI, RUI, and Price Index. As in previous publications a high correlation exists between the Health Cost of Living Index and TCI (correlation coefficient = 0.82) and with the Price Index (correlation coefficient = 0.65).

8 TCI equals Price Index multiplied by RUI. The contribution to TCI calculation takes this relationship into consideration

9 Cities across the nation participate in the Council for Community & Economic Research (C2ER) survey on a volunteer basis. Price information in the survey is governed by C2ER collection guidelines (http://coli.org/wp-content/uploads/2017/12/2018-COLI-Manual.pdf). Weights assigned to relative costs are based on government survey data on expenditure patterns for professional and executive households. MERIC derives the cost of living index for each state by averaging the indices of participating cities and metropolitan areas in that state.

TABLE 4: COMPARING HEALTH COST OF LIVING INDEX TO TCI, RUI AND PRICE INDEX

	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
Health Cost of Living Index 2016	*1.06*	*0.92*	*1.09*	*1.05*	*0.97*	*0.90*
TCI	1.19	0.80	1.11	1.04	0.94	0.96
RUI	1.05	0.93	1.07	0.90	1.10	0.95
Price Index	1.13	0.86	1.04	1.16	0.85	1.01

These results highlight the complexity of healthcare costs and how cost of living is one factor that plays a role in the healthcare landscape. There are many factors that influence healthcare costs. Some of these other factors include richness of the benefit plan, provider-payer reimbursement relationships, market share of public payers, and the rate of uninsured individuals—all contribute to commercial healthcare costs. Of particular note is research performed on how uncompensated care, Medicare rates, and Medicaid rates caused shifts in costs from regulated reimbursed payer populations to the commercial population. For those who may be interested in learning more on this topic, please reference Frakt's publication[10].

Utilization Metrics

INTRODUCTION

The TCRRV™ (RUI) measures intensity of healthcare resource utilization. To determine whether variation in Relative Resource Use is due to differences in the level of a service used (e.g., an MRI instead of an X-ray) or the number of times a provider orders a particular service (x-rays on more patients), the expanded TCRRV™ software offers a look at counts of specific services ordered, such as admissions, office visits, Emergency Room (ER) services, and pharmacy prescriptions. These utilization metrics are produced using the same patients and claims as the TCOC and TCRRV™ measure sets.

The utilization metrics include:

- Inpatient Admissions
- Inpatient Days

10 Frakt, Austin B. "How Much Do Hospitals Cost Shift? A Review of the Evidence." The Milbank Quarterly 89.1 (2011): 90–130. PMC. Web. 11 Jan. 2018.

- Surgery Admissions
- Surgery Admission Days
- Medical Admissions
- Medical Admission Days
- Emergency Room Visits
- Outpatient Surgery
- Primary Care Office Visits
- Specialty Office Visits
- Lab and Pathology Tests
- High Tech Radiology Use
- Standard Radiology Use
- Pharmacy Use
- Generic Pharmacy Use Ratio

RISK ADJUSTMENT FOR UTILIZATION METRICS

The risk score used for the Total Cost Index is designed to adjust for expected dollars spent for a particular configuration of conditions. Different conditions can have similar costs per year with distinctly different utilization patterns (see Table 5 below). This makes it necessary to use a different risk adjustment method for Utilization Metrics.

TABLE 5. RISK SCORE AND UTILIZATION DIFFERENCES

ACG	1721	4830
Description	Pregnancy, 2–3 ADG, Delivered	6–9 ADG with complications, Female 18–34, 2 major ADGs
Risk Score	3.32	3.41
UTILIZATION PER 1000 PATIENTS PER YEAR		
Office Visits	2,040	8,825
Inpatient Admissions	987	197
Emergency Room Use	79	565
Pharmacy Scripts Filled	4,665	24,209

Utilization also varies by age and sex:

TABLE 6. EMERGENCY ROOM VISITS PER 1000 PATIENTS PER YEAR

	Female	Male
Age 1–17	136	150
Age 18–39	197	131
Age 40–64	157	132

To enable comparison across regions, the utilization pattern by age/sex/ACG cell within a region is measured. These utilization rates are then applied to a standard distribution of patients by age/sex/ACG cell. This method calculates the regional utilization as if all regions were presented with the same set of patients. The differences in these risk-adjusted rates are then due to differences in the way providers in each region treat patients, rather than differences in the patients they are treating.[11]

UTILIZATION RESULTS

The tables below display selected utilization metrics for the participating regions. The metrics are adjusted for risk as described above. As with the TCI and RUI, all measures are calculated on 2016 dates of service. The RUI is shown alongside the risk-adjusted utilization rates because the interaction of the indexed utilization and the RUI highlight the difference between raw utilization and intensity.

TABLE 7. RISK ADJUSTED UTILIZATION AND RESOURCE USE INDEX

	Office Visits						RUI
	Count per 1,000 Patients			Index to Average			Professional
Region	**PCP**	**Specialist**	**Total**	**PCP**	**Specialist**	**Total**	
Colorado	2,068	1,245	3,313	1.07	0.75	0.92	0.96
Maryland	2,006	2,281	4,287	1.04	1.37	1.19	1.02
Minnesota	1,920	1,542	3,462	0.99	0.93	0.96	1.17
Oregon	1,786	1,673	3,459	0.93	1.01	0.96	0.97
St. Louis, MO	1,993	1,625	3,618	1.03	0.98	1.01	0.95
Utah	1,808	1,585	3,393	0.94	0.96	0.95	0.92
Average	**1,930**	**1,659**	**3,589**	**1.00**	**1.00**	**1.00**	**1.00**

11 For more information on the method of direct standardization, see https://www.healthknowledge.org.uk/e-learning/epidemiology/specialists/standardisation

	Inpatient						RUI
	per 1,000 Patients			Index to Average			Inpatient
Region	**Admissions**	**Days**	**Average Length of Stay**	**PCP**	**Specialist**	**Average Length of Stay**	
Colorado	41.1	146	3.55	1.00	0.92	0.93	0.92
Maryland	43.6	174	3.99	1.06	1.10	1.04	0.90
Minnesota	45.1	174	3.86	1.09	1.10	1.01	1.09
Oregon	35.4	122	3.45	0.86	0.77	0.90	0.84
St. Louis, MO	40.5	191	4.72	0.98	1.21	1.23	1.13
Utah	41.4	139	3.36	1.00	0.88	0.88	1.13
Average	**41.2**	**158**	**3.83**	**1.00**	**1.00**	**1.00**	**1.00**

	Emergency Room Visits		RUI
	per 1,000 Patients	Index to Average	Inpatient
Region	**Count**	**Count**	
Colorado	168	1.11	1.17
Maryland	178	1.18	0.74
Minnesota	144	0.95	1.06
Oregon	139	0.92	0.76
St. Louis, MO	148	0.98	1.29
Utah	132	0.87	1.03
Average	**151**	**1.00**	**1.00**

	Pharmacy Prescriptions Filled		RUI
	per 1,000 Patients	Index to Average	Pharmacy
Region	**Count**	**Count**	
Colorado	11,847	0.97	1.22
Maryland	11,860	0.98	0.96
Minnesota	11,865	0.98	0.84
Oregon	11,428	0.94	0.93
St. Louis, MO	13,391	1.10	1.21
Utah	12,555	1.03	0.83
Average	**12,158**	**1.00**	**1.00**

*Note: Emergency Room visits that result in direct admission to the hospital are excluded.

	Laboratory/Radiology						RUI
	per 1,000 Patients			Index to Average			Not Applicable
Region	**Lab/ Pathology**	**High Tech Radiology**	**Standard Radiology**	**Lab/ Pathology**	**High Tech Radiology**	**Standard Radiology**	
Colorado	5,387	189	596	0.97	1.02	0.91	
Maryland	6,620	186	704	1.20	1.01	1.08	
Minnesota	5,334	202	589	0.96	1.09	0.90	
Oregon	5,086	151	626	0.92	0.82	0.96	
St. Louis, MO	5,823	201	757	1.05	1.09	1.16	
Utah	4,921	178	640	0.89	0.96	0.98	
Average	**5,529**	**185**	**652**	**1.00**	**1.00**	**1.00**	

DISCUSSION

The first table above compares the regional rates of office visits to Primary Care Providers and Specialists, an important component of the Professional RUI. While the PCP visit rate varies somewhat across the regions, with Colorado at 7% above the average and Oregon 7% below, the rate of Specialist visits shows more dramatic differences. Maryland makes heavy use of specialists while Colorado is 25% below the average. Minnesota, despite its high Professional RUI, is about average in terms of office visits to both PCPs and specialists. This highlights the value of the utilization metrics as a way of understanding and addressing the RUI results, by giving users some insight into what is or is not driving them.

The Inpatient utilization metrics relate directly to the Inpatient RUI. Minnesota's 1.09 RUI and 1.09 indexed admission rate indicate that the intensity of admissions is about average. In contrast, Maryland's 0.90 inpatient RUI compared to its 1.06 indexed admission rate suggests that the average intensity is low. They are using below average resources on inpatient admissions, but more people are spending time in the hospital. Utah and St. Louis (MHI) show the opposite situation, with average admission rates but high resource utilization.

Emergency Room visits are only one component of Outpatient RUI, but they are often a focus of efforts to curtail inappropriate utilization. Colorado and Maryland have higher than average rates of ER utilization, but they have very different measures of outpatient resource consumption. These utilization metrics suggest

that both of these regions have an opportunity to reduce utilization through programs directed at ER visits, but they have different challenges when it comes to overall Outpatient utilization.

Pharmacy utilization is a complex issue. In some cases, disease management programs encourage greater use of appropriate medications to control chronic conditions. In other cases, such as antibiotic use, providers and patients should be focused on using prescriptions only in situations that warrant them. Comparing 30-day prescription counts with pharmacy RUI for each of the regions shows that Colorado uses particularly high-intensity medications, while Utah uses more prescriptions with a lower average intensity.

A review of the Laboratory/Radiology metrics shows that Oregon is consistently below the average for Laboratory tests and both types of Radiology. In contrast, St. Louis makes heavier than average use of all three types of testing. Along with St. Louis, Minnesota uses High Tech Radiology 9% more than the average and 33% more than Oregon, who has the lowest rate of High Tech Radiology.

DATA CONSIDERATIONS FOR UTILIZATION METRICS

The utilization methodology in the TCRRV™ software does not test thresholds or outliers. It counts all the activity within the category, unlike the TCI calculation which limits the costs per patient to a preset limit (in this case $100,000 per member per year). The TCRRV™ values are limited to specific ranges so a missing or mistaken value does not drastically impact the result. The lack of outlier threshold should be noted in any analysis of the data but not adjusted within the data.

This difference in methods puts a greater importance on data review. For example, on the initial data run, one region had five inpatient admission claims with no admission date. This created inpatient admissions with apparent lengths of stay of over 20,000 days each. After a review, these data points were corrected, and the lengths of stay recalculated.

Billing and practice patterns impact results. For example, the HealthPartners TCRRV™ Utilization metric for Outpatient Surgery counts only surgeries billed on the UB04 hospital claim form. Ambulatory surgical centers, which use the HCFA 1500 claim form, are not included. This phenomenon is apparent in the differences seen among regions in the Outpatient Surgery utilization metric, shown below:

TABLE 8: RISK ADJUSTED OUTPATIENT UTILIZATION

Region	Outpatient Surgery per 1000 Patients Per Year
COLORADO	133.3
MARYLAND	84.8
MINNESOTA	109.2
OREGON	59.3
ST. LOUIS, MO	132.1
UTAH	124.1

Use of Ambulatory Surgical Centers in Maryland and Oregon could be a possible explanation of outpatient surgery 21% and 45% lower than the other regions.

UTILIZATION CONCLUSION

The Utilization Metrics included in the expanded TCRRV™ software offer some insight into factors underlying differences in RUI by region. Because there is no truncation or testing for reasonability in the methodology, more attention to data cleaning and preparation is required. Utilization metrics drill down into specific services and are therefore more sensitive to differences in provider coding and billing patterns. These may be more alike within a state, creating more reliable comparisons among practices within a state, than among states. As with all statistics, one should interpret them with an understanding of their source (claims data) and context (the changing healthcare landscape).

