

15 Years of SHIELD: a reporting scheme for occupational asthma

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Abstract

SHIELD is the Midland Thoracic Society's Rare Surveillance Scheme for Occupational Asthma in the West Midlands, England, UK (working population 2.2 million). The database is a useful tool to locate outbreaks within a particular field of work and discover causative agents. There have been 1461 notifications of occupational asthma since January 1990.

The number of overall referrals peaked in 1990, 1995 and 2004, the latter being mostly due to a large outbreak due to metal working fluid used in the manufacture of car engines; there have been two previous smaller outbreaks in other engineering works. Isocyanates have been the commonest cause of occupational asthma over the last 15 years accounting for an average of 18% of all cases until 2005 when notifications dropped. The number of glutaraldehyde and latex associated occupational asthma cases has now declined, due to better management or removal of the agents. The incidence of colophony has also decreased more recently with the introduction of colophony free solder fluxes. There have been outbreaks due to cobalt in valve manufacture and chrome in a stainless steel foundry. There has been little variation in reports of flour, woods, adhesives, welding fume and other biocides.

In summary, although many agents have remained at a background level throughout the last 15 years, we should still be on the look out for new causes and old ones re-inventing themselves.

About Shield

- Joint project between the West Midlands branch of the Society of Occupational Medicine and Midland Thoracic Society
- Voluntary reporting scheme for respiratory and occupational physicians, when occupational asthma is the most likely diagnosis
- No specific Confirmatory tests required

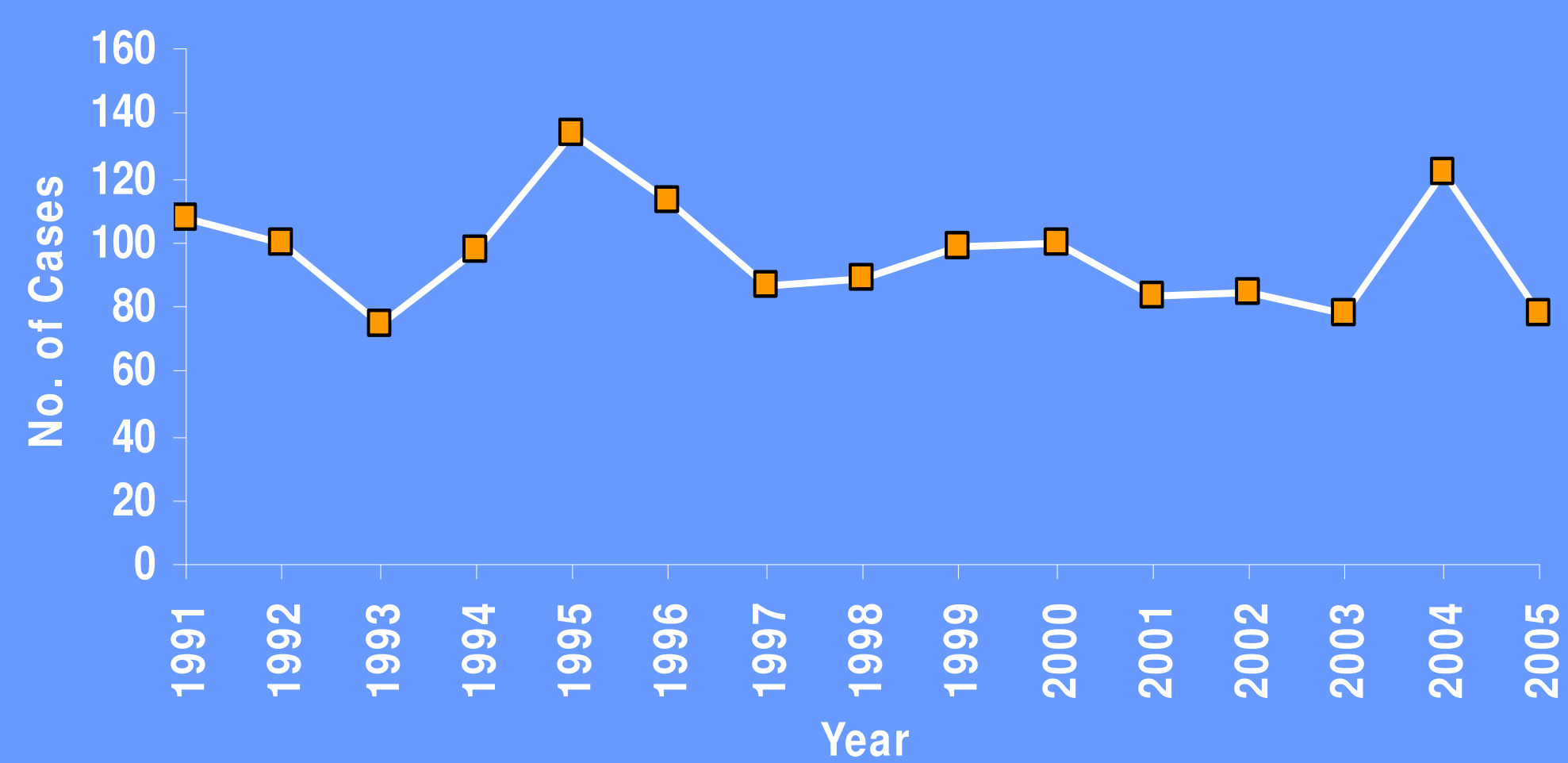
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- Set up in January 1989 to:
 - Study the incidence of occupational asthma in a defined geographical area
 - Determine proposed mechanisms of asthma
 - Audit diagnostic methods and objectives

