Employee Absenteeism in a Southeastern Ontario Tertiary Care Hospital: A Record Linkage Study

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Outline

- Rationale
- Key Messages
- Study Methods and Analyses
- Data Sources
- Results
- Discussion
- Implications
- Future considerations

Rationale

- Utilization of existing, electronically collected administrative data for the evaluation and surveillance of HCW absenteeism
- Lack of published research on HCW absenteeism regarding infectious disease transmission, and surveillance
- Threat of infectious diseases & nosocomial infections (i.e. SARS)

Key Messages

- Improve OH reporting
- Reducing absenteeism & costs
- Enhance monitoring of HCW absenteeism

Study Methods

- Retrospective cohort design involving a record linkage of Occupational Health and Human Resources data
- Study Period – June 1, 2004 to May 31, 2005
- Study Sample – 1,964 full-time employees
- Setting – KGH
- Descriptive Analysis – rates, frequencies
- (Multivariate Analysis)

Data Sources: Occupational Health Data (Injury/ illness reporting)

Parklane Software System

- Date of birth, sex, postal code
- Department
- OH Visit date
- Syndrome(s) - pre-determined by the system, classified by Occupational Health nurses

Data Sources: Human Resources Data (Absenteeism)

- Date of birth, sex, postal code
- Department
- Incident(s), hours, days absent (by month)

Modified Variables

Independent Variables:

- Departments
- Full-time Equivalency

Outcomes:

- Respiratory Illness - Febrile Respiratory Illness, Upper/ Lower Respiratory
- Gastrointestinal Illness
- Musculoskeletal/ Inflammatory condition

Objective

- To identify and describe absenteeism and Occupational Health visits among full-time Kingston General Hospital (KGH) employees, according to frequency, duration, workplace variables and seasonality.

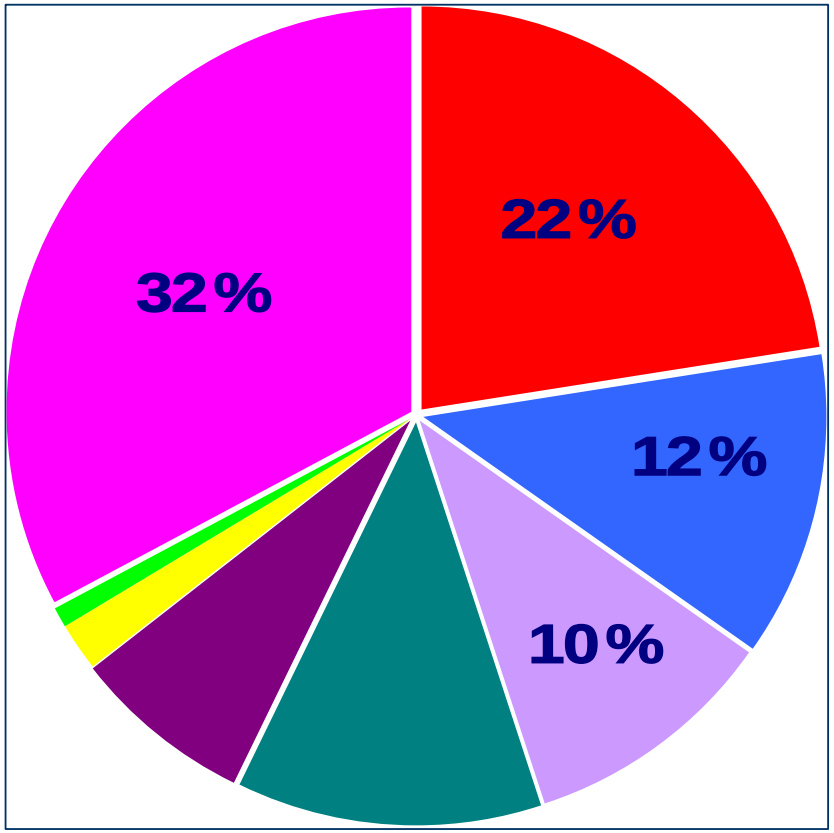
Absenteeism characteristics of Full-time Employees at KGH

Variable	n	%
Absent (at least once/year)		
Yes	1411	72
No	553	28
Number of New Periods of Absence		
Never	553	28
1	423	22
2	311	16
3	248	13
4,5	216	11
6+	194	10

