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of NEW HAMPSHIRE

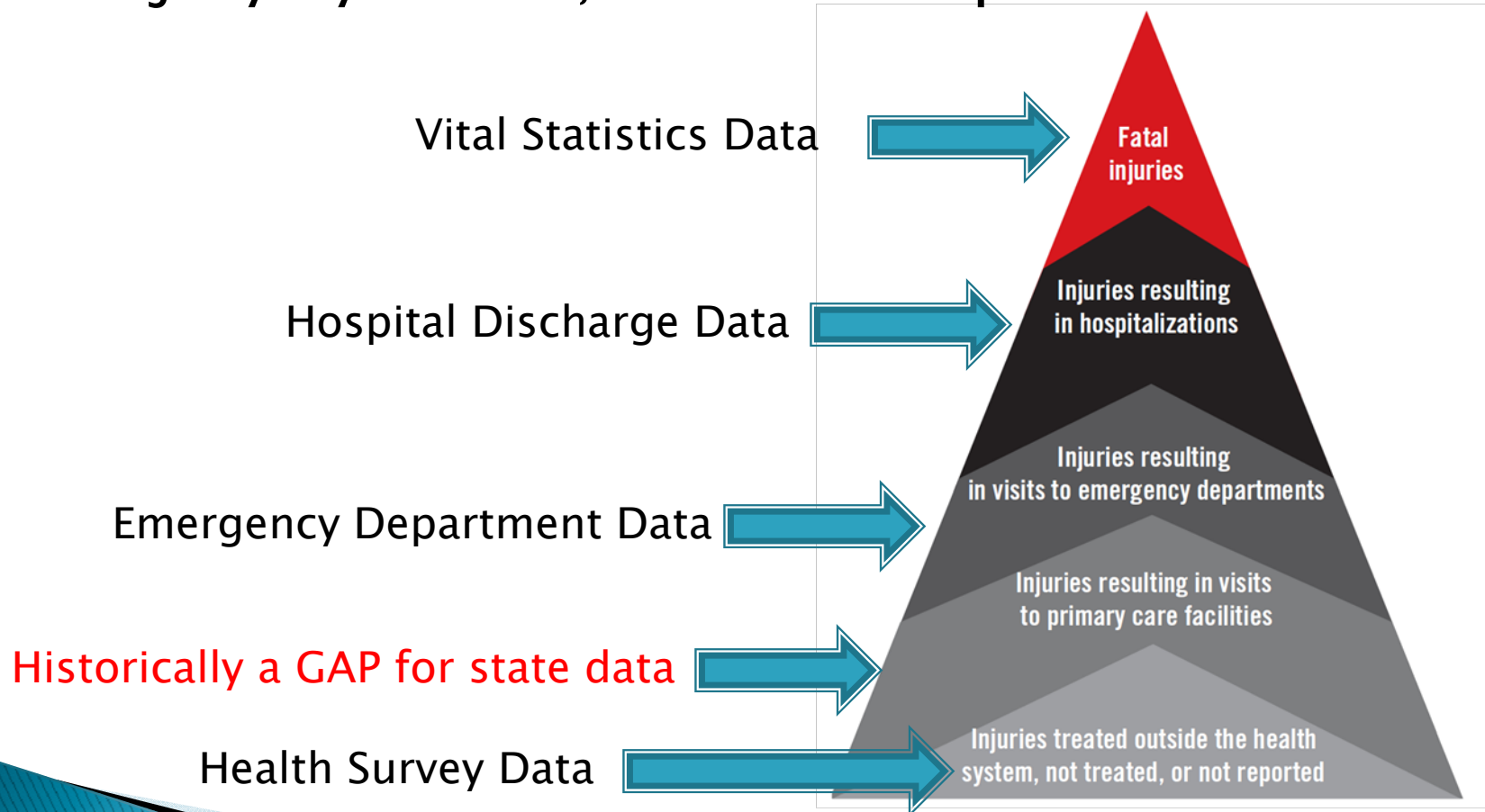
New Hampshire Institute for
Health Policy and Practice

APCD Utility for Public Health

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Public Health Data

▶ Injury Pyramid¹, as an example



1. https://www.who.int/violence_injury_prevention/key_facts/VIP_key_fact_5.pdf.



