

The French National mesothelioma surveillance program



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Context and objectives

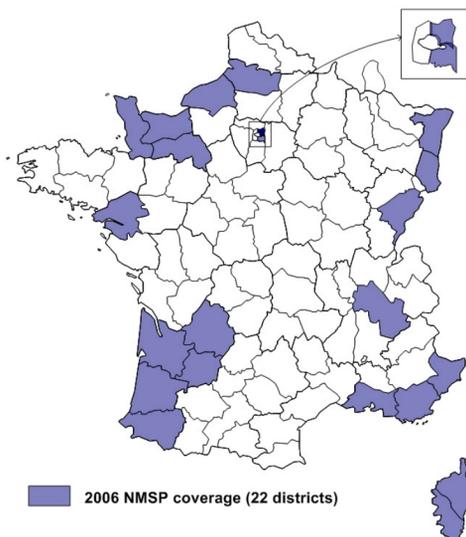
The National Mesothelioma Surveillance Program (NMSP) was established at the beginning of 1998 at the request of the French authorities. Responsibility for putting together qualified teams for each component of the program and overall coordination were assigned to the Occupational health department of the national Institute for health surveillance (DST-InVS).

The objectives of the NMSP are:

- to estimate the national incidence of mesothelioma in France and its course over time,
- to study the proportion of mesotheliomas in France attributable to asbestos exposure, especially of occupational origin and to contribute to research into other possible aetiological factors (man made mineral fibres, ionizing radiation, SV40 virus, etc.),
- to help to improve the pathologic diagnosis of mesothelioma.
- to assess the extent of the recognition of pleural mesothelioma as a compensable occupational disease.

Methods

The NMSP is organized into several components: (1) Incidence monitoring; (2) Exposures and aetiology; (3) Pathology and clinical confirmation; (4) Assessment of recognition as a compensable occupational disease.



1) Incidence monitoring

- Exhaustive recording since 1998 of all incident primary pleural tumours in specified representative districts (approximately 1/4 of the French population),
- Estimate of the national incidence of pleural mesothelioma based on the estimated incidence/mortality ratio obtained by comparing the incidence and mortality data from the study districts.

2) Exposures and aetiology

- Interview of each reported case using a standardized questionnaire: reconstruction of the lifelong histories (homes, schools, detailed job history including the tasks performed during each job, home repairs and do-it-yourself handy work) and other situations that may have involved exposure to asbestos or other possible aetiological factors,
- Assessment by industrial and environmental hygienists of the probability, intensity, frequency and duration of exposure to each etiological factor.

3) Pathology and clinical confirmation: standardized diagnostic confirmation procedure

- For each case, samples are transmitted to a national group of specialized pathologists ("Mesopath" panel) and classified as certain, uncertain, unclassified (because of inadequate material or ruled it out in favour of other diagnosis). A supplemental immunohistochemical analysis is undergone to maximise the reliability of the diagnosis,
- When the case can not be confirmed pathologically, a clinical assessment by two pneumoconiosis specialists is organized.

4) Assessment of recognition as a compensable occupational disease

- In 18 of the 22 NMSP districts, we compiled a list of the mesothelioma cases (diagnosed on the period 1999-2001 and not excluded by the pathology confirmation procedure) of workers who belonged to the General national health insurance fund,
- Comparison of the proportion of patients eligible for compensable occupational diseases and the proportion of subjects who did not benefit of compensation.

Results

1) Incidence monitoring

- From 1998, 1765 cases have been reported (80% men). The mean age was 69 in women and 70 in men,
- On the period 1998-2002, taking into account the heterogeneity in the incidence/mortality ratio for pleural cancer, we estimated the annual incidence to be 610 cases among men (incidence rate: 2.2 per 100,000), and 180 for women (incidence rate: 0.6 per 100,000).

