NYS Occupational Injury/Illness Priority Index

Presented at NYS Occupational Health Surveillance Workgroup Meeting

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Introduction

- There were over 700,000 work-related injuries & illnesses in NYS between 2003 & 2005.

- NYS Workers' Compensation paid out more than 9 billion dollars in claims between 2003 & 2005.

- The most severe work-place injuries & illnesses resulted in over 40,000 hospitalizations & over 700 deaths between 2003 & 2005.

- Majority of work-related injuries & illnesses are preventable.

NYS Data Sources

- NYS Work-related injury & illness data:

    - Bureau of Labor & Statistics (BLS): Survey of Occupational Injuries & Illnesses (SOII)

    - NYS Workers' Compensation Board Injury & Illness Indemnity Claims

- NYS Occupational fatality data:

    - BLS: Census of Fatal Occupational Injuries (CFOI)

- NYS Work-related hospitalizations:

    - New York State Statewide Planning and Research Cooperative System (SPARCS)

- US Employment Projections:

    - BLS % Employment change from 2004 - 2014 (NYS not available by industry)

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NYS Data Sources

- BLS data:

   - record events that result in death, loss of consciousness, days away from work, restricted work, or medical treatment beyond first-aid.

- SOII:

   - Probability sample (not a census of all employers).

   - Employers only required to report on 30 cases of work-related injury with days away from work.

   - Excludes: Military, self-employed, farms with < 11 employees, & Federal agencies (NYS does collect public data).

- Workers' Compensation:

   - All indemnity claims accepted by NYS workers' compensation board in accident year 2004.

NYS Data Sources

- CFOI

    - Decedents' occupation, work environment, equipment involved in death, and the event are collected.

    - Relies on records obtained from independent secondary sources (e.g: news papers/ reports, death certificates, workers' compensation).

    - Cases are substantiated with two or more independent sources.

    - Record fatalities by the state in which the accident occurred, not state of residence, while rate calculation is based on the state of residence.

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NYS Data Sources

- SPARCS:

    - Collects diagnoses (ICD-9), primary payer, demographic information, place & cause (Ecode) on every hospital discharge in NYS.

    - Work-relatedness = having an expected primary payer of workers' compensation for the admission, is possible the primary diagnosis is not related to workers' compensation claim.

    - Hospitalization suggests these are the most severe work-related injuries & illnesses (subject coding inconsistencies).

    - Industry and occupation of person admitted is not included.

Work-related Injuries/Illnesses: Calculating Priority in NYS

- Occupational injuries & illnesses obtained from SOII for 2003-2005 by major industry group.

- Number & incidence rate were obtained by major industry group, for:

  All Injuries & Illnesses

  Injuries & Illnesses with Days Away from Work

  Injuries & Illnesses with Job Transfer

- Number of cases and incidence rates per industry group were sorted in ascending order & ranked.

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Work-related Injuries/Illnesses: Calculating Priority in NYS

- Numeric rank for the number of cases and incidence rates were added together = priority score.

- Priority score was then sorted in ascending order & ranked, with 1 being the lowest priority.

- Overall Priority:

- Indices for 3 inj/ill categories & Workers' Compensation were adjusted by severity & summed = Priority Score.

- Priority Score was adjusted by estimated growth in industry for U.S. = Adjusted Priority Score.

- Adjusted Priority Score ranked, with 1 being lowest priority.

Work-related Injuries/Illnesses: All in NYS

Industry	2003	2004	2005	Mean Count	Count Rank
Mining	100	100	100	100	1
Agriculture/Forestry/Fishing	800	500	800	700	2
Utilities	1,300	1,700	1,600	1,533	3
Education	3,500	4,300	3,900	3,900	4
Other Services	4,100	4,000	3,700	3,933	5
Information	4,000	4,500	3,500	4,000	6
Financial Activities	5,800	6,300	6,200	6,100	7
Wholesale Trade	9,400	10,400	9,800	9,867	8
Professional/ Business	13,100	9,200	12,800	11,700	9
Construction	11,300	13,300	11,800	12,133	10
Transportation	14,000	12,100	13,300	13,133	11
Leisure/ Hospitality	13,500	13,000	13,800	13,433	12
Retail Trade	23,700	26,000	25,400	25,033	13
Manufacturing	28,100	24,600	23,500	25,400	14
Health Care	39,500	36,500	46,300	40,767	15
Data derived from SOII for NYS.					

