Brotherhood of Maintenance of Way Employes Division/ SMART Mechanical Coalition

CHEIRON
Classic Values, Innovative Advice

Marketplace Review

December 1, 2020

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Responses

I. Waste in U.S. Healthcare System
II. Benchmarking
III. Plan Demographics
IV. Benefit Delivery
V. Member Engagement
VI. Member Health
VII. Conclusion

Appendices:

A. Benefit Summary

B: Sources for Member Health

C. Required Uses and Disclosures

I. Waste in US Healthcare System

NCCC Position	BMWED/SMART-M Position
• Caused by Patient Demand	• Caused by Providers and Payers • Healthcare is not like a normal product, people do not want to be sick, i.e., nor do they want to use the healthcare system

Six Domains of Waste

NCCC cites JAMA (2019) '6 Waste Domains':

Six Waste Domains	Do patients have primary control over this issue?
1. Failure of care delivery	No
2. Failure of care coordination	No
3. Overtreatment	No
4. Pricing failure	No
5. Fraud and abuse	No
6. Administrative complexity	No

The problem is not created by and cannot be solved by the patients.

Providers and Payers cause this waste, not Patients.

NCCC Proposal Does Not Address Sources of Waste

After considering the 6 waste domains in the US, the NCCC Key Elements of Proposal are:

- Modify plan benefits (make patients pay more)
- Add new contributions and surcharges to patients
- Index patient cost sharing to increase every year
- Patients find the most cost-effective Providers

These ideas do not address the sources of waste. Instead they shift the plan costs to Railroad patients and assume Railroad patients are sufficiently informed and have the power to affect the conduct of Payers and Providers.

History of Shifting Cost to Patients

1925
- Blues plans originally popular because of their first-dollar coverage (first half of 20th century)

1950
- With rising premiums, Blue Cross began adding deductibles in the 1950s (similar to property insurance)

1975
- Costs continued to rise, leading to Managed Care plans with first dollar coverage becoming popular again in the last quarter of the 20th century

2000
- Costs continued to rise, leading to bringing back and increasing deductibles under the thought that patients would be better consumers in the early 2000s.

Bottom-line: Costs have continued to rise regardless of the cost shifting schemes.

Restraining the Health Care Consumer: The History of Deductibles and Co-payments in U.S. Health Insurance Article in Social Science History. · December 2006. DOI: 10.1215/01455532-2006-007

US vs. Other Nations' Systems

- **US (ranked #15) healthcare systems spend is 16.9% of GDP or 6.2% percentage points more than Canada's (ranked #1) 10.7% of GDP**
- **US patients go to Medical Doctors (MDs) less and have fewer MDs than all of countries ranked higher (It's NOT about patient utilization!!)**

First Dollar Spend	1 Canada	2 Denmark	3 Sweden	4 Norway	5 Germany	15 US
Office Per Visit	$0	$0	$0-33	$19-46	$0	Varies
Rx Per Year	Avg:20% ($140)	Decreasing Copay	Up to $123	Up to $260	10% ($56-112)	Varies
Hospitalization Per Day	$0	$0	$5-11	$0	$12.84	Varies
Cost-Sharing Cap Per Year	No Need	$548 limit on drug cost share	$125 Medical	$281 per person	2% of household income	Varies

Dollars are rounded after converting to USD
https://www.commonwealthfund.org/international-health-policy-center/countries/[country name]
https://www.usnews.com/news/best-countries/slideshows/countries-with-the-most-well-developed-public-health-care-system

Waste in US Healthcare System Conclusion

- NCCC is expecting Railroad Patients to have knowledge and act upon it appropriately, which is certain to fail
- For plans, first-dollar coverage along with aligning incentives works best
- Legislation works best for dealing with the US Healthcare System

II. Benchmarking

a) Benefit Cost
b) Benefit Value
c) Cost Sharing Features

NCCC Position	BMWED/SMART-M Position
Benchmarks show: - Plan costs are excessive - Employee cost share too low - Benefits too high **Benefits should be mainstream**	**Benchmarking comparison is flawed:** - Plan costs are not excessive - Benefits are lower than plans for comparable industries **BMWED/SMART-M members' working conditions are not mainstream.** **Health costs are a burden for members.**