Year-to-Year Comparisons

In Phase III Year Two, six regions contributed to the TCOC benchmark results. Four of those regions participated in all three years of the TCOC comparison: Maryland, Minnesota, Oregon, and Utah. These four regions provide an opportunity to assess the stability of the measure over time and across regions. One of the complexities of making comparisons between years is the variation of available commercially insured members in each region. Through the years, there have been some substantial changes in the amount of available data for some of the regions. Notably, in 2016 the Supreme Court's decision in *Gobeille vs Liberty Mutual*[12] severely impacted the availability of self-funded Employee Retirement Income Security Act (ERISA) data contributions. Other factors that impacted data availability include timeliness and quality of the data submitted to each region.

12 For more information about *Gobeille vs Liberty Mutual* and the impact on APCDs, please see the APCD Council's statement: https://www.apcdcouncil.org/news/2016/03/apcd-council-statement-scotus-decision-gobeille-v-liberty-mutual-case

In spite of these changes in the amount of data available, Table 9 demonstrates the consistency in the TCOC measures. Of particular note, Minnesota was the only region whose data store did not change significantly from year to year.

TABLE 9: COMPARING TCOC MEASURES FROM 2014 TO 2016 WITH COMMON PARTICIPANTS IN ALL THREE YEARS

	Maryland	Minnesota	Oregon	Utah
2014 TCI	0.84	1.11	1.07	1.00
2015 TCI	0.88	1.11	1.04	1.00
2016 TCI	0.83	1.14	1.07	0.99
2014 RUI	0.91	1.08	0.94	1.10
2015 RUI	0.99	1.08	0.94	0.99
2016 RUI	0.97	1.11	0.93	0.99
2014 Price Index	0.93	1.03	1.14	0.91
2015 Price Index	0.88	1.03	1.11	1.00
2016 Price Index	0.85	1.03	1.14	1.00

Maryland's sample fundamentally changed from 2014 to 2016. Maryland no longer includes any data from self-funded employers with ERISA health plans, and changes in the individual market (ACA-compliant and non-compliant plans) introduced more high risk patients. Utah had changes in its data store from 2014 to 2015 that increased accuracy in the detailed data on inpatient claims and improved the precision of the TCRRV. This change in the data store and TCRRV output specifically drove down the RUI in 2015 which also impacts the Price Index.

Table 10 shows all participants for all three years of the project. It should be remembered that the HealthPartners measures are relative only to those regions that participate. Comparing Table 9 and Table 10 demonstrates how including different regions in the benchmark can impact the measures; this is due to the fact that any measure based on a small number of contributors can be influenced by the inclusion or exclusion of just a single participant. The indexes fluctuate between 0.01 and 0.04 depending on whether all regions are used or only the four regions with data for all three years are used.

TABLE 10: COMPARING TCOC MEASURES FROM 2014 TO 2016 WITH ALL PARTICIPANTS

	Colorado	Maryland	Minnesota	Oregon	St. Louis, MO	Utah
2014 TCI	–	0.86	1.14	1.10	0.90	1.02
2015 TCI	1.17	0.84	1.07	1.00	–	0.96
2016 TCI	1.19	0.80	1.11	1.04	0.94	0.96
2014 RUI	–	0.88	1.05	0.93	1.08	1.07
2015 RUI	1.11	0.97	1.05	0.92	–	0.97
2016 RUI	1.05	0.93	1.07	0.90	1.10	0.95
2014 Price Index	–	0.98	1.09	1.18	0.83	0.96
2015 Price Index	1.06	0.87	1.01	1.09	–	0.99
2016 Price Index	1.13	0.86	1.04	1.16	0.85	1.01

CONCLUSION

Phase III Year Two of the RWJF Total Cost of Care project advances healthcare cost and utilization transparency in several important ways. First, a greater understanding of how cost and utilization vary between regions is achieved. Cost was analyzed by price and utilization to identify cost drivers in different regions. The utilization metrics then build upon this by showing regional differences in healthcare practices and use. Finally, the project highlights that although there may be changes in payer mix and data availability for a region, the differences among regions are, at a high level, more consequential than the potential differences caused by these data changes. These findings advance the national conversation regarding healthcare cost and utilization in the search for a solution to the healthcare cost crisis.

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DOI: 10.1377/hlthaff.2019.00784
HEALTH AFFAIRS 39,
NO. 1 (2020): 50–57

REVIEW ARTICLE

The Impact Of Bundled Payment On Health Care Spending, Utilization, And Quality: A Systematic Review

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ABSTRACT The Centers for Medicare and Medicaid Services (CMS) has promoted bundled payment programs nationwide as one of its flagship value-based payment reforms. Under bundled payment, providers assume accountability for the quality and costs of care delivered during an episode of care. We performed a systematic review of the impact of three CMS bundled payment programs on spending, utilization, and quality outcomes. The three programs were the Acute Care Episode Demonstration, the voluntary Bundled Payments for Care Improvement initiative, and the mandatory Comprehensive Care for Joint Replacement model. Twenty studies that we identified through search and screening processes showed that bundled payment maintains or improves quality while lowering costs for lower extremity joint replacement, but not for other conditions or procedures. Our review also suggests that policy makers should account for patient-level heterogeneity and include risk stratification for specific conditions in emerging bundled payment programs.

Provider reimbursement has shifted in recent years from fee-for-service to alternative payment models that incentivize value by shifting financial risk for both health care costs and quality onto providers. Such models include accountable care organizations, advanced primary care medical homes, and bundled (or episode-based) payment.[1] Under bundled payment, providers assume accountability for the quality and cost of care delivered during a predetermined episode. Providers that keep costs below a risk-adjusted target price share a portion of the resulting savings, but those that exceed the target price incur financial penalties.[2] This creates financial incentives for providers to coordinate care over the entire episode.[3]

Beginning in 2009 the Centers for Medicare and Medicaid Services (CMS) tested the use of bundled payment for episodes of care with the three-year Acute Care Episode (ACE) Demonstration that covered all Parts A and B services for twenty-eight cardiac and nine orthopedic inpatient surgical services and procedures.[4] In 2013 CMS launched a large national bundled payment program, the Bundled Payments for Care Improvement (BPCI) initiative. The program accepted applications for four different models of payment covering forty-eight clinical episodes. Models 1, 2, and 3 retrospectively reconciled differences between the expenditure and a target price. Model 1 covered the acute period, model 3 the postacute period, and model 2 both periods. Medicare paid BPCI participants on a fee-for-service basis, and costs were reconciled after the episode was completed. In contrast,

model 4 was a prospective payment model that required CMS to make a one-time advance payment to participants for all services rendered.[2,5,6]

In 2016 CMS launched the Comprehensive Care for Joint Replacement (CJR) model, an ongoing model that makes bundled payments for hip or knee replacement. Similar to BPCI's model 2, CJR holds hospitals responsible for Medicare spending for the acute period and a postacute period of ninety days, and differences between target prices and incurred costs are reconciled at the end of the year. However, while other bundled payment programs have been voluntary, CJR mandated hospital participation by randomly assigning urban markets to the program. The number of urban markets mandated to participate was subsequently halved, and low-volume and rural hospitals were allowed to opt out.[2,3,7]

Given growing stakeholder interest in bundled payment, policy makers, clinicians, and researchers would benefit from information on how bundled payment models have affected the cost and quality of care for covered conditions and procedural episodes. Impact evaluations of BPCI and CJR have been conducted, including formal evaluations by a federal contractor.[8] To increase understanding of the findings of the available studies as a whole, we performed a systematic review on the impact of bundled payment models on spending, utilization, and quality outcomes.

Study Data And Methods

Our systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[9]

STUDY INCLUSION CRITERIA We included all prospective or retrospective studies that compared a bundled payment approach with a fee-for-service reimbursement control group. We focused on the ACE, BPCI, and CJR models because of similarities in their design. We excluded other programs because of a lack of data (for example, BPCI Advanced) or differences in program design (for example, the Oncology Care Model) compared to the models included in our review. We included only peer-reviewed, English-language articles. We used the population, intervention, comparator, and outcomes (PICO) framework to guide our systematic review.

We classified the outcomes into four categories: health care spending, utilization, quality, and unintended consequences. Health care spending included total episode spending, episode spending for inpatient and postacute care stays, and home health agency spending in the episode. Utilization included discharge disposition (discharges to a postacute care facility, home health agency, or home) and length-of-stay in the hospital and postacute care facilities. Quality included readmission rate, complication rate, mortality, and emergency department visits. Unintended consequences included differences in risk selection or case complexity and episode volume.

IDENTIFICATION AND SELECTION OF STUDIES We searched MEDLINE and the Cochrane Central Register of Controlled Trials from inception to February 2019. Our detailed search strategy is in online appendix exhibit A1.[10] Title and abstract screening was done by one author (Rajender Agarwal), which was followed by full-text screening of relevant citations by two authors working independently (Agarwal and Ashutosh Gupta). Disagreements were resolved through consensus. Reference lists of included studies were screened to identify any additional studies that met our inclusion criteria.

DATA EXTRACTION We created evidence tables using the PICO framework and extracted relevant information on study design and analysis, population, sample size, details of the bundled payment initiative, and study outcomes. One author (Agarwal) initially extracted this information from each included article and inserted it into the evidence tables. All data extraction was subsequently verified for accuracy by a second author (Gupta) working independently.

LIMITATIONS Our systematic review had limitations that are worth mentioning. First, our conclusions were limited by the quality of the constituent studies. Fifty percent of the included studies were observational single-center studies with no adjustment for confounders.

Second, there was significant heterogeneity among the included studies in terms of interventions designed to facilitate care coordination between the inpatient and postacute care settings.

Third, despite the publication of several recent studies, there were limited data on patient-centered outcomes.

Finally, the tools available to assess the risk of bias in nonrandomized studies[11,12] are not sufficiently developed to account for selection on unobservable confounders. Rigorous nonrandomized studies use design-based approaches (for example, difference-in-differences analysis and instrumental variables estimation) to control for unobservable sources of confounding.[13,14] We report these study designs in the "Study Results" section and exhibits.

Study Results

Our literature searches identified 983 unique citations. Fifty-two of them were considered po-

tentially relevant based on title and abstract screening, and the full texts were obtained (see appendix exhibit A2 for the PRISMA flow diagram).[10] Our detailed review of full texts ultimately yielded twenty studies that met our inclusion criteria.[15–34]

EXHIBIT 1

Selected characteristics of 20 studies that compared a bundled payment model and fee-for-service reimbursement, and study outcomes

	Number of studies
CHARACTERISTICS	
Study design	
Quasi-experimental	7
Observational study with adjusted analyses	3
Observational study with no adjustment for confounders	10
Observational study with no significance testing	3
Number of centers	
Multiple	7
One	13
Patient population	
Lower extremity joint replacement	13
Spine fusion	3
Shoulder arthroplasty	1
Revision total knee or hip arthroplasty	1
Cardiac surgery	2
Medical conditions	2
Bundled payment model	
Acute Care Episode Demonstration	2
Bundled Payments for Care Improvement initiative	16
Comprehensive Care for Joint Replacement model	3
Practice setting	
Hospital	15
Physician group practice	5
OUTCOMES	
Health care spending	
Episode payments	16
Spending by type	
Inpatient hospitalization	10
Postacute care period	3
Institutional postacute care	2
Skilled nursing facility	6
Inpatient rehabilitation facility	7
Long-term acute care hospital	4
Home health agency	8
Utilization	
Discharge to:	
Postacute care facility	12
Home health agency	7
Home or self-care	6
Length-of-stay	
Hospital	13
Postacute care facility	6
Quality	
All-cause readmission rate	18
Complication rate	4
Mortality	4
Emergency department visits	5
Unintended consequences	
Risk selection or case complexity	5
Volume	5

SOURCE Authors' analysis of the studies.