Work-related Injuries/Illnesses: All in NYS

Industry	2003	2004	2005	Mean IR	IR Rank
Financial Activities	0.9	1.0	1.0	1.0	1
Professional/ Business	1.6	1.0	1.6	1.4	2
Information	1.7	1.9	1.4	1.7	3
Other Services	1.8	1.8	1.7	1.8	4
Education	2.0	2.5	2.0	2.2	5
Mining	2.9	2.7	2.8	2.8	6
Wholesale Trade	2.9	3.2	3.0	3.0	7.5
Leisure/ Hospitality	3.0	2.9	3.0	3.0	7.5
Retail Trade	3.6	3.6	3.9	3.7	9
Utilities	3.3	4.4	3.9	3.9	10
Construction	4.1	4.9	4.2	4.4	11
Manufacturing	4.9	4.3	4.2	4.5	12.5
Health Care	4.5	4.0	4.9	4.5	12.5
Agriculture/Forestry/Fishing	7.7	3.8	4.9	5.5	14
Transportation	7.1	5.7	6.4	6.4	15

Data derived from SOII for NYS.

IR = incidence rate based on 100 full time workers.

Work-related Injuries/Illnesses: All in NYS

Industry	Count Rank	IR Rank	Priority Score	Priority Index
Mining	1	6	7.0	1
Financial Activities	7	1	8.0	2
Education	4	5	9.0	4
Other Services	5	4	9.0	4
Information	6	3	9.0	4
Professional/ Business	9	2	11.0	6
Utilities	3	10	13.0	7
Wholesale Trade	8	7.5	15.5	8
Agriculture/Forestry/Fishing	2	14	16.0	9
Leisure/ Hospitality	12	7.5	19.5	10
Construction	10	11	21.0	11
Retail Trade	13	9	22.0	12
Transportation	11	15	26.0	13
Manufacturing	14	12.5	26.5	14
Health Care	15	12.5	27.5	15

Note: A Priority Index score of 1 is lowerst priority.

Data Derived from SOII for NYS.

Priority Score = Count Rank + IR Rank.

Work-related Injuries/Illnesses: Days Away from Work in NYS

Industry	2003	2004	2005	Mean Count	Count Rank
Mining	100	100	100	100	1
Agriculture/Forestry/Fishing	600	300	400	433	2
Utilities	500	700	700	633	3
Education	1,700	1,700	1,400	1,600	4
Other Services	2,300	2,000	1,900	2,067	5
Information	2,300	2,900	2,200	2,467	6
Financial Activities	3,100	3,100	3,300	3,167	7
Leisure/ Hospitality	6,000	4,400	4,200	4,867	8
Wholesale Trade	5,000	6,000	6,000	5,667	9
Professional/ Business	6,600	4,500	6,000	5,700	10
Construction	6,300	7,500	6,400	6,733	11
Transportation	9,700	7,600	7,700	8,333	12
Manufacturing	11,500	10,800	9,900	10,733	13
Retail Trade	10,600	12,800	12,000	11,800	14
Health Care	21,600	18,200	21,200	20,333	15
Data derived from SOII for NYS.					

Work-related Injuries/Illnesses: Days Away from Work in NYS

Industry	2003	2004	2005	Mean IR	IR Rank
Financial Activities	0.5	0.5	0.5	0.5	1
Professional/ Business	0.8	0.5	0.7	0.7	2
Education*	0.9	1.0	0.7	0.9	3.5
Other Services	1.0	0.9	0.9	0.9	3.5
Information	1.0	1.2	0.9	1.0	5
Leisure/ Hospitality	1.3	1.0	0.9	1.1	6
Mining	1.7	1.3	1.3	1.4	7
Wholesale Trade	1.5	1.8	1.8	1.7	8.5
Utilities	1.4	1.9	1.7	1.7	8.5
Manufacturing	2.0	1.9	1.8	1.9	10
Retail Trade	1.6	2.5	1.8	2.0	11
Health Care	2.4	2.0	2.2	2.2	12
Construction	2.3	2.8	2.3	2.5	13
Agriculture/Forestry/Fishing	5.9	2.0	2.3	3.4	14
Transportation	4.9	3.6	3.7	4.1	15
Data derived from SOII for NYS.					
IR = incidence rate based on 100 full time workers.					