Contradicting Arguments from NCCC

US Healthcare System is wasteful

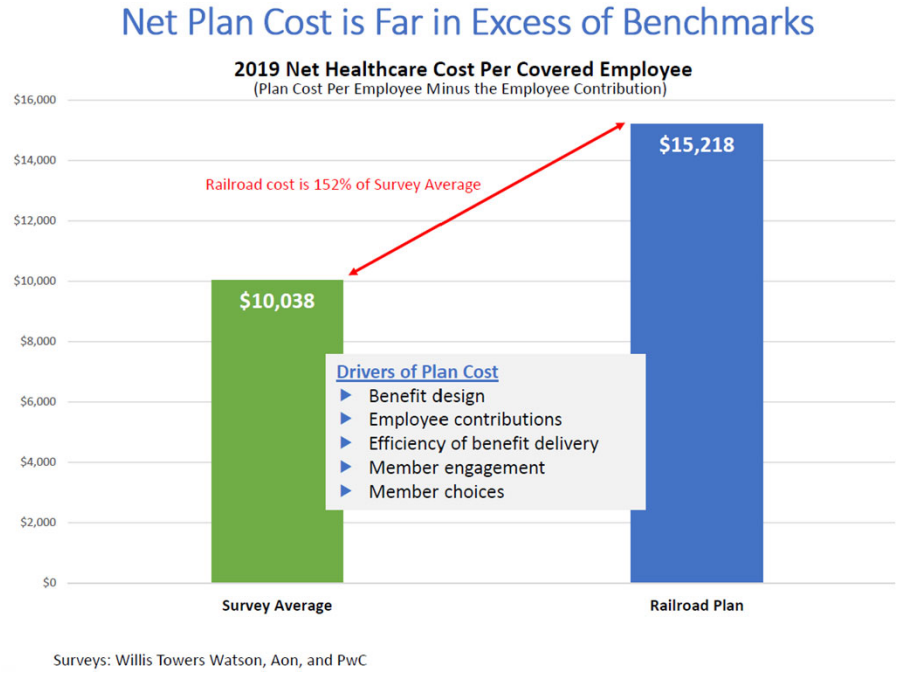
The way to address US Healthcare System is through legislation, not bargaining

We want to make the National Plan mainstream so it can be like average plan

Wouldn't it be better to model a plan after a leading system rather than a mainstream plan that contributes to making the US Healthcare System wasteful?

Benchmarking Analysis is Flawed

- NCCC states National Plan cost is 152% of survey average, or 52% higher



- Comparison does not adjust for industry underwriting factors, family composite, or furloughed employees

Benchmarking Analysis is Flawed

- Conclusion changes after adjusting for key differences between mainstream and the National Plan
- Adjusted Plan costs are now lower than benchmark prior to adjusting for benefit differences

	(a) Benchmark	(b) National Plan	(b) / (a)
Plan cost	$ 10,038	$ 15,218	151.6%
Family Size	2.25	3.14	
Plan Cost adjusted for Family composition	$ 4,461	$ 4,846	108.6%
Industry Underwriting Adjustment *	1.000	1.170	
Geographic Factor	1.000	1.025	
Demograhic**	1.000	0.885	
Plan Cost adjusted for Family Size, SIC, geo and demo	$ 4,461	$ 4,566	102.4%
Adjust Plan Cost to non-Furloughed employees cost only***	1.000	0.886	
Plan Cost further adjusted to exclude furloughed members	$ 4,461	$ 4,045	90.7%

* Industry factor for Railroad Transportation -- line-hauls operating developed by OptumInsight.

** Per UHC 2019 Claim Experience Summary Report

*** Ratio of incurred claims PMPM for non-HA, non-furloughed employees and dependents to incurred claims PMPM for non-HA employees and dependents. Incurred claims for July 2018 through June 2019 paid through October 2019 (UHC), December 2019 (Aetna), or January 2020 (Highmark)

- Given that National Plan covered benefits are better, this would indicate Railroad participants are good consumers of healthcare

Working Conditions Comparison

Mainstream Worker

- Most people commute to work and home each day
- Most work 5 days each week with 2 days off
- 8-hour work-day
- Many work in climate-controlled office settings with little physical activity
- Lunch observed as a break or working meeting

Railroad Worker

- About half work away from home, minimum 4 days at a time
- Some groups work 9 consecutive days
- Many 10+ hour work-day and/or shift work
- Almost always outdoor or in a non climate-controlled environment with physical work
- Often exposed to chemical fumes
- Daily 30-min lunch break rarely observed

