

Development of an Occupational Health Information System for Surveillance

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CDC: Engaging Stakeholders in Expanding
Occupational Health Surveillance within the National
Healthcare Safety Network (NHSN)

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Objectives

- ▶ Share Vanderbilt's experience in developing an occupational health surveillance system.
- ▶ Discuss problems in developing surveillance systems within a medical center.
- ▶ Provide tips to engage "top level" management in supporting electronic system development.



Vanderbilt University

- ▶ Institution of
 - higher education
 - academic medical center
- ▶ “One Vanderbilt”
 - Faculty: 3,526
 - Students: 12,093
 - Staff: 19,836
- Administration
 - 1 Chancellor
 - 8 Vice Chancellors
 - 10 schools with 10 deans



Vanderbilt University Medical Center

Operates 24/7

- ▶ Teaching Hospitals
 - Adult
 - Children
 - Psychiatric
- ▶ Major Trauma Center
- ▶ Multiple Offsite Clinics
- ▶ 75% of faculty and staff
- ▶ Multiple joint ventures, partnerships, contractors, volunteers,



Vanderbilt University



PHOTO: NEIL BRAKE/VANDERBILT UNIVERSITY


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HEALTH & WELLNESS
VANDERBILT FACULTY & STAFF



Occupational Health Clinic Services

- ▶ Surveillance of workplace hazards
 - Preventive immunizations/screenings
 - Follow-up of infectious exposures
 - Treatment of work-related injury/illness
 - ▶ Care of acute medical conditions
 - ▶ Interpretation of legislative/policy related to employee medical conditions
 - E.g. FMLA, ADA, Fit-for-Duty, etc
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Workplace Infectious Hazards

- ▶ Smallpox
 - ▶ Rabies
 - ▶ Meningococcal
 - ▶ Tuberculosis
 - ▶ Influenza
 - Seasonal
 - H1N1
 - ▶ Pneumococcal
 - ▶ Pertussis
 - ▶ Diphtheria
 - ▶ Syphilis
 - ▶ Measles
 - ▶ Mumps
 - ▶ Rubella
 - ▶ Varicella
 - ▶ Hepatitis A, B, and C
 - ▶ HIV
 - ▶ Botulism
 - ▶ Herpes B
 - ▶ Q fever
 - ▶ SARS
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Problems for Occupational Providers in the Health Care Setting

- ▶ Protection of patient vs. employee health
- ▶ Employment Law
- ▶ Distinction between delivery of care to an individual and population management, i.e. preventive medicine
- ▶ Rapidly emerging hazards and their management
 - E.g. H1N1 and SARS
- ▶ “Vertical” management of surveillance-related agencies
 - Federal, State, and VU
- ▶ Varying electronic architectures
 - Open vs. proprietary
 - Versions of software
 - Knowledge of participants





- ▶ “in the face of the H1N1 pandemic, the perception that health care workers are self-sacrificial “saints” who inevitably place themselves at risk when they come to work must be discarded and that occupational safety and health principles must be applied to protect this working population”

NIOSH Director John Howard

at the National Safety Council (NSC)
2009 congress and Expo.


Workplace Legislation

- ▶ Workers' Compensation (first state laws 1911)
 - ▶ Fair Labor Standards Act (1938)
 - ▶ Title VII of the Civil Rights Act (1964)
 - ▶ Occupational Safety and Health Act (OSHA)(1970)
 - ▶ Employee Retirement Income Security Act of 1974 (ERISA)
 - ▶ Pregnancy Discrimination Act (1978)
 - ▶ Americans with Disabilities Act (ADA)(1990)
 - ▶ Family Medical Leave Act (FMLA)(1993)
 - ▶ Health Insurance Portability and Accountability Act of 1996
 - ▶ Patient Bill of Rights (1998)
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VANDERBILT

Occupational Health Information System

- ▶ Assigns and tracks medical services related to occupational health programs
 - ▶ Purpose: compliance tracking and resource management
 - ▶ Not an appointment system or medical record
- 