STUDY CHARACTERISTICS All included studies were published in the period 2016–19. Our evidence base included seven quasi-experimental studies that used a difference-in-differences or instrumental variables analysis (exhibit 1).[15,19,22,23,26,27,30] Thirteen studies were observational in nature, with three adjusting for confounders.[29,31,32] Three studies did not perform significance testing for any outcome.[17,24,25] Seven studies were national multicenter studies,[15,19,22,23,26,29,30] while the remaining studies examined single-center experiences. The most common clinical episode was lower extremity joint replacement (LEJR).[15,17,19,22–25,27,28,30,31,33,34] Other clinical episodes were noncervical spinal fusion,[18,27,29] shoulder arthroplasty,[32] revision knee or hip arthroplasty,[20] cardiac surgery,[19,27] and medical conditions.[16,26]

BPCI's model 2 was evaluated in sixteen studies,[16–18,20–22,25–34] mandatory CJR was evaluated in three studies,[15,23,24] and ACE was evaluated in two studies.[19,31] The episode duration consisted of the hospitalization period plus ninety days in all except three studies, in which the duration was the hospitalization period plus thirty days.[19,31,34] Clinical episodes were initiated by a physician group practice in five studies[21,28,32–34] and by hospitals in the remaining studies. See appendix exhibit A3 for detailed study characteristics.[10]

OUTCOMES Exhibit 2 summarizes the outcomes of the included studies. See appendix exhibits A4–A22 for more detailed evidence tables that show the study outcomes.[10] (In this section of the article, "BPCI" refers to BPCI's model 2 unless otherwise noted.)

▶ **HEALTH CARE SPENDING:** Sixteen studies evaluated Medicare episode payments.[15,16,18–24,26,27,29,31–34] Six studies showed a significant decrease in episode payments associated with bundled payment.[15,21,22,31,32,34] In a multicenter study, Laura Dummit and colleagues showed a significant decrease in episode payment of $1,166 (3.9 percent) for patients undergoing LEJR in BPCI.[22] Three single-center studies showed a significant decrease in episode payments (range: $2,717–$3,263) among patients undergoing orthopedic surgery in BPCI.[21,32,34] In another single-center study, Amol Navathe and colleagues showed that for LEJR without complications, decreases in episode payments were not significant during the ACE period ($p = 0.62$) but were significant during the BPCI period ($p < 0.001$). There were no significant decreases or increases in episode payments during either the ACE or BPCI periods for LEJR with complications.[31] In another single-center study, Lindsay Jubelt and colleagues found that there was a significant in-

crease in episode payments of $8,291 among patients undergoing spinal fusion in BPCI, but no significant decrease or increase in episode payments for LEJR (–$3,017; 95% confidence interval: –$6,066, $31) or cardiac valve replacement (–$2,999; 95% CI: –$8,103, $2,105).[27] A multicenter observational study by Brook Martin and colleagues found that there was a significantly lower reduction in episode payments among beneficiaries undergoing lumbar fusion in BPCI.[29] Another single-center study was unable to demonstrate cost savings for lumbar spine fusions in BPCI.[18] Two single-center studies found no significant difference in episode payments associated with BPCI for LEJR[33] or revision total knee or hip arthroplasty.[20] A multicenter study by Lena Chen and colleagues found a nonsignificant $514 increase in episode payments with ACE for cardiac surgery and a nonsignificant $358 decrease for orthopedic surgery.[19] BPCI was not associated with a significant change in episode spending among patients with medical conditions (sepsis, pneumonia, heart failure, acute myocardial infarction, or chronic obstructive pulmonary disease) in two studies.[16,26] In a multicenter study, Michael Barnett and colleagues demonstrated a significant 3.6 percent reduction ($1,084) associated with CJR.[15] In another multicenter study, Amy Finkelstein and colleagues showed that the overall Medicare spending per episode was $453 lower (95% CI: –$909, $3) in CJR, a nonsignificant difference.[23]

Ten studies evaluated spending for inpatient hospitalization.[15,16,19,20,22,26,27,31,32,34] Three single-center studies found a significant reduction in spending (range: $562–$811) for patients undergoing orthopedic surgery in BPCI,[20,27,32] while another single-center study showed an increase in spending of $267.[34] A single-center study found a significant increase in spending of $4,178 for spinal fusion in BPCI.[27] Five studies showed no difference in spending for inpatient hospitalization[15,16,19,22,26] with bundled payment, and one study did not test for significance.[31]

All three of the studies that evaluated spending in the postacute care period (including spending on institutional postacute care, home health agencies, and outpatient visits) demonstrated a significant reduction in spending (range: $591–$1,960) with bundled payment.[19,21,32] Two single-center studies that evaluated institutional postacute care spending (including spending on care at skilled nursing facilities,, inpatient rehabilitation facilities, and long-term acute care hospitals) found a significant reduction in spending (range: $307–$7,982).[23,27] (One of the two studies showed no significant difference among patients undergoing spinal fusion.)[27]

EXHIBIT 2

Summary of results from 20 studies that compared a bundled payment model and fee-for-service reimbursement, by study outcome

Outcome	Direction of outcome	ACE	BPCI	CJR	Overall
HEALTH CARE SPENDING					
Episode payments	–	0/2	5/12	1/3	6/16
Spending by type					
Inpatient hospitalization	–	0/2	3/8	0/1	3/10
Postacute care period	–	1/1	2/2	—[a]	3/3
Institutional postacute care	–	—[a]	1/1	1/1	2/2
Skilled nursing facility	–	0/2	3/4	1/1	4/6
Inpatient rehabilitation facility	–	0/2	3/5	1/1	4/7
Long-term acute care hospital	–	0/1	0/3	0/1	0/4
Home health agency	+	0/2	3/6	0/1	3/8
UTILIZATION					
Discharge to:					
Postacute care facility	–	—[a]	5/9	2/3	7/12
Home health agency	–	—[a]	2/5	0/2	2/7
Home or self-care	+	—[a]	1/5	0/1	1/6
Length-of-stay					
Inpatient	–	1/1	7/11	1/2	8/13
Postacute care facility	–	—[a]	1/4	1/2	2/6
QUALITY					
All-cause readmission rate	–	1/2	4/14	1/3	6/18
Complication rate	0	1/1	—[a]	3/3	4/4
Mortality	0	1/1	2/2	1/1	4/4
Emergency department visits	0	1/1	3/3	2/2	5/5
UNINTENDED CONSEQUENCES					
Risk selection or case complexity	+	—[a]	1/3	0/2	1/5
Volume	–	—[a]	3/3	2/2	5/5

SOURCE Authors' analysis of the studies. **NOTES** The exhibit shows the number of studies that demonstrated the outcome effect among the total studies that evaluated the effect. The denominators across columns do not always sum to the denominator in the "overall" column because one study evaluated both the Acute Care Episode (ACE) Demonstration and the Bundled Payments for Care Improvement (BPCI) initiative. A minus sign (–) means that there was a decrease, a plus sign (+) means an increase, and a zero (0) means no change in the outcome evaluated. CJR is Comprehensive Care for Joint Replacement model. [a]Not applicable.

Among the six studies that evaluated spending for skilled nursing facilities,[15,19,22,26,31,34] four found a significant reduction in spending (range: $527–$2,697).[15,22,31,34] Similarly, of the seven studies that evaluated spending for inpatient rehabilitation facilities,[15,19,20,22,26,31,34] four found a significant reduction in spending (range: $227–$1,416).[15,22,31,34]

None of the four studies that evaluated spending for long-term acute care hospitals showed a significant difference with bundled payment participation.[15,26,31,34] Eight studies evaluated spending for home health agencies,[15,19,20,22,26,27,31,34] of which three (all single-center studies) showed an increase in spending (range: $188–$957) with bundled payment.[27,31,34]

▶ **UTILIZATION:** Twelve studies evaluated the impact of bundled payment on discharge to postacute care facilities (including skilled nursing facilities, inpatient rehabilitation facilities, and

long-term acute care hospitals).[15,17,18,20–25,27,32,33] Two multicenter studies showed a significant decrease in the percentage of discharges to postacute care facilities (range: 2.5–2.9 percent) with CJR,[15,23] and one single-center study did not test for significance.[24] Of the nine studies that evaluated the association of BPCI with discharges to postacute care facilities, five studies showed a significant impact of BPCI on this outcome.[21,22,27,32,33] One multicenter study[22] and two single-center studies[32,33] showed a significant decrease in discharge to postacute care facilities (range: 3.4–30.2 percent) in BPCI. Another single-center study found a significant decrease in discharges to skilled nursing facilities in BPCI. However, there was a significant increase in discharges to inpatient rehabilitation facilities.[21] Another single-center study showed that discharges to skilled nursing facilities for LEJR and spinal fusion increased significantly in BPCI. Discharges to inpatient rehabilitation facilities decreased significantly in all patient groups except those who had spinal fusion with major complication or comorbidity.[27] Of the remaining studies that evaluated the association of BPCI with discharges to postacute care facilities, three single-center studies[17,18,25] did not test for significance, and one single-center study[20] did not show a significant difference.

Seven studies evaluated the impact of bundled payment on discharge to a home health agency.[15,17,18,20,21,23,32] Two single-center studies done in orthopedic physician group practice settings showed a significant decrease in discharges to home health agencies (range: 6–8 percent) in BPCI,[21,32] and one multicenter study showed a significant increase in CJR.[15] Of the remaining studies, two did not test for significance,[17,18] and two others did not show a significant difference in discharges to home health agencies with bundled payment.[20,23]

Six studies evaluated the association between bundled payment participation and discharge to home or self-care,[17,18,20,23,28,33] with one single-center study showing a significant increase in BPCI.[33] Another single-center study showed a significant decrease in discharges to home after primary total hip arthroplasty but no difference after primary knee arthroplasty.[28] Two studies did not test for significance,[17,18] and two others did not show a significant difference in discharges to home with bundled payment participation.[20,23]

Thirteen studies evaluated the outcome of hospital length-of-stay.[15,17,18,20,22,24–28,31,33,34] Eight studies (two multicenter studies and six single-center studies) showed a significant decrease in the mean length-of-stay (range: 0.3–1.4 days) with bundled payment.[15,18,20,22,27,31,33,34] Of these studies, one single-center study found a significant decrease in the length-of-stay in BPCI for LEJR, but not for cardiac valve replacement or spinal fusion.[27] Three of the remaining studies did not test for significance,[17,23,25] and two others did not show a significant difference in length-of-stay.[26,28]

Six studies evaluated the outcome of length-of-stay in postacute care facilities.[15,21–23,27,33] One multicenter study[15] and one single-center study[33] showed a significant decrease in length-of-stay (range: 2.0–7.2 days). A single-center study found a significant increase in skilled nursing facility and inpatient rehabilitation facility length-of-stay in certain patient groups and no difference in other patient groups.[27] Of the remaining studies, one single-center study did not test for significance,[21] and two multicenter studies did not show a significant difference in length-of-stay in postacute care facilities.[22,23]

▶ **QUALITY:** Eighteen studies evaluated all-cause readmission rates across the episode duration.[15–24,26–29,31–34] Six studies found a significant decrease in readmission rates (range: 0.6–7.0 percent) with bundled payment.[15,19,21,27,32,33] Of the two studies that evaluated the association between ACE and readmission rates,[19,31] one multicenter study found a significant reduction in readmission rates with ACE for orthopedic surgery but not for cardiac surgery.[19] Of the fourteen studies that evaluated the association between BPCI and readmission rates,[16–18,20–22,26–29,31–34] three single-center studies showed a significant reduction in BPCI,[21,32,33] while one single-center study found a reduction in readmission rates for LEJR but not for cardiac valve replacement or spinal fusion.[27] Lastly, of the three studies that evaluated the association between CJR and readmission rates,[15,23,24] one multicenter study showed a significant reduction.[15] Bundled payment was not associated with differences in complication rates,[15,19,23,24] mortality,[15,19,22,26] or emergency department visits.[15,22,23,26,31]

▶ **UNINTENDED CONSEQUENCES:** Five studies evaluated case complexity to address whether hospitals that participated in bundled payment avoided higher-risk patients, a potential unintended consequence of the payment model.[15,18,23,26,30] A single-center study demonstrated a significantly higher case complexity in the BPCI cohort, with 45 percent of the patients considered to be complex versus 23 percent of the comparison cohort. This was believed to be the reason for the lack of cost savings.[18] Navathe and colleagues compared patient characteristics at matched BPCI and non-BPCI hospitals and found no significant differences across any case-mix measures. However, patients at BPCI hospitals were less likely to have been admitted to a skilled

nursing facility in the prior year, leading to a concern that hospitals may be avoiding patients with a history of institutional care.[30] The remaining studies, all of which were multicenter and quasi-experimental, did not show any significant differences in case complexity with bundled payment.[15,23,26]

There were no significant differences in episode volume in hospitals or markets that participated in bundled payment.[15,23,26,29,30]

Discussion

We performed the first systematic review of the published literature on the impact of bundled payment on episode spending, utilization, and quality. BPCI's model 2 was the most commonly represented program in the studies we included. We found that bundled payment resulted in a significant decline in Medicare episode payments in six of the sixteen studies that evaluated spending. Notably, all six studies examined orthopedic surgery, with four examining LEJR episodes. There were no significant differences in episode payments for spinal fusion procedures,[18,27,29] revision joint arthroplasty,[20] or medical conditions.[26] Discharges to postacute care facilities declined significantly in seven of the twelve studies that evaluated this outcome, and there was a significant reduction in hospital length-of-stay in eight of thirteen studies. However, a substantial number of studies found no effect on health care spending and utilization, although there was heterogeneity in the clinical episodes examined. Changes in quality of care, measured by complication rates, emergency department visits, and mortality, were not associated with bundled payment participation. There was a significant decrease in readmission rates in one-third of the studies that evaluated this outcome. Lastly, the available studies did not show evidence of potential unintended consequences from bundled payment, such as increased procedure volume or case-mix shifts resulting from patient selection.