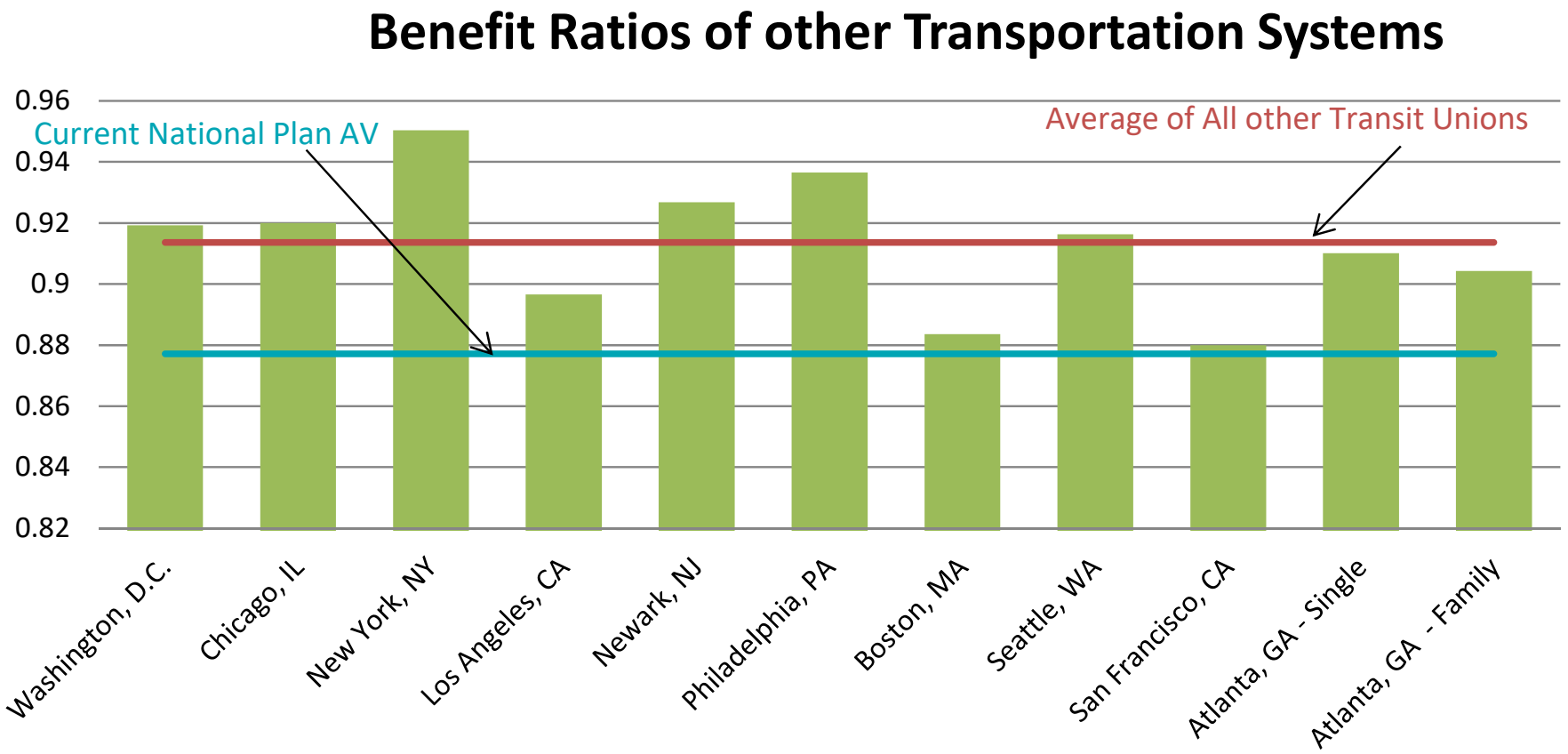
Railroads Have Never Been Mainstream

- 19th century:
  - Hospital Associations were created "in part due to the **inordinate number of injuries** sustained by workers, passengers, and bystanders." (http://railwaysurgery.org/HistoryLong.htm)
  - Railroads presented **unique hazard** and created new types of injuries to which doctors were not accustomed.
- Nowadays:
  - OptumInsight (UHC's healthcare consulting division) increase expected cost by 17% (i.e., medical underwriting load) for the Railroad – line-hauls operating industry
  - ACA increased allowed costs by 20% before the "Cadillac Tax" would apply for construction crafts like BMWED & SMART-M

Note: Hospital Association created in second half of 19th century

Actuarial Value (AV) of Benefits

Current AV is below industry average at 87.7% vs. 91.4% average for other transportation systems*



* AV calculated using standard tools from OptumInsight

Erosion of Benefits Through Time

	2010	2015	2020
Worker Contribution*	$2,400	$2,760	$2,747
% of Income	**2.8%**	**3.1%**	**2.8%**
Worker Average Spend	$708	$1,319	$1,797
% of Income	0.8%	1.5%	1.8%
Worker Max Spend (Med+Rx OOP Max)	$4,000	$8,000	$12,000
% of Income	4.7%	6.7%	12.2%
Total % of Workers' Income	**2.8% to 7.5%**	**3.1% to 9.8%**	**2.8% to 15%**

* Workers Contribution for 2010 and 2015 is 15% of projected plan cost with cap.

Sources: UHC H&W Annual Reports; OptumInsight Pricing Tool; The Labor Bureau, Inc. reports on Income vs US Median by Year

Importance of Covered Benefits

Health benefits are important to workers

Heavy burden on workers (up to **15% of income**)

Light burden on Railroads (**less than 3.5% of revenue**)

Benchmarking Conclusion:

- NCCC continues to try to use "mainstream" arguments of a poor healthcare system to say covered benefits should be reduced

- Healthcare costs of Railroad workers are below benchmark
- Healthcare needs of Railroad workers remain far above mainstream employees
- Healthcare costs impact a worker far more than a company

III. Plan Demographics

NCCC Position	BMWED/SMART-M Position
- Too many dependents covered - Dependents drive plan costs - Too many employees participate in National Plan	- Higher plan costs due to working conditions

Nature of Work Drives Demographics

Dependents need to be covered as:

- Spouses need to stay at home or have flexible working hours so they
  - Can watch children
  - Can handle everyday life issues

    For example, it is significantly easier to manage a family's medical needs like scheduling appointments and refilling medications if everyone has the same health plan
- Allowing the RR worker to meet the RR Carriers' demands for:
  - Varying work schedules
  - Long hours
  - Working away from home for multiple days

Nature of Work Drives Demographics

Employees participant in the health plan more because

- Older workers:
  - NCCC showed 18% typical opt outs vs. 2% RR opt out;
  - Consider 14.5% of working population under 26 (https://www.bls.gov/cps/cpsaat11b.htm) and can get coverage through their parents vs. only 2.4% Railroad workers under 26 as of June 2019
- Working conditions dictate need for health coverage

