# OSHA/Infection Control Annual Update Training – 2010

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# Disease Numbers 2008-2009

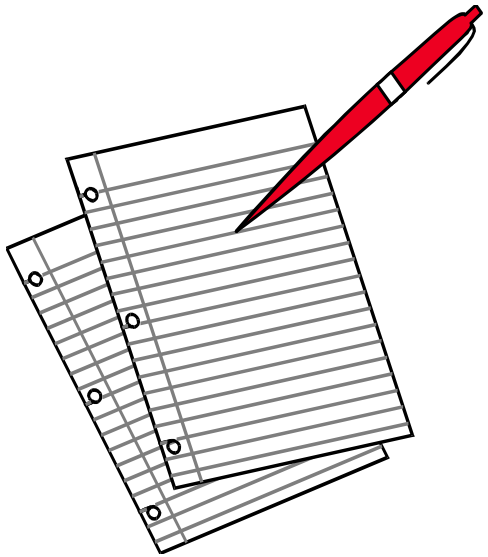
- 2008
- AIDS –39,202
- Hepatitis B – 4,033
- Hepatitis C – 877
- Syphilis – 13,048
- TB –13,299
- WNV – 1,356

- 2009
- AIDS – 36,870
- Hepatitis B – 3,020
- Hepatitis C – 782
- Syphilis – 12,833
- TB – 11,540
- WNV – 663

•CDC, MMWR, August 19, 2010

# Local Disease Stats-

- AIDS – 769
- Hepatitis B -75
- Hepatitis C –
- TB – 208
- Syphilis- 647
- WNV -0



•VA Dept. of Health 2010

# Other Key Diseases

- Measles cases – 61
- Mumps – 982
- Pertussis (whooping cough) – 13,506
- Chickenpox – 16,944

