Preventing, Controlling & Treating Infectious Diseases in Prisons.

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Presented by Dr. Mary Piper,
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Overview of Talk

• Factors to consider in managing infectious diseases in prisons;
• Focus on BBVs as an example in practice;
• TB in prisons;
• Disease Surveillance in Prisons;
• Swine Flu and Prisons.
Factors in Prison Health Protection

Population

Environment

Prevalence of Disease
Population

• Annual Throughput in Prison System in E&W: ~180,000;

• Estimated Prison Staff: 48,000;

• Therefore, in terms of transmission of infectious diseases, those that would be classified as close contacts of cases in prisoners/prison staff: ~250,000-1 million people;
Environment

- Primarily concerned with security, not health;
- Wide-range of types of accommodation:
  - Victorian ‘pan-optican’ design to more modern styles;
  - Wings Vs House Blocks;
- Single-cell accommodation: limited.
- Cell-sharing: common.
- Healthcare facilities: extremely variable.
- Staff levels & Skill Mix: variable.
Unprotected sexual activity

Large turnover of people in enclosed environment

Overcrowding

Sharing cells, toilets, showers & food;

Poor personal hygiene

Food handling & hygiene;

Inadequate Ventilation

Higher prevalence disease

Poor infection control practice

Lack of knowledge among prison staff re: managing infectious diseases.

Limited Facilities for Dx., Rx. & isolation
Prevalence of Disease: BBVs

Weild et al (2000):

- **Among 3,942 prisoners:**
  - HBV +ve (8%),
  - HCV+ve (7%),
  - HIV+ve (0.4%)

- **Among IDUs in prisons:**
  - HBV +ve (20%),
  - HCV+ve (30%),
  - HIV+ve (0.5%).

- **About quarter** of prisoners had ever injected drugs, 30% of whom reported injecting in prison.

- **Three quarters** of prisoners injecting in prisons shared needles or syringes.
Laboratory reports of acute HBV infection have increased among IDUs while decreasing in other populations (HPA, 2006).

61% of IDUs have ever been in prison*.

- Of these:
- 18% have ever injected in prison;
- 48% in prison prior to commencing injecting.

Median no. of periods of incarceration for IDUs: 3.

- 42% have been in prison at least 5 times.

Therefore, prison represents an opportunity to vaccinate the highest risk group against HBV infection.

- Prison-based vaccination programmes could have a significant impact upon community-based burden of infection.
Sources of IDU Hep B Vaccine Doses: UAPMP Community Survey

• Since the **Scottish Prison Service** introduced its HBV vaccination programme to all inmates in 1999, there have been no outbreaks of acute HBV infection among IDUs in Scotland*.

Estimated impact of Prison Vaccination on Acute HBV in the IDU population in England & Wales:

Scenario A: 33% coverage from 2006 onwards.
Scenario B: 50% coverage from 2006 onwards.
Scenario C: 66% coverage from 2006 onwards

Pillars of an Effective BBV Management Strategy in Prisons

- **Health Promotion Programmes**: New Prison DVD, Music CDs, new leaflets;
- **Rapid identification** of ‘at risk’ prisoners: Reception screening tool, self-identification by prisoner;
- **Early Testing & Access to Treatment** for Infected Prisoners: Effective commissioning & service provision by PCTs;
- **Early initiation and completion of Hep B Vaccination Programme**;
- **Harm minimisation**: Disinfecting Tablets, Condoms & Dental Dams, NEX;
- **Effective management of addiction**: 

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Protecting people
Preventing harm
Preparing for threats
Hepatitis B
Blood-borne viruses are bad bugs spread through blood and body fluids. You may have heard of them...

Hepatitis B

Hepatitis C
Like you they’re inside. But keep them outside of you!

Get out of jail BBV-free!

HIV

You can prevent BBVs. Ask at Healthcare.

Condoms
Chlorine Tablets
Vaccination

You may not know if you’re infected but you can be tested for BBVs in prison. Don’t pass them on to others, inside or outside!