APCD Data

- ▶ Can help fill a gap that has existed in public health
 - Community health assessment
 - Surveillance
 - Evaluation
- ▶ More focus on the integration of public health and healthcare
 - APCD can help highlight areas for opportunity
 - What can we learn from the healthcare setting to inform public health?
 - How can public health inform the healthcare settings?



The NH Example

- ▶ NH Health Web Reporting and Query System
- ▶ Includes five data sets:
 - Birth, Death, Cancer, Inpatient, Emergency Dept.
- ▶ Provides Standard Indicator Reports for user-defined geographic areas:
 - County(s)
 - Hospital Service Area(s)
 - Senate District(s)
 - Public Health Network(s)
 - Town(s)

The NH Example

- ▶ With funding from CDC's Assessment Initiative, NH is developing a web-based module for NH APCD data
 - Supplement the data from other NH HealthWRQS modules
 - Help understand how APCD can inform community health assessment
- ▶ Includes commercial APCD and Medicaid data
- ▶ An example: cardiovascular disease...

Mortality data



Overall Leading Causes of Death per 100,000 People (All Ages) - Both Genders

Year(s): 2007

County: COOS

Population 32,226

Leading Causes	Crude Rate	L 95% CI	U 95% CI	Events
Diseases of heart	316.5	255.1	377.9	102
Malignant neoplasms	254.5	202.4	315.9	82
Accidents	80.7	52.7	118.2	26
Chronic lower respiratory diseases	71.4	45.3	107.1	23
Cerebrovascular diseases	46.5	26.0	76.7	15
Diabetes mellitus	31.0	14.9	57.0	10
Alzheimers disease	31.0	14.9	57.0	10
Influenza and pneumonia	31.0	14.9	57.0	10
Chronic liver disease and cirrhosis	*	*	*	7
Parkinsons disease	*	*	*	5

Notes: * Rates based on fewer than 10 events are suppressed; numerator values are suppressed when between 1 and 4 for geographic areas with fewer than 10 towns or of any value if town has fewer than 5,500 people.
Data Source: NH Division of Vital Records Administration death certificate data.
Indicator Definition: Resident deaths grouped by National Center for Health Statistics standard method for defining underlying leading causes of death.

Hospital Discharge Data



Heart Disease Inpatient Discharges per 100,000 People

Year(s): 2006

County: COOS

Selected Region
New Hampshire

	Adjusted Rate	L 95% CI	U 95% CI	Events	Population	Adjusted Rate	L 95% CI	U 95% CI	Events	Population	Statistical Test
Overall	163.9	128.9	205.5	75	32,434	180.5	173.4	187.6	2,521	1,325,070	Not Sig
	Age-Specific Rate	L 95% CI	U 95% CI	Events	Population	Age-Specific Rate	L 95% CI	U 95% CI	Events	Population	Statistical Test
0 To 4	"	"	"	0	1,481	14.9	7.4	26.7	11	73,725	Not Sig
05 To 14	"	"	"	0	3,601	"	"	"	6	170,097	Not Sig
15 To 24	"	"	"	1	4,112	17.1	11.7	24.1	32	187,372	Not Sig
25 To 34	"	"	"	0	3,266	46.9	36.6	59.3	70	149,176	Not Sig
35 To 44	"	"	"	3	4,409	81.9	69.6	94.2	170	207,602	Not Sig
45 To 54	208.9	104.3	373.8	11	5,266	117.8	103.3	132.3	255	216,407	Not Sig
55 To 64	360.5	201.8	594.6	15	4,161	261.3	235.7	286.9	401	153,447	Not Sig
65 To 74	463.6	253.5	777.8	14	3,020	571.9	521.8	622.0	501	87,601	Not Sig
75 To 84	852.4	513.2	1,331.1	19	2,229	1,194.9	1,104.8	1,285.0	676	56,575	Not Sig
85 Plus	1,349.8	697.5	2,357.8	12	889	1,729.7	1,560.0	1,899.4	399	23,068	Not Sig
Total Crude	231.2	181.9	289.8	75	32,434						