Variable (†n=1411)	**Median**	**25th, 75th Quartiles**
Number of times absent/ person/ year	2	(1, 4)
Hours Absent/ person/ year	53	(23, 135)
Days Absent/ person/ year	7	(3, 18)
Mean duration of total days absent	17	

† *only employees experiencing an absence*

Primary Reasons for Absenteeism for 3,946 Periods of absence (n=1,964)



Total number of Absences for Full-time KGH employees reported by HR, but not reported to OH

Department	Total Number of FTE	Average Number of times absence reported to OH/ FTE/ year	Average Number of times absence not reported to OH/ FTE/ year	Percentage of times absence not reported to OH
Surgery	75	**4.0**	**1.3**	33
General Medicine	**234**	**3.4**	**1.5**	**44**
Paediatrics	26	**3.0**	1.1	**37**
Resource Pool	60	2.9	1.1	**38**
Critical Care	183	2.5	1.0	**40**
Emergency Department	52	2.6	0.7	27
Out-patient clinics	162	2.2	0.5	23
Obstetrics/ Gynaecology	49	2.0	0.8	**40**
Administration & Support	**678**	1.8	0.4	23
Diagnostic Imaging	**234**	1.5	0.5	27

Discussion

- Highest crude absence rates = Surgical, General Medicine & Paediatric departments
- Highest percentage of visits not reported to OH = General Medicine, Critical Care & Obstetrics/ Gynaecology

**Improve OH Reporting

Reduced Absenteeism and Costs

- Workplace Health Promotion
- Maximize productivity/ utilization while minimizing staffing costs
- Retention strategies
- Target specific departments to provide more complete and accurate OH data

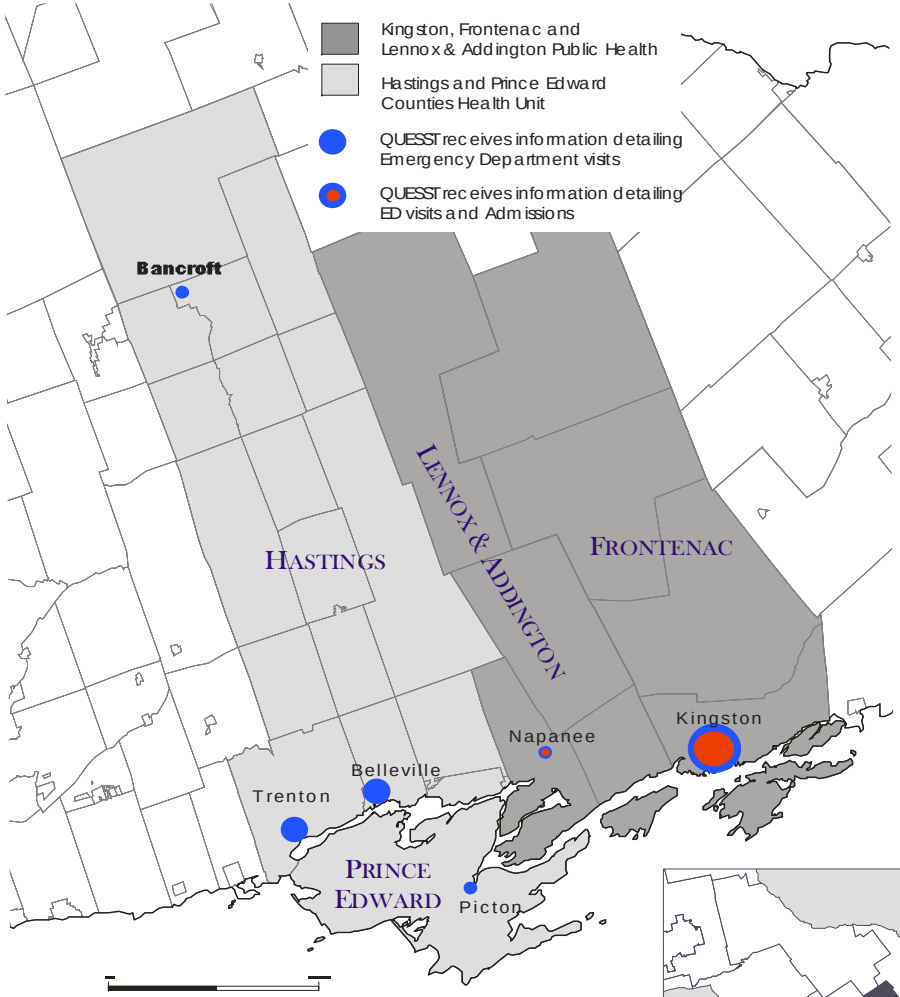
= Reduction in costs &
Improvement in monitoring

Next Steps

- To examine the potential for integration of this Occupational Health data stream into an existing Emergency Department surveillance system.