Work-related Injuries/Illnesses: Days Away from Work in NYS

Industry	Count Rank	IR Rank	Priority Score	Priority Index
Education	4	3.5	7.5	1
Mining	1	7	8.0	2.5
Financial Activities	7	1	8.0	2.5
Other Services	5	3.5	8.5	4
Information	6	5	11.0	5
Utilities	3	8.5	11.5	6
Professional/ Business	10	2	12.0	7
Leisure/ Hospitality	8	6	14.0	8
Agriculture/Forestry/Fishing	2	14	16.0	9
Wholesale Trade	9	8.5	17.5	10
Manufacturing	13	10	23.0	11
Construction	11	13	24.0	12
Retail Trade	14	11	25.0	13
Transportation	12	15	27.0	14.5
Health Care	15	12	27.0	14.5

Note: A Priority Index score of 1 is lowerst priority.

Data Derived from SOII for NYS.

Priority Score = Count Rank + IR Rank.

Work-related Injuries/Illnesses: w/Job Transfer in NYS

Industry	2003	2004	2005	Mean Count	Count Rank
Mining*	0	0	0	0	1
Information*	0	0	100	33	2
Agriculture/Forestry/Fishing*	0	0	200	67	3
Education	100	100	100	100	4
Leisure/ Hospitality*	200	200	0	133	5.5
Other Services	100	100	200	133	5.5
Financial Activities*	200	300	0	167	7
Utilities	300	500	400	400	8
Construction	400	600	500	500	9
Professional/ Business	300	400	900	533	10
Health Care*	1800	0	900	900	11
Wholesale Trade	1300	1000	700	1,000	12
Transportation	1100	1300	1100	1,167	13
Retail Trade	1700	1700	2100	1,833	14
Manufacturing	4500	3700	3400	3,867	15

Data derived from SOII for NYS.

* Number of cases is < 15 and is assigned a zero value.

Work-related Injuries/Illnesses: w/Job Transfer in NYS

Industry	2003	2004	2005	Mean IR	IR Rank
Information*	0.0	0.0	0.0	0.0	3
Financial Activities*	0.0	0.1	0.0	0.0	3
Professional/ Business*	0.0	0.0	0.1	0.0	3
Education*	0.0	0.0	0.0	0.0	3
Leisure/ Hospitality*	0.0	0.0	0.0	0.0	3
Health Care*	0.2	0.0	0.1	0.1	6.5
Other Services*	0.0	0.1	0.1	0.1	6.5
Construction	0.1	0.2	0.2	0.2	8
Mining*	0.5	0.4	0.0	0.3	10
Wholesale Trade	0.4	0.3	0.2	0.3	10
Retail Trade	0.3	0.4	0.3	0.3	10
Agriculture/Forestry/Fishing	0.2	0.3	0.9	0.5	12
Transportation	0.6	0.6	0.5	0.6	13
Manufacturing	0.8	0.6	0.6	0.7	14
Utilities	0.7	1.2	1.0	1.0	15

Data derived from SOII for NYS.

* Incidence rate is < 0.05 and is assigned a zero value.

IR = incidence rate based on 100 full time workers.

Work-related Injuries/Illnesses: w/Job Transfer in NYS

Industry	Count Rank	IR Rank	Priority Score	Priority Index
Information	2	3	5	1
Education	4	3	7	2
Leisure/ Hospitality	5.5	3	8.5	3
Financial Activities	7	3	10	4
Mining	1	10	11	5
Other Services	5.5	6.5	12	6
Professional/ Business	10	3	13	7
Agriculture/Forestry/Fishing	3	12	15	8
Construction	9	8	17	9
Health Care	11	6.5	17.5	10
Wholesale Trade	12	10	22	11
Utilities	8	15	23	12
Retail Trade	14	10	24	13
Transportation	13	13	26	14
Manufacturing	15	14	29	15

Note: A Priority Index score of 1 is lowest priority.

Data Derived from SOII for NYS.

Priority Score = Count Rank + IR Rank.

Injury & Illness Claims to Workers' Compensation in NYS

Industry	2004 Indemnity Cases	Count Rank
Mining	78	1
Agriculture/Forestry/Fishing	402	2
Utilities	908	3
Other Services	1,751	4
Information	1,931	5
Financial Activites	3,330	6
Wholesale Trade	4,118	7
Leisure/Hospitality	4,531	8
Professional/Business	4,736	9
Construction	6,646	11
Manufacturing	9,243	14
Education	5,018	10
Transportation	6,668	12
Retail Trade	7,732	13
Health care	14,036	15

Data derived from NYS Workers' Compensation data for accident year 2004.

