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Research Using the Workers' Compensation Information System (WCIS)

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Workers' Compensation Information System (WCIS)



- Electronic repository
- Submitted by claims administrators
- Two parts
 - First Report of Injury (FROI) and Subsequent Report of Injury (SROI)
 - Medical bill payment data
- Uses

Information Collected by WCIS



● Employee and Employer

Occupation Description	Bus Operator (P/T)
Employer Name	Metropolitan Transit Au
Class Code	7382 Bus or Limousine Operations
Industry Code	

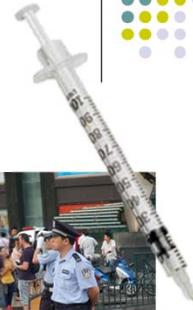
● Injury

Part of Body Injured	30	Upper Extremities/Multiple Upper Extremities
Cause of Injury	60	Strain/Strain or Injury by, NOC
Nature of Injury	52	Sprain or strain
Injury Description	Repetitive continuous use and turning of both arms while operating the bus has caused severe pain, to upper extremities both hands, wrist, arms, sh	

● Medical Bills – ICD-9

847.1	Thoracic Sprain
847.2	Lumbar Sprain

WCIS Research Projects in 2014



CARPAL TUNNEL SYNDROME



Calculate Industry Specific Rates of CTS from 2006-2011



- Identify cases in WCIS
- Industry code cases
- Match cases to denominator

How do we identify CTS?



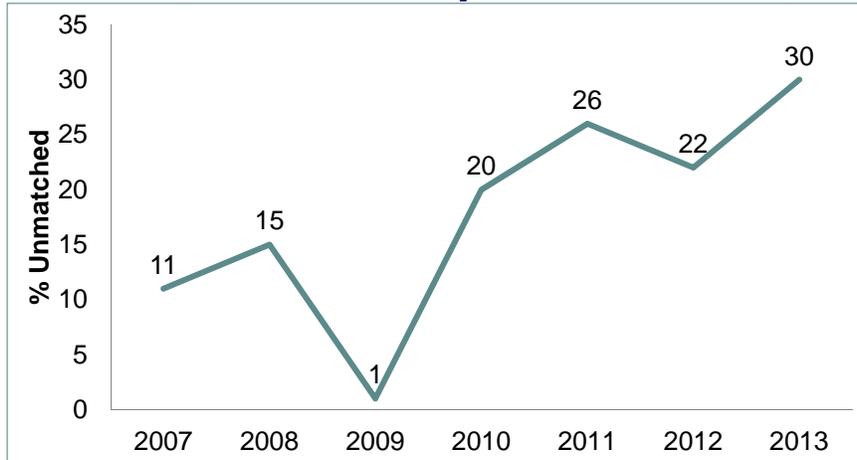
Nature of injury	78, Carpal tunnel syndrome 49, Sprain or tear 52, Strain or tear 80, All other cumulative injury	
Cause of injury	97, Repetitive motion 60, Strain or injury by 98, Cumulative 94, Rubbed or abraded by	
Part of body	33, Lower arm 34, Wrist 35, Hand 36, Finger(s)	37, Thumb 39, Wrist(s) & Hand(s) 30, Multiple upper extremities 90, Multiple body parts
Injury description	Contains a variation of the term "carpal," "CTS," etc. or "numbness" or "tingling"	

Case Classification Scheme



Procedure code	ICD-9 Dx Code	Number of Acceptable Criteria Variables				
		4	3	2	1	0
64721 or 29848	Any	Probable	Probable	Possible	Uncertain	Uncertain
Any	354 or 354.0	Probable	Probable	Possible	Uncertain	Uncertain
Other or N/A	Other or N/A	Possible	Uncertain	Uncertain	Uncertain	Uncertain

Requires match of FROI data with medical bill data – when we can't do that, we can't capture cases



CTS Case Characteristics, WCIS 2006-2011



Characteristic	Cases	Full-time Equivalent (FTE)	Rate x 100,000 FTE
Overall	89,762	84,063,352	106.8
Age Category			
25-34	18,178	21,204,757	85.7
35-44	23,390	21,250,744	110.1
45-54	28,126	19,384,346	145.1
55-64	13,877	10,799,772	128.5
Gender			
Male	24,116	47,427,627	50.8
Female	65,121	36,635,726	177.8



WHAT JOB ACTIVITIES ARE CAUSING THIS?