Emergency Department System

- Community Health monitoring system
- Public Health initiative
- **Real-time -** ED visits to 7 area hospitals (KFL&A and HPE Health Units), admissions to 3 hospitals
- Outbreak detection
- Alerting, Reporting, Dissemination of results

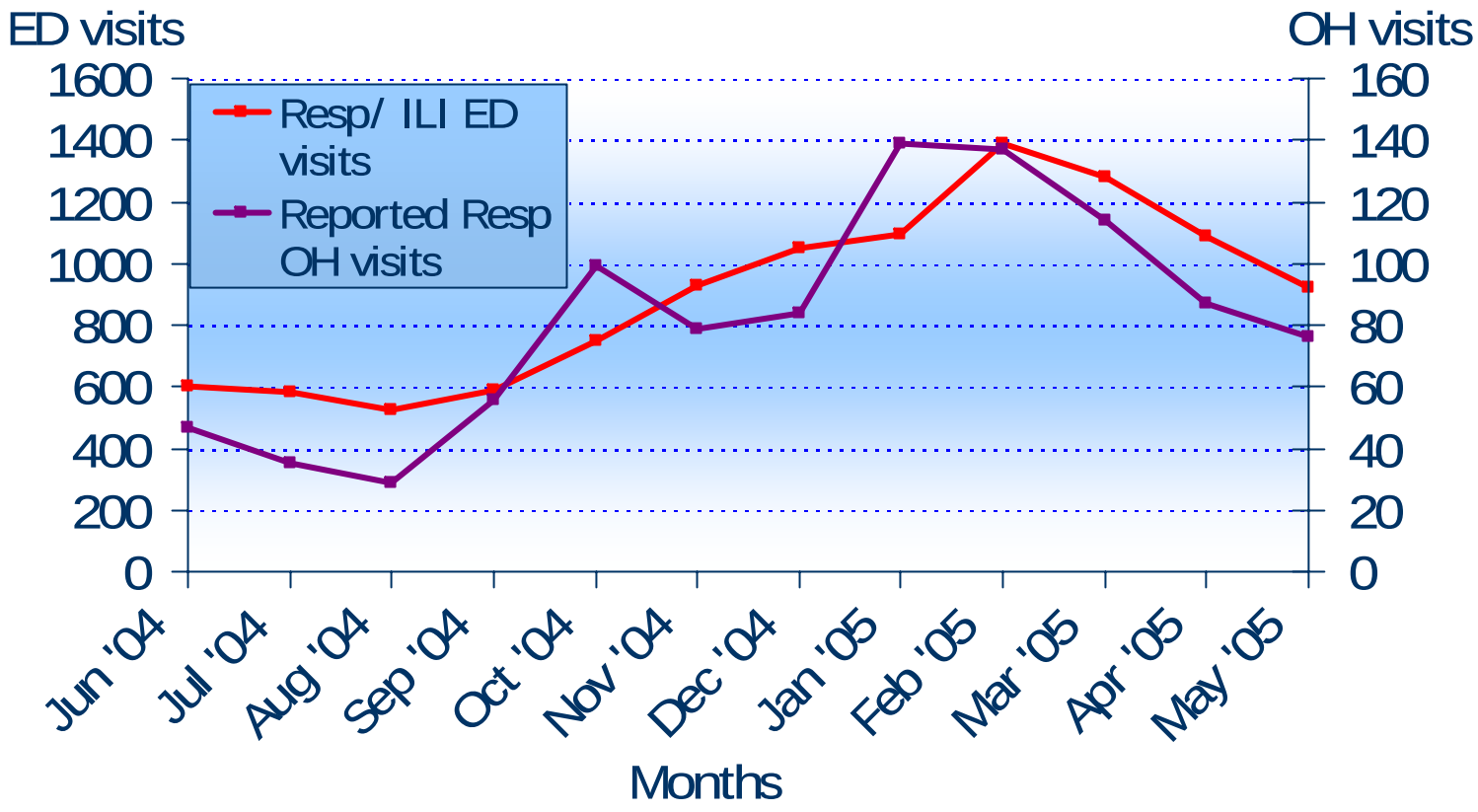


- ED visits from 7 area hospitals covering 2 public health units
- Admissions to 3 hospitals
- Approx. 240,000 visits/yr
- Population ~ 350,000
- System captures ~ 94% of visits by this population

