Methodologies to identify work-related diseases: Review on sentinel and alert approaches

Typology and in-depth study

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INTRODUCTION

- Work and working conditions change continuously
- This may lead to new occupational safety and health risks
- A ‘new occupational safety and health risk’ defined by EU-OSHA as any occupational risk that:
  - Was previously unknown and is caused by new processes, new technologies, new types of workplaces, or social organisational change; or
  - Is a longstanding issue that is newly considered a risk as a result of a change in social or public perceptions; or
  - New scientific knowledge allows a longstanding issue to be identified as a risk.

- New or emerging risks may lead to new and emerging work-related diseases (WRDs)

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Additional approach or instrument to those already in use for monitoring occupational diseases (ODs);

Early warning system with a comprehensive approach for signal management: detecting, strengthening and alerting of new WRDs

“Early warning system”
OVERVIEW OF THE PROJECT

Task 1. • Literature review development of typology

Task 2. • In-depth description of 12 selected systems through interviews and qualitative analysis

Task 3. • Seminar to discuss outcomes 1 and 2

Task 4. • Final report including analysis and recommendations

Task 5. • Workshop to disseminate findings to stakeholders

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LITERATURE REVIEW

- Search **scientific literature** from several databases
- Search **grey literature** from reports, websites, survey reports
- Contact authors of sources if necessary
- Extract data from articles to collect information on
  - General aspects: country, organization/institution maintaining the system, website
  - Aim of data collection, coverage
  - Reporting mechanism
  - Evaluation of work-relatedness, follow-up
  - Dissemination, link with prevention
- Analyse data, develop typology and report:

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Methodologies to identify work-related diseases: Review of sentinel and alert approaches

European Risk Observatory Literature Review

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THE IN-DEPTH STUDY

- 6 systems described through *in-depth desk research*:

  Information describing the development, outline and results of the systems was gathered from websites, grey literature and scientific publications.

- 6 systems described through *interviews with 3 stakeholders*:

  1. Owner of the sentinel or alert system;
  2. Workplace actor who reports to the system
  3. Researcher and other stakeholder using the system in the framework of monitoring, WRD detection, OD recognition, or workplace prevention.
RESULTS LITERATURE REVIEW

- 75 systems/approaches identified from EU countries as well as outside Europe (USA, Canada, Australia, Singapore, Taiwan etc.)
- **Typology** with algorithm to determine type

<table>
<thead>
<tr>
<th>Nr</th>
<th>Question</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the system aimed at workers or at the general public?</td>
<td>Workers/General public including workers</td>
</tr>
<tr>
<td>2</td>
<td>Which type of surveillance is used in the system?</td>
<td>Passive/Active/Sentinel</td>
</tr>
<tr>
<td>3</td>
<td>Is the system linked to workers’ compensation?</td>
<td>Yes/No</td>
</tr>
<tr>
<td></td>
<td>If yes, what type of system</td>
<td>Closed list/ open list/no list at all</td>
</tr>
<tr>
<td>4</td>
<td>Which diseases or health problems are reported?</td>
<td>Comprehensive (all diseases)/Specific (one or subset of diseases)</td>
</tr>
<tr>
<td>5</td>
<td>Is the system among others aimed to alert on new and emerging work-related health problems?</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>
RESULTS

Monitoring systems

Compensation-based
- Closed list
- Open list
- No list

Systems primarily designed for data collection and statistics

Noncompensation-based
- Sentinel systems
- Public health systems aimed at workers and non-workers

All work-related diseases

Specific group of work-related diseases

Work-related diseases, accidents and injuries

Spain: CEPROSS and PANOTRASSTSS
Hungary: Registration system of OOs
Switzerland: SUVA
Belgium: Fund for Occupational Diseases
Finland: Finnish Register of Occupational Diseases (FROD)
USA (Washington State): SHARP (3 programmes aimed at dermatitis, asthma, musculoskeletal disorders); Taiwan: NODIS

UK: THOR-GP, OPRA, THOR-EXTRA; Norway: RAS; France: MCP, RNV3P; the Netherlands: NROD, PIM; Spain: Vocational health surveillance Program in Navarre

UK: SWORD, EPIDERMA, SIDAW (THOR); South Africa: SORDSA; Australia: SABRE; Canada: OWRAS; France: ONAp2, EpiNano; Italy: OCCAM

