Participatory strategy for the management of occupational risks

J. Malchaire
Catholic University of Louvain
Belgium

Summary
- Observations
- The basic principles
- The SOBANE strategy
- Déparis
  - Presentation
  - Procedure of application
- The role of OH practitioners

Classical approach to analyse the working conditions:
1. Recognition of a problem
2. Measurements by a specialist
3. Comparison to the limits
4. Decision or not to improve
5. Control measures designed by the specialist
6. Decision by the employer
7. Action or not

Specific evaluation sufficient for critical situations with concentrations, levels of noise... larger than the limits

No or limited participation of the workers who are at best « consulted »

Success?

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
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<tbody>
<tr>
<td>Noise</td>
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<td>Manual handling</td>
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</table>

Now
- More MSDs
- More problems of stress
- More problems of dissatisfaction
Multifactorial problems
No specific methods of analysis
Require a more general approach covering all aspects of the working conditions
Without a strategy

- Sophistication
- Cost
- Expertise

Number or work situations
Number of risk factors

Evaluation of the risks

Prevention

Fundamental principles

1. Prevention is the objective, not assessment
2. Terminology
3. The available qualifications are complementary
4. The worker is the main actor of prevention
5. All the problems are linked
6. Preventive vs legalistic approach
7. Management vs. Evaluation (quantification)
8. The SMEs

Principle 1: The prevention is the objective

The employer must:
- Guarantee the safety and the health of the workers in all the aspects linked to the working situation.
- Implement all the general principles of prevention:
  - Avoid the risks
  - Evaluate the risks that cannot be avoided
  - Combat the risks at the source
  - Adapt the work to the individual...

Accent placed

- Not on protection and medical surveillance
- But on risk prevention

Principle 2: Terminology

- Use of terms
  - Work situations
    - Working conditions
    - Workplaces
  - OH practitioners
  - Experts

The risk factors:

- All factors of the work situation that might interfere with the health, safety and wellbeing of the workers:
  - Safety:
    - Accidents: work in height, unlevelled ground, use of a knife, electricity...
  - Health:
    - Occupational diseases: noise, solvents, manual handling
  - Wellbeing:
    - Comfort, personal development, stress, noise, shift work, autonomy, relations...
**Risk**

- Probability of an effect
- Probability of a certain gravity (G)
- Taking into account:
  - The exposure (E) to a risk factor
  - And the conditions (C) of this exposure

\[ R = E \times C \times G \]

**Expressions to be avoided:**
- Factor of hazard / danger
- Risk of a hazard / danger
- Dangerous risk
- Occasional risk
- Analysis of the risks and of the hazards
- Potential risk
- Between specialists: adequate terms
- In the field: «problems»

**Evaluation of the risks**

\[ R = E \times C \times G \times T \]

- Risk = Exposure
- * C : Conditions of exposure
- * G : degree of gravity

**Principle 3:**
**The available qualifications are complementary**

- Workers
- Local management
- OH practitioners
- Occ. physicians
- Industrial Hygienists
- Ergonomists
- Experts

**Discipline**

- Ensemble of knowledge with its own group of experts and its own characteristics like:
  - Same objective and concepts
  - Same capacities and methodologies
- Example:
  - Medicine (occupational), engineering, psychology (occupational)
  - Ergonomics, occ. Hygiene (> toxicology)

**Organize the complementarity**

- All the conflicts of interest come from:
  - A lack of understanding
  - A lack of reflection on the role of each one

- Carefully consider what mean and imply multidisciplinarity interdisciplinarity
Multi – pluri disciplinarity

- Actions in common of various specialists of various disciplines, toward the same objective

The actions can be:
- In parallel, without relations: Juxta - disciplinarity
- In an integrated way: inter - disciplinarity

Degree of interdisciplinarity

- Number of disciplines:
  - Occ. medicine
  - Engineering
  - Occ. psychology
  - Ergonomics
  - Occ. Hygiene

- Distance between those disciplines:
  - Engineer – Physician > Engineer - Hygienist

- Degree of integration

Conditions of the interdisciplinarity

- Various people from distinct complementary disciplines have a spirit of working in group, acquired
  - Not only by the proximity
  - But by a deep analysis and a clear and non ambiguous clarification of
    - the common values
    - the personal and common objectives
    - the complementarities
    - the methods

Principle 4: the main actor of the prevention

- Objective: Improve the wellbeing of the worker?
- Therefore: no action relevant without the knowledge of the work situation that has only the worker
- The worker is then:
  - the main actor of the prevention,
  - and NOT the object of the prevention