Plan Demographics

- NCCC wants to reduce coverage for dependents
- Railroad workers need dependents to be covered under same health plan because of nature of their work

IV. Benefit Delivery

NCCC Position	BMWED/SMART-M Position
- Discounts are suboptimal - Site of care inefficient	- Agree, as stated in 2016, Discounts are not optimal - Agree site of care is inefficient, but patients do not know optimal site of care

Provider Discounts

- As demonstrated by BMWED/SMART-M during the last round of negotiations (357 Plan proposal), National Plan can attain significant savings by redesigning the network
- Provider network is a bargained issue under Railroad Labor Act
- Provider network impacts:
  - Member disruption
  - Member choice of providers
- Three-tier plans are better suited than two-tier plans to minimize cost:
  - Direct members to better/more cost efficient or effective providers

Site of Care

Members do not always have the choice of site of care

- Patients cannot choose labs, radiology, anesthesiology, and pathology providers during a hospital stay
- Doctors send tests to the labs or patients to a specific lab that already received the prescription order
- Doctors direct patients to radiology sites which can be difficult for patients to change, especially when prescription was sent electronically to site
- Infusion centers are extremely hard for patients to navigate given the limited quantity

- NCCC blocked a program that enticed patients to choose cost-effective sites of care when appropriate during last bargaining round.
- Instead NCCC recommends putting ill patients in the middle of their doctor and the insurance company.
- This approach is typical of an insurance company, because it makes it easier for the insurance company to contract with its providers.
- But the National Plan has a fiduciary responsibility to protect its participants not to protect its vendors.
- Optimization of Site of Care is best accomplished with a three-tier network.

Benefit Delivery Conclusion

- NCCC now agrees that discounts and site of delivery are inefficient

- Aligning incentives and guiding patients is the best solution
- BMWED and SMART-M agree benefit delivery is an appropriate subject for bargaining

V. Member Engagement

NCCC Position	BMWED/SMART-M Position
- More member engagement results in lower cost of care	- No evidence - MD directs care not patients - Questionable stats – what are the ROI estimates? - Poorly contracted if not per visit

Member Engagement Programs

NCCC Conclusion:

Increased engagement in these programs will result in Plan savings.

Program *	Description of Utilization
Best Doctors	0.2% railroad use vs. typical use of 2%
Cleveland Clinic	N/A
Health Advocate	1.8% railroad use vs. typical use of 10%
Optum Care Management	Identified 17% of members eligible for programs Engaged with only 4% 60% unable to be reached vs. typical 35%
Teladoc	4.5% railroad use vs. typical use of 10%
Vital Decisions	Awaiting data

* All implemented during 2018, with the exception of Cleveland Clinic.

Indicates a lack of engagement or lack of understanding of what is available

Given the significant health conditions reflected in Plan data, the expectation is that these programs should be seeing significant utilization

- Sources of average utilization??
- NRLC does not have correct member contact info
- Programs should be responsible for engagement and vendor fees should reflect utilization
- Regardless,

The impact on total plan spend will be de minimis

Patient Engagement at the Margins

Providers participated in research to measure patient engagement and its impact on healthcare for patients.

Some conclusions of the study include:

- *Importantly, most providers in our study reported that patients' **socioeconomic conditions shape their possibilities for engagement**.*
- ***Marginalized patients** had sufficient **reasons to distrust the health care system** due to histories of exclusion and poor treatment.*
- *We found that patient engagement, as articulated by the providers in our study, **differs from concepts of compliance or adherence**.*
- *It is notable that providers in this study used a largely **qualitative and intuitive style of assessing patient engagement**.*

Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5654327/

Issues with Member Engagement Programs

- No savings estimates have been provided for any of these programs
- If NCCC believes engagement is the answer, then NCCC should improve benefits by:
  - ✓ Waiving cost for patients using platform telemedicine (only impacts 9 low-cost conditions)
  - ✓ Lowering copays and coinsurance for cost-effective providers

Member Engagement Conclusion

- NCCC believes if unions made members engage in a problematic healthcare system the Plan would save money