Industry Coding Systems



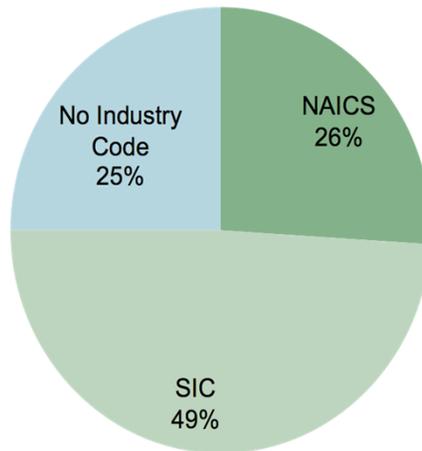
Standard Industrial Code (SIC)

- Started in 1937
- 4 digits
- 10 sectors
- Last updated 1987

North American Industry Classification System (NAICS)

- Started in 1997
- 6 digits
- 20 sectors
- Updated every 5 years

Original Industry Coding in WCIS, CTS Cases 2006 - 2012



Public Sector Workers are Less Likely to Have Correct Industry Code



- Public sector is composed of many industries



Government



- We aggregated six industries into 'public administration'
- Government claims were identified
 - By SIC 91* or NAICS 92* code
 - By employer name
 - By class
- Public Safety
- Public Transit
- Schools
- Other industries with industry

Combined Industry Codes



Wired and wireless telecommunications



Aircraft and aerospace manufacturing



Offices of physicians and outpatient care centers



Employer Name and Employer FEIN



407 claims all coded as department and discount stores



46 claims from employer "Abracadabra" without industry coding



Code 46 "Abracadabra" claims as department and discount stores

Employer Abracadabra



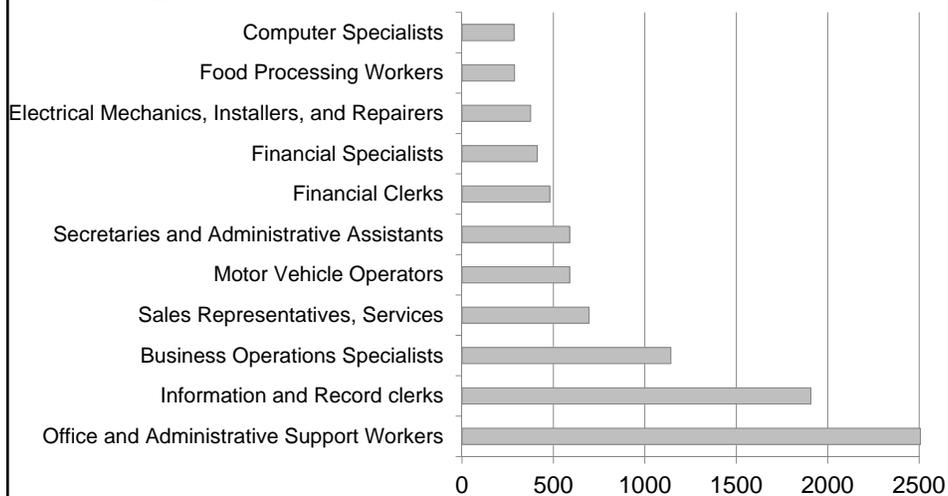
Challenges



Industries with highest rates of CTS, California 2006-2011

Rank	Industry Description	Cases	Rate x 100,000 FTE
1	Textile and fabric finishing and coating mills	54	393
2	Animal slaughtering and processing	396	342
3	Sugar and confectionery products	148	326
4	Telecommunications	2,674	325
5	Navigational and control instruments manufacturing	588	280
6	Public administration	4,752	268
7	Insurance carriers and related activities	3,632	262
8	Aluminum production and processing	67	252
9	Bus service and urban transit	808	238
10	Miscellaneous petroleum and coal products	27	234

Prevalent Occupations Among Industries with the 10 Highest CTS Rates, California 2006 - 2011



In spite of everything we know about office ergonomics, there are still 1,000s of cases of CTS among office workers

How much does CTS Cost?

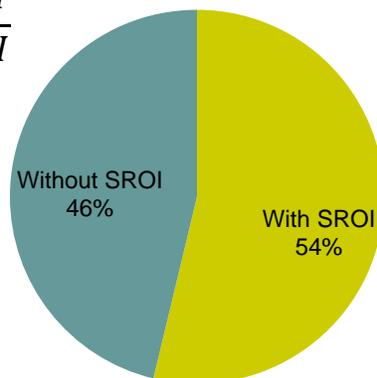


- Subsequent Report of Occupational Injury
 - Cost
 - Temporary Disability
 - Permanent Disability
 - Medical Costs
 - Legal Costs
 - Settlements
 - Return to work

SROI Completeness, 2012



$\frac{305K \text{ SROI}}{568K \text{ FROI}}$



How much does CTS Cost?



- Calculation coming soon....