Work-related Injuries/Illnesses: NYS Overall

Industry	All	Days Away*	Job Transfer**	WC Claims***	Priority Score	Growth Adj.	Adj. Priority Score	Priority Index
Mining	1	3.125	8.75	2	14.875	-8.8%	13.57	1
Financial Activities	2	3.125	7	8	20.125	10.5%	22.24	2
Information	4	6.25	1.75	14	26	11.6%	29.02	3
Agriculture/Forestry/Fishing	9	11.25	14	4	38.25	-10.7%	34.16	4
Other Services	4	5	10.5	12	31.5	11.8%	35.22	5
Education	4	1.25	3.5	20	28.75	32.5%	38.09	6
Utilities	7	7.5	21	6	41.5	-1.3%	40.96	7
Professional/ Business	6	8.75	12.25	10	37	27.8%	47.29	8
Leisure/ Hospitality	10	10	5.25	18	43.25	17.7%	50.91	9
Whoesale Trade	8	12.5	19.25	16	55.75	8.4%	60.43	10
Construction	11	15	15.75	22	63.75	11.4%	71.02	11
Manufacturing	14	13.75	26.25	28	82	-5.4%	77.57	12
Retail Trade	12	16.25	22.75	26	77	11.0%	85.47	13
Transportation	13	18.125	24.5	24	79.625	11.9%	89.10	14
Health Care	15	18.125	17.5	30	80.625	30.3%	105.05	15

Note: A priority index score of 1 is lowest priority

WC Claims = NYS Workers' Compensation Accepted Indemnity Claims for Accident Year 2004

Priority Score = All + Days Away* + Job Transfer**+ Workers' Comp

Growth Adj. = Estimated Growth in Industry between 2004-2014 (http://www.bls.gov/news.release/ecopro.t01.htm)

Adjusted Priority Score = Priority Score + (Growth Estimate x Priority Score).

* The rank for those injuries and illnesses with days away from work were weighted: Rank x 1.25

**The rank for those injuries and illnesses that required job transfer were weighted: Rank x 1.75

***The rank for those injuries and illnesses that had accepted claims from NYS workers' compensation were weighted: Rank x 2.0

Work-related Fatalities: Calculating Priority in NYS

- Occupational fatalities obtained from CFOI for 2003 - 2005 by major industry group for NYS.

- Number of fatalities each year was summed & adjusted by the estimated growth of that industry for U.S.= priority score.

- Priority scores were sorted in ascending order & ranked, with 1 being the lowest priority.

- Performed separately for NYC & NYS w/o NYC (results not shown here).

Work-related Fatalities: NYS

Industry	2003	2004	2005	Mean Deaths	Priority Score	Growth Estimate**	Adjusted Priority Score	Priority Index
Mining*	0	0	0	0	1	-8.8%	0.91	1
Utilities*	0	6	0	2	2.5	-1.3%	2.47	2
Information*	0	0	5	2	2.5	11.6%	2.79	3
Education*	0	3	6	3	4	32.5%	5.30	4
Health Care	4	6	4	5	5	30.3%	6.52	5
Financial Activities	8	8	5	7	6	10.5%	6.63	6
Manufacturing	11	15	14	13	8	-5.4%	7.57	7
Wholesale Trade	5	8	10	8	7	8.4%	7.59	8
Agriculture/Forestry/Fishing	17	14	11	14	9.5	-10.7%	8.48	9
Other Services	8	16	19	14	9.5	11.8%	10.62	10
Leisure/ Hospitality	17	24	11	17	11	17.7%	12.95	11
Retail Trade	23	18	20	20	13	11.0%	14.43	12
Professional/ Business	21	25	7	18	12	27.8%	15.34	13
Transportation	27	25	42	31	14	11.9%	15.67	14
Construction	46	54	53	51	15	11.4%	16.71	15

Data Derived from CFOI for NYS.

Note: A priority index score of 1 is lowest priority

Priority Score = Ordinal Rank of Mean deaths 2003-2005.

Adjusted Priority Score = Priority Score + (Growth Estimate x Priority Score).

* Zero cells indicate no data or data that did not meet CFOI publication criteria (< 3 deaths).

**Growth Estimate based on U.S BLS projections 2004-2014. (http://www.bls.gov/news.release/ecopro.t01.htm)

Work-related Hospitalizations: Calculating Priority in NYS

- Injury & illness defined as work-related if expected primary payer was workers' compensation.