Chemist/Pharmacy
Hospital or your GP
Needle Exchange

You can be treated in here and back home.

Remember, BBVs are spread by infected blood or body fluids.

Hepatitis B attacks your liver.

Hepatitis C attacks your liver.

HIV stops your body being able to fight infection.

BBVs can kill. Keep them out. Get out of jail BBV-free!

DH Department of Health
British Liver Trust
British Prison Reform Trust
KEEP IT CLEAN
Only use clean needles for tattoos!

USE DISINFECTANT TAP
CLEAN UP before you SHOOT

Or drugs? Are you sharing?

Who cleaned the needle?

And what about your Syringes, filters, spoon?

Better than HEP B or C from it

There's a load of little blood vessels in your arse...

Bust one of them and we're in!

If you're gonna fuck.

We know sex happens in prisons...

WHAT are you saying?

We've already visited some of your mates in here, but you can't tell who!

You don't even know how we get in!

...which is kicking the SHIT out of you!

This could KILL you!

...and screw your insides!

And what we're doing...

get in through

Toothbrush? Gums bleed, right?

What about hair clippers? We only

KEEP YOUR LAB
HEPATITIS B, HEPATITIS C & HIV
spread through infected blood and body fluids

PLAY SAFE
- Always use a condom
- Use plenty of lube

DON’T SHARE
- Needles or works
- Piercing or tattoo equipment
- Razors, clippers, even toothbrushes

KEEP IT CLEAN
- Use sterile equipment
- Bleach or disinfectant tablets can help if you have to reuse – clean before and after

GET TESTED AND GET YOUR HEP B JABS
- ASK A NURSE TODAY

HEPATITIS B WANTS TO DO YOU DAMAGE
It spreads through infected blood and body fluids and attacks your liver

TAKE CONTROL, GET VACCINATED

1st JAB
DAY 0

2nd JAB
DAY 7

3rd JAB
DAY 21

4th JAB
1 YEAR

You’ll need:
- ALL your jabs to be fully protected
- a top up at 5 years

If you think you have put yourself at risk, get tested

Talk to your doctor or nurse today

For help and information
GUM clinic, your GP or hospital
Chemist or Pharmacy
Needle Exchange

British Liver Trust free helpline: 0800 652 7330
www.britishlivertrust.org.uk

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Protecting people
Preventing harm
Preparing for threats
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<td><strong>The prison is not participating</strong> in the HPA’s PIP Team’s National Surveillance Programme, irrespective of self-reported Hepatitis B vaccine uptake.** OR &lt;br&gt;The prison is reported by the HPA’s Prison Infection Prevention Team’s National Surveillance Programme to be achieving Hepatitis B vaccine uptake of less than 50% by all new eligible and consenting prisoners received into the establishment in the 3 mths prior to the reference date.</td>
<td><strong>The prison is reported by the HPA’s Prison Infection Prevention Team’s National Surveillance Programme to be achieving Hepatitis B vaccine uptake of between 50% and up to 80% by all new eligible and consenting prisoners received into the establishment in the 3 mths prior to the reference date.</strong></td>
<td><strong>The prison is reported by the HPA’s Prison Infection Prevention Team’s National Surveillance Programme to be achieving Hepatitis B vaccine uptake of 80% or more by all new eligible and consenting prisoners received into the establishment in the 3 mths prior to the reference date.</strong></td>
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Monitoring Delivery of Prison-Based Vaccine Programme.

- Via **Prison Infection Prevention Team**: collaboration between Offender Health & The Health Protection Agency;
- Quarterly surveillance reports based on returns from participating prisons.
- Aims to:
  - Monitor HBV vaccination coverage in prisons;
  - Improve prison HBV vaccine coverage;
  - To inform prison healthcare staff of infectious diseases affecting the prison population.
Hepatitis B Vaccine Uptake
March ’08 – Feb ‘09

Average Uptake = 43%
Vaccine Uptake by HPA Regions in England

Vaccine Uptake (%)

Region

East Midlands
East of England
London
Yorkshire and Humber
West Midlands
Wales
South West
South East
North West
North East

Vaccine Uptake (%)

Q1 Q2 Q3 Q4

Green KPI

Amber KPI

Red KPI
Total No. of Hep B Vaccine Doses administered to prisoners in E&W 2008.