# MMR & Autism

- Dr. Wakefield's work fabricated


January 10, 2010

# Check your vaccine/immunization status

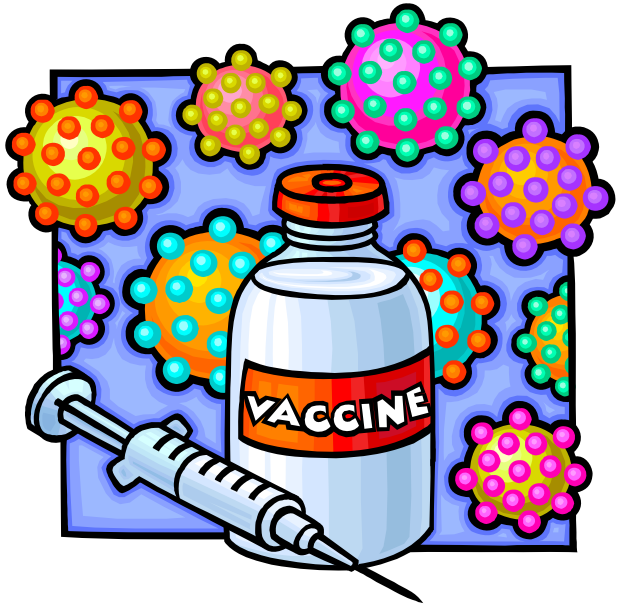
# Records Request

- High school
- College
- Previous employer

# Vaccines/Immunizations

- OSHA enforcing CDC guidelines for –

- HBV vaccine
- Tdap booster
- Chickenpox vaccine
- MMR
- Flu vaccine



# Ryan White Notification Law

# Update – November 2009

- Ryan White Notification Law – is back!
- Now listed under–
  - Part G

# Disease List

- New one required
- HHS has authorized CDC to develop

# Refresher/Reminders

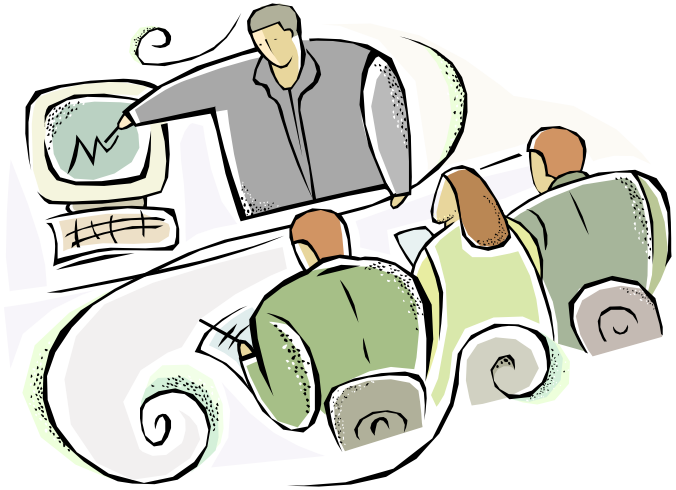
# Exposure Control Plan Annual Update

- Update annually
- Update disease information

Paragraph ©(1)(iv), CPL 2-2.69, OSHA

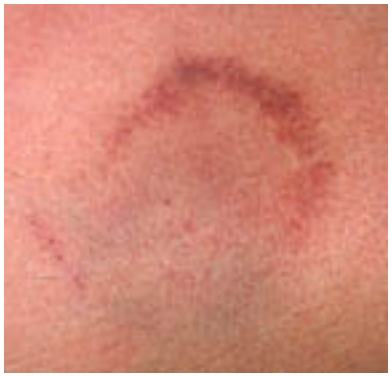
# Training Clarification

- New hire training
- Annual update training



# Human Bites & Exposure

- You are bitten and blood is drawn
  - You are not exposed – it is *YOUR* blood !



# Non -Risk Body Fluids, HIV, HBV,HCV

- Tears
- Saliva
- Urine
- Stool
- Sweat
- Vomitus
- Nasal Secretions
- Sputum

•CDC, May 15, 1998, June 29, 2001, Sept. 2005

# HBV Infection Rate– US

- Healthcare worker infection infrequent

CDC, September, 2008

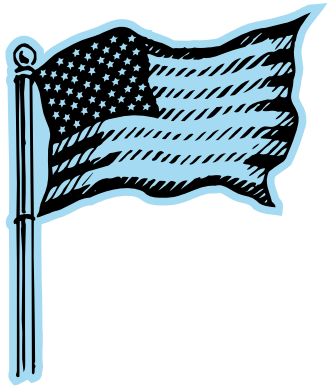
# Hepatitis B Vaccine

- There is NO formal requirement or recommendation for a booster
- Offers protection via “immunologic memory”
- Titer 1-2 months after completion of vaccine series is required- OSHA enforcing
  - CDC, 1992,1997, June 29, 2001, December 2006

# Hepatitis C Cases

Incident rate
continues to *decline*

- Rate in US- 1.3%



•September, 2008

# Hepatitis C

- 15% – 20% of acute infections
  - Sexual exposure

# AxSYM Anti HCV

- New rapid test for HCV
- Takes 23 mins.
- More accurate than other antibody tests
- Performed on the *source* !
- Cost $65.00

CDC, 2005

# Newest Rapid Test

- OraQuick HCV
- FDA approved in June
- VAOSH enforcing

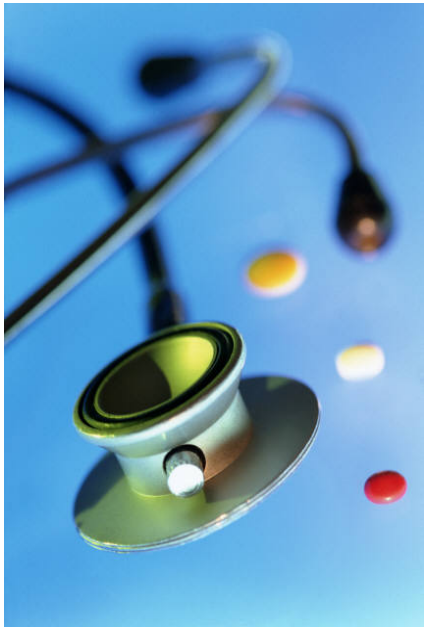
# Reminder –

- If you are exposed to a hepatitis C positive patient, you should have a blood test in 4- 6 weeks