USA: SENSOR, HHE; Belgium and the Netherlands: SIGNAAL; France: GAST, OccWatch; New Zealand: NODS

USA: SENSOR Pesticides Program; New Zealand: NODS Specialist Panels (Cancer Panel, Respiratory Diseases Panel, Solvents Panel, and Chemical Panel)

UK: Self-reported Work-related Illness survey (SWI); Ireland: Quarterly National Household Survey (QNHS)

France: Programme de surveillance des troubles musculo-squelettiques (TMS), French National Program for Mesothelioma Surveillance (PNMS); USA: Pesticide Illness Surveillance Program (PISP)
Compensation-based systems

- Switzerland: SUVA
- Belgium: Fund for Occupational Diseases
- Hungary: Registration system of ODs
- Washington: SHARP (3 programs aimed at dermatitis, asthma, musculoskeletal disorders)
- Spain: CEPROSS and PANOTRASSTSS
- Taiwan: NODIS

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Systems for data collection and statistics

- The Netherlands: NROD, PIM
- Finland: Register of occupational safety and health administration
- UK and Ireland: THOR; UK: Riddor
- Norway: RAS
- France: MCP, RNV3P, ONAP2, EpiNano
- Spain: Navarre
- Italy: OCCAM
- Canada: OWRAS
- Singapore: iReport
- South Africa: SORDSA
- Australia: SABRE

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Public health systems

Ireland: Quarterly National Household Survey (QNHS)

UK: Self-reported Work related Illness survey (SWI)

France: TMS, PNMS

USA: Pesticide Illness Surveillance Program (PISP)

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Compensation-based systems

- Collect data for workers’ compensation purposes reporting is driven by insurance and mostly mandatory by law

- Cases are mainly reported by physicians; some systems also allow employees, employers, trade union delegates, etc. to make a claim

- Some systems (SUVA, NODIS) collect additional data for WRDs which will not be compensated opens the possibility to implement preventive actions regardless of compensation

- Conditions for capturing new WRDs:
  - Closed list / open list / no list
  - Independence from compensation in terms of reporting
Initially directed towards occupational accidents, ODs gradually introduced

Created to provide insurance to workers over time expanded to include preventive workplace activities and publication of national OSH statistical data

Reporting based on voluntary participation of all types of physicians
Data mainly from two sources: compensation claims and medical examinations (screening) of workers

Work-relatedness evaluation is performed by SUVA’s OH experts
Possibility to include detailed workplace inspections with exposure assessments

Even though the criteria for recognising an OD and its compensation are strict, preventive actions triggered by a reported case are implemented regardless of fulfilment of these criteria

Strong point: direct link between the collected data and prevention aimed at individual workers at their workplace, or at specific groups of workers at high risk
Statistics:

New occupational health risks

Nanoparticle and Health at the Workplace

In Switzerland, the Swiss Accident Insurance Institution (Suva) is responsible for the prevention of occupational diseases in the workplace. Therefore, Suva is involved in the study of nanoparticles at workplace.

The Suva-Film (2009) shows how the Suhler AG Uzwil is dealing with the dangers of Nanotechnology.

Fällezahlen 2014: total 2152 Berufskrankheiten
(Quelle: SSUV Unfallstatistik 2016)

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- **Aim:** data collection and analysis to measure incidences and trends in OSH
- Based on voluntary participation of physicians in general (Italy: requested by law)
- All WRDs or disease specific
- **Disease-specific systems:**
  - respiratory diseases;
  - skin diseases;
  - occupational cancer;
  - infectious diseases and
  - WRDs related to nanomaterials exposure
- **Final work-relatedness decision** made by reporter or by evaluation by OSH experts
- **Scarce exposure assessment**
- Prevention activities at different levels (company, sector, national) in communication with governing bodies (statistical input for national preventive strategies and policies)
Non-compensation-related system, run by the Norwegian Labour Inspectorate (NLI)
Main purpose: data collection and analysis for all WRDs

Suitable for sentinel surveillance: reports signal to the NLI for workplace interventions and prevention of hazardous exposures

Covering all sectors including SMEs, except offshore petroleum, aviation and marine sector
All physicians can report cases they suspect being work-related and advice further investigation; participation grade is low (3-5%)