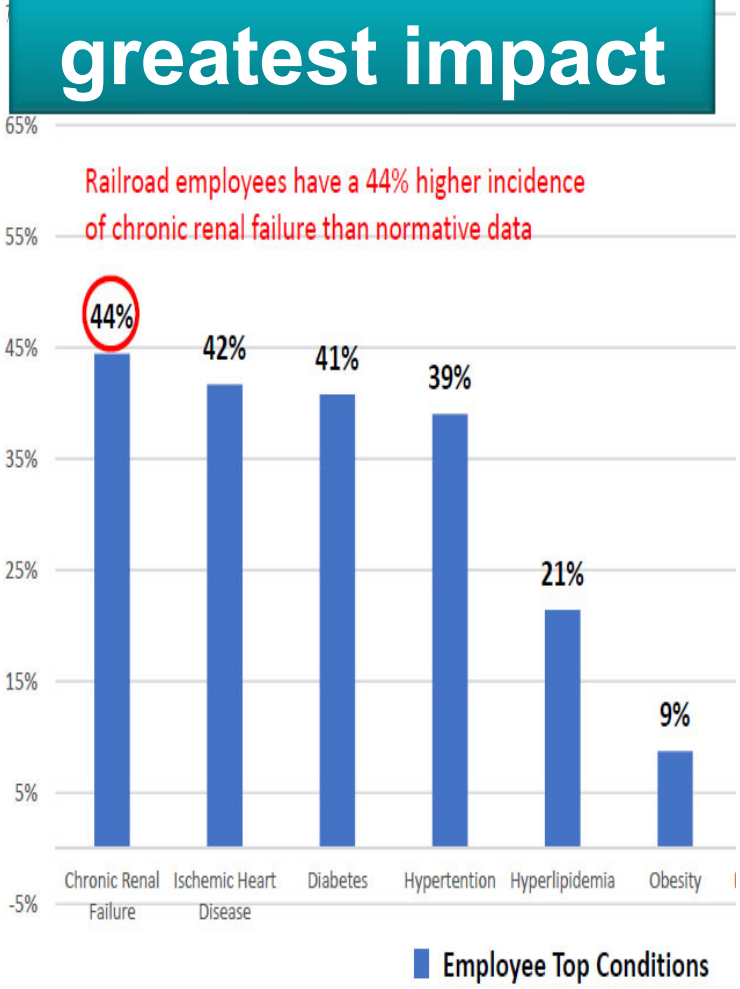
- Vendors selected by NCCC have been ineffective; aligning incentives and guiding patients is the best solution
- BMWED and SMART-M agree this is an appropriate subject for bargaining

VI. Member Health

NCCC Position	BMWED/SMART-M Position
- Member and Spouse's lifestyle contribute greatly to high health costs	- No evidence - Top chronic conditions for spouses are not resulting from lifestyle choices - Work conditions dictate workers' health conditions, not lifestyle

Working Conditions Cause Top Employee Conditions

Working Conditions have greatest impact



Condition	Cause
Chronic Renal Failure	Outdoor Environment Lead Exposure
Ischemic Heart Disease	Outdoor Environment Work Schedule (i.e., Long hours & Travel) Diesel Fuel Lifting
Diabetes	Work Schedule
Hypertension	Outdoor Environment Work Schedule Diesel Fuel Lifting
Hyperlipidemia (High Cholesterol)	Diesel Fuel Lifting
Obesity	Work Schedule Travel

See Appendix C for sources.

Environmental Effects on Health

- Climate change results in health hazards for outdoor workers
  - Increased heat and solar radiation exposure
  - Poorer air quality
  - Temperature extremes
- Health consequences
  - **Cardiovascular** diseases
  - Respiratory diseases
  - Mental health and stress-related disorders
  - Infectious diseases
  - Cancers
  - Chronic **kidney disease** of non-traditional origin

Sources: Worker health and safety and climate change in the Americas: issues and research needs
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176103/
Risk factors for chronic kidney disease of non-traditional causes: a systematic review
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6461065/

Lead Exposure: Renal Failure

- A 2015 review article summarizing papers from 1970 – 2010 found that the mean blood lead level concentration of railway workers ranged from 28 to 86 µg/dL.
- As a reference, above 5 µg/dL is considered above normal.
- Exposure to high levels of lead may cause anemia, weakness, **kidney damage**, and brain damage.

Source: Lead exposure in US worksites: A literature review and development of an occupational lead exposure database from the published literature
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4711746/

Non-Standard Work Hours Affect Health

1) Several studies report a significant correlation between long work hours and obesity.
2) A 2010 study found
   a) 10-hour day shift had higher rates of short sleep duration,
   b) 10-hour night shift had higher rates of **obesity** and no exercise, and
   c) 10-hour rotating shift had higher rates of no exercise and short sleep duration.
3) A study linked shift work with **cardiovascular disease**, including heart attacks, chest pain, and **high blood pressure**.
4) A 2010 article reported a higher risk for **strokes** in shift workers.
5) A 2009 article concluded there is evidence that workers are at higher risk for metabolic disturbances (e.g., **high blood sugar**) and increases in smoking after starting shift work.
6) Another 2009 article reported decreases in slow-wave sleep result in an increased risk for Type II **Diabetes**.

Sources: Work Schedules and Health Behavior Outcomes at a Large Manufacturer
https://www.jstage.jst.go.jp/article/indhealth/48/4/48_MSSW-03/_pdf
Negative Impacts of Shiftwork and Long Work Hours https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4629843/
Effects of poor and short sleep on glucose metabolism and obesity risk https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457292

Diesel Fuel Effects on Health

- Freight trains are powered with diesel fuel, which can result in negative health consequences for those who work around them.
- OSHA Hazard Alert: Prolonged diesel exhaust/diesel particulate matter exposure can increase the risk of **cardiovascular disease, cardiopulmonary** and respiratory disease, and lung cancer.
- Workers in jobs with diesel exhaust exposure have an increased risk of COPD mortality relative to those in unexposed jobs. Their increased risk of **COPD mortality is 2.5% for each additional year** of work in a diesel-exposed job.
- Diesel fuel contains benzene, which can damage the bone marrow and increase leukemia risk.

