Infection control and workplace safety: Knowledge and practices in the Bloemfontein Central Laundry

Group 8:
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Introduction

- Bloemfontein Central Laundry services both the public (health facilities, EMS) and private sector (resorts).
- No formal provincial guidelines or policies for infection control and safety practices for laundries.
- Laundry workers (LW) are exposed to different hazards during the course of their work (e.g. biological, chemical, ergonomic, physical and psycho-social).
Background

The following diseases have been reported to be contracted by laundry employees:

- Hepatitis A*, B**, and C*
- Chickenpox***
- Salmonella****
- Back and other musculoskeletal injuries

*Borg MA et al, Occupational Medicine, 1999
** Sepkowitz KA, Annals of Int Med, 1996
***Yeon-Soon Ahn et al. Industrial Health, 2008
****Standaert SM et al, Infection Control and Hosp Epi, 1994
Background continued

Occupational Health and Safety Act, No 85 of 1993
The employer is required by law (Sec 8)

- to provide and maintain, as far as is reasonably practicable, a working environment that is safe and without a risk to the health of the employees.
- to provide vaccination to prevent hepatitis B
- to provide suitable personal protective equipment (PPE) (e.g. safety goggles, gloves, etc.)
- For users of machinery, employers shall conduct a risk assessment of conditions that may arise from the work activities.
Rationale

- **Observation:**
  - LW are not adhering to infection control (IC) and safety practices

- **Assumptions:**
  - Lack of knowledge of the use of PPE and safe practices to prevent hazards/diseases (e.g. Needle-sticks, blood and body fluid exposures, back injuries)
  - Risk taking behaviour/practices
Aim of the study

- To investigate knowledge and practices relating to IC and safety of the employees in the Bloemfontein Central Laundry
Objectives of the study

- To identify IC and safety practices important to protect health care workers at the laundry
- To determine LW reporting of workplace hazards related to IC and safety
- To assess LW knowledge and practices regarding IC and safety
- To assess current training and identify areas where LW might benefit from additional training in IC and safety practices
Methods

- Literature, other relevant documents reviewed
- Research questionnaire developed, piloted and adapted
  - Demographics, reporting, knowledge and practices
- Participation was on a voluntary basis:
  - Informed consent was obtained
  - In the small sections, i.e. 4 or less, (nurse, transport, workshop/boiler and cleaners) all LW were asked to participate.
  - In larger sections, i.e. 16, half of LW were asked to participate.
  - Literate respondents: self-administered
  - Illiterate respondents were interviewed (~16%) to complete questionnaire
Methods continued

- Authorisation obtained from the Head, Laundry Services, and Head of BFN Laundry
- Joint information session with management, supervisors and unions
- Information session with supervisors and employees
- Data analysis: univariate analysis
Results: Respondent Demographics

Age:
- Younger than 20 – 2%
- 20-29 year – 13%
- 30-39 years – 38%
- 40-49 years – 21%
- 50-59 years – 22%
- 60 years and older – 4%

Sex:
- Female – 60%
- Male 40%

Race:
- Black – 78%
- Coloured – 12%
- White – 9%
- Asian – 1%

Years worked in BFN laundry:
- ≤1 year – 23.5%
- 1 to ≤ 5 years – 32.4%
- >5 to ≤ 10 years 16.2%
- >10 years – 27.9%

68/128 (53.1%) of LW participated
Results: Respondent Demographics

- Vaccinations reported:
  - Hepatitis B – 85%
  - Influenza – 53%
- 84% reported being examined at OH clinic when they started to work in the laundry
- Reported incident in past two years:
  - Needle stick injury – 12% (8 of 68)
  - Another type of injury at work – 21% (14 of 68)
Results: Reporting IC and safety (H&S) problems at the laundry

<table>
<thead>
<tr>
<th>Reporting by H&amp;S problems</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge:</strong> I know how to contact the OH clinic</td>
<td>85%</td>
</tr>
<tr>
<td><strong>Practice:</strong> I report H&amp;S problems to OH clinic</td>
<td>57%</td>
</tr>
<tr>
<td>- always</td>
<td>57%</td>
</tr>
<tr>
<td>- never</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Knowledge:</strong> I know how to contact my H&amp;S representative</td>
<td>82%</td>
</tr>
<tr>
<td><strong>Practice:</strong> I report H&amp;S problems to H&amp;S rep</td>
<td>56%</td>
</tr>
<tr>
<td>- always</td>
<td>56%</td>
</tr>
<tr>
<td>- never</td>
<td>16%</td>
</tr>
<tr>
<td>Of those with needle stick injury, number who reported incident</td>
<td>7/8 (88%)</td>
</tr>
<tr>
<td>Of those with other work-related injuries, number who reported</td>
<td>13/14 (93%)</td>
</tr>
</tbody>
</table>
# Results: Reported use of IC and safety practices

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use eye protection</td>
<td>72%</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>I change my procedures with infected linen</td>
<td>37%</td>
<td>13%</td>
<td>50%</td>
</tr>
<tr>
<td>I dispose of sharps in a sharps container</td>
<td>30%</td>
<td>28%</td>
<td>42%</td>
</tr>
<tr>
<td>I wash my hands before and after eating, gloving and working</td>
<td>8%</td>
<td>11%</td>
<td>81%</td>
</tr>
<tr>
<td>I use guards on machinery</td>
<td>47%</td>
<td>12%</td>
<td>41%</td>
</tr>
<tr>
<td>I ask for help when lifting heavy objects</td>
<td>28%</td>
<td>12%</td>
<td>60%</td>
</tr>
<tr>
<td>I get supervision on safe working practices</td>
<td>31%</td>
<td>28%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Results: Reported lack of training (knowledge) on IC and safety practices

Percentage of respondents who reported that they had not receiving training by specific topic

- Hand hygiene: 30%
- Use of PPE: 57%
- Needle stick/injury prevention: 90%
- HIV/AIDS prevention: 37%
- Machine hazards: 69%
- Safe lifting of linen bags: 46%
One of the lessons learnt: Importance of questionnaire design

- N95 respirators should be used by all LW in the production section most of the time
- Questionnaire item:
  “Do you use an N95 respirator?”: only 15% replied yes
  We should have had a question that asked why?
  - I don’t know what an N95 respirator is?
  - I don’t like to use – uncomfortable?
  - Management does not supply respirators?
  - Question does not apply equally to all?
One of the lessons learnt: Importance of involving unions

- Plan to engage employees
- Union involvement critical for success
Limitations of the study

- **Bias:**
  - Self-reported questionnaire
  - Volunteer nature of the study
  - Interviewer
  - Unequal risk across all sections in the laundry

- Some questions did not measure what they were intended to (e.g. do you wear N95 respirator?) which limited the ability to draw conclusions

- Numbers too small to allow for bivariate analysis
Conclusions and Recommendations

- Practices important to protect health care workers at the laundry were identified.
- Discrepancy between reported knowledge and practices – e.g., 82% know how to report to H&S but only 56% actually report.
- Increased training needed on IC and safety practices – needle stick injury, machinery safety, use of PPE.
- Encourage LW to get supervision on safe working practices.
- Policy development on IC and safety practices is needed.
Thank You!

Acknowledgements

- FS Dept of Health
- Laundry Management
- Supervisors
- Unions
- All participants
- Mentors and program –
  - CHSR&D, POHU, SA
  - UBC, Canada