Final decision on work-relatedness is made by OPs from the NLI
Reporter gets feedback
NLI can take appropriate preventive and remedial action based on reported cases

Register for Arbeidsrelaterte Sykdommer (RAS)
Occupational Health Surveillance Program in Navarre (Spain)

- Regional system, run by Institute of Public and Occupational Health of Navarra
- Non-compensation-related system for 7 diseases based on sentinel surveillance
  - Initially 5 diseases: elbow and wrist tendinitis, carpal tunnel syndrome (CTS), occupational asthma, airway reactive dysfunction syndrome (RADS), and dermatitis.
  - Since 2013, shoulder disorders and voice disorders are included.
- Voluntary reporting by mainly public health physicians through a computer application
- Cases are investigated by an OH physician who can contact the employer and his Occupational Health Service
- If necessary initiate preventive measures and refer cases to the appropriate institutions to claim workers’ compensation for occupational disease.
- Reporters get feedback on their cases and in annual meetings assessment is discussed
- Recorded incidence of WRDs in Navarra is six times higher than the average incidence in the Spanish State (2009)
Spain: Overview of incidence of reported work-related diseases in Navarra, 2014 and 2015

<table>
<thead>
<tr>
<th>Diseases</th>
<th>2015</th>
<th>Incidence per 100,000 workers</th>
<th>2014</th>
<th>Incidence per 100,000 workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbow and wrist tendinitis</td>
<td>571</td>
<td>186.3</td>
<td>537</td>
<td>171.0</td>
</tr>
<tr>
<td>CTS</td>
<td>182</td>
<td>59.4</td>
<td>151</td>
<td>48.1</td>
</tr>
<tr>
<td>Asthma RADS</td>
<td>15</td>
<td>4.9</td>
<td>11</td>
<td>3.5</td>
</tr>
<tr>
<td>Dermatitis</td>
<td>107</td>
<td>34.9</td>
<td>114</td>
<td>36.3</td>
</tr>
<tr>
<td>Shoulder disorders</td>
<td>424</td>
<td>138.4</td>
<td>339</td>
<td>107.9</td>
</tr>
<tr>
<td>Voice disorders</td>
<td>43</td>
<td>14.0</td>
<td>36</td>
<td>11.5</td>
</tr>
<tr>
<td>Total</td>
<td>1342</td>
<td>437.9</td>
<td>1188</td>
<td>378.2</td>
</tr>
</tbody>
</table>

Source: I.S.P.L.N. Sección de Medicina del Trabajo y Epidemiología Laboral.
<table>
<thead>
<tr>
<th>Name of scheme</th>
<th>Reporting parties</th>
<th>Start date</th>
<th>End date (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWORD – Surveillance of Work-related and Occupational Respiratory Disease</td>
<td>Consultant chest physicians</td>
<td>1989</td>
<td>/</td>
</tr>
<tr>
<td>EPIDERM – Surveillance of Work-related Skin Disease</td>
<td>Consultant dermatologists</td>
<td>1993</td>
<td>/</td>
</tr>
<tr>
<td>OPRA – Occupational Physicians Reporting Activity</td>
<td>OH physicians</td>
<td>1996</td>
<td>/</td>
</tr>
<tr>
<td>SIDAW – Surveillance of Infectious Diseases at Work</td>
<td>Consultant infectiologists</td>
<td>1996</td>
<td>/</td>
</tr>
<tr>
<td>OSSA – Occupational Surveillance Scheme for Audiological Physicians</td>
<td>Consultant audiologists</td>
<td>1997</td>
<td>2006</td>
</tr>
<tr>
<td>MOSS – Musculoskeletal Occupational Surveillance Scheme</td>
<td>Consultant rheumatologists</td>
<td>1999</td>
<td>2009</td>
</tr>
<tr>
<td>SOSMI – Surveillance of Occupational Stress and Mental Illness</td>
<td>Consultant psychiatrists</td>
<td>1999</td>
<td>2009</td>
</tr>
<tr>
<td>THOR-ENT - Occupational Surveillance of Otorhinolaryngological Disease</td>
<td>Otorhinolaryngologists</td>
<td>2005</td>
<td>2006</td>
</tr>
<tr>
<td>THOR GP – THOR in General Practice</td>
<td>General practitioners</td>
<td>2005</td>
<td>/</td>
</tr>
<tr>
<td>THOR-EXTRA</td>
<td>Reporting parties from all other schemes</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>
THOR is maintained by the University of Manchester
Currently presents the main national OSH data source