The number above each region represents the number of prisons in that region.
Proportion of prisons reporting Hepatitis B vaccination data: England and Wales, 2008

Reporting (%)

Region

- South East
- West Midlands
- East Midlands
- Wales
- Yorkshire and Humber
- East of England
- London
- North East
- North West
- South West

- Fully reporting
- Partially reporting
- Not reporting
TB Control in Prisons in England & Wales
Little doubt that poor management of TB in prisons could lead to ‘concentration’ effect, thus increasing burden of disease in community.

- An outbreak of isoniazid mono-resistant tuberculosis (TB) in north London began in 1999 and now involves over 300 cases to date, the vast majority of whom were diagnosed in London.
- Cases are twice as likely to be infectious as other TB cases in London.
- Following a review of the cases it was found that 33% of had passed through the prison system;
- However, significant overlap between risk factors for TB and risk factors for prison e.g. injecting drug use (40%), homelessness (17%) & ethnicity;
• According to the HPA’s Tuberculosis Incident and Outbreak Surveillance (TBIOS) database, **35** incidents or outbreaks were reported in a detention setting in the UK in 2008 (including prison/other secure unit/asylum or reception centre).
  - All took place in England.
  - Of these, 33 occurred in prisons, and 29 were amongst the actual prisoners (i.e. not staff).

• There is likely underreporting of TB incident activity.
• Prisons may provide an **opportunity for reducing the burden of TB in the community** by increasing the opportunity for case-finding among high-risk groups.

• The CMO’s Action Plan on TB suggests that to deliver well organised and co-ordinated patient care services for TB we need to:
  
  – Achieve **good coverage** of prisons;
  
  – Have **rapid assessment of suspected cases**;
  
  – **Supervision of prisoner’s TB treatment**;
  
  – Maintenance of **uninterrupted care** by liaising with services in new area of residence prior to release.
A Mobile X-Ray Unit (MXU) project sponsored by DH proved the utility of digital x-ray technology in detecting infectious TB in high risk populations in London, including prisoners.

Developing this capability, DH have commissioned a major health improvement programme by installing fixed digital x-ray machines in prisons in London and in the Regions.

- 5 London prisons (HMPs Brixton, Belmarsh, Pentonville, Wandsworth, Wormwood Scrubs): being installed currently.

- 3 Regional centres (HMPs Manchester, Birmingham and Holme House): will be installed later this year.

X-ray technology to be used as part of a suite of measures designed in partnership with local HPU and PCT to improve case detection and access to treatment for prisoners.
Infectious Disease Surveillance in Prisons
Surveillance of Communicable Diseases in Prisons

• **PIP Team**: Collect information from reporting HPUs on prison-related infectious diseases and add to a surveillance database;

• Encourage those dealing with incidents or outbreaks in prisons or detention settings to notify to PIP Team to:
  – improved intelligence;
  – share knowledge & learning;
  – identify specific resources/expertise;
  – assist in health needs assessments of individual prisons/ prison estate.

• To notify, contact PIP Team, Colindale on:
  – [Patrick.Kirwan@hpa.org.uk](mailto:Patrick.Kirwan@hpa.org.uk) or telephone: 02083277067
Results of Audit: Prison-related infections in South East

- Prison related infectious diseases collated from IRIS, phone logs and lab reports for 2007/8

- Number of incidents/queries reported by:
  - Infections
  - HPUs
  - Data sources
No. prison related infections/queries: South East - 2007/8
Limitations to prison surveillance:

- No clear definition of what prison infections should be reported and which data system should be used;
- Extent of under-reporting cannot be assessed through this data;
- Not possible to cross check within and between data sources, that each incident represents a separate event;
- Missing data fields (dates/specific prison/specific infection);
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<td>The Prison has a written policy on communicable disease control. BUT THIS DOES NOT include an outbreak plan OR pandemic flu plan, developed in partnership with the Local Health Protection Unit (and other prisons in the HPU's area) and signed off by the Prison Governing Governor, Chief Executive of the PCT and the lead CDDC for prisons in their region. The Prison <strong>DOES NOT have an Infection Control link nurse</strong> who has specific responsibility / training in infection control.</td>
<td>The Prison has a comprehensive written policy on communicable disease control. THIS DOES NOT include an outbreak plan OR pandemic flu plan, developed in partnership with the Local Health Protection Unit (and other prisons in the HPU's area) and signed off by the Prison Governing Governor, Chief Executive of the PCT and the lead CDDC for prisons in their region.</td>
<td>The Prison has a <strong>comprehensive written policy on communicable disease control, including an outbreak plan and pandemic flu plan</strong>, developed in partnership with the Local Health Protection Unit (and other prisons in the HPU's area) and signed off by the <strong>Prison Governing Governor, Chief Executive of the PCT and the lead CDDC for prisons in their region</strong>. The Prison has an Infection Control LINK NURSE who has specific responsibility / training in infection control. The Prison link Nurse attends meetings with the local HPU six monthly.</td>
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Outbreak Plan Template

- Multi-agency contingency plan for the management of outbreaks of communicable diseases or other health protection incidents in prisons in England and Wales:
  - Published in **October 2008** and distributed to HPU Leads for Prison Health Protection;
  - Developed in partnership with LaRS Prison Health Protection Network & Offender Health.
  - Sets out the actions required to identify & manage an incident or outbreak, as well as describing the roles & responsibilities of partner organisations involved.
  - Recommended for use across prison estate.
Infection Inside: Quarterly Report by OH and HPA

March 2009
Volume 5, Issue 2

CHANGES TO THE PRISON HEPATITIS B VACCINATION MONITORING PROGRAMME

Message to the special edition of Infection Inside: This issue has been produced to reflect the changes to the Prison Hepatitis B Vaccination Monitoring Programme that are being rolled out from 1st April 2008. These changes have been designed to improve the accuracy of the data the programme collects, and to provide a better understanding of the cohort of prisoners who are at risk of acquiring hepatitis B infection. The Department of Health (DH) and Public Health England (PHE) have worked closely together to develop the new system.

Alistair Brown and Patrick Howard
Scientific Co-ordinators / Prison Infection Prevention Team / Health Protection Agency

Who changes?

New Prison Health Performance and Quality Standards (PHE/MHCLG) have been released which state that all prisons should record all cases of hepatitis B infection in prisoners.

These changes are in response to evidence from other health-care settings, including other parts of the NHS, about the increasing rate of hepatitis B.

What are the changes?

From 1st April 2008:

Definition of new infections:
A new infection should be recorded in the data set if a new patient has been identified for whom a new report is initiated. Infections should only be recorded if they are confirmed using laboratory tests.

What are the benefits of the changes?

The new changes will improve the accuracy of the data the programme collects, and will provide a better understanding of the cohort of prisoners who are at risk of acquiring hepatitis B infection. The Department of Health (DH) and Public Health England (PHE) have worked closely together to develop the new system.

The new changes will ensure that there is a consistent approach to recording hepatitis B infections, and will provide a better understanding of the cohort of prisoners who are at risk of acquiring hepatitis B infection.

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• On **May 8th**, Offender Health issued detailed guidance to prisons on managing possible Swine Flu (Influenza A H1N1) cases in prisons, among prisoners or staff;
  
  – To date, no cases of Swine Flu reported in prison estate;

• A new **Prison Service Instruction** on Planning for Pandemic Flu in Prisons is being prepared by Offender Health, HM Prison Service and MoJ;

• Very detailed guidance on case management, infection control and disease surveillance due to be published in ‘Planning for Pandemic Flu in Prisons & Places of Detention’