Our results are consistent with those of an evaluation of BPCI's model 2 conducted by federal contractors. In their report, model 2 accounted for nearly 90 percent of the episodes initiated. Of the sixty-seven clinical episode combinations analyzed in the report, there was a significant decline in Medicare payments for twenty-seven episodes. The declines were primarily due to relative reductions in institutional postacute care. There was no association between bundled payment participation and changes in quality of care as measured by readmission rates, emergency department visits, or mortality.[8]

Policy Implications

Our findings have four important implications for policy makers debating the further implementation and expansion of bundled payment programs. First, the current state of evidence suggests that for LEJR, bundled payment encourages hospitals and physician practice groups to provide cost-efficient care without compromising quality. By demonstrating that the quality of care remained the same or increased while costs decreased, the existing evidence from the BPCI and CJR models suggests that LEJR episodes may meet the criteria for expansion—though formal assessments require an actuarial analysis by CMS. There is no evidence of benefit for other clinical episodes at the present time.

Second, while bundled payment has yielded favorable results for LEJR, it has yet to demonstrate similar benefits for other clinical episodes, including those for medical conditions. Medical condition episodes differ from LEJR episodes in that LEJR is elective and patients undergoing it tend to be younger, with lower rates of poverty and disability than patients with medical conditions included in bundled payment.[26] In scaling up bundled payment programs, policy makers will need to restrict the programs to those clinical episodes that may be an appropriate fit for such payment models.

Third, we found that for certain clinical episodes, such as spinal fusion procedures, bundled payment was not associated with cost savings because of unusually high baseline patient complexity—which likely influenced the care provided by postacute care facilities and home health agencies in such populations. Given the penalty for cases that exceed the bundled payment target price, providers may be reluctant to accept these patients, which could in turn lead to decreased access to care. Studies have suggested that CMS needs to include more robust risk stratification of patients in bundled payment programs to allow higher payments for more complex patients and to more fairly judge the performance of providers who care for them.[35,36]

Fourth, it is of paramount importance to continue examining the design and impact of bundled payment programs and differences in outcomes by clinical episode. The BPCI Advanced program is a new iteration of voluntary bundled payment that started in October 2018. This program will generate new data about bundled payment by adding outpatient episodes and engaging new specialty types in advanced alternative payment models. The evidence to date suggests that the current bundled payment design is conclusively well suited to only one clinical episode—LEJR—and may require changes to

produce better value for patients with other conditions. Future research should evaluate how specific design features of bundled payment could be adapted to other clinical conditions and procedures. Furthermore, because voluntary bundled payment models are more popular than mandatory models, future work should consider the type and amount of financial reward needed to attract more participants. Lastly, most of the available evidence on bundled payment programs is from acute care hospitals, and more evidence is needed on physician group practice participants.

Conclusion

While bundled payment programs maintain or improve quality while lowering costs for LEJR, our systematic review suggests that the effects of the payment model on health care spending and utilization varied considerably—particularly by clinical episode type. CMS should continue to scale up the BPCI and CJR programs for LEJR, but it should account for patient-level heterogeneity, include risk stratification, and consider changes to specific design features for specific episodes. ■

Rajender Agarwal received compensation from Sound Inpatient Physicians, in Tacoma, Washington, for performing clinical work as a hospitalist and consultancy fees from Mercy Health Lourdes Hospital, in Paducah, Kentucky. Joshua Liao received textbook royalties from Wolters Kluwer and personal fees from Kaiser Permanente Washington Health Research Institute that were not related to the content of this article. Amol Navathe received personal fees from Navvis Healthcare Inc., the National University Health System of Singapore, and Agathos Inc.; personal fees and equity from NavaHealth; personal fees for service as a commissioner of the Medicare Payment Advisory Commission; speaking fees from the Cleveland Clinic; and an honorarium from Elsevier Press, none of which were related to this article. He also serves without compensation as a board member of Integrated Services Inc. The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the US government.

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Review Article

Spine centers of excellence: applications for the ambulatory care setting

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Contributions: (I) Conception and design: All authors; (II) Administrative support: None; (III) Provision of study materials or patients: None; (IV) Collection and assembly of data: All authors; (V) Data analysis and interpretation: All authors; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

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Abstract: Centers of excellence (COE) are designed to deliver high-quality, cost-effective healthcare by providing specialized and comprehensive multidisciplinary care for a given condition and have become attractive option to both insurers and healthcare providers given their promise of creating value. The criteria that constitute and define a COE may be delineated by a number of entities with a stake in value-based healthcare delivery including professional societies, the federal government, insurers and businesses seeking to control costs while guaranteeing outcomes for their employees. COEs accomplish this goal through a number of means, the first and most essential of which is centralization of organization wherein a variety of specialists are integrated under a single hospital system to improve communication between providers and decrease overall variability of care delivery. In this system, the patient is tracked throughout the entire spectrum of care from diagnosis, through non-operative or surgical intervention, and postoperative care. The centralized model in turn allows for standardization of protocols and multidisciplinary team input which helps to inform case selection, improve patient screening, make treatment more uniform and ultimately allow for dynamic and continual modification of best practices. This model lends itself particularly well to orthopedic subspecialties where patients often require specialized pre-, intra- and post-operative care from a variety of providers. However, despite their apparent benefits, studies evaluating outcomes after implementation of COEs have been less than favorable, and further research is needed in this area to support their widespread adoption. The growth of the ambulatory surgery center in orthopedics provides a new opportunity for the development, evaluation and evolution of spine COEs. Although the direct value of COEs is yet to be firmly established, they provide guidelines for best practices in outpatient spine surgery and a framework for how spine care can be transitioned safely and effectively to the outpatient setting.

Keywords: Ambulatory surgery; spine; outpatient; comprehensive health care; healthcare delivery

Submitted Feb 16, 2019. Accepted for publication Apr 12, 2019.
doi: 10.21037/jss.2019.04.10
View this article at: http://dx.doi.org/10.21037/jss.2019.04.10

What is a healthcare center of excellence (COE)?

Healthcare COE have been established by the healthcare industry in response to the observation that businesses in the non-healthcare sector frequently find success in improving quality of product while decreasing costs when these centers are implemented (1). A healthcare COE has been defined as "*a program within a healthcare institution which is assembled to supply an exceptionally high concentration of expertise and related resources centered on a particular area of medicine, delivering associated care in a comprehensive, interdisciplinary fashion to afford the best patient outcomes possible*" (2). The goals of healthcare delivery and the changing landscape of healthcare economics lend themselves well to the COE model as these centers promise successful, cost-effective treatment of a defined group of conditions which would

be otherwise more time or resource intensive without guarantee of favorable outcomes at non-specialty centers (3). COEs adhere to a multidisciplinary model, which has been established as a cost-effective healthcare delivery system wherein the patient is tracked throughout the entire spectrum of care from diagnosis, through non-operative or surgical intervention, and postoperative care all delivered through one institution or overarching management body. Specialty areas that have found success though this model include both non-surgical specialties such as cardiology, oncology and neurology, and surgical specialties including bariatric surgery, ophthalmology and orthopedics (2). The COE model lends itself particularly well to subspecialties like joint replacement and spine surgery where patients frequently require specialized care from multiple providers throughout the episode of care, including preoperative optimization, specialized intraoperative techniques, and specialty-specific postoperative rehabilitation.

Who decides the criteria for a COE is variable? Oftentimes these centers are established by professional society guidelines or a government entity (4). For instance, Bariatric surgery COEs were developed in 2006 given the high volume of procedures performed annually, refusal of insurance carriers to cover the procedure due to questions regarding cost effectiveness and risk profile, and limited data to support effectiveness of the procedure (5). Two governing bodies—ACS and ASMBS—created guidelines designating COE which was ultimately adopted by CMS insofar as only bariatric surgery performed at COEs would be reimbursed (6). Recently, outcomes have failed to demonstrate benefit of COEs, and this restriction was dropped in 2013 (7,8). Similarly, the American College of Cardiologists has created a "HeartCARE Center" national distinction of excellence which is their highest recognition. Criteria consist of cardiovascular accreditations, individuals within the system with advanced status in the ACC, and outcomes reporting or participation in quality improvement initiatives (9). Occasionally, the designation is created by bodies with a particular interest in streamlined or cost-effective delivery; and in this case it describes a partnership between a business entity and a hospital or healthcare network which defines a healthcare center which is seen to provide superior, cost-effective healthcare which can be mutually beneficial to both parties. As an example, Walmart has established a network of COEs through the mayo clinic system and waives copays for selected procedures if done at one of these centers (10,11). Similarly, Optum, an insurance company, has defined "Optum Centers of Excellence" as hospital systems with which they have partnered to deliver higher-than-average quality of care. Various other private health plans, federal and state payers and specialty societies have created designations for COE, e.g., Aetna Institutes and Blue Cross and Blue Shield Blue Distinction Centers. In these cases, the designation may serve as a means of directing patients within these plans to seek care at COEs which ideally would serve to mutually benefit both the patient and payer in terms of cost and quality of care delivered; however, it does not technically define a COE by any other national criteria.

Bariatric surgery COE's relative failure to provide improved care highlights some of the issues at play in the creation and marketing of COEs as providers of value in healthcare. If the goal is to create specialized programs with proven high-quality healthcare that are attractive to stakeholders through the assumption that COEs will provide superior outcomes, and they do not, then COEs fail at a fundamental level (1,12,13). In cases where hospitals self-designate as COE without upholding rigorous external standards, this may serve simply as a marketing strategy. When not created in association with a second party with an interest in cost-effective healthcare delivery for other reasons there is a concern that unregulated COEs may potentially steal market share from other healthcare entities without actually providing improved outcomes and in turn negatively affect their perception, and ultimately their purpose. However, several studies have demonstrated the effectiveness of COEs at decreasing cost and creating value, and in theory they provide the optimal setting for healthcare delivery (14,15).

Spine COE

As is the case with COEs in general, there is no single entity and no specific set of criteria that defines a spine COE. One study from 2013 evaluated the effectiveness of spine COE's created in in 2009 in partnership with 25 health plans from across the United States as designated by a predefined set of requirements. In a comparison of outcomes between the 369 hospitals designated as COEs and 1,449 other centers performing similar operations, there was no difference in complications or readmission among patients undergoing cervical fusions, lumbar fusions or lumbar discectomies/decompressions (16). While results may have proved unfavorable for spine COEs, another study from 2013 by the same authors found that similarly designated centers for hip and knee surgery produced lower complication rates for hip

surgery, serving as a proof of concept that COEs can deliver on promises of improvement in value-based healthcare (15). This was supported by a study of Blue cross value-designated facilities which demonstrated decreased cost and complication rates in lumbar and cervical spine surgery (14). In the current environment, while hospital systems can define themselves as a spine COE, there is no centralized board to police this designation which oftentimes results from an agreement between a health plan and hospital system (2,10). The Joint Commission (JCO) defines criteria for a COE more generally by the ability of a hospital system to earn a disease specific care certification, a designation available for a number of disease states, conditions and procedures. Within the realm of spine surgery, JCO certification encompasses laminectomy, discectomy and spinal fusion requiring providers to comply with consensus based national standards, employ consistent use of evidence based practice, and collect performance measures (17). Recently JCO has partnered with the American Academy of Orthopaedic Surgeons to provide total hip and knee replacement certification with the aim of standardizing COE/certification nationwide with increased provider input, though no similar plan is in place (or yet made public) for a similar partnership with an orthopedic spine specialty group to create national guidelines for spine surgery (18).