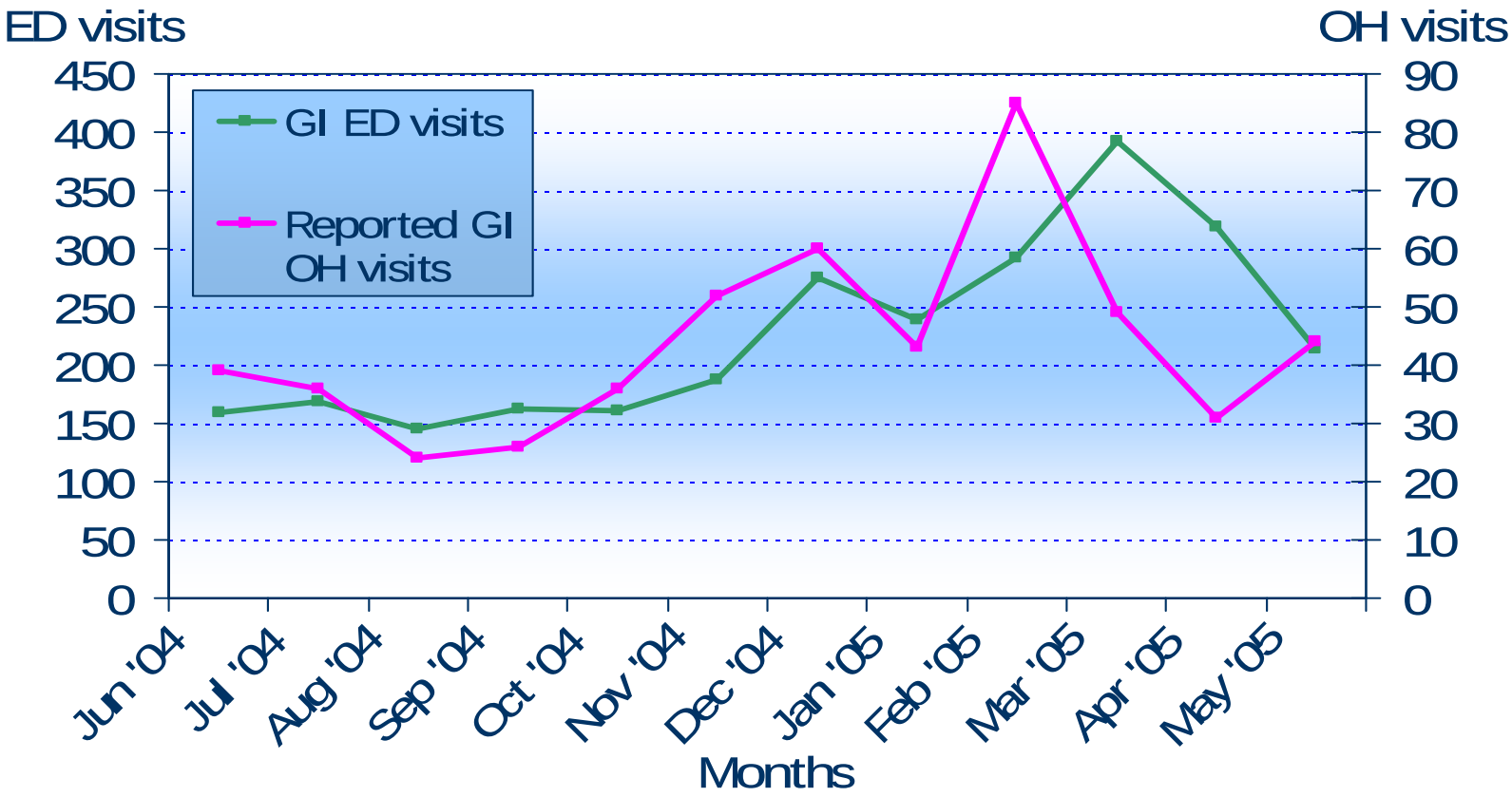
KFL&A PublicHealth

Queen's University

Respiratory Illness Reporting



Gastrointestinal Illness Reporting



Strengths & Limitations

- Existing administrative databases
- Novel application of health data
- All absenteeism events

