



Workers Compensation – Current Issues and Future Game Changers

Barry Lipton, FCAS, MAAA
Practice Leader &
Senior Actuary

Sean Cooper, FCAS, MAAA
Practice Leader &
Senior Actuary


Raji Chadarevian
Director, Medical
Regulation & Informatics

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved.

1

Antitrust Notice

- The Casualty Actuarial Society is committed to adhering strictly to the letter and spirit of the antitrust laws. Seminars conducted under the auspices of the CAS are designed solely to provide a forum for the expression of various points of view on topics described in the programs or agendas for such meetings.
- Under no circumstances shall CAS seminars be used as a means for competing companies or firms to reach any understanding – expressed or implied – that restricts competition or in any way impairs the ability of members to exercise independent business judgment regarding matters affecting competition.
- It is the responsibility of all seminar participants to be aware of antitrust regulations, to prevent any written or verbal discussions that appear to violate these laws, and to adhere in every respect to the CAS antitrust compliance policy.



2



Work Comp vs. Group Health

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved.

3

Medical Costs Covered by Workers Compensation and Group Health

Workers compensation (WC) covers lifetime medical costs associated with a work-related injury

Group health (GH) covers a broad array of healthcare services and products for an employee and their covered family members during the policy term

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved

4

4

Medical Cost Controls

Some Commonalities

- Provider Networks
- Drug Formularies
- Prior Authorization/
Utilization Review

Some Differences

- Fee Schedules
- Patient Shares the Costs
- Safety Programs
- Wellness Programs
- Focus on Return to Work

	WC	GH
Fee Schedules	✓	
Patient Shares the Costs		✓
Safety Programs	✓	
Wellness Programs		✓
Focus on Return to Work	✓	


© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved


5


5

WC Costs More Than GH To Treat Similar Injuries

Physician Services from Service Years 2013 to 2016

 Volume of services drives cost differences while prices paid are comparable

 WC costs for radiology improved while physical medicine remained high

 Smaller cost differences for acute injuries than for complex injuries

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved

6

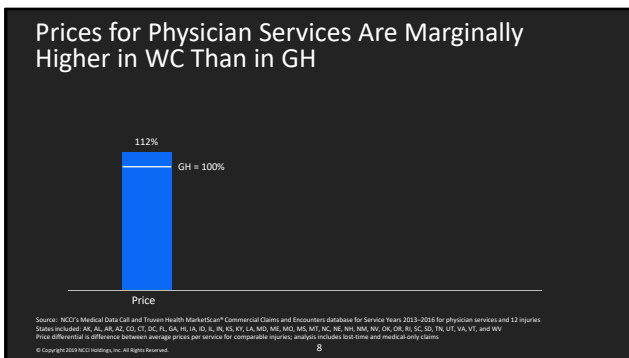
6

Injuries Included in Analysis of Physician Services

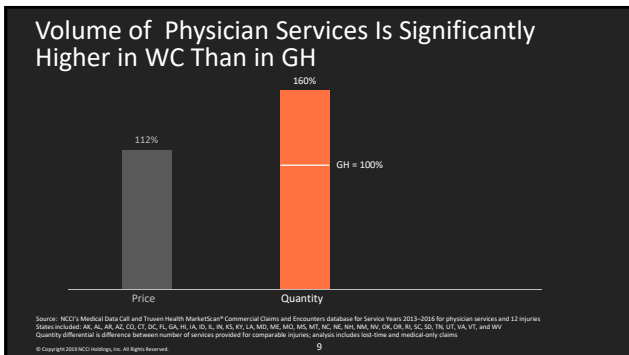
Acute	Complex
<ul style="list-style-type: none">Ankle fracture or sprainHumerus/shoulder fracture, dislocation, or sprainWrist/hand fracture, dislocation, or sprainKnee ligament injuryLower extremity open wound or blunt traumaUpper extremity open wound or blunt trauma	<ul style="list-style-type: none">Inguinal herniaLower back disc disordersOther bone and joint disordersBursitisOther lower back disorders incl. spineUpper back spine/spinal cord injury