The growth of the ambulatory surgery center (ASC) in orthopedics provides a new opportunity for the creation of spine COEs and, ultimately, value in ambulatory spine surgery (19,20). As evidence mounts to support the safety of ambulatory spine care, there is an increasing need to police these centers and ensure that patient safety is not sacrificed for cost-effectiveness (21,22). Currently, JCO, and other licensing agencies such as the Accreditation Association for Ambulatory Health Care (AAAHC), have provided a set of criteria for certification as an ambulatory orthopedic surgery COE—an important step in ensuring value-based care and ensuring the overall effectiveness of ambulatory spine COEs (23). While the evidence to date is promising, further research to support the value created by spine ASCs is paramount, especially as the indications for outpatient spine surgery will inevitably expand to encompass increasingly more complex cases, potentially putting at risk the benefits of spine ASCs by creating an unacceptable risk profile. The creation of ambulatory spine COEs provides the best opportunity to accurately evaluate the true value of outpatient spine surgery given the elimination of variables through the relatively standardized criteria by which they are defined. Applying the general principles of healthcare COEs to spine surgery will ensure that best practices are followed, in turn ideally providing further high-quality evidence in support of outpatient spine surgery.

Key tenets for COE

Creating value

Ultimately, the creation of value—or the highest quality of care at the lowest cost—is the overarching goal of creation of COEs in ambulatory spine care (24). The value equation, as it has been termed, is the confluence of safety, institutional processes, patient satisfaction and outcomes measures, and overall cost to the patient, payer and society. While indirect costs—namely loss of workforce productivity—related to spine care may be particularly difficult to measure, direct costs related to resource utilization can be controlled to some degree with effective COE operational management. A recent focus on creating value in spine surgery by decreasing direct costs is the movement of spine surgery into outpatient ambulatory surgery centers. In one study, when compared to inpatient anterior cervical discectomy and fusion or cervical disc replacement (ACDF/CDR), average outpatient charges were 52% and 83% lower, respectively (25). Spine surgery performed safely and efficiently in appropriately indicated patients in the outpatient setting can circumvent many of the costs associated with lengthy inpatient stays and provide value through cost savings.

While not all patients will be eligible for this model of care, there is a growing body of evidence to support the safety of outpatient spine surgery in ASCs. A recent meta-analysis of 39 studies evaluating the value equation of ambulatory spine surgery, namely the ratio of quality—or safety—to cost found that ambulatory spine procedures have equivalent or superior outcomes compared to inpatient procedures with regards to complications rates, hospital transfer rates, and readmission (26). COEs must maintain a high safety profile, and in the absence of evidence to suggest otherwise, limiting ambulatory spine surgery to those patients who are medically optimized undergoing less involved procedures for less complex pathology further ensures value in the outpatient setting (27).

Centralization of organization

Among the various considerations in COE designation,

comprehensive care and centralization of organization are paramount. A COE provides a "one-stop shop" for patients wherein they can receive all of their necessary pre- and postoperative care within a single organization. Integration of a variety of specialists under the umbrella of one hospital system gives a COE the ability to treat conditions which may complicate or arise from a patient's episode of care. For instance, a complicated patient with multiple comorbid medical conditions who presents for spine surgery should be able to be managed perioperatively within one center rather than in a more traditional hub-and-spoke model. The standardization which arises from centralized organization improves communication between providers, decreases errors resulting from variability among providers, and streamlines the process. Ideally, when possible, co-location of providers creates efficiency for patients as well (2). Ambulatory spine COEs linked to a larger hospital system where this type of comprehensive care can be provided.

Defining an organizational structure along the lines of diagnosis or surgery type rather than operational structure also streamlines patient experience and can create subspecialty depth of expertise while decreasing practice variability. From a broad perspective, this would require that within a hospital's orthopedics department, a given surgeon's scope of practice is limited to a specific subspecialty; more narrowly speaking, this may mean that in a given spine surgery department, providers specializing in minimally invasive spine surgery may no longer be allowed to perform large adult deformity cases, and similarly deformity surgeons may not be allowed to perform the occasional microdiscectomy (28). Extrapolating this to the outpatient model, this would necessarily restrict which spine cases can feasibly be performed at ASCs.

This also involves the creation of clinical pathways wherein the specifics of perioperative care are defined and standardized, decreasing variability and allowing healthcare providers to focus on best practices. Furthermore, pathways should be considered malleable, changing to adopt new evidence-based practices. Monitoring for compliance, recording outcomes, setting pathway-specific benchmarks and sharing individual provider experiences set the stage for further pathway refinement (2). The structure of ASCs—typically smaller operations with a core of dedicated staff—lends itself well to adherence to and refinement of standardized clinical pathways through constant feedback from providers and staff.

Multidisciplinary team building and protocol creation

One facet of COEs that lends itself particularly well to a centralized model is the utilization of multidisciplinary meetings geared at creating value and improving outcomes by carefully scrutinizing patient treatment plans. Multidisciplinary conferences and standardized protocols, which may in certain cases limit access to surgery if the likelihood of complications is unacceptably high, have been shown to significantly reduce risk for perioperative complications (29,30). As the indications for ambulatory spine surgery continue to evolve, comprehensive and standardized protocols to inform case selection, patient screening, anesthesia type, and management in overnight observation units are important aspects of excellent spine care (31). Where evidence is lacking regarding ambulatory spine surgery, best practice guidelines—whether formally published or simply developed and agreed upon by stakeholders at ambulatory care centers—can be useful adjuncts in patient selection and management in ASCs (32).

Given the historically inconsistent data regarding the effectiveness of COEs in to improve outcomes, establishment of prospective and multicenter registries can provide another avenue to define their effectiveness. Registries have the dual benefit of measuring quality and effectiveness of spine procedures in a real-world clinical setting while demonstrating value of spine surgery as it relates to patient outcomes and quality of life (33). They allow institutions to measure the population value of spine surgery, simultaneously identifying those groups or individuals who serve to benefit most from an intervention as well as those who will not, and can further define the best setting—inpatient or outpatient—in which to perform a given procedure. By recording individual outcomes longitudinally, prospective patient registries allow for further refinement of cost-effective clinical indications and treatment strategies, ideally decreasing treatment variation, creating national benchmarks, and optimizing value in ambulatory spine care.

Conclusions

While spine care delivery systems remain highly variable, adherence to the tenets of COEs provides a framework to standardize outcomes and demonstrate value in the outpatient spine care model. Effective spine care requires strict patient selection, patient and staff education, and

adherence to pre- and post-operative protocols with an eye towards continual process refinement in order to allow for seamless care while avoiding complications. Although the direct value of COEs is yet to be established, they provide a guideline for best practices of these pathways and examples for how spine care can be transitioned safely and effectively to the outpatient setting.

Acknowledgements

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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Cite this article as: Sheha ED, Iyer S. Spine centers of excellence: applications for the ambulatory care setting. J Spine Surg 2019;5(Suppl 2):S133-S138. doi: 10.21037/jss.2019.04.10

Temporary Rule Related to Hospital Payments

Overview

Staff is requesting Board approval to file a temporary rule to amend PEBB's current Oregon Administrative Rules 101-080-0010, which relates to PEBB benefit plans' payment for hospital services. The amended language included in this temporary rule serves to clarify that the actual reimbursement amount carriers shall pay hospitals as the lesser of billed charges, the carrier's contracted rate for the provider, or the maximum reimbursement amount established in ORS 243.256.[1] Amended language is also included to clarify that carriers must capture data fields on claims for services or supplies that are necessary to determine the Medicare rate for the service or supply in order to ensure that the actual reimbursement amount does not exceed the maximum reimbursement amount.

Temporary filing of this rule will allow the amended rule to take effect upon filing and remain in effect for six months while PEBB proceeds through the formal permanent rule making process.

Amended language to the current OAR 101-080-0010 is shown in the underlined text below.

Board Action

Board approval to file a temporary rule to amend PEBB's current OAR 101-080-0010 is requested.

Payment for Hospital Services
OAR 101-080-0010

(1) ~~Except~~ Except as provided in section (8), the maximum reimbursement amount for each claim subject to ORS 243.256 and these rules shall be determined by the carrier applying the applicable percentage of the Medicare rate, or the Medicare rate for similar services or supplies, as of the date of service of the claim.

(2) The actual reimbursement amount for each claim subject to ORS 243.256 and these rules shall be based on the lesser of billed charges, the carrier's contracted rate for the provider, or the maximum reimbursement amount established in ORS 243.256 and these rules.

~~(1)~~(3) The carrier shall determine the PEBB member's cost sharing based upon the actual reimbursement amount as determined in Section (2) above ~~lower of the amount allowed by ORS 243.256 or the carrier's contracted rate for the provider~~.

~~(2)~~(4) The following payments shall not be included under ORS 243.256(1) or these rules:

[1] ORS 243.256 establishes the maximum amount carriers and third party administrators contracted with PEBB may pay for inpatient and outpatient hospital services and supplies is 200 percent of the amount paid by Medicare for the service or supply for in-network hospitals and 185 percent of the amount paid by Medicare for the service or supply for out-of-network hospitals.

(a) services or supplies that are not covered by Medicare
(b) services or supplies provided at Ambulatory Surgery Centers
(c) professional services provided in a Hospital.

~~(3)~~(5) If a third-party administrator of a self-insured plan provides total fee-for-service payments to an in-network hospital under ORS 243.256(1) or (2) that exceed twice the total payments at the Medicare rate for the plan year, the self-insured plan third-party administrator will return the difference to PEBB. Moneys returned to PEBB under this rule will be deposited in the Public Employees' Revolving Fund for purposes consistent with ORS 243.167

~~(4)~~(6) If a fully-insured carrier provides total fee-for-service payments to an in-network hospital under ORS 243.256(1) or (2) that exceed twice the total payments at the Medicare rate for the plan year, the fully-insured carrier will provide PEBB a credit to fully-insured premium rates equivalent to this difference.

~~(5)~~(7) If a third-party administrator of a self-insured plan provides total fee-for-service payments to an out-of-network hospital under ORS 243.256(1) or (2) that exceed 1.85 times the total payments at the Medicare rate for the plan year, the self-insured third-party administrator will return the difference to PEBB. Moneys returned to PEBB under this rule will be deposited in the Public Employees' Revolving Fund for purposes consistent with ORS 243.167.

~~(6)~~(8) If a fully-insured carrier provides total fee-for-service payments to an out-of-network hospital under ORS 243.256(1) or (2) that exceed 1.85 times the total payments at the Medicare rate for the plan year, the fully-insured carrier will provide PEBB a credit to fully-insured premium rates equivalent to this difference.

~~(7)~~(9) If a carrier or third-party administrator does not reimburse hospitals on a fee-for-service basis, it may pursue an alternative payment method that maintains total payments while taking into account the limits established in ORS 243.256 and described in this rule, including, but not limited to:
(a) value based payments,
(b) capitation payments and
(c) bundled payments.
A carrier or third-party administrator using alternative payment methods must provide actuarial calculations that show the payment methods used adhere to the limits specified in ORS 243.256. Such alternative payment methods must be reported to PEBB as part of its benefit plan agreement with the carrier or third-party administrator. If payments under the alternative payment arrangement exceed the limits specified in ORS 243.256 the carrier or third-party administrator will return the difference to PEBB. Moneys returned to PEBB under this rule will be deposited in the Public Employees' Revolving Fund for purposes consistent with ORS 243.167.

~~(8)~~(10) For purposes of this rule, the "Medicare rate" is the amount of reimbursement for a claim that would be paid as if the Centers for Medicare and Medicaid Services (CMS) reimbursed the claim. Therefore, the outpatient reimbursements apply the Medicare Ambulatory Payment Classification (APC) or Hospital Outpatient Prospective Payment System (OPPS), and that for inpatient the reimbursements apply Medicare Severity Diagnosis Related Groups (MS-DRG). All rebates, incentives, or adjustments that would have applied if reimbursed by Medicare would also apply. The "Medicare

rate" as defined in this rule is used to determine the maximum reimbursement amount for each claim subject to ORS 243.256 and these rules and in no way prohibits a carrier or third-party administrator from establishing contracted claims reimbursement rates that are lower than the maximum reimbursement amount. This includes contracted claims reimbursement rates informed by Medicare Advantage rates, so long as contracted rates do not exceed the maximum reimbursement amount established in ORS 243.256 and this rule. Furthermore, this includes capturing data fields on claims for services or supplies that are necessary to determine the Medicare rate for the service or supply in order to ensure that the actual reimbursement amount does not exceed the maximum reimbursement amount established in ORS 243.256 and this rule.