Experts at the University of Manchester constantly assess and analyse the data
In addition, THOR-EXTRA allows all reporting physicians to report interesting cases or WRDs with a potentially novel cause
Data quality is constantly improved through the system’s various innovative features

In addition to identifying incidences and trends in work-related ill health in the UK, the collected data are used in numerous other ways:
• dissemination to stakeholders,
• informing of policies and links with prevention,
• identification of new/emerging WRDs,
• evaluation of preventive actions in place, etc.
Non-compensation-based system maintained by the National Institute for Insurance against Accidents at Work (Istituto nazionale Assicurazione Infortuni sul Lavoro, INAIL)

Built on the mandatory reporting of WRDs required by Italian legislation

A wide network of local prevention centers (Azienda Sanitaria Locale, ASLs) oversee the collecting of data on any type of work-related health complaints

Physicians in the ASLs perform a thorough work-relatedness evaluation of cases and transfer the data into a national database maintained by the INAIL

Strong point: in-depth analysis of each reported case, not only in terms of causal relationship with work, but also with regards to the quality of the collected data, which often indirectly affects the certainty of the work-relatedness evaluation

MALPROF data are used to guide national and local preventive actions, develop OSH policies, identify high-risk groups of workers and identify new/emerging risks and WRDs

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The National Network for Monitoring and Prevention of Occupational Diseases (RNV3P) is a network for monitoring and prevention in OH.

It is grouping together the 32 Occupational Disease Consultation Centres (CCPPs) in mainland France and a sample of OH services (SSTs) associated with the network (n=9).

This network aims to collect data from each consultation into a permanent national database on ODs (patient’s demographic data, diseases, exposures, business sector, and profession).

It is up to the network’s university hospital experts to investigate the diseases and attribute them, if necessary, to an occupational origin (this ‘expert’ causality is also registered in the database).

The RNV3P is not only a platform for dialogue between clinicians and other OH professionals, but also a system that co-ordinates knowledge for the purposes of monitoring, improving knowledge and preventing occupational risks.
EpiNano (France)

- Non-compensation-related system aimed at one type of exposure (nanoparticles)
- Developed by the former French Institute for Public Health Surveillance (Institut de Veille Sanitaire, InVS), which is now part of Santé Publique France

- Aims to develop an epidemiological surveillance system of workers likely to be exposed to engineered nanomaterials (ENM).
  - Collection of all the information necessary to identify and characterise workstations that might cause occupational exposure to carbon nanotubes (CNT) or titanium dioxide (TiO2) nanoparticles, aggregates, and agglomerates
  - Validated semi-quantative method to characterise potential exposure (the Onsite technical logbook)
  - Researchers who perform onsite visits are epidemiologists and industrial hygienists

- The objectives of the prospective cohort study are to monitor the medium- and long-term possible health effects of nanomaterial exposure and to enable further research
Fig. 4B Distribution of workstations according to the type of operation performed: workstations classified as concerned with exposure to carbon nanotubes or TiO2 nanoparticles, aggregates and agglomerates (n=30)

- Functionallization: 14%
- Synthesis: 20%
- Sampling: 10%
- Analysis: 7%
- Cutting: 7%
- Filling: 3%
- Freeze drying: 3%
- Weighing: 20%

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Sentinel systems

- Sentinel surveillance: each case is seen as a signal
- Based on voluntary participation of physicians

- Mainly monitor all types of WRDs; some have additional schemes for specific WRDs

- Information on exposure: a more thorough description while reporting / workplace inspections with data gathering