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved. 7

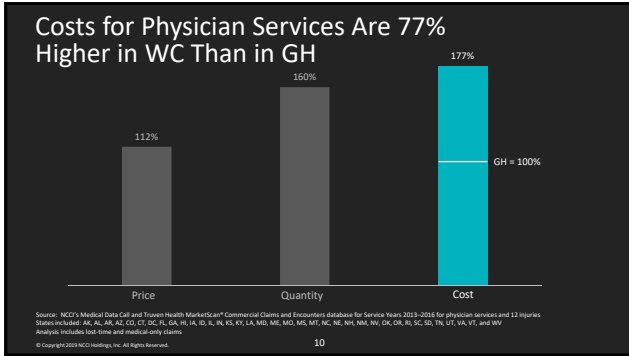
7



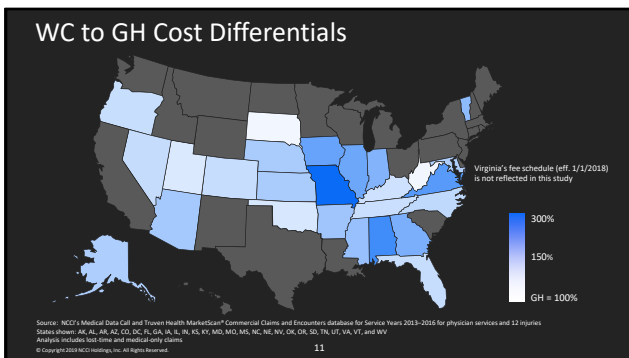
8



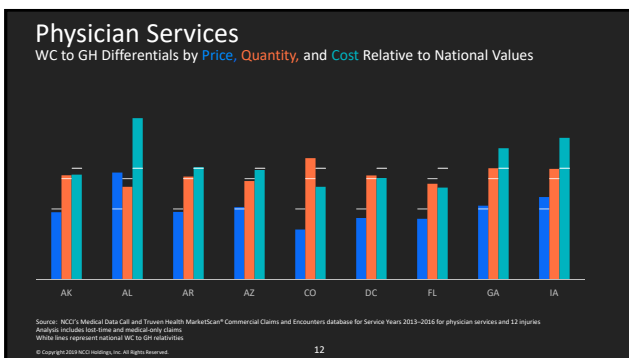
9



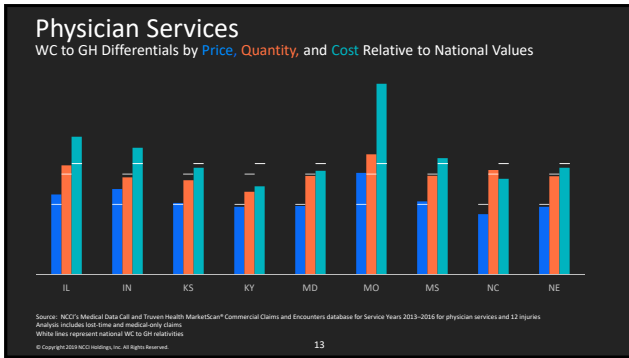
10



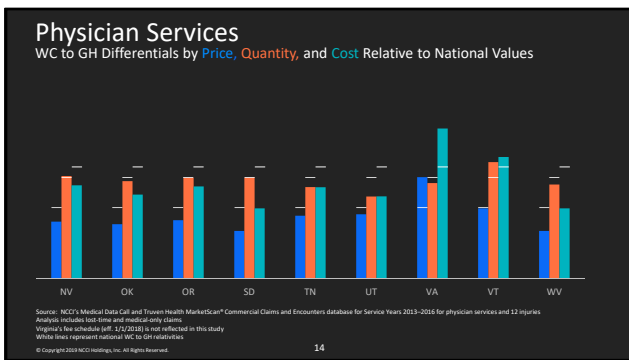
11



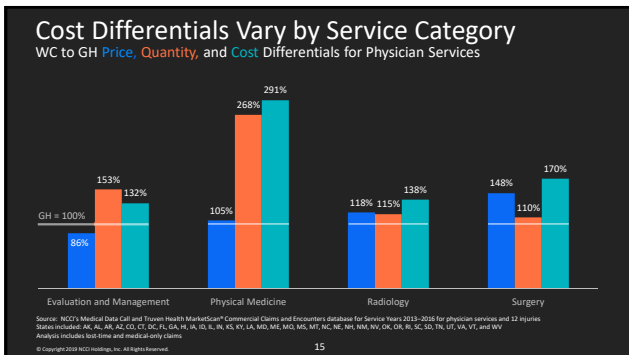
12



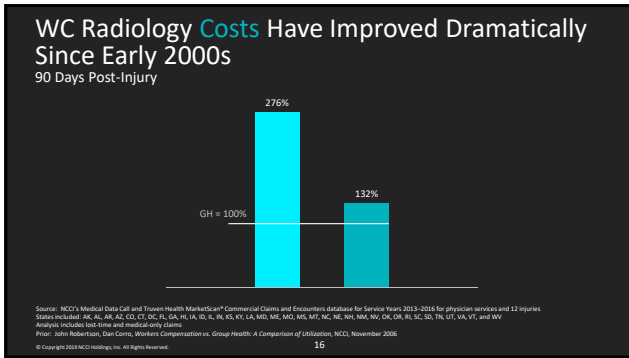
13



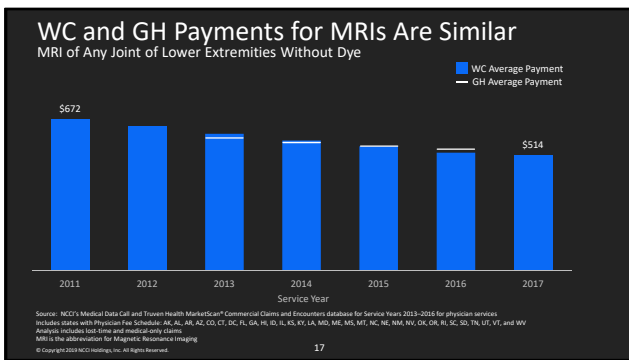
14



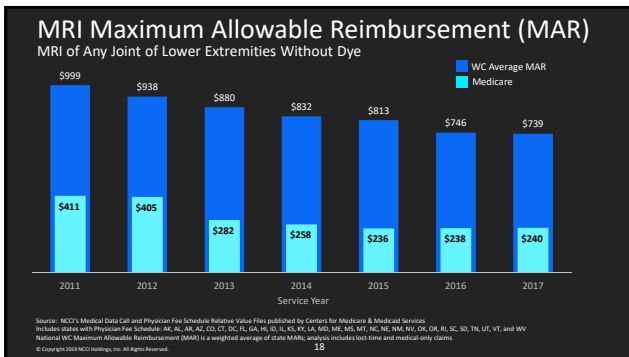
15



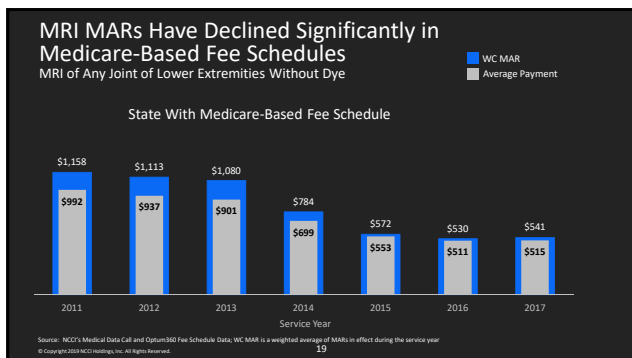
16



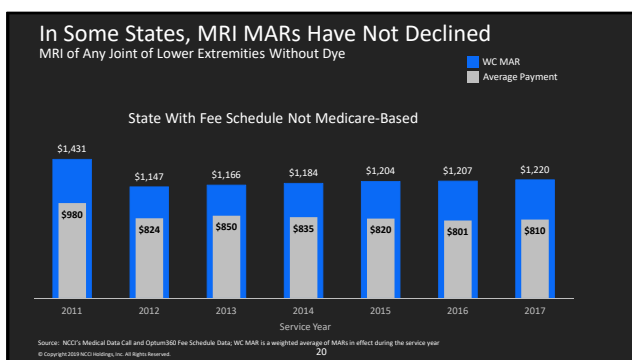
17



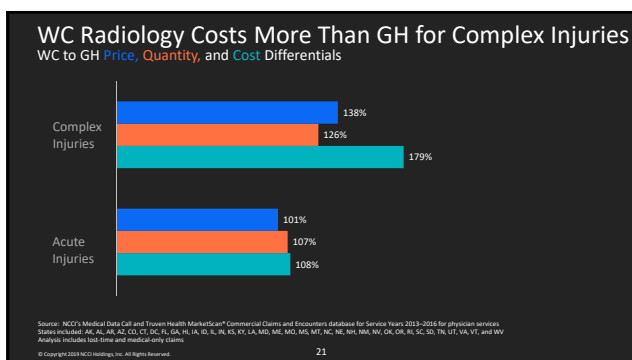
18



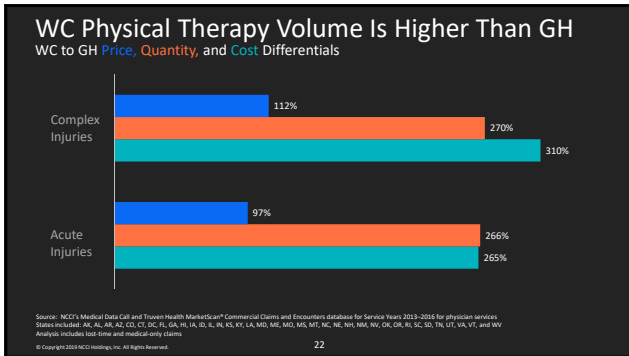
19



20



21



22

- ### WC Patients Get More Physical Therapy Than GH
- Among the 12 injuries, WC patients are 45% more likely to receive physical therapy
 - Among patients receiving physical therapy, WC patients receive
 - 50% more visits
 - 20% more modalities per visit
 - And cost 37% more per visit
- Source: NCCI's Medical Data Call and Trovan Health MarketScan® Commercial Claims and Encounters database for Service Years 2013-2016 for physician services. States included: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, and WV. Analysis includes fee-for-service and medical-only claims. © Copyright 2018 NCCI Holdings, Inc. All Rights Reserved.

23


Experience Rating Plan

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved.