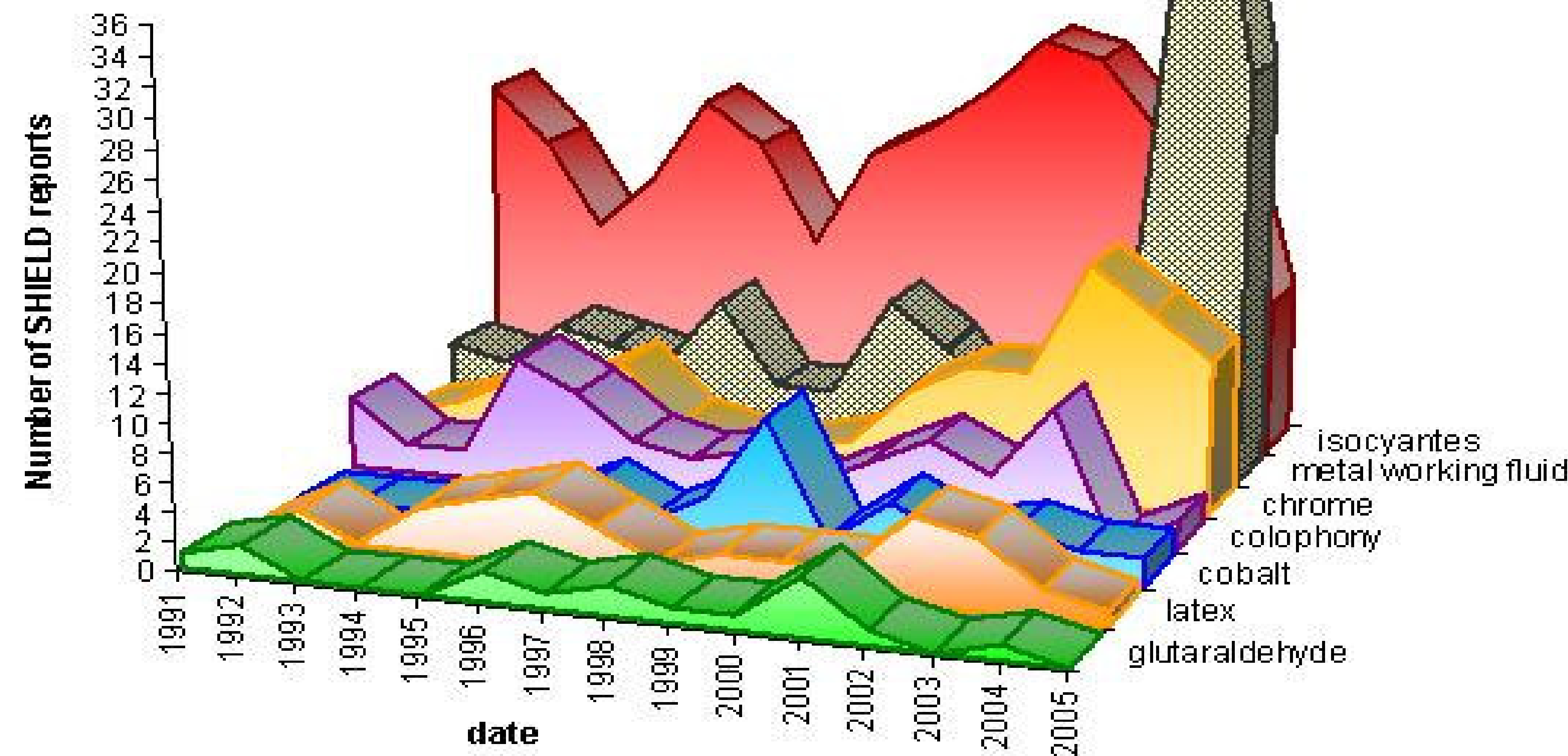