Statutory/Other Authority: ORS 243.125(1), ORS 243.061 to 243.302
Statutes/Other Implemented: ORS 243.256

Division 70
LOCAL GOVERNMENT PARTICIPATION

101-070-0001
Definitions

"Local Government" ~~has the meaning given to it in House Bill 2279 (2013).~~ **means any city, county or special district or any intergovernmental entity created under ORS chapter 190 in the State of Oregon.**

101-070-0005
Participation Requirements

(1) Notice of **Interest:** ~~Intent to Participate~~

(a) Local Governments choosing voluntarily to participate in PEBB must complete and submit to PEBB a written Notice of **Interest.**~~Intent to Participate~~. The following notification timeline applies if the Local Government employs:

(A) 50 or fewer participating, eligible employees - 90 days prior to the **coverage effective start date** ~~PEBB Open Enrollment start date~~, ~~(usually October 1),~~ or;

(B) More than 50 participating, eligible employees but fewer than 500 participating, eligible employees — 120 days prior to the **coverage effective start date** ~~PEBB Open Enrollment start date~~, or;

(C) More than 500 participating, eligible employees — 180 days prior to the **coverage effective start date.** ~~PEBB Open Enrollment start date.~~

(b) Local Governments employing more than 500 participating, eligible employees that submit a Notice of **Interest** ~~Intent to Participate~~ may allow individual employee groups entry into **the** PEBB **program** ~~plans~~ upon expiration of collective bargaining agreements that govern employee health and welfare benefits for the individual employee groups.

(c) PEBB reserves the right to extend any deadline or time within which a Local Government must take any action under these rules if the Local Government applies in writing for relief to PEBB and demonstrates in writing that special circumstances warrant the grant of such relief. For the purpose of this subsection, special circumstances that warrant the grant of relief include emergencies that reasonably can be regarded as imposing an obstacle to the Local Government. Special circumstances are circumstances beyond the reasonable control of the individual or organization including, but not limited to, Local Government employee groups facing above average increases in health benefit plan rates that prevent renewal, emergency reorganizations or replacements of the current benefit plans, board of directors or executive officers of the organization, acts of God and comparable practical impediments to an individual's or organization's ability to meet a deadline or achieve the correction of a violation of rules. The grant or denial of relief under this subsection must be determined by the PEBB official specifically delegated that task. PEBB also reserves the right to waive or to permit the correction of minor or technical violations of OAR 101-070-0005.

(2) Financial Participation:

(a) Local Governments must provide PEBB with the most recent two years of medical ~~premiu —~~ **premium -** equivalent rates for self-insured groups and the most recent two years of medical premium rates for fully insured groups ~~either~~ before submitting a Notice of **Interest.** ~~Intent to Participate~~. ~~or accompanied with the Notice of Intent to Participate.~~ Demographic data and logistical data may be requested as well. **This information is used by PEBB's Consultant to perform an actuarial plan comparison.**

(A) If an actuarial plan comparison completed by PEBB's Consultant demonstrates these **premium** rates are less than 10% over PEBB's costs during the same ~~two year~~ **two-year** period, the Local Government may enter participation at current PEBB **premium** rates.

(B) If an actuarial plan comparison demonstrates these **premium** rates are equal to or over 10% of PEBB's costs during the same two**-**year period, PEBB may add a rate surcharge for up to three years.

(i) Upon entry into **the** PEBB **program** ~~participation~~, Local Governments with more than 500 self-insured employees must either:

(I) Deposit a sufficient monetary reserve by ~~February~~ **January** 1 of the first plan year to finance the stabilization account of the PEBB revolving fund to the PEBB risk-adjusted level as determined by ~~the PEBB~~ **PEBB's** Consultant; or

(II) Agree to pay an additional surcharge to premiums to establish a reserve fund for the Local Government over a period of time as determined by PEBB's Consultant.

(ii) When a Local Government with more than 500 self-insured employees terminates participation in PEBB, it may take its initial contribution paid into the stabilization account of the PEBB revolving fund as determined by PEBB's Consultant.

(iii) When a Local Government provides a cash incentive to a member for opting-out of health coverage and the value of the incentive is 50% or more than the PEBB premium rate for an employee-only tier, PEBB may assess a surcharge to the Local Government.

(iv) Monthly Remittance. For ~~the purpose of~~ subsections (6) through (11), the terms below have the following meanings:

(I) "ACH credit" means a payment initiated by a participating Local Government that is cleared through the Automated Clearing House (ACH) network for deposit to the PEBB treasury account;

(II) "ACH debit" means a payment initiated by PEBB and cleared through the ACH network to debit a participating Local Government's financial account and credit the PEBB treasury account;

(III) "Local Government Payment" means the monthly Local Government Payment to PEBB that includes the contributions of both Local Government as the employer, and its employees as required to pay the monthly premiums in full for selected PEBB benefit plans;

(IV) "Local Government Payment Invoice" means a monthly itemized statement provided by PEBB that includes the enrollment elections of the employees and dependents of a Local Government and the PEBB premium rate associated with the benefit coverage enrollment month.

(V) "Pay-As-Billed" means billing a Local Government based upon its monthly enrollment file in the **PEBB benefit management** ~~PEBB.benefits~~ system.

(VI) "Overpayment" means the amount of a Local Government's monthly payment to PEBB that exceeds the amount due.

(VII) "Underpayment" means a payment submitted by a Local Government that is less than the invoiced amount.

(VIII) "Electronic Funds Transfer" refers to a payment through ACH credit or ACH debit.

~~(IX) "Cover Oregon" refers to the Oregon Health Insurance Exchange public corporation.~~

(IX~~X~~) "Due date" means ~~the third business day~~ **the seventh business day of the current month of coverage.** ~~into the current month of coverage.~~

(v) Local Governments will receive a monthly invoice from PEBB by the first business day of the month of coverage that details the payments due for that month of coverage.

(vi) Local Governments are required to submit payment to PEBB through Electronic Funds Transfer no later than the due date.

(vii) PEBB reserves the right to issue surcharges or take other appropriate measures to Local Governments that submit monthly payments after the due date.

(viii) Local Governments must select an electronic funds transfer method by submitting an Electronic Funds Transfer authorization form to PEBB 45 days prior to participation in a PEBB plan year.

(ix) Local Governments seeking a refund of an overpayment must notify PEBB within 45 calendar days from the date the overpayment occurred.

(x) The Local Government shall submit any underpayment to PEBB as soon as it is discovered.

(I) PEBB will request a refund from a carrier in accordance with the law. The carrier will refund the premium to PEBB back to the date of the termination or the date allowed by law for recoupment.

(II) PEBB will generally reimburse a Local Government overpayment by making an adjustment to the next monthly invoice.

(III) The Local Government must reconcile their monthly invoice and process appropriate termination or Qualified Status Changes. Failure to do this timely will result in the Local Government being responsible for premium costs.

(3) General Participation Requirements:

(a) Local Governments who choose to participate in PEBB must comply with PEBB eligibility, enrollment, and continuation of insurance rules as defined in OAR Division 101-10, 101-015 and 101-030, regardless of whether the Local Government is administering a Section 125 Cafeteria Plan.

(b) Local Governments must agree to and sign an inter-governmental agreement **(IGA)** with PEBB ~~along with the Notice of Intent to Participate~~ that includes provisions of their participation in **the** PEBB **program**, including, but not limited to, the following participation requirements. Local Governments must:

(A) Retain full authority to define employee-employer premium cost share arrangements compliant with Affordable Care Act (ACA) regulations.

~~(B) Participate in all benefit coverage types approved and provided by PEBB. All PEBB plans must be available to all benefit eligible employees.~~

(**B** ~~C~~) Use the PEBB tiered-rate structure for all benefit coverage types.

(**C** ~~D~~) Participate in all PEBB health and wellness and programs offered by PEBB.

(**D** ~~E~~) Comply with the PEBB benefit plan-year cycle, Open Enrollment period, and plan renewal timeline.

(**E** ~~F~~) Submit all premium payments to PEBB ~~on a~~ monthly. ~~basis.~~ Premium submission to PEBB is completed through Electronic Funds Transfer, no later than the due date as indicated by PEBB.

(**F** ~~G~~) Not transfer to any PEBB plan any deductibles or annual out-of-pocket maximums met with a prior carrier.

(**G** ~~H~~) Agree that ~~PEBB.benefits~~ **the PEBB benefit management system** is the authority for managing and reporting all billing, eligibility and enrollment information communicated to the insurance plan carriers by PEBB. ~~and~~ Local Governments will update employment changes **timely** in **the PEBB benefit management system** ~~PEBB.benefits~~ as they occur.

(c) Local ~~governments~~ **Governments** may allow currently enrolled Early Retirees to participate in PEBB retiree plans only if the retirees participated in the Local Government's retiree medical plan for at least two years prior to January 1, 2014. The PEBB Retiree Rules as defined in OAR Division 101-50-0005 et. seq. apply to all Early Retirees.

(d) Local Governments may request transfer of term life insurance coverage through the Local Government group life policy to the PEBB term life insurance policy. PEBB will transfer the life insurance amount in force on the last day the prior group coverage was in effect if requested and documented by the Local Government rounded to the nearest multiple of $10,000. Premium rates for the coverage will be at the current PEBB life insurance rate tier structure.

(e) Local Governments that elect to participate in benefit plans provided by PEBB may elect to terminate participation in PEBB, subject to the following rules:

(I) Termination of participation **in the PEBB program** will be allowed on a one-time basis only. ~~however, Local Governments electing to terminate PEBB plan coverage and electing to participate in Cover Oregon,~~ **The Local Government may** ~~can~~ elect to return to participate in plans provided by the PEBB **once**. Upon returning to PEBB, a Local Government must again satisfy all Notice of **Interest** ~~Intent to Participate~~ and other participation requirements **PEBB's Consultant will perform an actuarial analysis to determine if a surcharge should be applied**.

(II) PEBB may terminate participation of a Local Government within three months of entering PEBB if the Local Government fails to perform any action required by Oregon Revised Statutes (ORS) 243.105 to 243.285 and 292.051 or by PEBB rule.

(f) Local Governments may purchase employee benefits not offered by PEBB~~. or Cover Oregon~~.