2) Exposure and aetiology

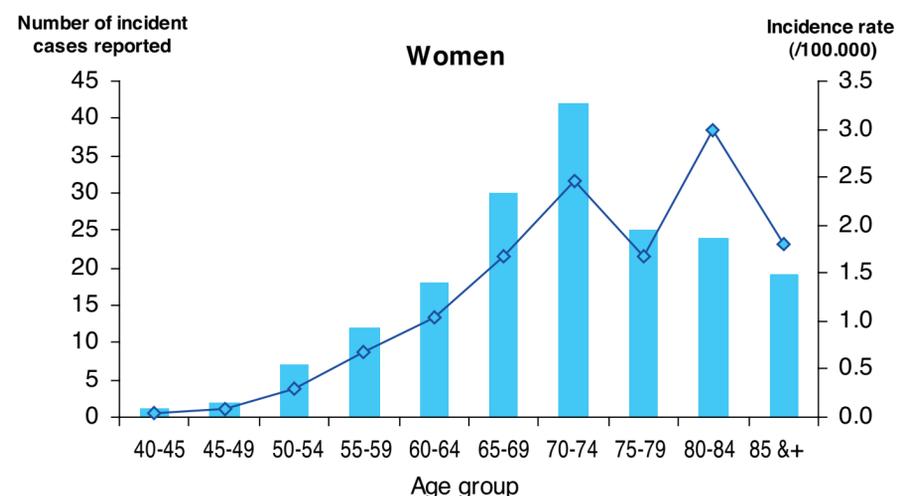
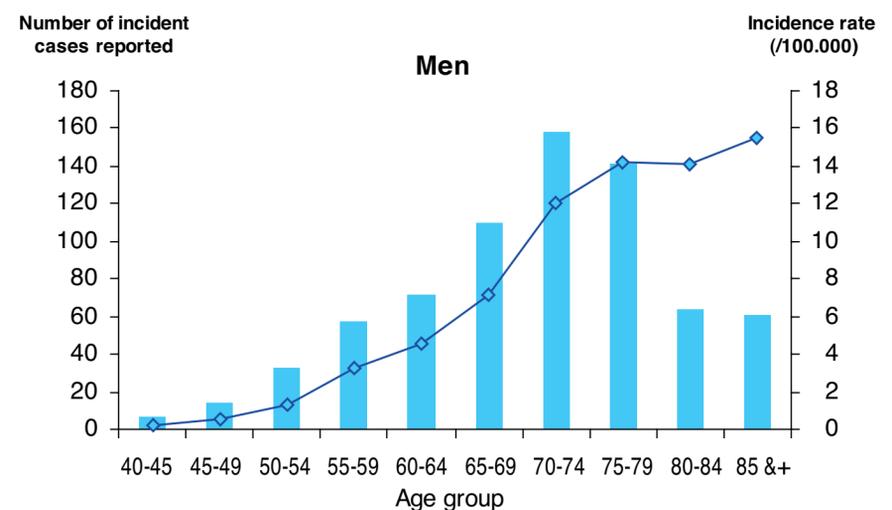
- From 1998, 702 questionnaires were assessed (670 men and 175 women),
- An occupational exposure can not be excluded in 92% of men and 42% of women.

3) Pathology and clinical confirmation

- Pathology review confirmed the initial pathologist's diagnosis in 67% of cases, ruled it out in 13%, and left it uncertain in the others,
- For half of the latter, the clinical findings strongly supported a mesothelioma diagnosis,
- Analysis of the histological variants showed mostly epithelioid mesothelioma (approximately 70%). The mixed form was observed in 15% of the cases and the sarcomatoid form in 11%; the desmoplastic form accounts for less than 2% of the latter.

4) Assessment of recognition as a compensable occupational disease

- In all, 62% applied for designation of an occupational disease, and 91% of these were receiving workers' compensation,
- Of the 38% of subjects who did not make the request, about half were considered asbestos-exposed.



Conclusions

The NMSP is a large scale epidemiologic surveillance system with several original aspects, providing important information to improve the knowledge of malignant pleural mesothelioma, such as monitoring the evolution of its incidence, of high risk occupations and industries, and improving pathology techniques.