

Silicosis Elimination Program in Thailand

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Introduction

- Silicosis is one of the most important occupational diseases in Thailand
- First reported case in Wulfam mine in 1954
- Silicosis Surveillance Program was set up by the Division of Occupational Health in 1981
- First and only one occupational disease to be selected for elimination at national level

Aims

- Describe current situation of the disease,
- Report action plans and activities of the national silicosis elimination program.

History of reported cases

Year	Type of industry	Region	No. of cases	Type of disease
1954	Wulfam mine	Central	1	Acute
1974	Fluoride mine	Central	5	Chronic
1975	Wulfam mine	South	1	Chronic
1976	Wulfam mine	South	22	Acute
1984	Wulfam mine	Central	2	Acute
1990	Ceramic	North	2	Chronic

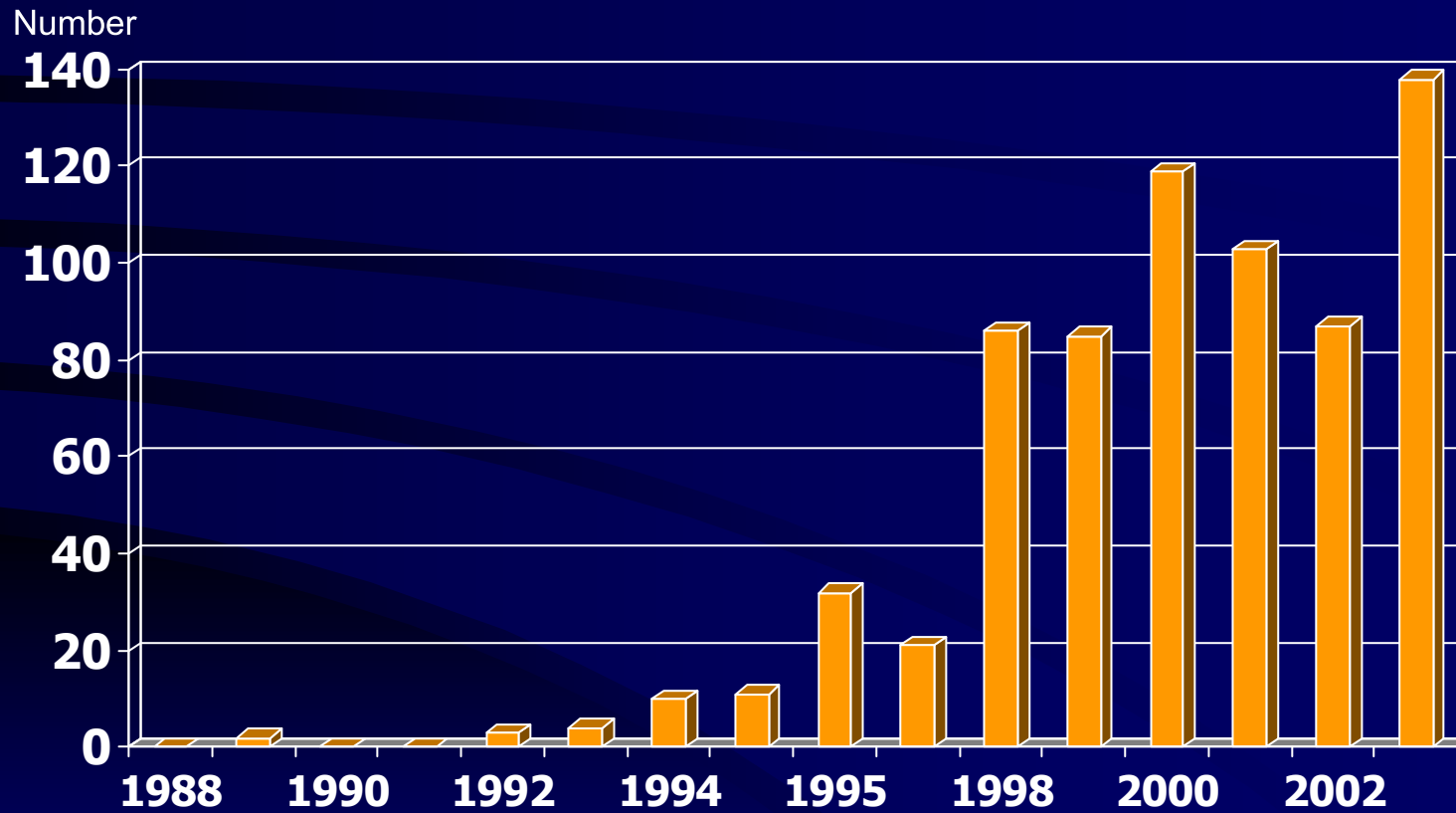
Prevalence rates of silicosis by type of industry from active case survey