24

NCCI Experience Rating Modification

Mod uses an insured's three-year claim history from the Experience Period to predict its loss cost in the Rating Period



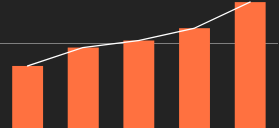
Experience period has three years in general
© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved

25

25

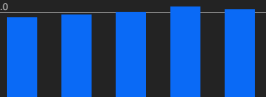
Current Mod Performs Well

Steep slope in loss ratios before applying Mod shows predictive power



Lowest Mod Quintiles Highest

Small deviations from 1.0 in loss ratios after applying Mod shows accuracy



1.0 Lowest Mod Quintiles Highest


Rating Year 2014, all states combined, approximately 20% of insureds in each Mod group (quintiles by insured count)
Total loss ratios are balanced to 1.0 both before and after applying Mod
© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved

26

26

Mod Performance Varies by Industry Group

Loss Ratios Before and After Applying Mod by Quintiles



1.0

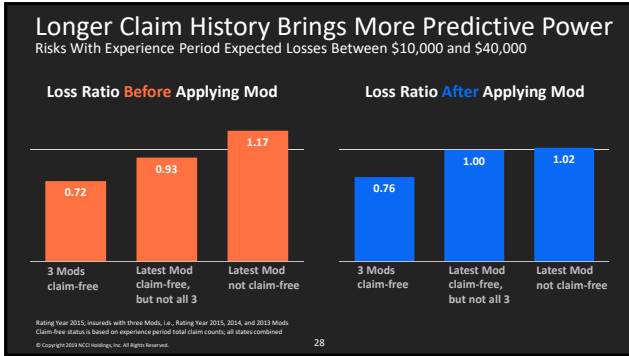
Manufacturing Contracting Office & Clerical Goods & Services Miscellaneous

1.0

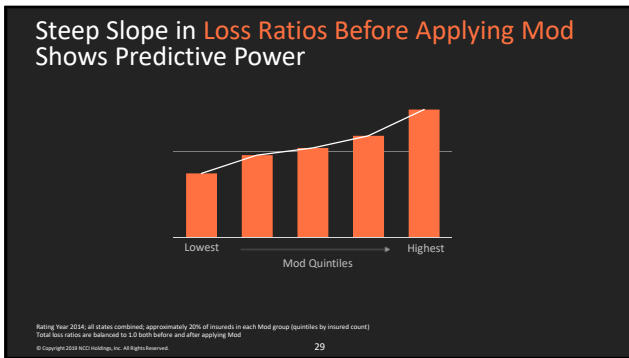
Rating Year 2014, all states combined, quintiles by insured count
© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved

27

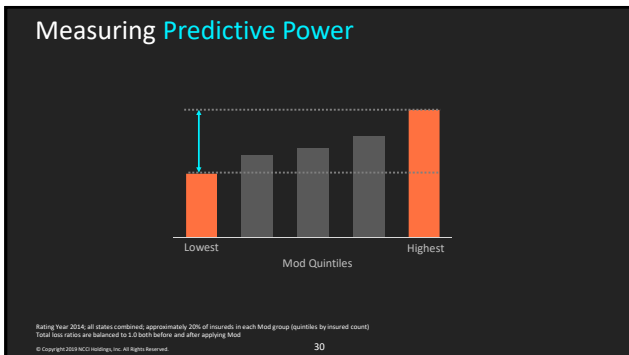
27



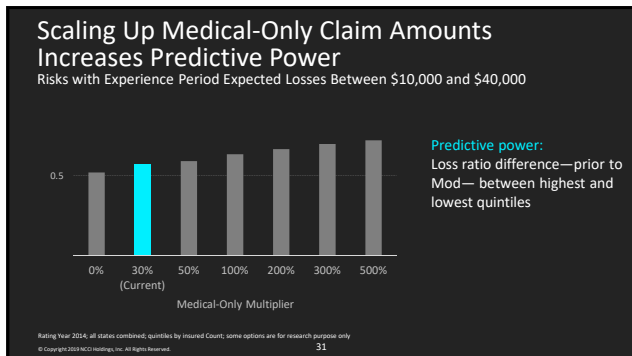
28



29



30



31

Summary

- Higher volume of services per injury causes higher WC costs vs. GH
- The cost difference between WC and GH varies significantly by state
- The NCCI experience rating plan is performing well overall