- HCV-RNA (blood test)
  - Cost – $65.00

# Hepatitis C – Early Treatment

- Studies – Germany & France
  - HCV-RNA positive begin treatment
  - 24 weeks – clear viral load



# HCV & Treatment

- If only slight liver abnormalities, treatment may not be needed

Mayo Clinic, 2009

# Infected Healthcare Workers–Occupational Infection–HIV

- 1978 – December, 2007
  - 57* documented cases
    - 0 in fire/EMS personnel
    - 49 were sharps related exposures

CDC, 2008(CDC), NIOSH

# Undocumented Cases

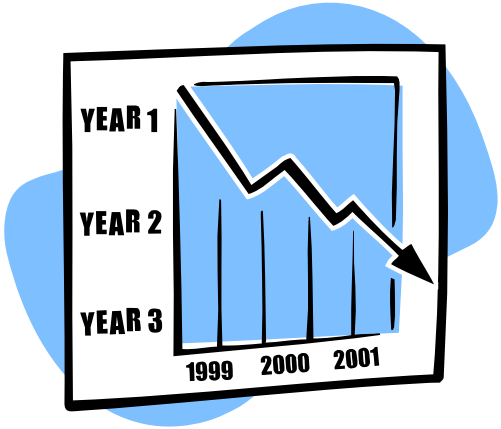
- 139 cases of “possible” occupational acquired HIV infection
- 12 in EMT/Paramedics

CDC, September 14, 2008

# No new cases since 2000

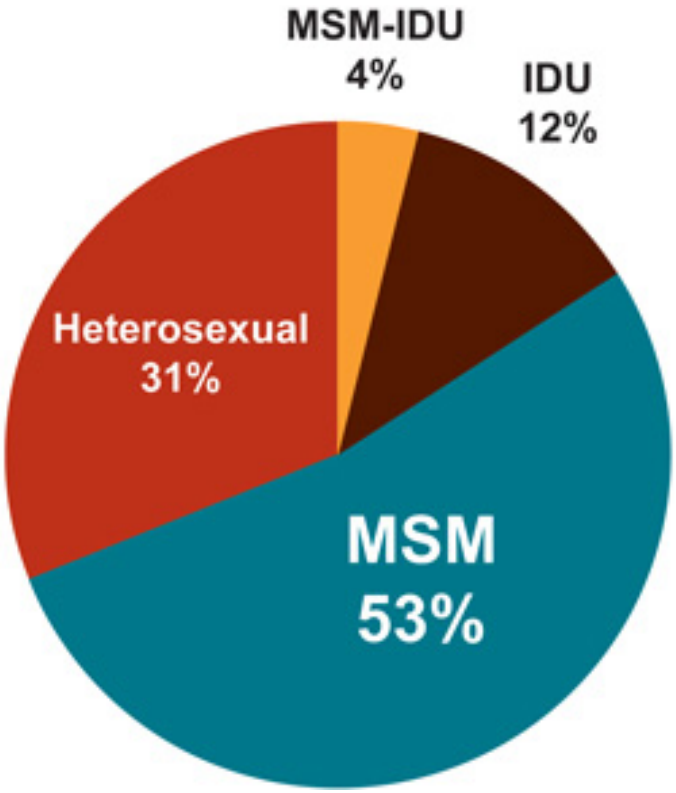
# Update in U.S.