- Low reporting threshold + work-relatedness evaluation by experts

- Strong link with prevention by sending an alert signal to stakeholders
● Occupational Health Warning Groups, run by Santé Publique France (former L’Institut de veille sanitaire, InVS)
● Covers all economic sectors in France including SME’s in 10 regions (2016)
● Aim to provide an epidemiologic response to unusual health events at workplaces and to alert of new/emerging work-related health risks and diseases
● Enables reporting of any type of unusual health event at workplaces (clusters of cancers or other diseases, non-typical exposures, etc.) to the regional platform for monitoring and health emergencies, the ARS (Agences régionales de santé)
● Reporters: any OH actor in charge of prevention or a witness of the event; about 80 % of cases are reported by OH physicians; cases have also been reported by health and safety committees, workers, unions, managers, medical specialists, GPs, and industrial hygienists.
● ARS will carry out a validation and evaluation
● If the signal seems unusual, direct it to the Regional Epidemiological Units (CIRE - Cellules interrégionales d’épidémiologie), which mobilises the GAST group of experts.
● Experts have one month to confirm the signal, raise an alert, initiate an investigation if necessary, and make a decision, if necessary, regarding any consequent prevention measures to be implemented
Overview of reports to GAST sorted by category 2008-2015

- Non-valid
- Other pathology
- Unusual exposure
- Unexplained collective syndrome

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NIOSH HHE Health Hazard Evaluations (USA)

- HHE Program identifies chemical, biological or physical hazards at the workplace
- Run by the National Institute of Occupational Safety and Health (NIOSH)
- A priority of the program is to evaluate and identify new and emerging hazards

- The program operates from two locations in the USA and acts upon request of employers, employees or employee representatives, other public-sector agencies
- Multidisciplinary teams investigate cases; depending on the subject they comprise industrial hygienists, physicians, and other occupational health specialists (including epidemiologists, psychologists, engineers, and statisticians).

- Responses to requests: written or oral consultations on technical matters, full-scale onsite investigations
- Written reports containing recommendations of evaluations are shared with employer and employee representatives at the worksite that is the subject of the investigation.
NIOSH HHE Health Hazard Evaluations (USA)

<table>
<thead>
<tr>
<th>Year</th>
<th>Exposures to Pharmaceutical Dust at a Mail Order Pharmacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>Ergonomic and Safety Climate Evaluation at a Brewery</td>
</tr>
<tr>
<td>2012</td>
<td>Legionnaires’ Disease at an Automobile and Scrap Metal Shredding Facility</td>
</tr>
<tr>
<td>2013</td>
<td>Evaluation of Sensitization and Exposure to Flour Dust, Spices, and Other Ingredients Among Poultry Breading Workers</td>
</tr>
<tr>
<td>2013</td>
<td>Evaluation of Environmental Controls at four Homeless Shelters Associated with a Tuberculosis Outbreak – Florida</td>
</tr>
<tr>
<td>2014</td>
<td>Evaluation of Exposures and a Potential Hydrogen Sulphide Release Event at an Aircraft Engine Services Facility, West Virginia</td>
</tr>
<tr>
<td>2014</td>
<td>Evaluation of Musculoskeletal Disorders and Traumatic Injuries Among Employees at a Poultry Processing Plant.</td>
</tr>
<tr>
<td>2014</td>
<td>Lead exposure at a firing range and gun store</td>
</tr>
<tr>
<td>2015</td>
<td>Evaluation of Potential Employee Exposures to Mycobacterium tuberculosis at an Elephant Refuge</td>
</tr>
<tr>
<td>2015</td>
<td>Evaluation of Occupational Exposures at Dry-Cleaning Shops using SolvonK4 and DF2000 (new solvents)</td>
</tr>
<tr>
<td>2015</td>
<td>Evaluation of Respiratory Health at a Syntactic Foam Manufacturing Facility</td>
</tr>
<tr>
<td>2015</td>
<td>Evaluation of Heat Stress, Heat Strain, and Rhabdomyolysis during Structural Fire Fighter Training</td>
</tr>
<tr>
<td>2016</td>
<td>HHEs of Electronic Waste Workers (2)</td>
</tr>
<tr>
<td>2016</td>
<td>HHEs in Coffee Processing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Request and follow-up</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>New requests</td>
<td>269</td>
<td>230</td>
<td>209</td>
<td>185</td>
<td>259</td>
</tr>
<tr>
<td>Technical consultation</td>
<td>118</td>
<td>126</td>
<td>118</td>
<td>124</td>
<td>184</td>
</tr>
<tr>
<td>Field investigations</td>
<td>53</td>
<td>34</td>
<td>33</td>
<td>39</td>
<td>41</td>
</tr>
<tr>
<td>Publications and presentations</td>
<td>36</td>
<td>51</td>
<td>73</td>
<td>102</td>
<td>47</td>
</tr>
</tbody>
</table>
SIGNAAL is an online non-compensation-based sentinel system in place since July 2013.