Notes

* Rates based on fewer than 10 events are suppressed; numerator values are suppressed when between 1 and 4 for geographic areas with fewer than 10 towns.
 Data Source: NH DHHS Hospital Discharge Data Collection System.
 Indicator Definition: Inpatient discharges with a principal diagnosis of heart disease (ICD 9CM code 391-398,402,404,410-416,420-429).

Emergency Department Data



Heart Disease ED Visits per 100,000 People

Year(s): 2006

County: COOS

	Selected Region					New Hampshire					
	Adjusted Rate	L 95% CI	U 95% CI	Events	Population	Adjusted Rate	L 95% CI	U 95% CI	Events	Population	Statistical Test
Overall	91.2	64.5	125.2	38	32,434	47.9	44.2	51.6	668	1,325,070	Sig
	Age-Specific Rate	L 95% CI	U 95% CI	Events	Population	Age-Specific Rate	L 95% CI	U 95% CI	Events	Population	Statistical Test
0 To 4	"	"	"	0	1,481	"	"	"	1	73,725	Not Sig
05 To 14	"	"	"	0	3,601	7.1	3.7	12.4	12	170,097	Not Sig
15 To 24	"	"	"	1	4,112	47.5	38.1	58.5	89	187,372	Not Sig
25 To 34	"	"	"	2	3,266	22.1	15.2	31.0	33	149,176	Not Sig
35 To 44	"	"	"	5	4,409	28.9	22.1	37.2	60	207,602	Not Sig
45 To 54	"	"	"	1	5,266	38.8	30.9	48.0	84	216,407	Not Sig
55 To 64	"	"	"	7	4,161	66.5	53.6	79.4	102	153,447	Not Sig
65 To 74	"	"	"	9	3,020	138.1	113.5	162.7	121	87,601	Not Sig
75 To 84	"	"	"	5	2,229	185.6	150.1	221.1	105	56,575	Not Sig
85 Plus	"	"	"	8	889	264.4	202.2	339.6	61	23,068	Not Sig
Total Crude	117.2	82.9	160.9	38	32,434						

Notes

* Rates based on fewer than 10 events are suppressed; numerator values are suppressed when between 1 and 4 for geographic areas with fewer than 10 towns.
 Data Source: NH DHHS Hospital Discharge Data Collection System.
 Indicator Definition: Resident ED visits with a principal diagnosis of heart disease (ICD 9CM code 391-398,402,404,410-416,420-429)

Risk Behaviors (BRFSS)



Coos County Totals

Behavioral Risk Factor Surveillance System Indicators, 2008

Any physical activity in past 30 days, 2008	Yes		No		n
	%	95%CI	%	95%CI	
	72.4	(68.2 , 76.6)	27.6	(23.4 , 31.8)	

Overweight or obese, 2008	Neither overweight or obese		Overweight (not obese)		Obese		n
	%	95%CI	%	95%CI	%	95%CI	
	30.3	(25.9 , 34.7)	40.8	(35.9 , 45.6)	28.9	(24.5 , 33.4)	

Current smoking, 2008	Yes		No		n
	%	95%CI	%	95%CI	
	21.1	(17.1 , 25.2)	78.9	(74.8 , 82.9)	

NH Claims Module



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Measurement Year=2009
Type of Payer=Commercial

NH HealthWRQS
Report Category: Cardiovascular Disease
Report Title: Cardiovascular Disease Prevalence