- HIV transmission rate decreased 89% since 1984 and 33% since 1997




CDC, 2008

# Estimates of New HIV Infections in the United States, By Transmission Category




Hall HI, Song R, Rhodes P, et al. Estimation of HIV Incidence in the United States. *JAMA* 2008;300: 520–529

# States Broaden HIV Testing

- California
- Illinois
- Iowa
- Louisiana
- Maine
- Maryland
- New Hampshire
- New Mexico
- North Carolina
- North Dakota
- Rhode Island
- Virginia

# Rapid HIV Tests

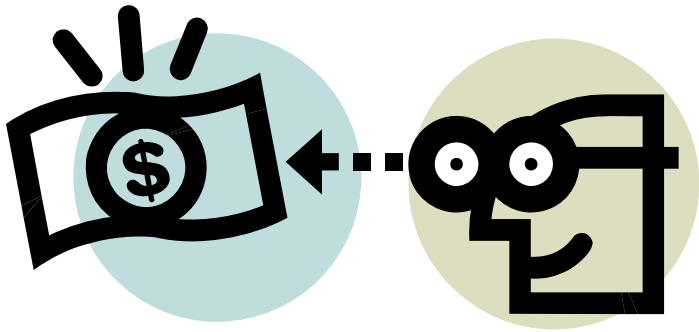
**Rapid HIV Test – currently available – using blood**

OraQuick
Reveal
Uni-Gold
Multispot
Clearview

CDC January 2007

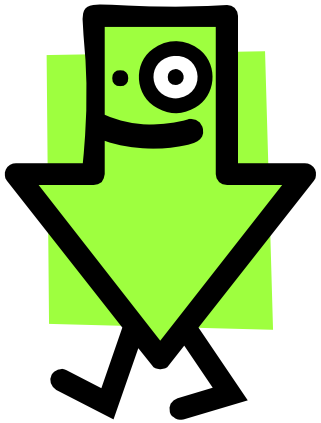
# Local Labs

- Not complying
  - Money issue



# Syphilis Cases

- 2009 first documented decrease
- Post exposure follow up if source is HIV positive or Hepatitis C positive



# Highest States for cases – 2009

- California
- Texas
- New York City
- Florida


CDC, MMWR, Jan. 7, 2010

# CDC – Plan

- Update plan to eliminate syphilis by 2015
  - Appears to be working

# Tuberculosis

# Tuberculosis

- 2009 lowest case number since 1953
- 71.4% decrease since 1993
- 2007 – screening applicants for entry to U.S.

# Multi-drug Resistant TB

- MDR-TB – 84% in foreign-born persons
  - 107 cases in 2008

- XDR-TB – 2 cases reported in 2007
  - XDR-TB 1993 -2007 = 83 cases reported
    - No cases 2008/09

# Risk Assessment

- Based on number of active-untreated TB patients *transported* in the past year


- Update each year!

# Risk Assessment – TB

- Low Risk
  - Transported less than 3 TB patients
- Medium Risk
  - Transported more than 3 TB patients

CDC TB Guidelines, 2005, pg. 134

# Department TB Risk Assessment

- 2009 –

# New Version TB Blood Test

- QFT-G (In-tube)
  - FDA approved – October 2007
  - Less time consuming to perform
  - More accurate
  - Cost effective

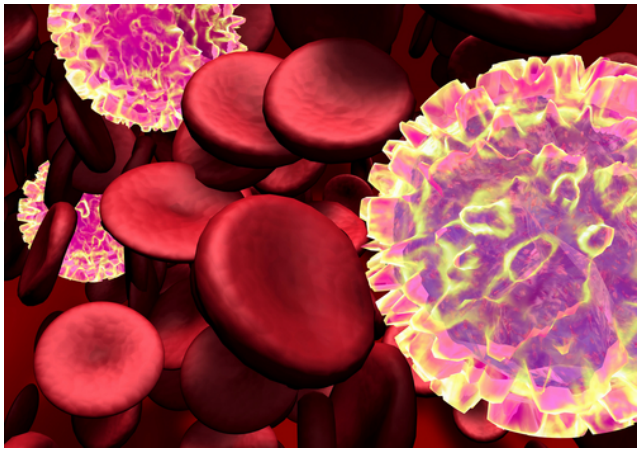
# Transmission – Plane

- " TB is generally not spread by casual contact, but typically requires relatively prolonged contact in shared air space. The environment on long flights in commercial aircraft, particularly those of 8 or more hours in length, has been previously implicated in TB transmission, especially to passengers seated in close proximity"