- Under-reporting
- Self-reported outcomes
- Merge proved difficult

Implications

- Improve OH reporting
- Reduce absenteeism & costs associated
- To create a HCW OH surveillance system

** **Monitor HCW injury and illness events**

Future Considerations

- Continued monitoring of infectious disease
- Early detection of hospital-based outbreak
- Integration with existing Emergency Department system
- Pandemic Influenza
- Provide feedback (alerts & reports)

Thank you

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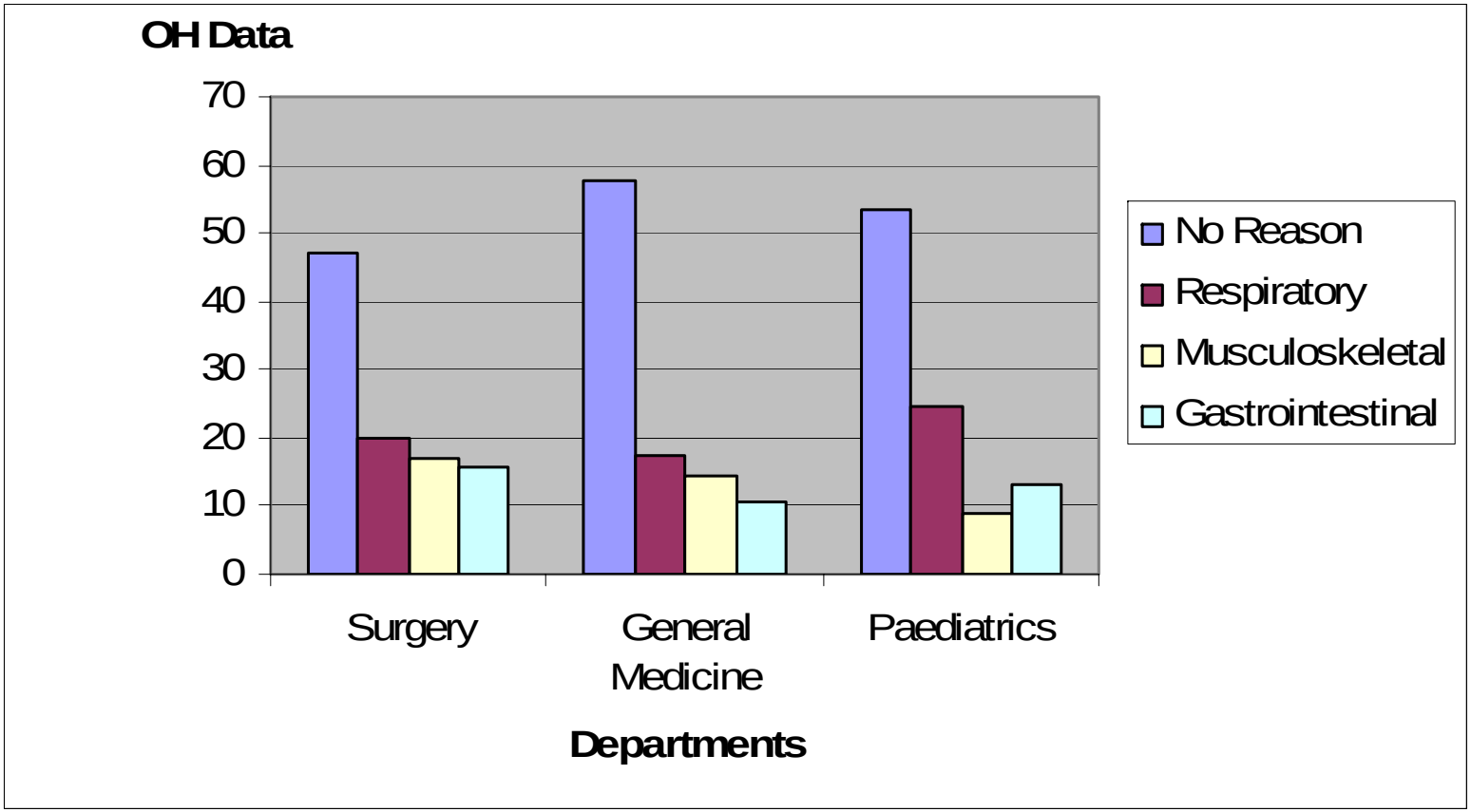
Reasons associated with highest absenteeism by department



Questions

- BTWMF – difficult to interpret, is there information that can be provided?