Participative approach

- Train the worker
- «Understand the work in order to improve it»
Principle 5: The nature of the problems

- The worker “lives” his work situation
- Not as a succession of distinct and independent facts
- BUT as a whole
  - the noise influences the relations
  - the technical organization between workplaces influences the risk of MSDs
  - the division of responsibilities influences the work content

“Everything is linked”

Global approach:

Whatever the problem (noise, physical load, chemical agents, MSDs, stress …)

Consider them in the general context of the work situation

Principle 6: Legalistic preventive

Effect Intoxication stress

L Exposure

Objectives

- No only to be below the legal indicators
- But to seek an optimal state of
  - health and wellbeing for the workers
  - technical and economical health for the company

Principle 7: Management vs measurements

Example

"The concentration in xxx is 48 ppm"

- Where? close, far from the sources...
- Level during what period of time?
  - instantaneous value,
  - average on 1, 5, 60, 480 min.
- In what work conditions?

REPRESENTATIVENESS?
Example

The worker is exposed to a noise level of 92 dB(A) "

• When? how many machines working...
• Where? close, far from the machines...
• Level during what period of time?
  instantaneous value,
  average on 1, 5, 60, 480 min.
• In what working conditions?

• REPRESENTATIVENESS?

False excuses

• " What it is not quantified does not exist "

• " Quantitative evaluation leads to solutions "
  • How much? vs Why? and how?
  • The global vs the details

• " Is necessary to measure and quantify to determine if there is a risk "
  • Limit versus continuity of the dose - risk relationship

Quantification when it is indispensable for:

• Scientific research
• Dose - effect - response relationships
• Compensations
• Court
  • (Compare before – after)
• Deepen a particular point
Conclusions:

Evaluation of the exposure in quantitative terms
- Very complicated
- Long, expensive
- Little necessary at the beginning
- Little used in the field in a representative way

“The cost to measure the exposure correctly is greater that what several developing countries spend for health per capita per year”

Paul Oldershaw
Control Banding

“...It is not unusual to see more attention given to exposure assessment and monitoring than to risk prevention and control.

The fascination exerted by sophisticated equipment and by numbers is, for some reason, greater than the interest in designing pragmatic solutions to prevent exposure”

B. Goelzer (1996)

Principle 8: SMEs

- No measurements a priori
  - costly
  - long and difficult
  - not representative

Prevention >>> measurements

Management >>> assessment

**Conclusions**

- Participation of the workers
- Start from a comprehensive approach
- Progressive approach
- Based on the people in the field
- Objective: the best possible conditions
- Measurements after, not before

- Develop methods applicable in SMEs
  - And not only in the large companies
The different levels of intervention
Philosophy of the strategy of Prevention of the occupational risks

SOBANE
Screening – Observation – Analysis - Expertise

A strategy
• actors
  • Artillery
  • Tanks
  • Infantry
• in time
≠ method

Management of public health

Management of occupational health

Persons involved

<table>
<thead>
<tr>
<th></th>
<th>Work Situation</th>
<th>Screening</th>
<th>Observation</th>
<th>Analysis</th>
<th>Expertise</th>
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<tr>
<td>Workers</td>
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<tr>
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<th>Stage 2 Observation</th>
<th>Stage 3 Analysis</th>
<th>Stage 4 Expertise</th>
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<td></td>
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<td>Systematically</td>
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<td>10 min</td>
<td>2 hours</td>
<td>1 day</td>
<td>A few days</td>
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<td>Knowledge working conditions Hygiene</td>
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8
The first day of the intervention  
**Level 1: Screening**

- Guide very simple to understand and use
- Fast and little costly

So as to be used
- By the workers and the local management

Conclusions:
- What to do to improve directly the situation
- What aspects require a more specific Observation

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One or 2 weeks later  
**Level 2. Observation**

- Guide simple to understand and use
- A little more costly and time consuming

To study the risk qualitatively
- by the persons in the field
  - The workers
  - The local management

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1 or 2 months later  
**Level 3. Analysis**

- Method more sophisticated to understand and use
- More time consuming and more costly

To study the risk qualitatively and quantitatively
- When it is indispensable
- To understand all the components of the risk factor
- To identify more sophisticated solutions

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3 months later  
**Level 4. Expertise**

- Techniques complementary and specific for develop even more sophisticated solutions
- Knowledge and means very specific
- Very specialized persons
- Occasional and detailed studies according to recommendations specified by those who conducted the 3 first levels of the strategy and oriented toward a specific item
Tools to implement the SOBANE philosophy