Sources: OSHA/MHSA Hazard Alert on Diesel Exhaust (DE) and Diesel Particulate Matter (DPM) https://www.osha.gov/Publications/OSHA-3590.pdf
Leukemia and Benzene https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3447593/
Chronic obstructive pulmonary disease mortality in railroad workers https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2658724/

Heavy Lifting Effect on Health

Lifting can cause

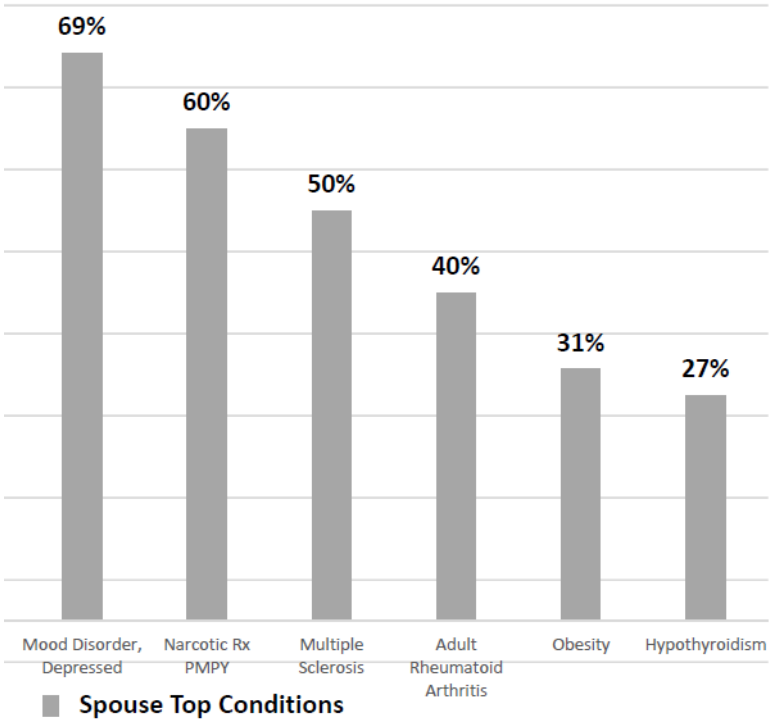
Hypertension (High Blood Pressure) & Hyperlipidemia (High Cholesterol)

A 2019 study showed heavy lifting at work has a negative effect on both **arterial stiffness** and nervous system **blood pressure regulation**, which results in a higher risk for **cardiovascular** diseases.

Source: Association between occupational, sport and leisure related physical activity and baroreflex sensitivity. The Paris Prospective Study III. https://eprints.utas.edu.au/33900/2/137560%20-%20Association%20between%20occupational%20-%20Final%20author%20version.pdf

Sex and Stress Cause Top Spouse Conditions

At most one condition related to lifestyle



Condition	Cause
Mood Disorder, Depression	Logic would say greater burden because of spouse's work schedule
Narcotic Rx	As a result of pain, not addiction as government has greatly tightened controls
Multiple Sclerosis	Unknown cause – no evidence of lifestyle; **women more than 2 to 3 times as likely as men**
Adult Rheumatoid Arthritis	Genetics and sex
Obesity	Many causes including depression
Hypothyroidism	Genetics and genetic gender

See Appendix C for sources.

Spouses' Lifestyle Do Not Cause Above Average Prevalence in Listed Conditions

- Mental Health/substance abuse conditions are not lifestyle related
- Logic would imply that these conditions could be more prevalent for spouses of BMWED/SMART-M because of stress caused by working conditions of the Railroad employee
- Narcotic Rx for pain relief

Conditions	Typical Causes	Risk Factors
Mood disorder/depression	Genetic, biological, environmental	Family history, previous mood disorder, trauma/stress, physical illness, brain structure
Narcotic Rx	Pain related to medical condition, if addiction then behavioral health problem	Family history, past/present addictions, pre-existing psychiatric conditions

Source: Mayoclinic.org

Lifestyle Does Not Cause High Prevalence in Listed Conditions

Conditions	Typical Causes	Risk Factors
Multiple sclerosis	Autoimmune disorder in which immune system attacks the protective sheath (myelin) covering nerve fibers; unknown cause	Age; **sex (women more than 2-3 times as likely as men)**; family history; Epstein-Barr viral infection; race (white more inclined); climate; Vitamin D deficiency; autoimmune disease such as thyroid disease, pernicious anemia, Type 1 diabetes, and inflammatory bowel disease; smoking
Adult rheumatoid arthritis	Autoimmune disorder in which immune system attacks lining surrounding joints; unknown cause	Age, **sex (more frequent amongst female)**, family history, obesity, smoking, environment exposure
Hypothyroidism	Autoimmune disorder in which immune system attacks the thyroid gland (Hashimoto's thyroiditis)	Family history, **sex (more frequent amongst female)**, other autoimmune diseases, radiation therapy, anti-thyroid medications

- **Majority of Railroad spouses are women**
- **Women are more at risk for these conditions**
- **Not related to lifestyle**

Source: Mayoclinic.org

Listed Top Conditions

Less than 10% of the National Plan's expenditures are for the NCCC's top chronic conditions list.

Members appear to be managing their chronic conditions well.