- Number of admissions, median length of stay, and median $/day were all sorted in ascending order & their ranks were summed = priority score.

- Priority score was sorted in ascending order = priority index, with a 1 being lowest priority.

- Priority Index was created for major diagnosis, injuries/poisonings, cause of injury & place injury occurred.

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Work-related Hospitalizations: Major Diagnosis in NYS

Major Diagnosis Groups	2003	2004	2005	Mean Count	Count Rank
Sensory Organ Disease	18	15	14	16	1.5
Diseases of the Blood	18	12	18	16	1.5
Neoplasms	50	58	47	52	3
Infectious/Parasitic Disease	50	60	74	61	4
Genitourinary System Disease	65	54	90	70	5
Endocrine/Metabolic Disease	83	74	81	79	6
Nervous System Disease	157	171	136	155	7
Respiratory Sysytem Disease	254	211	214	226	8
Mental Disorders	204	215	266	228	9
Digestive System Disease	276	320	276	291	10
Skin Disease	338	341	378	352	11
Ill-defined Conditions	426	453	437	439	12
Circulatory System Disease	500	545	470	505	13
Injury/Poisoning	4,912	5,005	4,783	4,900	14
Musculoskeletal Disease	5,610	5,804	5,496	5,637	15
Data derived from NYS SPARCS.					

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Work-related Hospitalizations: Major Diagnosis in NYS

Major Diagnosis Groups	2003*	2004*	2005*	Mean LOS	LOS Rank
Ill-defined Conditions	1.0	1.0	1.0	1.0	1
Sensory Organ Disease	3.0	2.0	1.0	2.0	2
Nervous System Disease	3.0	2.0	2.0	2.3	3
Digestive System Disease	3.0	2.0	3.0	2.7	4
Circulatory System Disease	3.0	3.0	3.0	3.0	7
Genitourinary System Disease	3.0	3.0	3.0	3.0	7
Injury/Poisoning	3.0	3.0	3.0	3.0	7
Musculoskeletal Disease	3.0	3.0	3.0	3.0	7
Skin Disease	3.0	3.0	3.0	3.0	7
Diseases of the Blood	4.0	3.0	4.0	3.7	10
Endocrine/Metabolic Disease	4.0	4.0	4.0	4.0	11.5
Respiratory Sysytem Disease	4.0	4.0	4.0	4.0	11.5
Mental Disorders	5.0	5.0	5.0	5.0	13.5
Neoplasms	5.5	6.5	3.0	5.0	13.5
Infectious/Parasitic Disease	5.5	6.0	6.5	6.0	15

* Median value for this Year
Data derived from NYS SPARCS.

Work-related Hospitalizations: Major Diagnosis in NYS

Major Diagnosis Groups	2003*	2004*	2005*	Mean $/day	$/day Rank
Mental Disorders	1,315	1,226	1,253	1,265	1
Skin Disease	2,314	2,474	2,783	2,523	2
Respiratory Sysytem Disease	2,578	2,884	3,033	2,832	3
Genitourinary System Disease	2,905	3,114	3,203	3,074	4
Endocrine/Metabolic Disease	2,785	3,342	3,144	3,090	5
Sensory Organ Disease	3,394	2,592	3,571	3,186	6
Infectious/Parasitic Disease	3,069	3,242	3,861	3,391	7
Diseases of the Blood	3,053	2,197	5,341	3,531	8
Neoplasms	3,161	3,386	4,075	3,540	9
Digestive System Disease	3,578	4,211	4,193	3,994	10
Ill-defined Conditions	3,801	4,305	4,777	4,294	11
Circulatory System Disease	3,669	4,495	4,827	4,330	12
Nervous System Disease	3,999	4,081	5,021	4,367	13
Injury/Poisoning	4,069	4,497	5,246	4,604	14
Musculoskeletal Disease	5,860	6,920	7,899	6,893	15

* Median value for this Year
Data derived from NYS SPARCS.