Strategy : Link multiple workplace hazard programs and services to the individual

- ▶ Identify workplace hazards
 - ▶ Group workplace hazards into “events”
 - Surveillance
 - prevention and monitoring related to specific jobs
 - Exposures:
 - contact occurs with unsafe level
 - Worker’s Comp
 - injury or illness related to contact
 - Acute Care
 - question of ability when hazard not job related
 - Training
 - education of hazard programs
 - ▶ Define programs for each event
 - E.g. TB would have different program for annual screening, exposure, and disease treatment
 - ▶ Identify services for each hazard program
 - ▶ Electronically link all hazard programs the individual
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Specific Scope

- ▶ Federal, state, or employer mandated
 - OSHA (TOSHA)
 - Worker's Compensation
 - FMLA
 - ADA
 - HIPAA
- VU workplace policies designed to protect health



Managed Surveillance

- ▶ Algorithms consider hazards associated with each job
- ▶ Determines who, what, where, when , and why
- ▶ Assigns services
- ▶ Record service results
- ▶ Interface with related programs and events
- ▶ Report compliance



Coordination and Communication

- ▶ Web based application
- ▶ Security groups allow access on a “need-to-know” basis
- ▶ Shares information with appropriate internal partners
 - Safety, Risk Management, Case Management, Opportunity Development Center, Infection Control, and Employee Assistance Program , Human Resources