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. 32

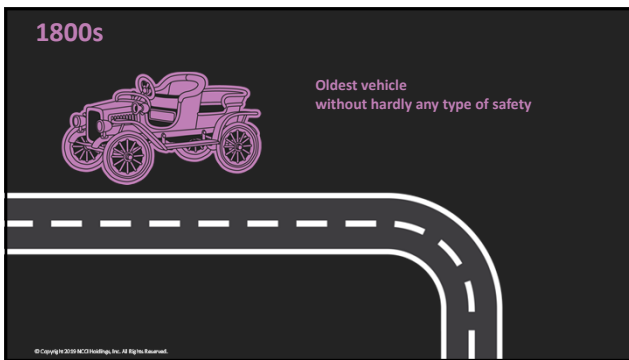
32



33



34



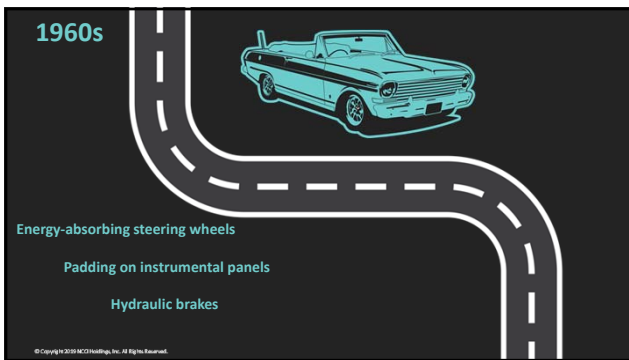
35



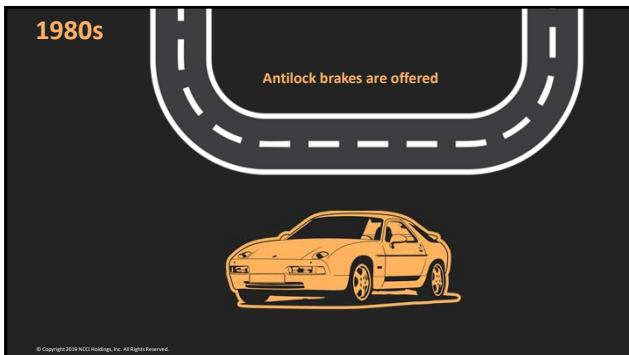
36



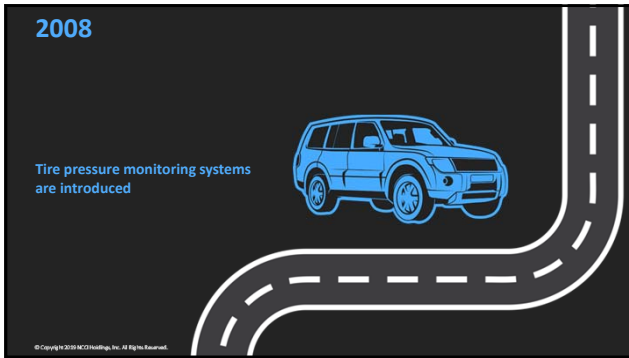
37



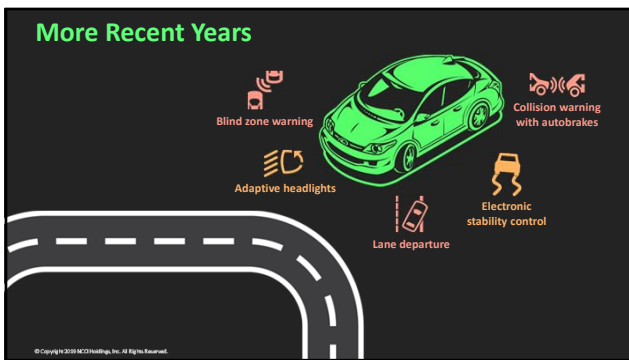
38



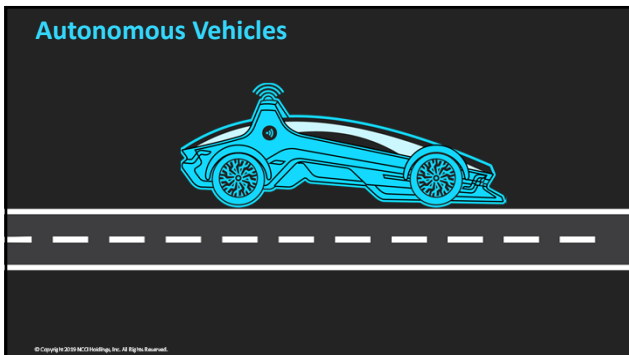
39



40




41



42

Occupations That Involve Driving




25% of Payroll
50% of Premium

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. Source: NCCI's Unit Statistical Data

43


Motor Vehicle Accidents in WC




2 Out of 5 Fatalities
1 Out of 5 Permanent Total
3 Times the Average Cost of Other Claims
10% of Benefit Costs

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. Source: NCCI's Unit Statistical Data

44

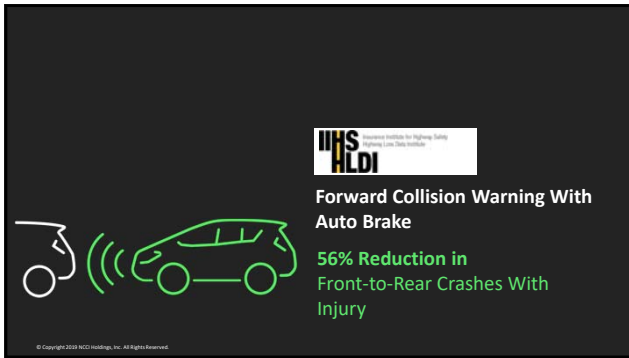


90% of accidents are caused by driver error



© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved.