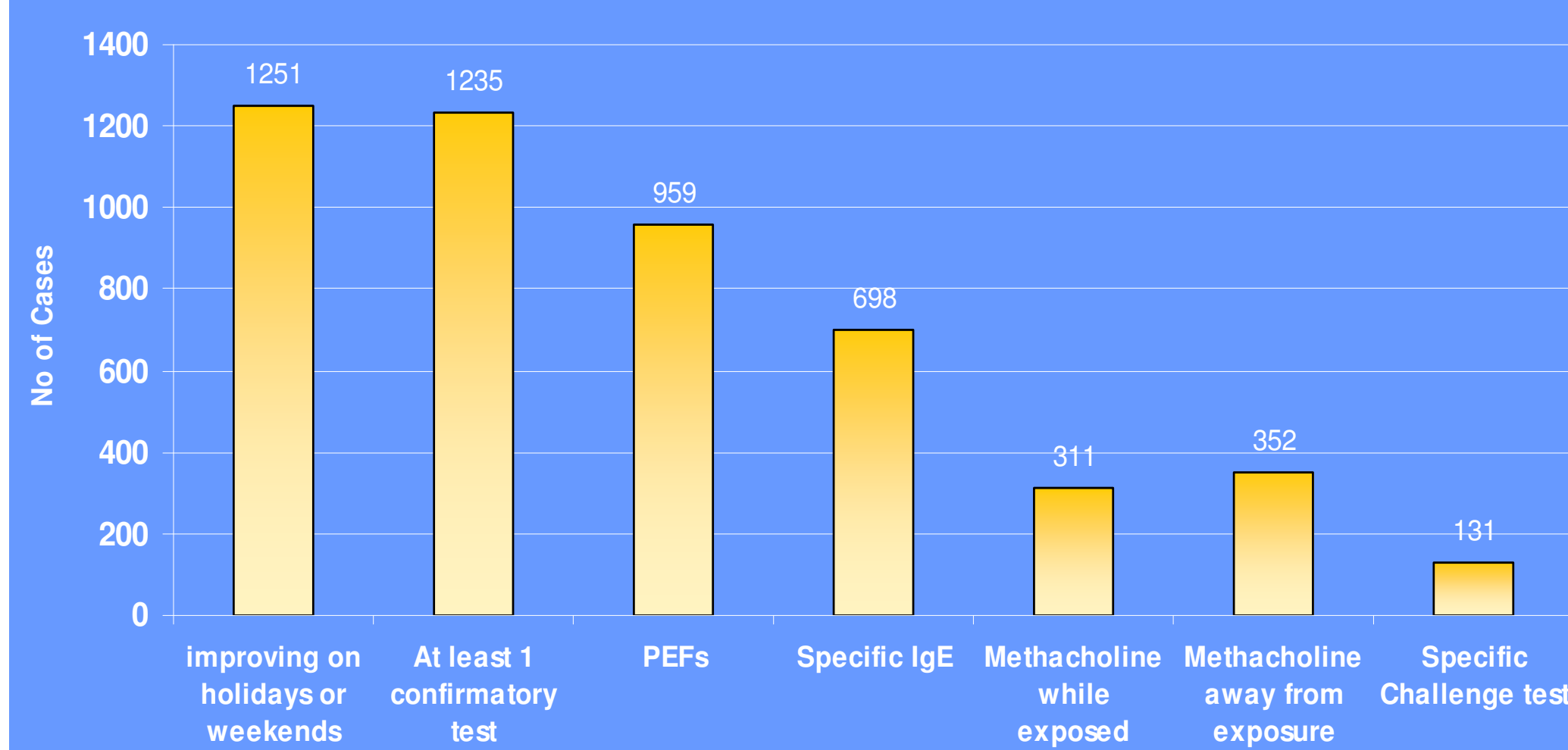
Conclusions