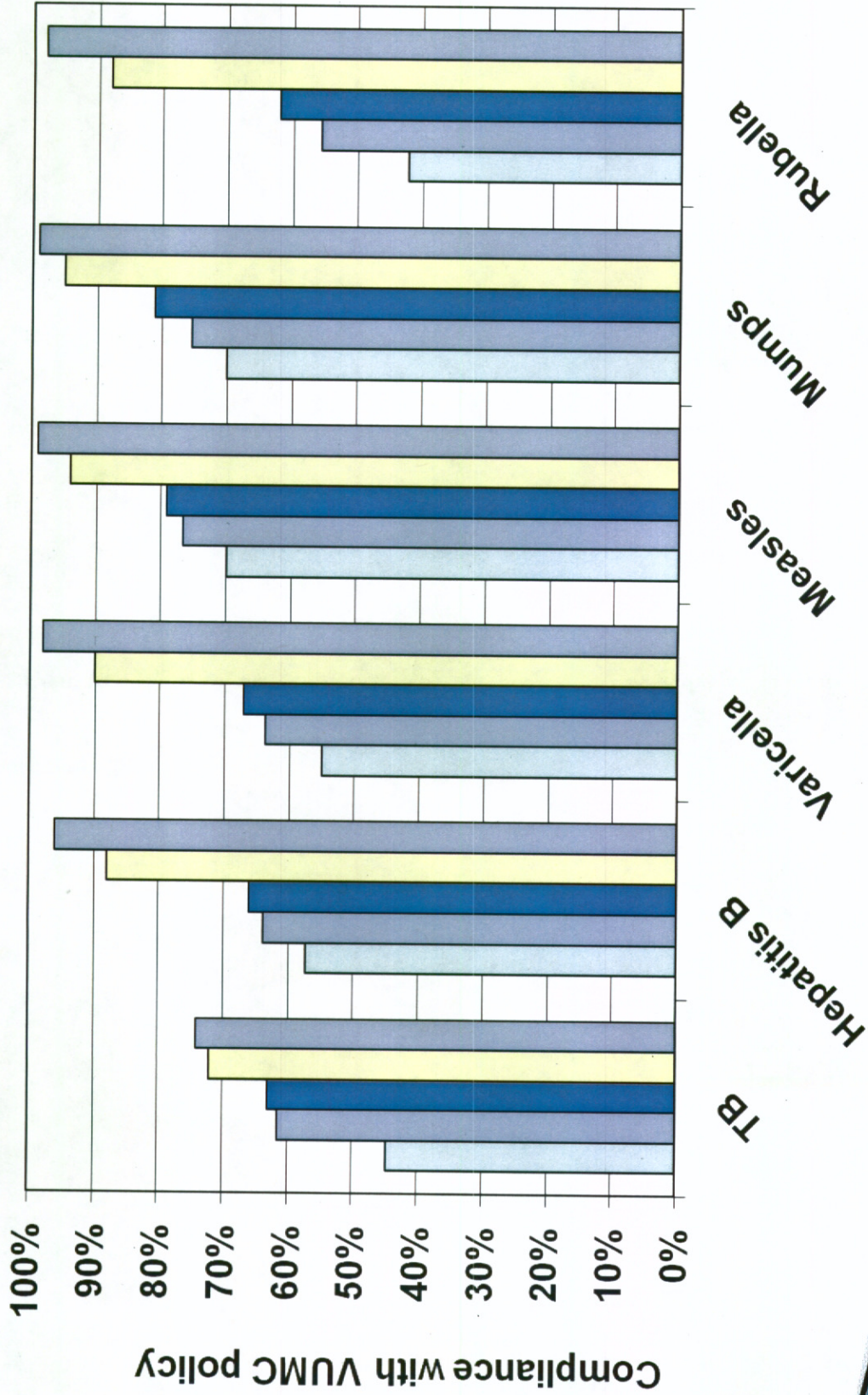


Manage Compliance and Resources

- ▶ Business Objects Universe
- ▶ Reports post to employee and supervisor portals
 - No medical information shared with supervisors
 - Individual compliance (Y/N)
 - Group statistics
- ▶ Feeds dashboards and administrative cost reviews



Compliance Rates Across Job Codes, e.g. Physicians



■ VMG Jan '05
 ■ VMG Apr '05
 ■ VMG Apr '06
 ■ VMG Apr '07
 ■ VMG Apr '08

BBF Exposure Report



Occupational Health Clinic Blood and Body Fluid
Exposure Report for Managers 4/1/2007 to 6/30/2007

Confidential

IN Surgical Stepdown Department Injury Count

Job Title	Event Date	Object Causing Injury	Object Category	Brand of Object	PIE	How Occurred	Preventable	Corrective Action
Registered Nurse 1-CC, VP/NPP	6/4/2007	Sutury Needle	Hollowore Needle	Sims Smith	No	After Use / Before Disposal	Yes	Activate Safety Device
Registered Nurse 1-CC, VP/NPP	4/4/2007	Injection Needle	Hollowore Needle	Sims Smith	Yes	Insert / DC (During Use)	No	

9 South Surgical Department Injury Count

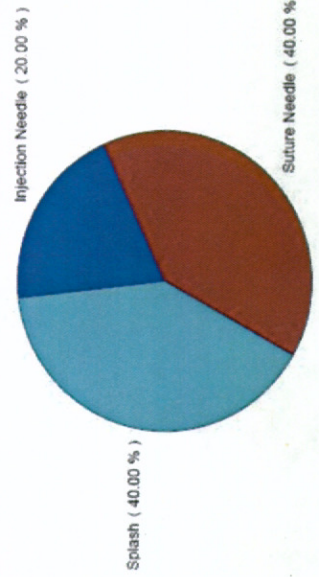
Job Title	Event Date	Object Causing Injury	Object Category	Brand of Object	PIE	How Occurred	Preventable	Corrective Action
Registered Nurse 3, VP/NPP	6/17/2007	Splash	Splash	N/A	No	Other	No	
Registered Nurse 2, VP/NPP	5/8/2007	Injection Needle	Hollowore Needle	Sims Smith	No	After Use / Before Disposal	Yes	Appropriate Handling



Occupational Health Clinic Blood and Body
Fluid Exposure Report for Managers 4/1/2007
to 6/30/2007

Ob/Gyn Housestaff

Department Injury Count = 5



Percent of this department's injuries caused by each object

Blood/Body Fluid Exposure Rate Value Added: Improved Safety and Reduction in Worker's Comp Claims