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Work-related Hospitalizations: Major Diagnosis in NYS

Major Diagnosis Groups	Count Rank	LOS Rank	$/day Rank	Priority Score	Priority Index
Sensory Organ Disease	1.5	2	6	9.5	1
Genitourinary System Disease	5	7	4	16	2
Diseases of the Blood	1.5	10	8	19.5	3
Skin Disease	11	7	2	20	4
Endocrine/Metabolic Disease	6	11.5	5	22.5	5.5
Respiratory Sysytem Disease	8	11.5	3	22.5	5.5
Nervous System Disease	7	3	13	23	7
Mental Disorders	9	13.5	1	23.5	8
Digestive System Disease	10	4	10	24	9.5
Ill-defined Conditions	12	1	11	24	9.5
Neoplasms	3	13.5	9	25.5	11
Infectious/Parasitic Disease	4	15	7	26	12
Circulatory System Disease	13	7	12	32	13
Injury/Poisoning	14	7	14	35	14
Musculoskeletal Disease	15	7	15	37	15
Data derived from NYS SPARCS.					
Priority Score = Count Rank + LOS Rank + $/day Rank.					

Work-related Hospitalizations: Injuries/Poisonings in NYS

Injury/ Poisoning Groups	2003	2004	2005	Mean Count	Count Rank
Nonmedicinal Toxic Effect	43	40	34	39	1
Spinal/ Nerve Injury	47	48	44	46	2
Unspecified	53	58	58	56	3
Traumatic Complications	87	84	76	82	4
Dislocation	87	89	86	87	5
Internal Damage	144	130	159	144	6
Crushing Injury	145	168	163	159	7
Skull Fracture	162	162	189	171	8
Intracranial Injury	247	249	283	260	9
Burns	275	319	302	299	10
Sprains/Strains	324	336	250	303	11
Neck Fracture	312	329	314	318	12
Open Wound	437	475	415	442	13
Upper Limb Fracture	515	469	439	474	14
Medical Complications	944	944	923	937	15
Lower Limb Fracture	1,041	1,057	999	1,032	16

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized: Foreign body injuries, Injured blood vessels, Late effects of accident, Poisoning, & Superficial wounds.

Data derived from NYS SPARCS.

Work-related Hospitalizations: Injuries/Poisonings in NYS

Injury/ Poisoning Groups	2003*	2004*	2005*	Mean LOS	LOS Rank
Nonmedicinal Toxic Effect	1.0	1.0	1.0	1.0	2
Sprains/Strains	1.0	1.0	1.0	1.0	2
Unspecified	1.0	1.0	1.0	1.0	2
Crushing Injury	2.0	2.0	2.0	2.0	6
Dislocation	2.0	2.0	2.0	2.0	6
Intracranial Injury	2.0	2.0	2.0	2.0	6
Open Wound	2.0	2.0	2.0	2.0	6
Upper Limb Fracture	2.0	2.0	2.0	2.0	6
Spinal/ Nerve Injury	3.0	2.0	2.0	2.3	9
Lower Limb Fracture	4.0	3.0	3.0	3.3	10
Medical Complications	3.5	4.0	3.0	3.5	11.5
Skull Fracture	4.0	3.5	3.0	3.5	11.5
Internal Damage	4.0	4.0	4.0	4.0	13.5
Neck Fracture	4.0	4.0	4.0	4.0	13.5
Burns	6.0	5.0	5.0	5.3	15
Traumatic Complications	2.0	2.0	21.0	8.3	16

* Median value for this Year

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized: Foreign body injuries, Injured blood vessels, Late effects of accident, Poisoning, & Superficial wounds.

Data derived from NYS SPARCS.

Work-related Hospitalizations: Injuries/Poisonings in NYS

Injury/ Poisoning Groups	2003*	2004*	2005*	Mean $/day	$/day Rank
Unspecified	4,132	3,739	4,206	4,026	1
Neck Fracture	3,501	4,106	4,558	4,055	2
Crushing Injury	3,618	3,754	4,858	4,077	3
Lower Limb Fracture	3,686	4,147	4,869	4,234	4
Nonmedicinal Toxic Effect	4,537	3,745	4,608	4,297	5
Open Wound	3,921	4,235	4,840	4,332	6
Internal Damage	3,761	4,161	5,191	4,371	7
Traumatic Complications	4,563	3,778	4,936	4,426	8
Medical Complications	3,936	4,491	5,145	4,524	9
Skull Fracture	4,168	5,149	5,553	4,957	10
Spinal/ Nerve Injury	3,431	4,635	7,259	5,109	11
Burns	4,572	5,540	5,392	5,168	12
Intracranial Injury	4,423	5,136	5,967	5,175	13
Upper Limb Fracture	4,672	4,883	6,245	5,267	14
Dislocation	4,565	5,542	7,175	5,761	15
Sprains/Strains	5,162	6,489	6,120	5,924	16

* Median value for this Year

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not
   prioritized: Foreign body injuries, Injured blood vessels, Late effects of accident, Poisoning,
   & Superficial wounds.