Age Group (Standard)	County of Residence=Coos					State of New Hampshire Total					Significance
	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	
** Age-Adjusted Total **	153.2	147.8	158.6	N/A	N/A	132.8	132.0	133.6	N/A	N/A	Sig
0-4	*	*	*	*	*	7.2	5.9	8.5	117	16,263	*
5-14	10.0	5.0	17.9	11	1,098	10.3	9.5	11.2	556	53,737	Not Sig
15-24	28.8	20.3	39.7	37	1,286	24.5	23.3	25.8	1,494	60,898	Not Sig
25-34	101.7	82.2	124.5	94	924	69.4	67.0	71.9	3,130	45,073	Sig
35-44	203.7	181.4	225.9	323	1,586	152.2	149.3	155.2	10,214	67,088	Sig
45-54	308.5	285.8	331.3	705	2,285	278.3	274.8	281.7	25,080	90,129	Sig
55-64	457.1	428.3	486.0	965	2,111	446.3	441.5	451.1	32,842	73,586	Not Sig
** Crude Total **	222.7	213.2	232.1	2,135	9,588	180.5	179.2	181.8	73,433	406,774	N/A

Number of Selected Individuals: Members who were continuously enrolled for 11+ months and have a primary diagnosis of cardiovascular disease (ICD-9 CM 390-447, 272.0-272.4).

Number of Population Individuals: Members who were continuously enrolled for 11+ months.

Data Source: NH Department of Health and Human Services, Office of Medicaid Business and Policy, Bureau of Systems and Data Management, Comprehensive Healthcare Information System data, on HealthWRQS Pilot Claims Module. Accessed at <http://healthwrqs-pre.sr.unh.edu/>

Report generated on: 01/24/2011

NH Claims Module



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Measurement Year=2009
Type of Payer=Commercial

NH HealthWRQS
Report Category: Cardiovascular Disease
Report Title: Cardiovascular Disease Prevalence and Cholesterol Screening

Age Group (Standard)	County of Residence=Coos					State of New Hampshire Total					Significance
	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	
5-14	*	*	*	*	11	323.7	276.4	371.0	180	556	*
15-24	243.2	*	*	9	37	402.9	370.8	435.1	602	1,494	*
25-34	531.9	394.8	701.3	50	94	589.1	562.2	616.0	1,844	3,130	Not Sig
35-44	609.9	524.7	695.1	197	323	693.7	677.5	709.8	7,085	10,214	Sig
45-54	716.3	653.8	778.8	505	705	740.1	729.5	750.8	18,562	25,080	Not Sig
55-64	703.6	650.7	756.6	679	965	767.3	757.8	776.8	25,199	32,842	Sig
** Crude Total **	675.9	641.0	710.8	1,443	2,135	728.3	722.1	734.5	53,480	73,433	N/A

Number of Selected Individuals: Members who were continuously enrolled for 11+ months and have a primary diagnosis of cardiovascular disease (ICD-9 CM 390-447, 272.0-272.4) and a service for a cholesterol screening test (CPT codes 80061, 83715, 83716, 83721).

Number of Population Individuals: Members who were continuously enrolled for 11+ months and have a primary diagnosis of cardiovascular disease (ICD-9 CM 390-447, 272.0-272.4).

Data Source: NH Department of Health and Human Services, Office of Medicaid Business and Policy, Bureau of Systems and Data Management, Comprehensive Healthcare Information System data, on HealthWRQS Pilot Claims Module. Accessed at <http://healthwrqs-pre.sr.unh.edu/>

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NH Claims Module



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Measurement Year=2008
Type of Payer=Medicaid

NH HealthWRQS
Report Category: Cardiovascular Disease
Report Title: Cardiovascular Disease Prevalence