Total Absence Reporting

Variable	Adjusted Odds Ratio	95% Confidence Interval
Union Affiliation		
Support Services	2.5	(1.7, 3.7)
Nurses	2.9	(1.9, 4.4)
Full-time Work-years		
5-<15 years	1.4	(1.1, 1.8)
15 + years	1.4	(1.1, 1.8)

*controlled for union affiliation, annual salary, full-time work-years, sex, age

Respiratory Illness Reporting

Variable	Adjusted Odds Ratio	95% Confidence Interval
Union Affiliation		
Support Services	1.8	(1.2, 2.8)
Sex		
Female	1.5	(1.1, 2.0)

*controlled for union affiliation, annual salary, full-time work-years, sex, age

Gastrointestinal Illness Reporting

Variable	Adjusted Odds Ratio	95% Confidence Interval
Union Affiliation		
Support Services	2.1	(1.2, 3.6)
Nursing	2.8	(1.6, 4.9)
Full-time Work-years		
5-<15 years	1.6	(1.2, 2.2)

*controlled for union affiliation, annual salary, full-time work-years, sex, age

Conditions

Respiratory

- Upper Respiratory - Laryngitis, tonsillitis, sinusitis, tracheitis
- Lower Respiratory - Bronchitis, broncheolitis, pneumonia
- FRI symptoms - fever, cough, chills, malaise, body aches

Conditions

Gastrointestinal Illness

- Gastroenteritis
- Symptoms - Nausea, vomiting, diarrhea

Health Care Worker Absenteeism

- When productivity/utilization levels are kept below 80 percent, nurses are more likely to be satisfied with their jobs and absenteeism is reduced.
- Retention strategies must address:

- physical and mental health of nurses (interpersonal relationships)
- balancing the efforts and rewards associated with work
- nurse autonomy (job control)
- full scope of practice
- managerial relationships
- innovative work schedules
- hiring more nurses into full-time permanent positions
- reasonable nurse-to-patient ratios based on targeted productivity/utilization standards

[CHSRF, September 2004]

**Economic Impact

Last Minute Absence Reasons

- Personal illness most common reason for last-minute no-shows (33%)
- Family issues (24%)
- Personal needs (21%)
- Stress (11%)
- Entitlement mentality (10%)

[CCH Incorporated, 2002 Survey]

Workplace Health Promotion

- Medical costs are directly related to health risks and health behaviours (i.e. employees with fewer risk factors incur lower medical costs).
- Comprehensive workplace health promotion programs lower health care and insurance costs, decrease absenteeism, and improve performance, productivity and work morale.
- $1/ $2.05 – $5.96

[Makrides, L., Cdn. Assoc. of Cardiac Rehab., 2004]

Reduced Absenteeism

- At **DuPont,** each dollar invested in workplace health promotion yielded $1.42 in lower absenteeism costs over a 2 year period. [American Journal of Public Health, September 1990]

- **Johnson and Johnson** reduced their absenteeism rate by 15% within two years of introducing their wellness program. They also cut their hospital costs by 34% after just three years. [Human Resources Executive, April 1993]

- To prevent back injuries among its employees, a **county in California** offered classes and fitness training to all it's workers. As a result, there was a significant decrease in sick days related to back injuries, producing a net cost-benefit ratio of 1 to 1.79. [WELCOA – 1999]

What information are we collecting?

- **Real-time -** ED visits to 7 area hospitals (KFL&A and HPE Health Units), admissions to 3 hospitals
  - Date and Time of Visit or Admission
  - Hospital
  - Age/Sex
  - Postal Code (5 digits)
  - Chief Complaint
  - **Triage Score**
  - Febrile Respiratory Illness **(FRI)** Screening results

- Syndromes: Gastroenteritis, Respiratory, Fever/ILI, Asthma, Derm-infectious, Neuro-infectious, Severe Infection, Other