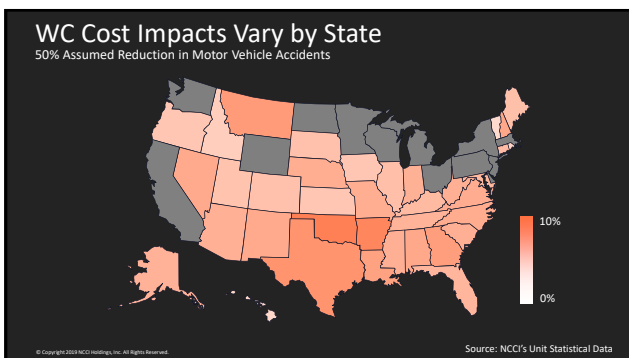
45



46



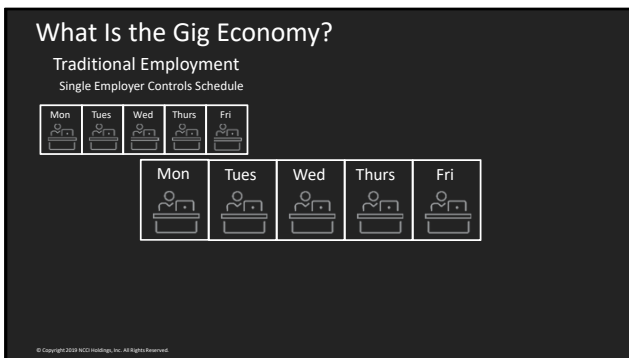
47



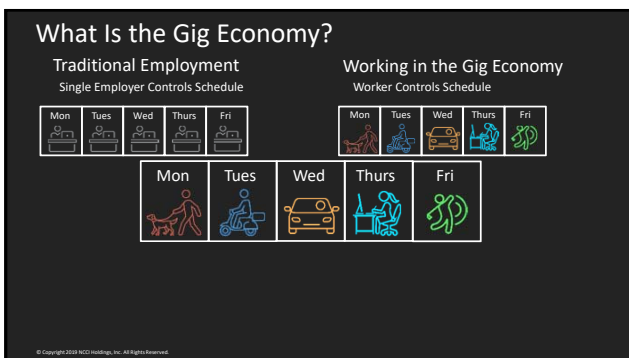
48



49



50



51

What Is the Gig Economy?

Traditional Employment
Single Employer Controls Schedule

Mon Tues Wed Thurs Fri

Single Employer Provides Compensation

Wage & Salary
+
Employee Benefits
= Total Compensation

Working in the Gig Economy
Worker Controls Schedule

Mon Tues Wed Thurs Fri

Worker Receives Compensation For Each "Gig":

Dog Walking
Delivery Driver
Transportation
Online Work
= Total Compensation

52

How Can the Gig Economy Change the Game?

~~Wage & Salary~~
~~Employee Benefits~~

Exposure
Leakage

Dog Walking
Delivery Driver
Transportation
Online Work

53

How Big Is the Gig Economy?


According to a 2017 survey by the Federal Reserve, 31% of all adults engaged in gig work

54

How Big Is the Gig Economy?

According to a 2017 survey by the Federal Reserve, 31% of all adults engaged in gig work

The Washington Post, however, reported the share of Gig Economy workers at 7%



© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

55


How Big Is the Gig Economy?

According to a 2017 survey by the Federal Reserve, 31% of all adults engaged in gig work

The Washington Post, however, reported the share of Gig Economy workers at 7%

These varying estimations highlight two major hurdles in understanding the state of the Gig Economy:

- The lack of a standard definition of workers counted as participating in gig work
- The lack of data




© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

56

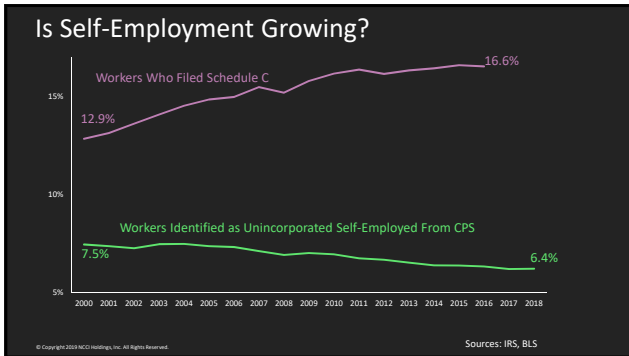
How Big Is the Gig Economy?

- Gig workers are self-employed
- Benefits of using unincorporated self-employed workers as a proxy:
 - Consistent definition
 - Data availability
 - Similar exposure leakage potential