2020 Public Employees' Benefit Board (PEBB)
Post Open Enrollment Report
March 2020

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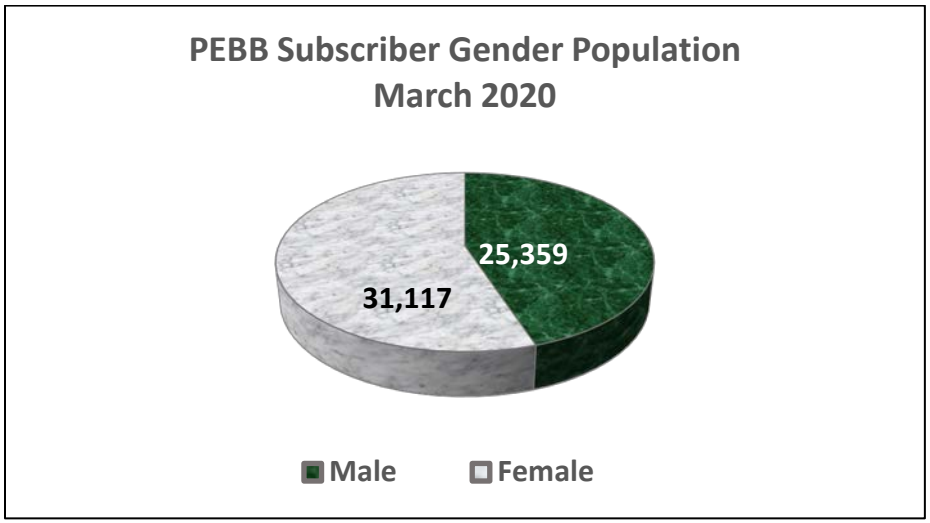
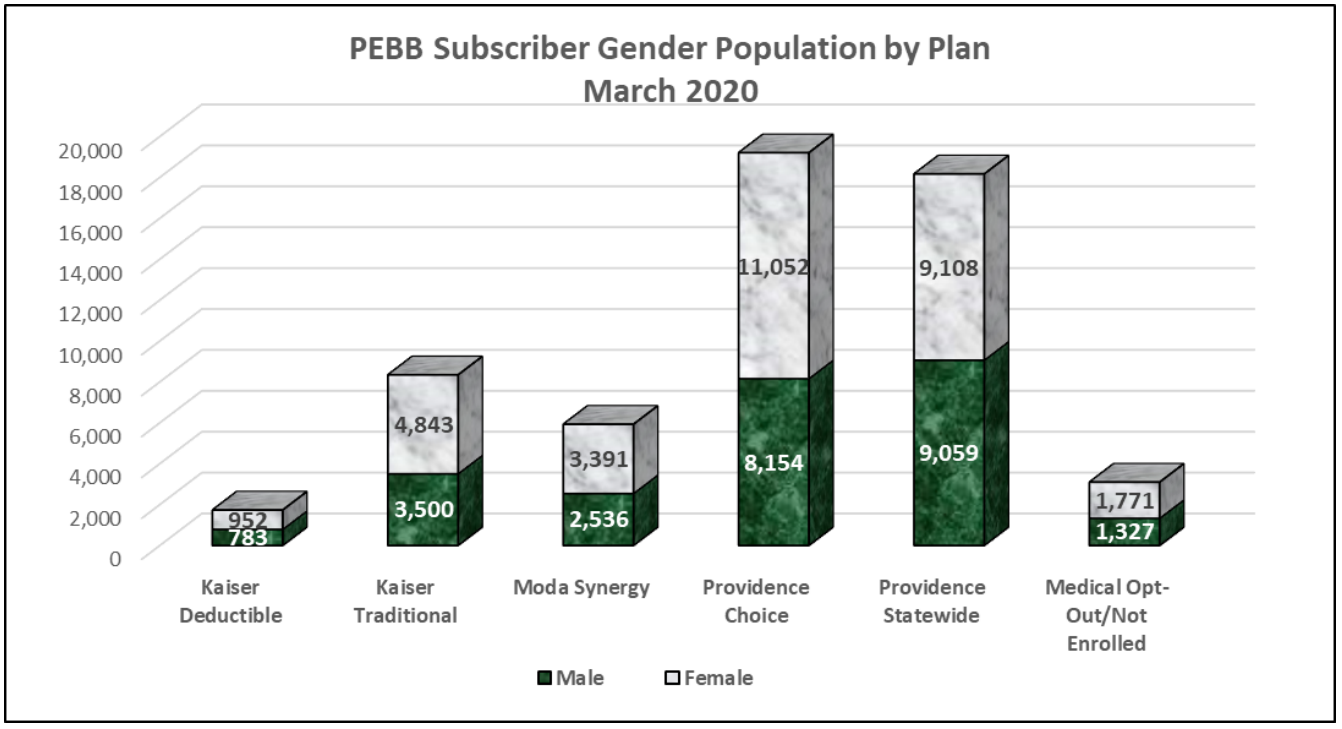
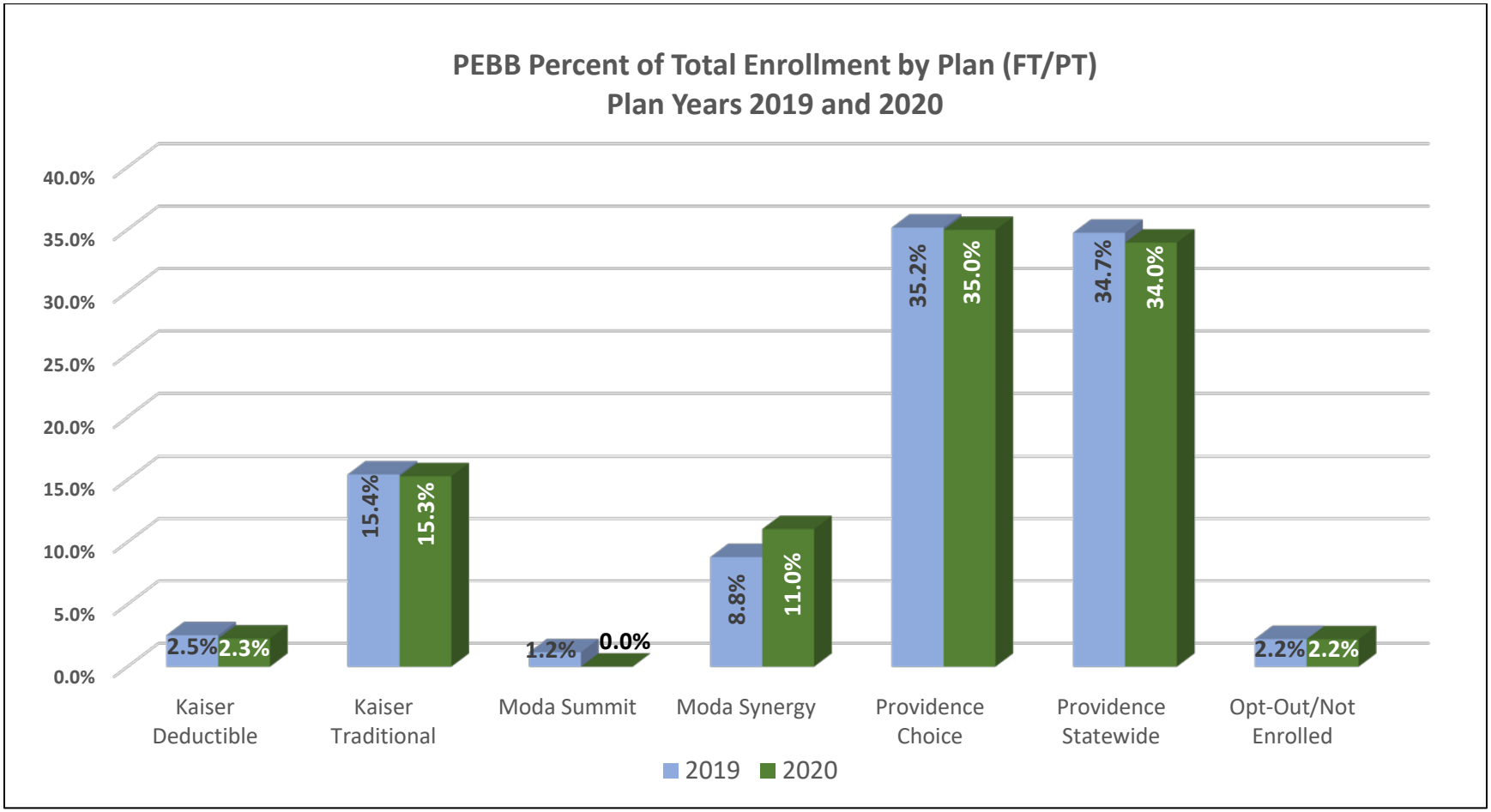
PEBB Subscriber Gender Population - March 2020





PEBB Total Medical Enrollment – Plan Years 2019 and 2020



Total Enrollment includes: Full-Time and Part-Time Plans for Active Employees, COBRA, Self-Pay and their Dependents.

PEBB Post Open Enrollment Summary Report – March 2020

PEBB Total Medical Enrollment – Plan Years 2019 and 2020

	Plan Year 2019				Plan Year 2020				
Plans (Full-Time/Part-Time)	**Subscribers**	**Dependents**	**Total**	**% of Total**	**Subscribers**	**Dependents**	**Total**	**% of Total**	**% Change**
Kaiser Deductible	1,624	1,767	3,391	2.42%	1,662	1,801	3,463	2.45%	2.1%
Kaiser Traditional	8,318	13,118	21,436	15.28%	8,274	13,094	21,368	15.15%	-0.3%
Moda Summit	517	1,055	1,572	1.12%					
Moda Synergy	4,662	7,427	12,089	8.62%	5,812	9,480	15,292	10.84%	26.5%
Providence Choice	18,831	29,563	48,394	34.49%	18,810	29,618	48,428	34.33%	0.8%
Providence Statewide	18,194	29,866	48,060	34.25%	17,874	29,382	47,256	33.49%	-1.7%
Kaiser Deductible Part-Time	61	84	145	0.10%	73	87	160	0.11%	10.3%
Kaiser Traditional Part-Time	72	125	197	0.14%	69	112	181	0.13%	-8.1%
Moda Summit Part-Time	19	29	48	0.03%					
Moda Synergy Part-Time	95	141	236	0.17%	115	173	288	0.20%	22.0%
Providence Choice Part-Time	416	522	938	0.67%	396	507	903	0.64%	-3.7%
Providence Statewide Part-Time	313	377	690	0.49%	293	355	648	0.46%	-6.0%
Medical Opt-Out/Not Enrolled*	3,107		3,107	2.21%	3,098		3,098	2.20%	0.3%
Total	**56,229**	**84,074**	**140,303**	**100.00%**	**56,476**	**84,609**	**141,085**	**100.00%**	

Total Enrollment includes: Full-Time and Part-Time Plans for Active Employees, COBRA, Self-Pay and their Dependents.

2019-2020 Medical Plan Migration

Number of Subscribers

	2020 Plan						
2019 FT/PT Plan	**Kaiser Deductible**	**Kaiser Traditional**	**Moda Synergy Coordinated Care**	**Providence Choice**	**Providence Statewide**	**Opt-Out/Not Enrolled**	**2019 Total**
Kaiser Deductible	1,398	113	26	56	27	13	**1,633**
Kaiser Traditional	141	7,778	70	128	46	27	**8,190**
Moda Summit	0	0	462	32	32	1	**527**
Moda Synergy	5	33	4,315	134	129	32	**4,648**
Providence Choice	38	18	332	17,819	453	64	**18,724**
Providence Statewide	22	65	309	461	17,075	63	**17,995**
Opt-Out/Not Enrolled	18	40	52	87	69	2,491	**2,757**
2020 Total	**1,622**	**8,047**	**5,566**	**18,717**	**17,831**	**2,691**	**54,474**
# increase/decrease	-11	-143	918	-7	-164	-66	
% increase/decrease	**-0.7%**	**-1.7%**	19.8%	**0.0%**	**-0.9%**	**-2.4%**	

Migration numbers include only those subscribers who were enrolled in a medical plan in both December 2019 and January 2020.

2019-2020 Medical Plan Migration by Percentage

Percent of Subscribers

	2020 Plan						
2019 FT/PT Plan	**Kaiser Deductible**	**Kaiser Traditional**	**Moda Synergy Coordinated Care**	**Providence Choice**	**Providence Statewide**	**Opt-Out/Not Enrolled**	**2019 Total**
Kaiser Deductible	86.2%	1.4%	0.5%	0.3%	0.2%	0.5%	**1,633**
Kaiser Traditional	8.7%	96.7%	1.3%	0.7%	0.3%	1.0%	**8,190**
Moda Summit	0.0%	0.0%	8.3%	0.2%	0.2%	0.0%	**527**
Moda Synergy	0.3%	0.4%	77.5%	0.7%	0.7%	1.2%	**4,648**
Providence Choice	2.3%	0.2%	6.0%	95.2%	2.5%	2.4%	**18,724**
Providence Statewide	1.4%	0.8%	5.6%	2.5%	95.8%	2.3%	**17,995**
Opt-Out/Not Enrolled	1.1%	0.5%	0.9%	0.5%	0.4%	92.6%	**2,757**
	1,622	**8,047**	**5,566**	**18,717**	**17,831**	**2,691**	**54,474**

March 2020 Totals

Migration numbers include only those subscribers who were enrolled in a medical plan in both December 2019 and January 2020.