Result of co-operation between the Netherlands Centre for Occupational Diseases (NCvB), the Centre of Environment and Health of KU Leuven (Belgium) and Group IDEWE (a Belgian External Service for Prevention and Protection at Work).

Main goal is to detect new OH risks and new ODs.

OH physicians mainly report diseases they suspect to be caused by an employee’s occupation.

Strong point: every reported case is evaluated in a structured manner by at least two independent OH experts. The experts assess whether the case could be a WRD and whether it is a new OH problem.

After the assessment, the reporting physician receives an elaborated report. This report contains supportive literary research, the relevance to the job in question, and suggestions regarding the next steps in the course of action.
### SIGNAAL (Belgium and the Netherlands)

<table>
<thead>
<tr>
<th>Some of the reports since July 2013</th>
<th>Work-related?</th>
<th>New combination?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open angle glaucoma and playing saxophone (teacher)</td>
<td>NL</td>
<td>Yes</td>
</tr>
<tr>
<td>Achilles tendon rupture in the assembly, dismantling and maintenance of cranes</td>
<td>NL</td>
<td>Yes</td>
</tr>
<tr>
<td>Back pain in the care of dementia patients without available lifting aids</td>
<td>NL</td>
<td>Possible</td>
</tr>
<tr>
<td>Endotoxin fever after cleaning a polluted drain with high pressure</td>
<td>NL</td>
<td>Yes</td>
</tr>
<tr>
<td>Nosebleeds and formaldehyde exposure in aluminium production</td>
<td>B</td>
<td>Yes</td>
</tr>
<tr>
<td>Pulmonary alveolar proteinosis and exposure to hairspray in a hairdresser</td>
<td>B</td>
<td>Yes</td>
</tr>
</tbody>
</table>
SENSOR: first OSH surveillance system designed according to the sentinel approach.
Initial goal: provide information on any identified work-related health problems
Main reporting parties were physicians across the USA.

SENSOR Pesticide Program: only remaining system of the initial SENSOR with its original name

Three main sources of data information:
• State Department of Agriculture;
• Poison Control Centers;
• Workers’ Compensation System

Main strong points of the SENSOR Pesticides Program:
• clear case definition;
• detailed description of cases through numerous standardised variables;
• thorough assessment procedure of the reported cases, including classification of cases, determination of case severity, case investigation, and follow-up.

Usage of SENSOR data is closely related to activities of the Environmental Protection Agency (EPA), which enables the necessary link with prevention and pesticide-related policy.
Public health systems

- Aimed at health surveillance of workers and general population

All types of WRDs

- Survey-based systems: Labour Force Surveys: **QNHS** (Ireland), **SWI** (UK);

- A special module for work-related health problems

Specific type of WRDs

- Focused on specific diseases, but both work-related and non-work-related cases can be reported
  - France **TMS** - musculoskeletal disorders;
  - **PNMS** - pleural mesothelioma;
  - USA **PISP** – diseases related to pesticides exposure

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Active surveillance systems
Main purpose: estimate incidence and prevalence of work-related injuries and WRDs
Similar design with data collection in three-month periods, through interviews with workers (randomly selected) in households.
Both LFSs have modules collecting information on work-related ill health
Ireland: QNHS survey (Quarterly National Household Survey) is carried out by the Central Statistics Office (CSO) of Ireland, covering 3000 households weekly
UK: Self-Reported Work-Related Illness (SWI), is carried out by the Office for National Statistics (ONS), covering 50,000 households each trimester

Individually are asked whether they suffered from any illness or disability in the past 12 months that they believe were caused or aggravated by their work and on factors at work that may adversely affect mental well-being or physical health.
No further evaluation of work-relatedness of the health problems
The LFSs provide information on WRDs from the workers' perspective
United Kingdom

Estimated rates of prevalence (total cases) and incidence (new cases) of stress, depression or anxiety caused or made worse by work among working people in last 12 months; source

Ireland

Work-Related injury and illness (%) by occupational group, 2010–2012 (pooled)

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