Railroad Employees National Health and Welfare Plan - Medical Cost Only

Incurred from 7/1/2018 to 6/30/2019

UHC data thru 10/31/2019; Aetna data thru 12/31/2019; Highmark data thru 1/31/2020

Medical Plan Paid by Condition (Workers Only)

Condition	Plan Paid	% Total
Chronic Renal Failure	$7,680,000	1.9%
Ischemic Heart Disease	$17,220,000	4.2%
Diabetes	$6,320,000	1.5%
Hypertension	$3,410,000	0.8%
Hyperlipidemia	$1,130,000	0.3%
Obesity	$3,480,000	0.8%
Total Listed Top Conditions	$39,240,000	**9.5%**
Total Medical Spend	**$414,460,000**	

Medical Plan Paid by Condition (Spouse Only)

Condition	Plan Paid	% Total
Mood Disorder, Depressed	$2,760,000	0.6%
Multiple Sclerosis	$4,630,000	1.0%
Adult Rheumatoid Arthritis	$1,470,000	0.3%
Obesity	$6,860,000	1.4%
Hypothyroidism	$910,000	0.2%
Total Listed Top Conditions	$16,630,000	**3.4%**
Total Medical Spend	**$483,710,000**	

Top Spend Per UHC

Condition	% of Total Cost
Musculoskeletal	14%
Injuries/Poisoning	10%
Neoplasms	9%
Circulatory Systems	9%
All Others	58%

In UHC's words:

Diagnosis Distribution

Claims related to 'Musculoskeletal System' diagnoses are a primary driver of health care costs.

Source: UHC 2018 Claim Detail report page 8 of 84

Musculoskeletal Disorders

RR management seems to ignore the working conditions which cause the top health care spends:
Musculoskeletal and Injuries

- Biomechanical work exposures are associated with neck, lower back, and knee pain.
- Whole-body vibration work exposures are associated with neck pain, knee pain, and sciatica (nerve pain in leg).
- Compared with average U.S. male workers (adjusting for age, race, and region) maintenance-of-way male workers were more likely to report:
  - **repeated lifting, pushing, pulling, or bending** at work (74.6% vs 46.9%),
  - **not enough staff** (88.1% vs 65.2%), and
  - **carpal tunnel syndrome** (7.9% vs 3.6%).
- Maintenance-of-way workers were less likely to report:
  - **management prioritizing workplace health and safety** (59.4% vs 94.8%),
  - ability to make job decisions on their own (68.4% vs 87.7%), and
  - supervisor support (60.3% vs 90.8%).

Source: Occupational risk factors for musculoskeletal disorders among railroad maintenance-of-way workers.
https://pubmed.ncbi.nlm.nih.gov/32144807/
Work Exposures and Musculoskeletal Disorders Among Railroad Maintenance-of-Way Workers.
https://pubmed.ncbi.nlm.nih.gov/31022101/

Member Health Conclusion

- NCCC presentation implies members' lifestyle greatly increases National Plan costs

- Working conditions continue to contribute to poor health
- Management ignores the top two health cost drivers
- Spouse health conditions are also not life style related rather they are more closely correlated with stress and genetic gender

VII. Conclusion

Conclusions

1) Agree US Healthcare System needs improvement, but that is not a bargaining issue
2) Patients do not have the knowledge or purchasing power to change the US Healthcare System
3) Railroad working conditions continue to result in less healthy members
4) Railroad working conditions result in need for spouse and dependents' coverage

5) Some evidence that Railroad workers are managing their chronic conditions well, but national system comparison shows first dollar coverage could improve chronic care management
6) Plan (unlike Patients) does have knowledge, resources, and ability to provide appropriate incentives to direct care to most cost-effective services and providers
7) Cost of care is significantly more for patients (at up to 15% of income) than for employers (less than 3.5% of revenue)

Appendices:

A: Benefit Summary

- MMCP Covered Benefits

Plan Last Modified:	9/1/2008 (ACA-1/1/11)	1/1/2014	1/1/2018	1/1/2019
Provider Network:	**MMCP - UHC, Aetna. Highmark**			
Benefit Ratio	**93.2%**	**92.2%**	**88.2%**	**87.8%**
In-Network (INN) Benefits				
Deductible (Individual / Family)	**None**	**$200 / $400**	**$325 / $650**	**$350 / $700**
Coinsurance	**None**	**None**	**10%**	**10%**
Out-of-Pocket Max (Individual / Family) for Coinsurance	**Not Applicable**	**$1000 / $2000**	**$1,800 / $3,600**	**$2,000 / $4,000**
Copays				
Office Visit (OV) - Primary Care (PCP)	**$20 no DC**	**$20 no DC**	**$25 no DC**	**$25 no DC**
Preventive Services	**$20 no DC**	**$0**	**0%**	**0%**
OV - Specialist Care Provider (SCP)	**$35 no DC**	**$35 no DC**	**$40 no DC**	**$40 no DC**
Urgent Care (UC)	**$25 no DC**	**$25 no DC**	**$25 no DC**	**$25 no DC**
Hospital Emergency Room (ER)	**$25 no DC**	**$25 no DC**	**$100 no DC**	**$100 no DC**
Outpatient Surgery	**No Copay, No Limit**	**No Copay, No Limit**	**DC**	**DC**
Hospital Inpatient	**No Copay, No Limit**	**No Copay, No Limit**	**DC**	**DC**
Out-of-Network (OON) Benefits				
Deductible (Individual / Family)	**$300 / $900**	**$300 / $900**	**$650 / $1,300**	**$700 / $1,400**
Coinsurance	**25%**	**25%**	**30%**	**30%**
Out-of-Pocket (OOP) Max (Individ / Family)	**$2,000 / $4,000**	**$2,000 / $4,000**	**$3,600 / $7,200**	**$4,000 / $8,000**
Prescription Drugs				
Retail (Generic / Brand/ Brand Non Formulary) Copay:	**INN: $10/$20/$30 OON: 25%**	**INN: $10/$20/$30 OON: 25%**	**$10/$30/$60**	**$10/$30/$60**
Mail Order (Generic / Brand/ Brand Non Form) Copay:	**INN: $20/$30/$60 OON: 25%**	**INN: $20/$30/$60 OON: 25%**	**$10/$60/$120**	**$10/$60/$120**