Data derived from NYS SPARCS.

Work-related Hospitalizations: Injuries/Poisonings in NYS

Injury/ Poisoning Groups	Count Rank	LOS Rank	$/day Rank	Priority Score	Priority Index
Unspecified	3	2	1	6	1
Nonmedicinal Toxic Effect	1	2	5	8	2
Crushing Injury	7	6	3	16	3
Spinal/ Nerve Injury	2	9	11	22	4
Open Wound	13	6	6	25	5
Dislocation	5	6	15	26	6
Internal Damage	6	13.5	7	26.5	7
Neck Fracture	12	13.5	2	27.5	8
Traumatic Complications	4	16	8	28	9.5
Intracranial Injury	9	6	13	28	9.5
Sprains/Strains	11	2	16	29	11
Lower Limb Fracture	16	10	4	30	12
Skull Fracture	8	11.5	10	29.5	13
Upper Limb Fracture	14	6	14	34	14
Medical Complications	15	11.5	9	35.5	15
Burns	10	15	12	37	16

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized: Foreign body injuries, Injured blood vessels, Late effects of accident, Poisoning, & Superficial wounds.

Priority Score = Count Rank + LOS Rank + $/day Rank.

Data derived from NYS SPARCS.

Work-related Hospitalizations: Injury/Poisonings by Cause in NYS

Injury/Poisoning Cause	2003	2004	2005	Mean Count	Count Rank
Accidental Poisoning by Other Substance	18	22	24	21	1
Late Effects of Accident	34	47	38	40	2
Accident Caused by Environmental Factors	46	43	48	46	3
Motor Vehicle Nontraffic Accident	61	54	63	59	4
Accidents Caused by Fire	76	76	80	77	5
Homicide/Violence by Other Person	94	95	65	85	6
Motor Vehicle Traffic Accident	540	586	634	587	7
Medical Complications	937	933	910	927	8
Other Accident	1,423	1,541	1,411	1,458	9
Accidental Fall	1,587	1,533	1,441	1,520	10

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized:
    Accidental poisoning by drugs, Adverse drug/medicinal/biological effect, Air/Space transport accident,
    Legal intervention, Misadventures in surgery/medical care, Missing E-code, Other road vehicle accident,
    Railway accident, Submersion/Suffocation/Foreign Body, Suicide/Self-inflicted injury, Terrorism,
    Unknown if self-inflicted or accidental injury, Vehicle accident NEC, War, & Water transport accident.
Data derived from NYS SPARCS.

Work-related Hospitalizations:
Injuries/Poisonings by Cause in NYS

Injury/Poisoning Cause	2003*	2004*	2005*	Mean LOS	LOS Rank
Accidental Poisoning by Other Substance	1.0	1.0	1.0	1.0	1
Accident Caused by Environmental Factors	2.0	2.0	2.0	2.0	2.5
Other Accident	2.0	2.0	2.0	2.0	2.5
Homicide/Violence by Other Person	2.0	2.0	3.0	2.3	4
Motor Vehicle Nontraffic Accident	3.0	2.0	3.0	2.7	5
Motor Vehicle Traffic Accident	3.0	3.0	3.0	3.0	6.5
Accidental Fall	3.0	3.0	3.0	3.0	6.5
Late Effects of Accident	3.5	3.0	3.0	3.2	8
Medical Complications	3.0	4.0	3.0	3.3	9
Accidents Caused by Fire	5.0	2.0	3.5	3.5	10

* Median value for this Year

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized:

    Accidental poisoning by drugs, Adverse drug/medicinal/biological effect, Air/Space transport accident,

    Legal intervention, Misadventures in surgery/medical care, Missing E-code, Other road vehicle accident,

    Railway accident, Submersion/Suffocation/Foreign Body, Suicide/Self-inflicted injury, Terrorism,

    Unknown if self-inflicted or accidental injury, Vehicle accident NEC, War, & Water transport accident.

Data derived from NYS SPARCS.