- Observation
- Analysis
- Prevention
- Screening

1. Social facilities
2. Safety (accidents, falls...)
3. Machines and hand tools
4. Electricity
5. Fire and explosion
6. Lighting
7. Work on VDUs
8. Noise
9. Thermal environment
10. Chemical agents
11. Biological agents
12. Musculoskeletal disorders
13. Whole body vibration
14. Hand-arm vibration

Stage 1, Screening

Dépistage
Participatif des Risques

Déparis

Participative screening of the risks
SOBANE Wuppertal 2006

To be discussed

List of aspects to be discussed

What can be done in practical terms in order to improve the work situation

Aspects that need to be studied more in details:

Situation unsatisfactory: Needs for improvements
Situation partly satisfactory: To improve if possible
Situation completely satisfactory

General procedure

1. Information by the direction on the aims and commitment to take account of the results
2. Definition of a small group of workstations forming a unit, a "work situation" (10 to 15)
3. Designation of a coordinator
4. Adaptation of the tools to the work situation
5. Constitution of a working group (4 to 7 people) with
   • key operators designated by their colleagues
   • at least 1 man and 1 woman if mixed group
   • supervisory staff

6. Meeting of the group in a quiet room close to the working situation
7. Discussion on each heading
   - not to carry a score
   - but to determine
   - what can be made to improve the situation
   - what needs to be discussed ("Observation") more specifically
8. Synthesis by the coordinator
   • The list of the detailed solutions considered
   • The points that need to be studied more in detail
   • Who does what and when?
   • The short term action plan

Procedure

Report

Situation of work:

Synthesis of the measures suggested and of the complementary studies to perform
10. Implementation of the action plans at short, medium and long terms
11. Periodically, repetition of the operation
12. Revaluation of the situation and modification of the action plans

Déparis

Advantages
- Directly participative: the workers and local management are the actors
- No measurements
- No sophisticated concepts
- Oriented WHY? and HOW?
- No evaluation scale: 😊😊😊
- Priorities defined
- Fast and economical

“Operationally validated” in 40 small companies:
- understood and readily operational
- not too long, not too short
- leads to solutions at short, medium, long term
- optimizes the intervention of the O.H.
- saves time and €

Interest of Déparis
- Direct
  - Dynamic management of
    - No only the traditional risks
    - But all the aspects that influence the wellbeing of the workers
  - Greater probability of success:
    - The solutions come from the workers
- Indirect
  - Progressive training in occupational health
  - Motivation
  - Change of paradigm
    - NOT avoid problems: costs, negative aspects
    - BUT gain efficiency: investment, positive aspect

Déparis

Disadvantages
- Socially highly committed
  - Difficult to organize the first time
- Need to check that no major problem was forgotten
  - Complementary checklist

Role of the OH practitioner
- To make the partners
  - Direction
  - Trade-unions
  - Workers
  - Safety and health Committee

aware of the possibilities offered by the SOBANE strategy to structure the management of health and safety in the company for all work situations
**Role of the OH practitioner:**
- To adapt the methods at the 3 stages *Screening, Observation and Analysis* to the characteristics of the work situation in re-examining:
  - the terminology
  - the aspects taken in consideration

Mother ➔ daughter

**Daughters for some sectors**

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<tr>
<th>Sectors</th>
<th>Daughters</th>
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<tr>
<td>Agence bancaire</td>
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<td>Restaurants</td>
<td>Call centers</td>
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<td>Jardiniers</td>
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**Role of the OH practitioner:**
- To follow closely or lead himself the first application of the methods
  - to avoid ambiguities
  - to follow the process
  - discussion
  - decisions
  - synthesis
- To periodically re-start the use of the strategy while taking care that the process develops itself in the company

**Deming wheel**

- Quality of the work situation
- Time (years)

**The energy**
- Inertia
  - Lack of understanding
  - Lack of confidence
  - Resistance to changes
  - Fear of the unknown
  - Procrastination
  - Weariness, lassitude
  - Laziness
- Friction
  - Urgent >>> important
  - Regression to initial state of improvisation.
Sources of energy

- Someone outside the system, but not too much:
  - Internal OH practitioner
    - If outside the system
    - If influence on direction and workers
  - Occ. Physician
    - If he get involved
- NOT
  - Labour inspectorate
  - External specialized practitioners

Quality of the working situation

www.md.ucl.ac.be/hytr/

www.sobane.be

Thank you for your attention...