Dr. Cetron, US Public Health, July,2007

# West Nile Virus – Update

- Cases 2008 = 1,356
- Cases 2009 – 663



# West Nile Virus – 2009

- Cases moved westward
- Highest cases –
  - Texas – 104
  - California– 103
  - Colorado – 101
  - Nebraska – 51


CDC, Dec. 8, 2009

# Flu Vaccine – Annual

"Direct patient care"

All healthcare workers

# CDC Flu Vaccine Program

- Employers must offer
- Employers must pay
- Employees who decline – sign a declination form

CDC, February 24, 2006/2008/2009, NFPA 1581

# Department Flu Vaccine Participation – 2009

- Percent =

# Vaccine for 2010/11

- A- California/ H1N1
- A- Perth/16/2009
- B-Brisbane/60/2008


CDC, 2010

# FluMist – Nasal Spray

- For healthy persons ages
  - 2– 49 years
  - Does not need to be stored frozen
  - Do not take if pregnant – live virus vaccine
  - No thimerisol
  - Is egg based
  - Cost reduced
  - No work restriction

# Flu Vaccine Program Rationale

- Reduce annual illness in staff
- Increase protection from flu viruses
- Reduction of Flu will assist in identification of a pandemic

# Work Restriction

- Restrict ill workers from the workplace
  - use sick time
  - protect co-workers
  - protect patients

# Flu Vaccine – Mandate?

- Groups calling for mandate
  - American Academy of Pediatrics
  - Infectious Disease Society of America
  - Society for Healthcare Epidemiology of America

# Vaccination prevents influenza– get vaccinated

CDC, Dr. Fiore

# MDROs – Basic Issues

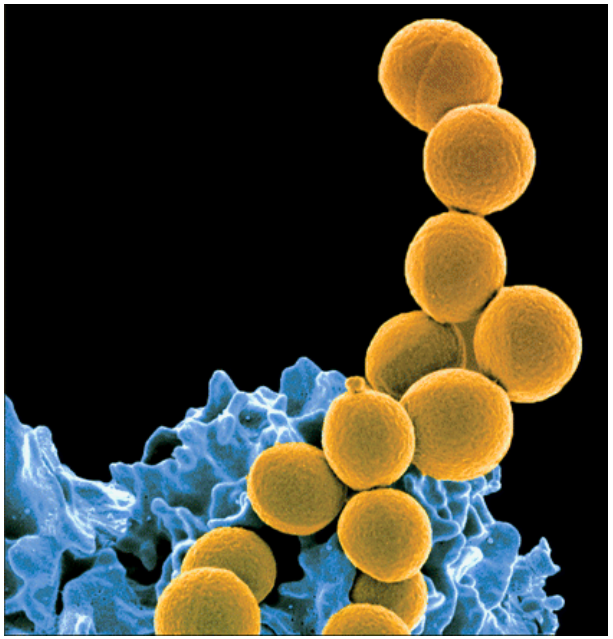
# MRSA – Update

- MRSA is the major hospital acquired pathogen

- 21% of skin infections & 28% surgical wound infections
- Inpatient specimens – 18.8%
- Outpatient specimens– 14.9%
- 60% in the ICU