Work-related Hospitalizations: Injuries/Poisonings by Cause in NYS

Injury/Poisoning Cause	2003*	2004*	2005*	Mean $/day	$/day Rank
Accident Caused by Environmental Factors	3,102	2,834	4,277	3,405	1
Accidental Poisoning by Other Substance	3,510	3,680	5,570	4,254	2
Homicide/Violence by Other Person	3,704	4,065	5,183	4,317	3
Other Accident	4,046	4,479	4,982	4,502	4
Medical Complications	3,908	4,492	5,144	4,514	5
Motor Vehicle Nontraffic Accident	3,762	5,083	4,747	4,531	6
Accidental Fall	4,066	4,430	5,207	4,568	7
Late Effects of Accident	5,809	5,414	4,253	5,159	8
Motor Vehicle Traffic Accident	4,444	4,856	6,370	5,223	9
Accidents Caused by Fire	4,805	5,793	6,187	5,595	10

* Median value for this Year

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized:
   Accidental poisoning by drugs, Adverse drug/medicinal/biological effect, Air/Space transport accident,
   Legal intervention, Misadventures in surgery/medical care, Missing E-code, Other road vehicle accident,
   Railway accident, Submersion/Suffocation/Foreign Body, Suicide/Self-inflicted injury, Terrorism,
   Unknown if self-inflicted or accidental injury, Vehicle accident NEC, War, & Water transport accident.
Data derived from NYS SPARCS.

Work-related Hospitalizations:
Injuries/Poisonings by Cause in NYS

Injury/Poisoning Cause	Count Rank	LOS Rank	$/day Rank	Priority Score	Priority Index
Accidental Poisoning by Other Substance	1	1	2	4	1
Accident Caused by Environmental Factors	3	2.5	1	6.5	2
Homicide/Violence by Other Person	6	4	3	13	3
Motor Vehicle Nontraffic Accident	4	5	6	15	4
Other Accident	9	2.5	4	15.5	5
Late Effects of Accident	2	8	8	18	6
Medical Complications	8	9	5	22	7
Motor Vehicle Traffic Accident	7	6.5	9	22.5	8
Accidental Fall	10	6.5	7	23.5	9
Accidents Caused by Fire	5	10	10	25	10

Note: Those injuries/poisonings with a mean of < 20 cases between 2003 and 2005 were not prioritized:

Accidental poisoning by drugs, Adverse drug/medicinal/biological effect, Air/Space transport accident,

Legal intervention, Misadventures in surgery/medical care, Missing E-code, Other road vehicle accident,

Railway accident, Submersion/Suffocation/Foreign Body, Suicide/Self-inflicted injury, Terrorism,

Unknown if self-inflicted or accidental injury, Vehicle accident NEC, War, & Water transport accident.

Priority Score = Count Rank + LOS Rank + $/day Rank.

Data derived from NYS SPARCS.

Conclusions

- Top 5 Industries for Work-related Injuries & Illnesses:

    1- Health Care

    2- Transportation

    3- Retail Trade

    4- Manufacturing

    5- Construction

Conclusions

- Top 5 Industries for Work-related Fatalities:

  1- Construction

  2- Transportation

  3- Professional/ Business

  4- Retail Trade

  5- Leisure/ Hospitality

DOH

Conclusions

- Top 5 Work-related Major Diagnoses Hospitalizations:

    1- Musculoskeletal Disease

    2- Injury/ Poisoning

    3- Circulatory System Disease

    4- Infectious/ Parasitic Disease

    5- Neoplasms

DOH

Conclusions

- Top 5 Work-related Injury/ Poisoning Hospitalizations:

  1- Burns

  2- Medical Complications

  3- Upper Limb Fracture

  4- Skull Fracture

  5- Lower Limb Fracture

DOH

Conclusions

- Top 5 Work-related Causes of Injury/ Poisoning Hospitalizations:

  1- Accidents Caused by Fire

  2- Accidental Falls

  3- Motor Vehicle Traffic Accident

  4- Medical Complications

  5- Late Effects of Accident

Conclusions

- < 1% of injuries/poisonings had a missing cause code.

- ~33% of injuries/poisonings had a missing place code.

- Unable to adequately prioritize place of injury/poisoning due to high proportion of missing place codes.

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Recommendations

- Use priority index method to target work-related injury and illness prevention on lower levels (e.g., geography, race, age).

- Utilize scientific and clinical partners to target interventions to high priority industries.

Future Research

- Study the reliability and validity of using the expected payer Workers' Compensation as an indicator of work-relatedness when prioritizing work-related hospitalizations in NYS.

- Analyze the priority indices over time.

Questions?

- Are they ways to improve these indices?

- Do you know of any other data sources that could be used to refine these indices?

- Should this index be applied to our prevention efforts, and if so how?

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