Type	Prevalence rate
Sand paper	46%
Mortar makers	15 - 35%
Brick makers	28%
Quarry & Stone grinding	8 - 19%
Concrete pipe	4%
mine	2%

Number of high risk workplaces and workers in 2003

Type of industry	No. of enterprises	No. of workers
Quarry & stone grinding	608	12,025
Ceramic	589	43,553
Glass manufacture	159	16,644
Brick	987	13,190
Concrete & Cement	3,864	69,059
Foundry	482	30,396
Mortar	157	6,937
Total	7,732	217,057

Number of reported cases of pneumoconiosis during 1988-2003



Source: Bureau of Epidemiology

Result of Active disease surveillance program

Year	No. of Workplaces	No. of Workers	% Suspected cases	% Dust level over standard
1995	275	5,851	6.4 %	43 %
1996	176	5,047	4.1 %	44 %
1997	264	7,727	2.7 %	51 %
1998	273	8,160	6.2 %	42 %
1999	311	5,723	2 cases	No data
2000	251	7,116	3.7 %	No data

The National Silicosis Elimination Program

- Set up in 2001
- The goal: “ Reduce new cases into zero within 10 years”
- Involvement the co-operation of all relevant organizations at all levels: International, National, Local levels.

Plans and Activities

International level:

- ILO, WHO, International academic institutions, etc.

Activities:

- Policy support
- Capacity building
 - Training of chest x-ray reading on pneumoconioses
- Technical support



NATIONAL TRAINING WORKSHOP ON PREVENTION OF PNEUMOCONIOSES

(READING THORACIC RADIOGRAPHS ACCORDING TO
THE ILO INTERNATIONAL CLASSIFICATION
OF RADIOGRAPHS OF PNEUMOCONIOSES)

BANGKOK, 11-15 DECEMBER 2000

AMARI WATERGATE HOTEL



Plans and Activities

National level:

- Min. of Public health, Min. of Labour, Min. of Industry, Min. of Environment and Natural resources

Activities:

- Law enforcement
- Technology transfer for dust control and health surveillance
- Support for workplace survey and monitoring
- Support for suitable preventive measures

Plans and Activities

Local level:

- Local relevant organizations and authorities

Activities:

- Law enforcement
- Conduct workplace survey: focus on quarry & stone grinding factories
- Implementation of preventive and control measures

Program indicators (within 5 years)

- Coverage : 25% of high risk workplaces
- Dust control : 50% of workplaces have dust level within normal limit
- PPE use : At least 60% of workers use PPE
- Complication : No TB in high risk workers or all detected TB are under treatment

Outcomes of the activities

Year	2001	2002
No. of workplaces	289	246
No. of workers	5,482	5,224
% of dust samples > standard level	14.6% (44/302)	22.3% (82/368)
No. of workers having chest x-ray	4,572	3,263
No. of silicosis	86 (1.88%)	34 (1.04%)
No. of TB	19	35
No. of silicosis with TB	2	-

Results of the workplace survey in 2002

- Coverage of workplaces
(only quarry & stone grinding factories) 45% (246/549)
- Coverage of high risk workers 58%(5,224/8,945)
- No. of workplace with PPE provision 40% (99/246)
- No. of workers who used PPE 18% (925/5,224)

Discussions

- Low number of cases may be due to short duration of exposure, high turn over-rate of workers, and lower concentration of silica in respirable dust.
- The program could achieve almost indicators. However, in order to achieve the goal within 10 years, the action plans have to be improved.
- The activities in 2003-2004 were interrupted by governmental reorganization and public health reform.

Obstacles

- Lack of making definite diagnosis from physicians
- Poor co-operation from employers and employees
- No suitable and low cost control measures available
- Change of policy in government budgeting allocation
- Lack of support from local policy makers

Conclusions

- No. of reported cases of silicosis are low
(prevalence rate = 1-2%)
- Quarry & stone grinding factories are high risk workplaces
- The implementation of the National Silicosis Elimination program can improve the situation by identifying high risk groups for further prevention and control of the disease.

Recommendations

1. Increase coverage
2. Expand the program to other high risk groups : Ceramic industry
3. Training
4. Law enforcement
5. Suitable technology for dust control



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