Note: Benefit Ratio is defined the same as NCCC defines Actuarial Value (AV). Here the value is produced using OptumInsight pricing/benchmarking tool.

A: Benefit Summary (continued)

- CHCB Plan

Plan Last Modified:	9/1/2008 (ACA-1/1/11)	1/1/2014	1/1/2018	1/1/2019
Provider Network:	**CHCB - UHC, Highmark**			
Benefit Ratio	**90.4%**	**90.7%**	**87.5%**	**87.1%**
In-Network (INN) Benefits				
Deductible (Individual / Family)	**$200 / $400**	**$200 / $400**	**$325 / $650**	**$350 / $700**
Coinsurance	**15%**	**15%**	**20%**	**20%**
Out-of-Pocket Max (Individual / Family) for Coinsurance	**$2000 / $4000**	**$2000 / $4000**	**$2,800 / $5,600**	**$3,000 / $6,000**
Copays				
Office Visit (OV) - Primary Care (PCP)	**DC**	**DC**	**DC**	**DC**
Preventive Services	**DC**	**$0**	**0%**	**0%**
OV - Specialist Care Provider (SCP)	**DC**	**DC**	**DC**	**DC**
Urgent Care (UC)	**DC**	**DC**	**DC**	**DC**
Hospital Emergency Room (ER)	**DC**	**DC**	**DC**	**DC**
Outpatient Surgery	**DC**	**DC**	**DC**	**DC**
Hospital Inpatient	**DC**	**DC**	**DC**	**DC**
Out-of-Network (OON) Benefits				
Deductible (Individual / Family)	**$200 / $400**	**$200 / $400**	**$650 / $1,300**	**$700 / $1,400**
Coinsurance	**15%**	**15%**	**20%**	**20%**
Out-of-Pocket (OOP) Max (Individ / Family)	**$1,500 / $3,000**	**$1,500 / $3,000**	**$5,600 / $11,200**	**$6,000 / $12,000**
Prescription Drugs				
Retail (Generic / Brand/ Brand Non Formulary) Copay:	**INN: $10/$20/$30 OON: 25%**	**INN: $10/$20/$30 OON: 25%**	**$10/$30/$60**	**$10/$30/$60**
Mail Order (Generic / Brand/ Brand Non Form) Copay:	**INN: $20/$30/$60 OON: 25%**	**INN: $20/$30/$60 OON: 25%**	**$10/$60/$120**	**$10/$60/$120**

Note: Benefit Ratio is defined the same as NCCC defines Actuarial Value (AV). Here the value is produced using OptumInsight pricing/benchmarking tool.

B: Sources for Member Health

- *Worker health and safety and climate change in the Americas: issues and research needs* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5176103/
- *Risk factors for chronic kidney disease of non-traditional causes: a systematic review* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6461065/
- OSHA/MHSA Hazard Alert on Diesel Exhaust (DE) and Diesel Particulate Matter (DPM) https://www.osha.gov/Publications/OSHA-3590.pdf
- Chronic obstructive pulmonary disease mortality in railroad workers https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2658724/
- Leukemia and Benzene https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3447593/
- Lead exposure in US worksites: A literature review and development of an occupational lead exposure database from the published literature https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4711746/
- *Work Schedules and Health Behavior Outcomes at a Large Manufacturer* https://www.jstage.jst.go.jp/article/indhealth/48/4/48_MSSW-03/_pdf
- *Negative Impacts of Shiftwork and Long Work Hours* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4629843/
- *Effects of poor and short sleep on glucose metabolism and obesity risk* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457292/
- *Association between occupational, sport and leisure related physical activity and baroreflex sensitivity. The Paris Prospective Study III.* https://eprints.utas.edu.au/33900/2/137560%20-%20Association%20between%20occupational%20-%20Final%20author%20version.pdf
- *Occupational risk factors for musculoskeletal disorders among railroad maintenance-of-way workers. https://pubmed.ncbi.nlm.nih.gov/32144807/*
- *Work Exposures and Musculoskeletal Disorders Among Railroad Maintenance-of-Way Workers. https://pubmed.ncbi.nlm.nih.gov/31022101/*

C: Required Uses and Disclosures

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