2020 New Hire Information

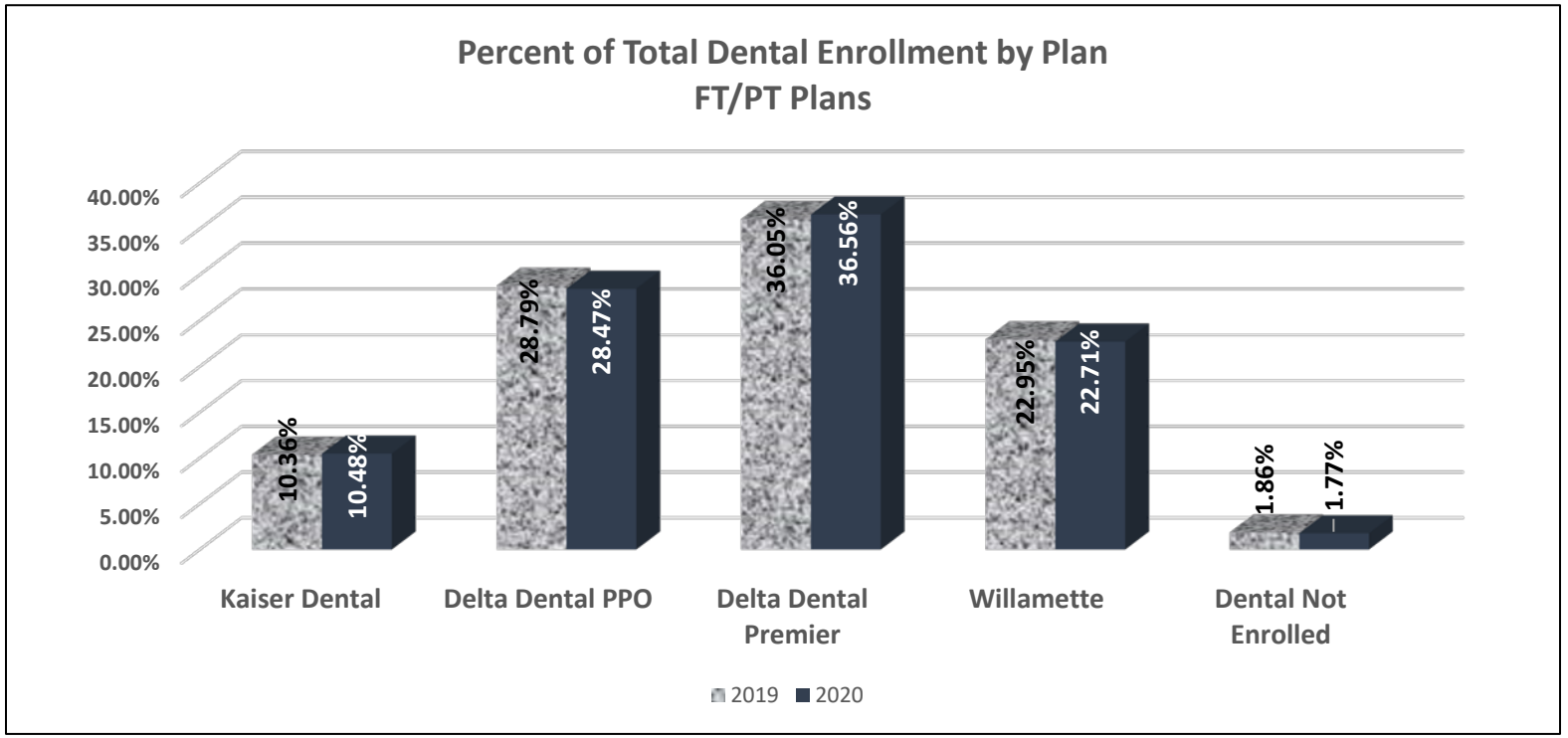
PEBB Post Open Enrollment Summary Report – March 2020

Plan Year 2020 - New Hires*			
Medical Plans (FT/PT)	**Subscribers**	**Dependents**	**Total**
Kaiser Deductible	118	84	202
Kaiser Traditional	212	223	435
Moda Synergy	352	457	809
Providence Choice	460	490	950
Providence Statewide	329	436	765
Kaiser Deductible Part-Time	4	2	6
Kaiser Traditional Part-Time	2	1	3
Moda Synergy Part-Time	9	6	15
Providence Choice Part-Time	13	13	26
Providence Statewide Part-Time	6	6	12
Medical Opt-Out/Not Enrolled	240		240
Total	**1,745**	**1,718**	**3,463**
Dental Plan (FT/PT)	**Subscribers**	**Dependents**	**Total**
Kaiser Dental	216	196	412
Delta Dental PPO	422	438	860
Delta Dental Premier	465	633	1,098
Willamette	383	441	824
Kaiser Dental Part-Time	5	1	6
Delta Dental Part-Time	16	22	38
Dental Not Enrolled	238		238
Total	**1,745**	**1,731**	**3,476**
Plan	**Subscribers**	**Dependents**	**Total**
Kaiser Vision**	333	613	946
VSP Basic	606	1,132	1,738
VSP Plus	475	1,175	1,650
Vision Not Enrolled	331		250
Total	**1,745**	**2,920**	**4,584**

**This table represents those employees eligible for coverage in March 2020 who were not eligible in December 2019.*

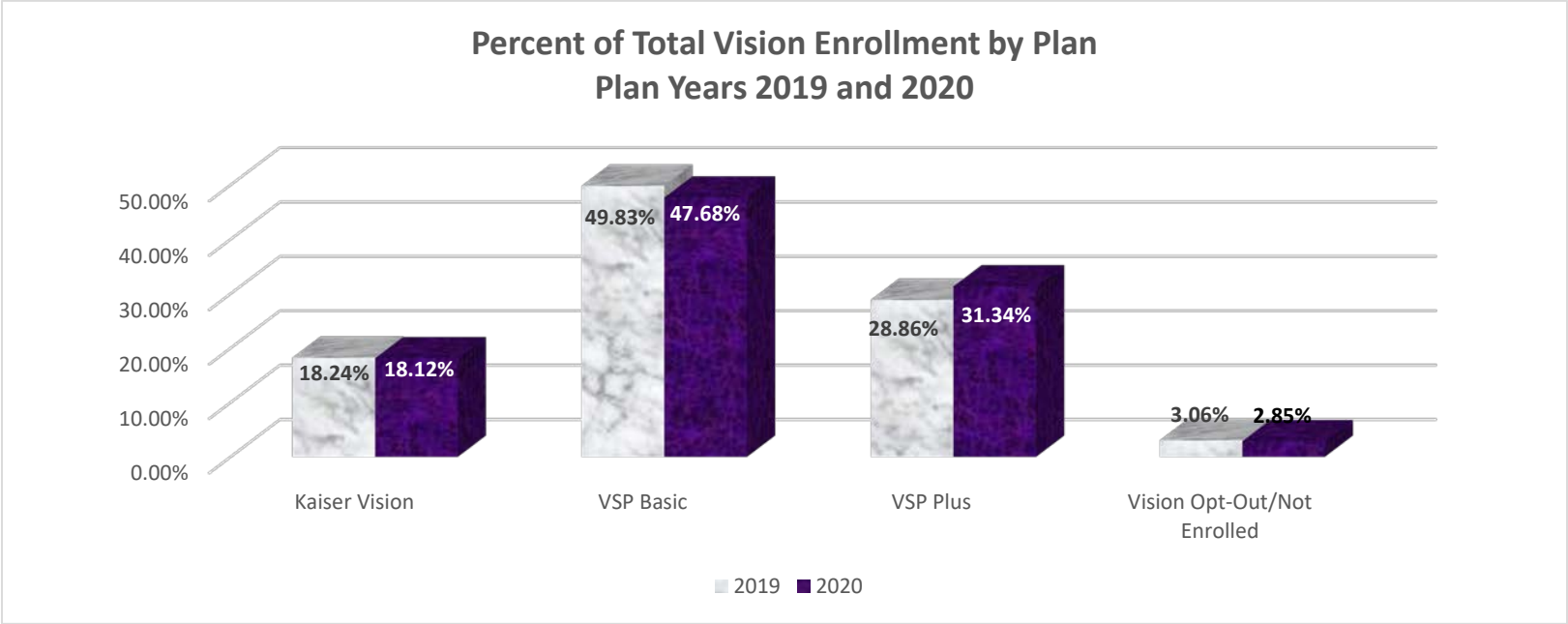
***Kaiser vision is bundled with Kaiser full-time medical plans*

PEBB Total Dental Enrollment – Plan Years 2019-2020



	Plan Year 2019				Plan Year 2020				
Plan	**Subscribers**	**Dependents**	**Total**	**% of Total**	**Subscribers**	**Dependents**	**Total**	**% of Total**	**% of Change**
Kaiser Dental	6,036	8,406	14,442	10.23%	6,121	8,598	14,719	10.35%	1.9%
Delta Dental PPO	15,468	24,340	39,808	28.20%	15,418	24,256	39,674	27.91%	-0.3%
Delta Dental Premier	19,294	31,597	50,891	36.05%	19,667	32,304	51,971	36.56%	2.1%
Willamette	12,385	20,005	32,390	22.95%	12,337	19,954	32,291	22.71%	-0.3%
Kaiser Dental Part-Time	76	101	177	0.13%	83	107	190	0.13%	7.3%
Delta Dental Part-Time	347	481	828	0.59%	330	465	795	0.56%	-3.9%
Dental Opt-Out/Not Enrolled	2,623		2,623	1.86%	2,520		2,520	1.77%	-3.9%
Total	**56,229**	**84,930**	**141,159**	**100.00%**	**56,476**	**85,684**	**142,160**	**100.00%**	

PEBB Total Vision Enrollment – Plan Years 2019-2020



	Plan Year 2019				Plan Year 2020				
Plan	**Subscribers**	**Dependents**	**Total**	**% of Total**	**Subscribers**	**Dependents**	**Total**	**% of Total**	**% of Change**
Kaiser Vision*	9,943	14,822	24,765	18.24%	9,949	14,836	24,785	18.12%	0.9%
VSP Basic	26,697	40,949	67,646	49.83%	25,842	39,367	65,209	47.68%	-3.6%
VSP Plus	15,432	23,750	39,182	28.86%	16,786	26,079	42,865	31.34%	9.3%
Vision Opt-Out/Not Enrolled	4,157		4,157	3.06%	3,899		3,899	2.85%	-6.2%
Total	**56,229**	**79,521**	**135,750**	**100.00%**	**56,476**	**80,282**	**136,758**	**100.00%**	

*Vision benefit for Kaiser is through Kaiser full-time medical plans

PEBB Health Engagement Model (HEM) – Plan Years 2019-2020

	Plan Year 2019	Plan Year 2020	
Plan	**Subscriber Total**	**Subscriber Total**	**% of Change**
HEM Participant	41,448	42,816	3.3%
HEM Non-Participant	7,250	6,825	-5.8%
Total	**48,698**	**49,641**	

Note: Opt-Out/Retiree/COBRA population and Members hired after Nov. are not eligible to participate in HEM

PEBB Surcharges – Plan Years 2019-2020

	Plan Year 2019			Plan Year 2020		
Plan	**Subscriber**	**Spouse/DP**	**Subscriber and Spouse/DP**	**Subscriber**	**Spouse/DP**	**Subscriber and Spouse/DP**
Tobacco Surcharge ($25)	2,014	1,084	520	1,956	1,084	492
Other Group Coverage Opt-Out ($50)		5,117			5,464	
Total	**2,014**	**6,201**	**520**	**1,956**	**6,548**	**492**

Note: All surcharges are deducted from the members (subscribers) paycheck.

PEBB Post Open Enrollment Summary Report – March 2020

PEBB Optional Benefit Plans – Plan Years 2019-2020

	Plan Year 2019		Plan Year 2020		
Optional Benefits	**Subscriber Total**	**% of Subscribers**	**Subscriber Total**	**% of Subscribers**	**% of Change**
Employee Optional Life	31,181	55%	31,268	55%	0.3%
Spouse Optional Life	14,246	25%	14,183	25%	-0.4%
Dependent Life (5K)	23,086	41%	23,329	41%	1.0%
Short Term Disability	28,677	51%	29,467	52%	2.7%
Long Term Disability	27,726	49%	28,323	50%	2.1%
Accidental Death and Dismemberment	26,162	47%	26,778	47%	2.3%
Dependent Care FSA	1,853	3%	1,919	3%	3.5%
Healthcare FSA	10,775	19%	11,152	20%	3.4%
Commuter Parking	999	2%	1,141	2%	14.2%
Commuter Transportation	345	1%	407	1%	17.9%
Long Term Care	2,316	4%	2,343	4%	1.1%
Spouse Long Term Care	205	0.4%	201	0.4%	-1.9%
Total Subscriber Population	**56,229**		**56,476**		