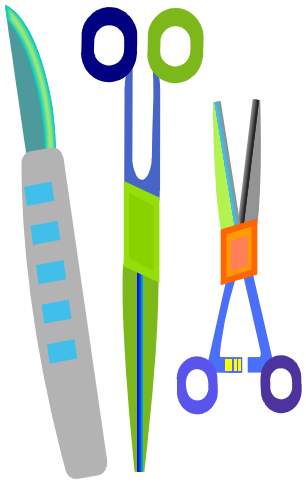
# New Strain – USA 300

- Community acquired
- More easily transmitted



# Treatment

- Incision & Drainage for soft tissue infections
- No antibiotics needed



# Clostridium difficile
# C- diff

# C- diff

- Anaerobic spore-forming bacillus
- *Clostridium difficile*-associated disease (CDAD)
  - Hospital-acquired
  - Related to antibiotic treatment

# Remember

Cleaning with 1:100 bleach/water solution is adequate (1/4 cup bleach to one gallon water)

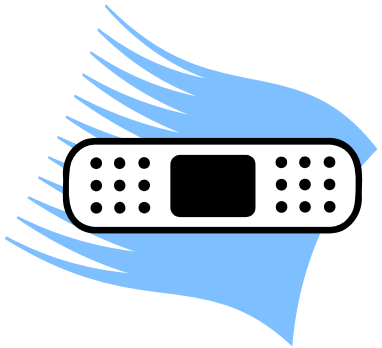

- Good for 24 hours after being mixed

# Prevention for HCW's

- Handwashing –
  - after touching blood/body fluids
  - after touching contaminated objects
  - after glove removal

# Prevention Issues

- Open areas on skin should be covered with a dressing-
- too large to cover - limit work tasks



CDC, NFPA,OSHA

# Plan for New Antibiotics

- Infectious Disease Society of America (IDSA)
- European Union
  - Global effort to make 10 new antibiotics by 2020

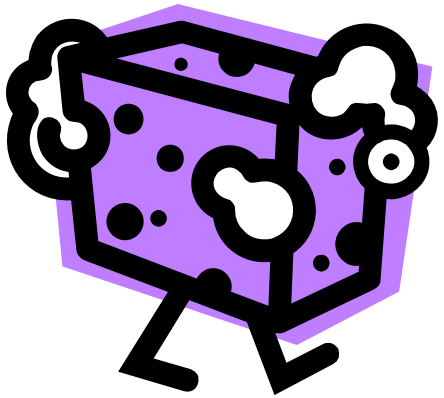
Clinical Infectious Diseases, 2010;50:1081-1083

# Compliance Monitoring

Check for compliance with cleaning routines

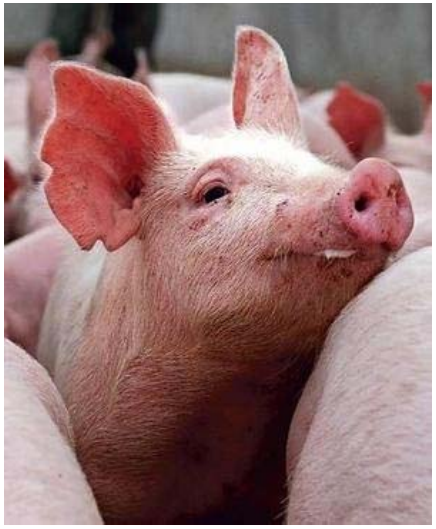
# Cleaning Issues

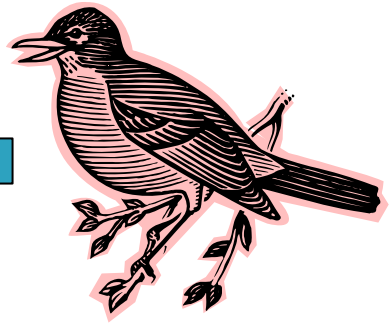
- There is no disease that requires airing of a vehicle or putting a vehicle out of service
- Clean and go!