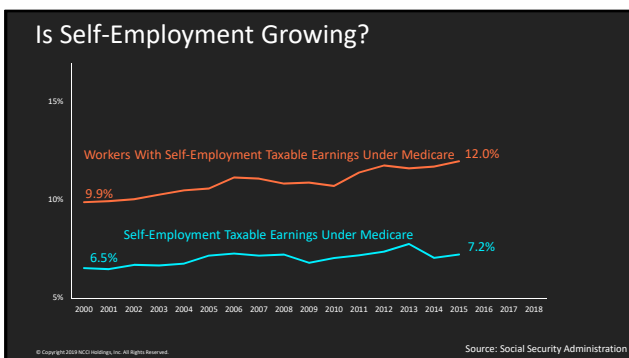


© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

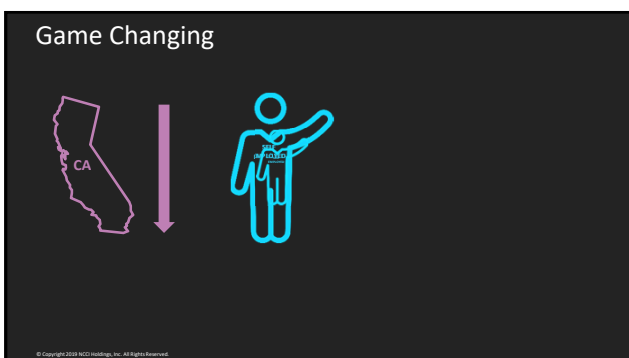
57



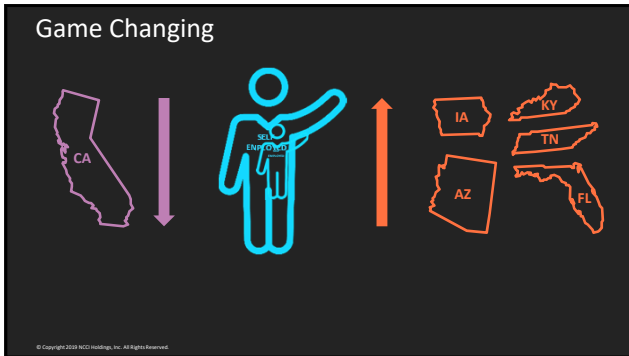
58



59



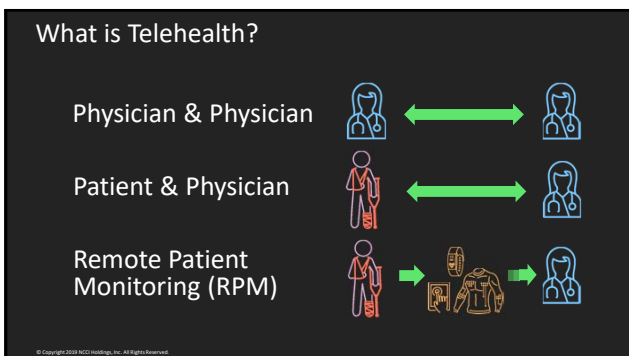
60



61



62



63

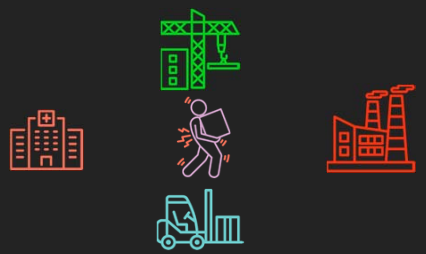
Challenges and Limitations

Rural Area	Technology
Telepresenter	Cost
Telehealth Site	Out-of-state specialists

© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

64


Telehealth and Emergency Room Visits



© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

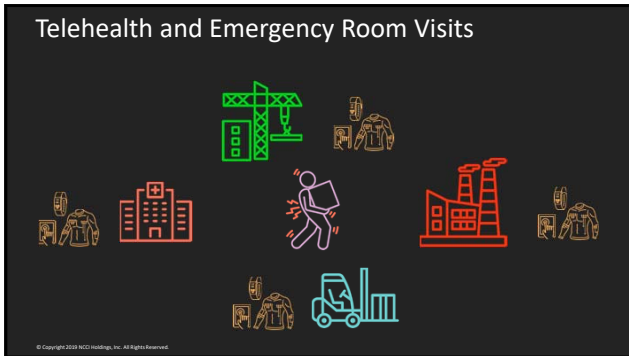
65

Telehealth and Emergency Room Visits

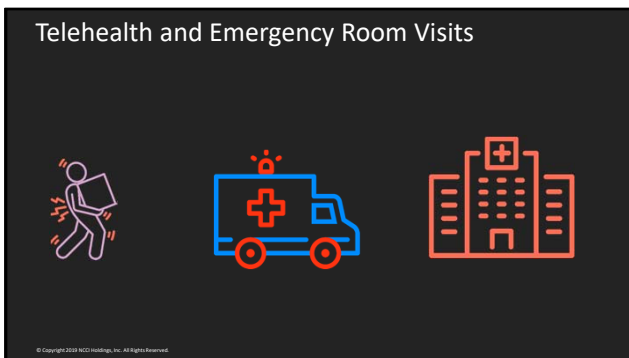


© Copyright 2019 NCC Holdings, Inc. All Rights Reserved

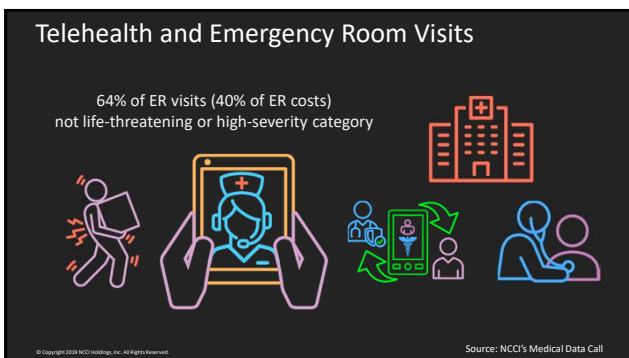
66



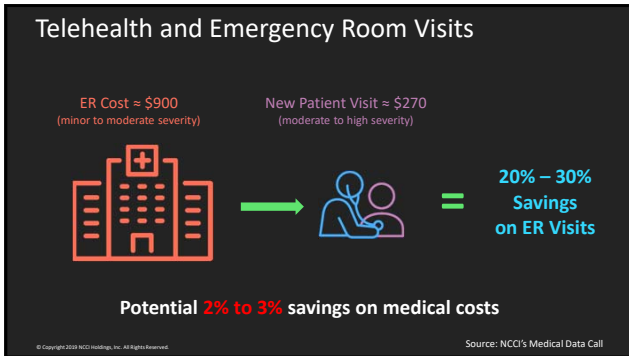
67



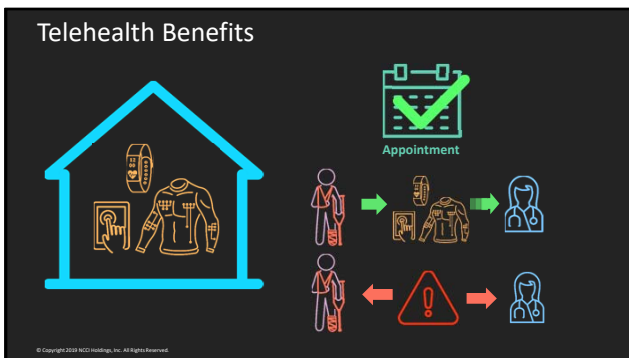
68



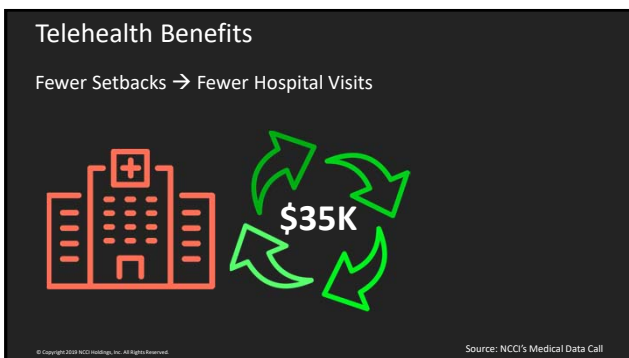
69



70



71



72

Telehealth Benefits

Potential Savings on Readmissions:

30-day Hospital Readmission Rate: 75%
Length of Stay: 40%
Patients requiring readmission: 50%

→ 35% reduction in overall hospital readmission costs

Potential savings of up to 2% on medical costs

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. Source: mHealth Intelligence

73

RPM and Physical Therapy

Exercises and Activities: 60%
Other: 40%

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. Source: NCCI's Medical Data Call

74

RPM and Physical Therapy

× 15

Potential 2% to 5% savings on medical costs

© Copyright 2018 NCCI Holdings, Inc. All Rights Reserved. Source: NCCI's Medical Data Call

75

Telehealth—Wearables

Today, some wearables gather much of the information that RPM devices do.

Injury Prevention Quicker Response to Injuries Quicker Return to Work

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved.

76

Game Changers

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved.

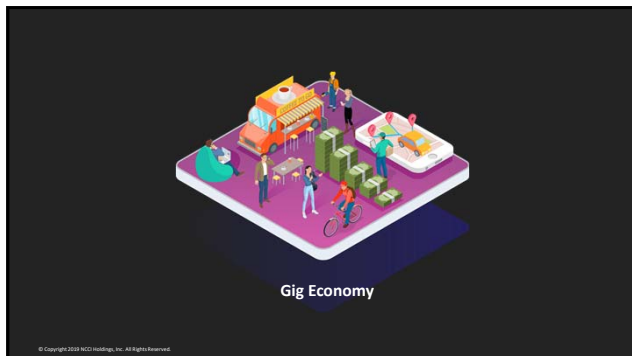
77

Autonomous Vehicles

-2% to -8%
-\$1B to -\$4B

© Copyright 2019 NCCI Holdings, Inc. All Rights Reserved.

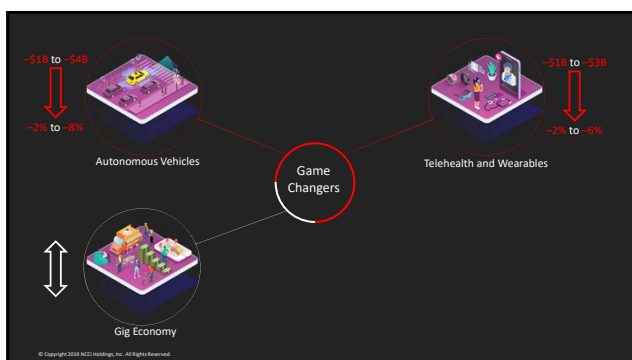
78



79



80



81