Age Group (Standard)	County of Residence=Coos					State of New Hampshire Total					Significance
	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	
** Age-Adjusted Total **	184.6	166.3	202.8	N/A	N/A	177.0	172.7	181.3	N/A	N/A	Not Sig
0-4	17.5	8.8	31.4	11	627	11.3	9.7	13.0	184	16,220	Not Sig
5-14	10.0	5.6	16.5	15	1,497	12.3	11.1	13.5	423	34,335	Not Sig
15-24	30.3	19.2	45.5	23	758	29.1	26.3	31.8	432	14,863	Not Sig
25-34	82.0	45.9	135.2	15	183	89.5	80.2	98.8	358	3,999	Not Sig
35-44	256.0	185.2	344.8	43	168	212.8	196.3	229.3	641	3,012	Not Sig
45-54	395.7	298.1	515.0	55	139	387.4	363.2	411.5	987	2,548	Not Sig
55-64	553.6	424.4	709.7	62	112	562.0	525.4	598.6	906	1,612	Not Sig
** Crude Total **	64.3	55.9	72.7	224	3,484	51.3	49.7	52.9	3,931	76,589	N/A

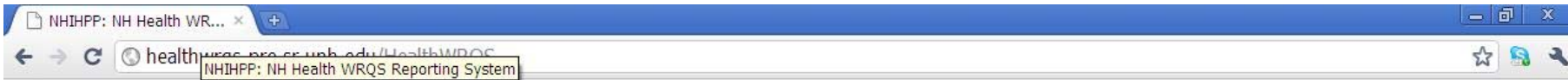
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Number of Population Individuals: Members who were continuously enrolled for 11+ months.

Data Source: NH Department of Health and Human Services, Office of Medicaid Business and Policy, Bureau of Systems and Data Management, Comprehensive Healthcare Information System data, on HealthWRQS Pilot Claims Module. Accessed at <http://healthwrqs-pre.sr.unh.edu/>

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Type of Payer=Medicaid

NH HealthWRQS
 Report Category: Cardiovascular Disease
 Report Title: Cardiovascular Disease Prevalence and Cholesterol Screening

Age Group (Standard)	County of Residence=Coos					State of New Hampshire Total					Significance
	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	Rate per 1,000	Lower 95% CI	Upper 95% CI	Number of Selected Individuals	Number of Population Individuals	
0-4	*	*	*	*	11	27.2	*	*	5	184	*
5-14	*	*	*	*	15	328.6	274.0	383.2	139	423	*
15-24	347.8	*	*	8	23	400.5	340.8	460.1	173	432	*
25-34	933.3	510.3	1,000.0	14	15	578.2	499.4	657.0	207	358	Not Sig
35-44	814.0	567.0	1,000.0	35	43	711.4	646.1	776.7	456	641	Not Sig
45-54	818.2	596.8	1,000.0	45	55	742.7	688.9	796.4	733	987	Not Sig
55-64	741.9	543.2	989.6	46	62	749.4	693.1	805.8	679	906	Not Sig
** Crude Total **	678.6	570.7	786.4	152	224	608.5	584.1	632.9	2,392	3,931	N/A

Number of Selected Individuals: Members who were continuously enrolled for 11+ months and have a primary diagnosis of cardiovascular disease (ICD-9 CM 390-447, 272.0-272.4) and a service for a cholesterol screening test (CPT codes 80061, 83715, 83716, 83721).
 Number of Population Individuals: Members who were continuously enrolled for 11+ months and have a primary diagnosis of cardiovascular disease (ICD-9 CM 390-447, 272.0-272.4).

Data Source: NH Department of Health and Human Services, Office of Medicaid Business and Policy, Bureau of Systems and Data Management, Comprehensive Healthcare Information System data, on HealthWRQS Pilot Claims Module. Accessed at <http://healthwrqs-pre.sr.unh.edu/>

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APCD Data and Other PH Data

- ▶ Current project to link APCD data to cancer registry data
 - Awarded to NH State Cancer Registry
 - PI: Judy Rees, BM BCh PhD, Research Assistant Professor of Community and Family Medicine, Dartmouth Medical School, Director of NH State Cancer Registry
 - Project Goal: Assess the feasibility of all-payer claims data (APCD) use in cancer registration (CCR), with a focus on improvements in case ascertainment and the accuracy of treatment information.
 - Developing CCR-APCD data matching and linkage methodology
- ▶ Coordinating with ME Cancer Registry and Westat

CDC's National Program of Cancer Registries (cooperative agreement U58 / DP000798)

Discussion

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