# H1N1 Flu Virus

- New virus





# Signs/Symptoms

- Flu-like
  - Fever
  - Sore throat
  - Cough
  - Nausea
  - Vomiting
  - Diarrhea**

# Severe Signs/Symptoms

- Adult
  - Shortness of breath
  - Chest pain/pressure
  - Dizziness
  - Confusion
  - Persistent vomiting
- Pediatric
  - Respiratory distress
  - Bluish skin color
  - Irritability
  - Fever with rash
  - Low fluid intake
  - Not waking or interacting

# Incubation Period

- 1 – 7 days

# Prevention

- Travel history on patient assessment especially with respiratory symptoms

# PPE Recommendations –

- When in close contact:
  - Surgical mask
  - Eyewear
  - Gown

CDC, July 29, 2009, WHO

# N 95's – ?

- For:
  - Intubation
  - Suctioning
    - Fit testing required
    - Fully comply with 1910.134

# June 3rd Meeting–Notes

- CDC to change H1N1 PPE guidelines
- Transmission – hand to mouth to nose to eyes?
- Surgical mask on patient blocked transmission
- No science to show N95's are more protective than surgical mask
- 30% – 50% infected had no signs/symptoms
- Presence of aerosols does not mean they are infectious

# Change – CDC Guidelines

- September 16, 2010
  - New Guidelines for seasonal flu and H1N1
    - Surgical masks !

# Why is there a change?

- Outbreak Investigation
  - Verify the diagnosis and confirm the outbreak
  - Define a case and conduct case finding
  - Tabulate date as to time, place and person
  - Take immediate control measures
  - Formulate and test hypothesis
  - Plan and execute additional studies
  - Implement and evaluate control measures
  - Communicate findings

# Survival on Surfaces

- About 2 hours
  - Routine cleaning is important
    - Equipment
    - Surfaces in vehicle

# No Antibacterials

- New problem:
  - Triclosan


FDA, 4/8/10

# Pandemic Phase

- Redefining Phases

WHO kept 6 phase system but changed the wording

WHO, 2009

# Keeping Perspective

- H1N1 flu case
- Deaths –
- Annual Seasonal Flu deaths
  - US
    - 36,000

CDC

# This has been practice

- We are not yet ready

- Problems Identified:
  - Old vaccine production methods
  - Not sure how many cases actually occurred
  - Need to address severity of illness
  - Need rapid testing methods

# Evidence Based Practice

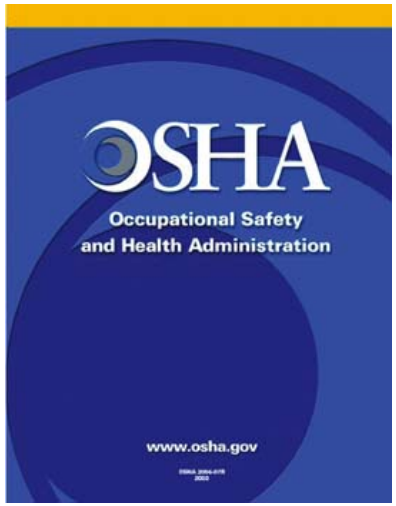
- Science to drive-
  - Procedures
  - Policy
  - Purchasing

# New OSHA Enforcement – 2009

- October 21, 2009
  - Focus on recordkeeping
    - Medical records
    - OSHA 300 forms
    - Sharps injury logs
    - Training records

# State Plan States

- Audits being conducted
  - More inspections



# OSHA Most Common BBP Citations – 2009

- Failure to have an Exposure Control Plan
- Failure to update Exposure Control Plan annually
- Failure to use engineering/work practice controls
- Failure to offer HBV vaccine to at risk employees and post-exposure follow up
- Failure to have vaccine declination forms
- No training offered at no cost and during work hours
- Failure to have an implementation schedule for the Exposure Control Plan
- Failure to have a sharps injury log
- Failure to document consideration and implementation of safer medical devices to reduce exposure risk
- Failure to discard sharps into sharps container as close as possible to site of use

OSHA Jan. 2010

# Exposures – 2009

- Bloodborne –
- Airborne –

# Questions & Answers

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