Conclusions



Roadblocks for Research

- Industry coding
- Employer name/FEIN
- Matching FROI and Medical Bills
- Calculating Costs with SROI
- Complex Injury



WORKPLACE VIOLENCE IN HEALTH CARE SETTINGS



Identify Cases of Workplace Violence among Health Care Workers, 2010-2012



- Identify health care workers
 - Industry code
 - Class Code
 - Occupation description
 - Employer name (confidential)
- Identify violence
 - Injury description
 - Cause of injury

```
SELECT *  
FROM  
WHERE INJURY_DESCRIPTION LIKE '%ASSAULT%'  
OR INJURY_DESCRIPTION LIKE '%STRANGLER%'  
OR INJURY_DESCRIPTION LIKE '%STR&G&D%'  
OR INJURY_DESCRIPTION LIKE '%AGITATED%'  
OR INJURY_DESCRIPTION LIKE '%AGGITATED%'  
OR INJURY_DESCRIPTION LIKE '%AGGRES%'  
OR INJURY_DESCRIPTION LIKE '%AGRES%'  
OR INJURY_DESCRIPTION LIKE '%COMBAT%'  
OR INJURY_DESCRIPTION LIKE '%THREAT%'  
OR INJURY_DESCRIPTION LIKE '%ABUSIVE%'  
OR INJURY_DESCRIPTION LIKE '%ABUSE%'
```

Continued...

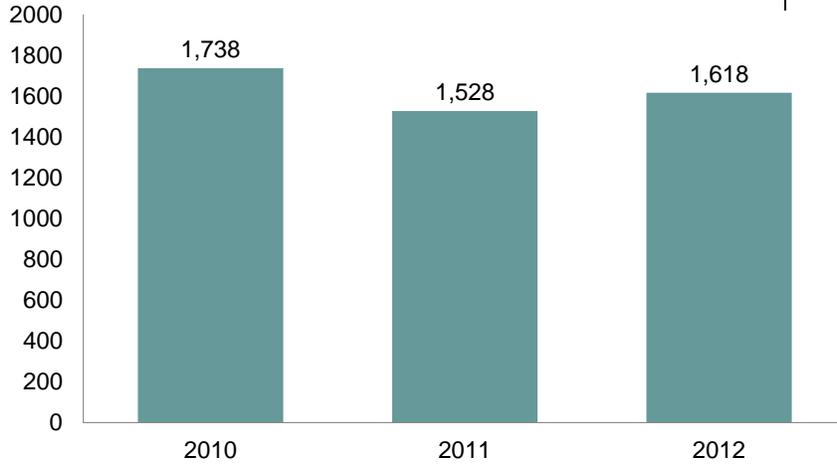


- Cause of injury fellow worker, patient of other person, but only if it involves punch, kick, or stab, or shove
- Person in the act of a crime
- Robb but not throb
- Stab but not stable
- Violent but not non-violent



- Takes time, patience, work hours, lots of iterations – but also relies on good data in the injury description.
- Needs to be validated every time it is done

Workplace Violence Claims among Healthcare workers, California 2010-2012



Demographics of Workplace Violence Claims, California 2010-2012



Characteristic	n	%
Overall	4,884	100%
Gender		
Female	3,393	69%
Male	1,466	30%
Age		
14 – 19	22	<1%
20 – 24	573	12%
25 – 34	1,234	25%
35 – 44	1,024	21%
45 – 54	1,339	27%
55 – 64	583	12%
65 - 84	98	2%

What Happens?



Employee was assaulted and robbed in the parking lot of a scenic location during lunch time.

Punch to right side of face/cheek by hospice patient when LPN was trying to calm an agitated patient.

Employee tried assisting resident to the restroom when resident became aggressive hitting and pulling the employee hair, resulting in an unknown injury to the head.

Co-worker made multiple threats and threaten to kill the claimant causing stress.

Workplace Violence Claims among Healthcare workers, California 2010-2012



Facility Type	n	Percent
Hospitals	1629	33%
Skilled Nursing and Intermediate Care Facilities	866	18%
Government	583	12%
Residential and Intellectual Disability Facilities	303	6%
Residential Care Facility - Elderly	276	6%
Psych and Substance abuse and Specialty Hospitals	200	4%
Home Health Services	188	4%
Child and Youth Services	162	3%
Ambulance and Ambulatory Care Services	154	3%
Physician Offices	129	3%
Unknown	183	4%

Challenges

- Natural language
- Public sector
- Underreporting



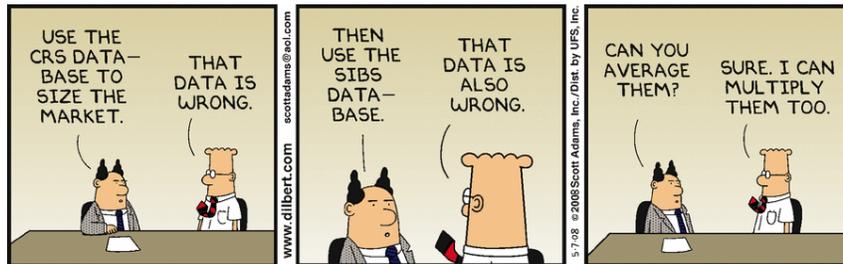
Improvement Activities

- Public sector meetings
- Targeting bad SROI reporters
- Training bulletins
- Medical bill matching project
- Medical Release 2.0
- Penalties



Conclusion

- Research (to practice) activities using WCIS
- Continuing challenges in reporting



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