- Two peaks in 1995 & 2004 of reporting to Shield, but otherwise no change in the number of cases between 1991 & 2006
- Isocyanates have remained the number 1 cause of occupational asthma on Shield until 2005
- Certain agents e.g. Latex have decreased in number probably due to more awareness and the use of alternatives
- Shield is a useful tool in locating outbreaks and identifying trends in causative agents

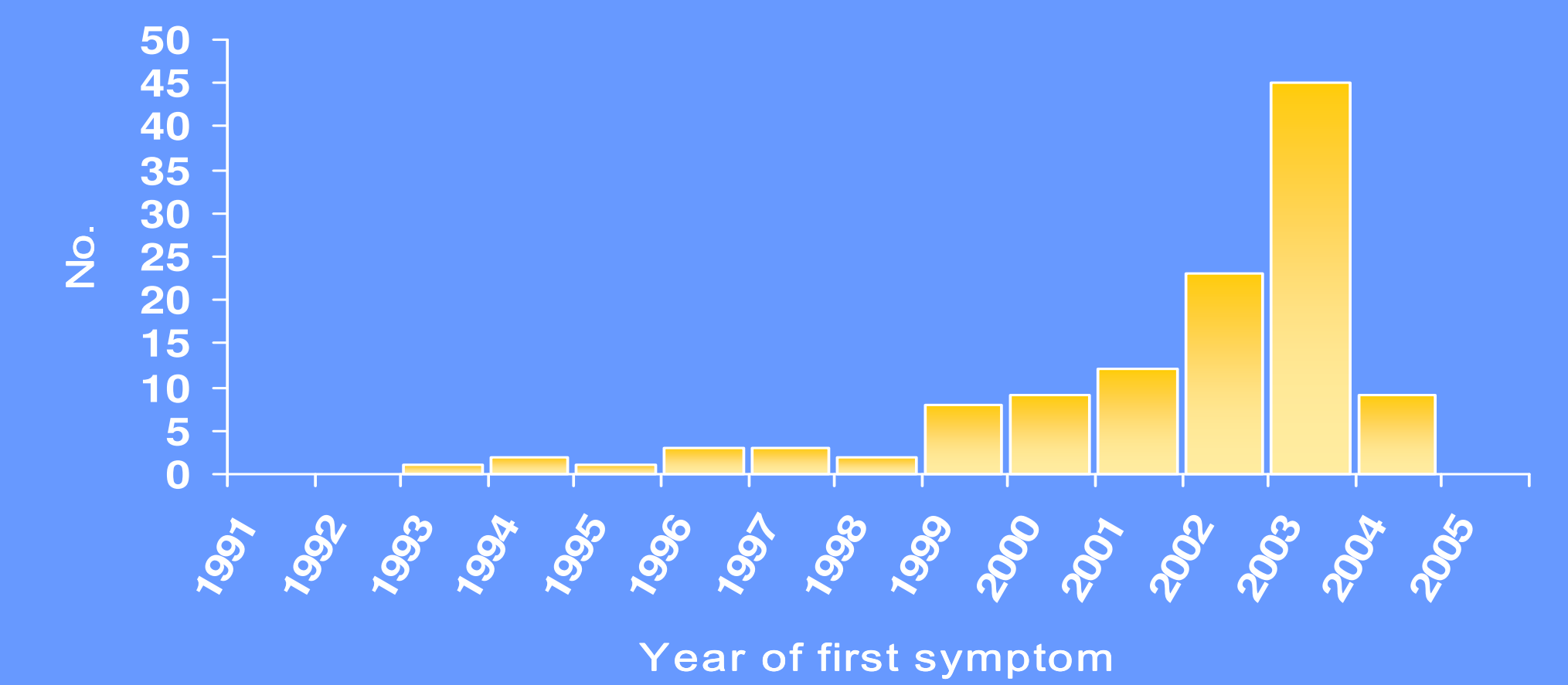
Number of Cases



Method of Diagnosis



Metal Working Fluid Outbreak

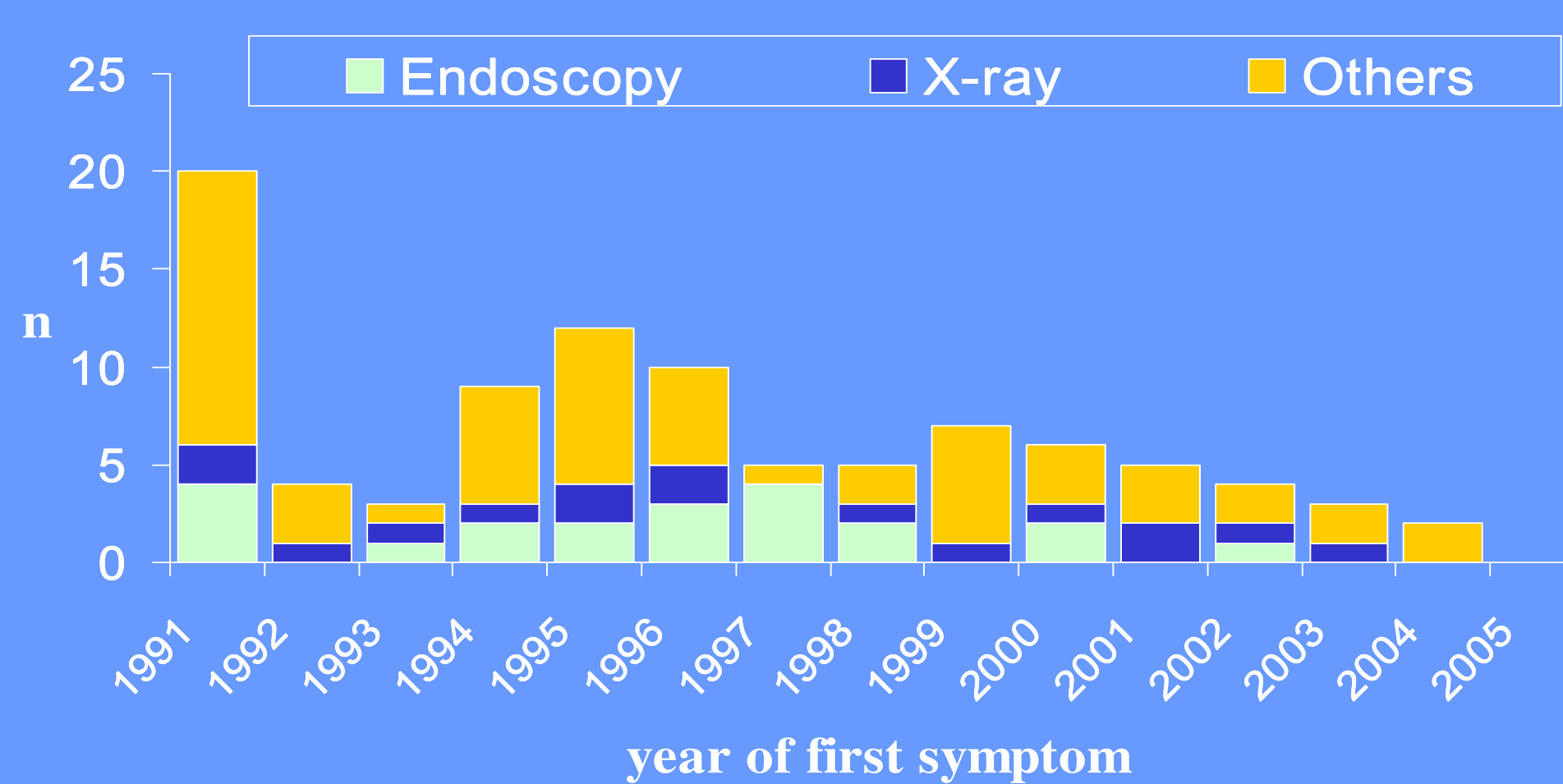


MWF and their constituents

- Additives**
- Antifoaming agents
 - Biocides
 - Additives
 - Cleaning Agent
 - Neat Oils

- Metals**
- Cobalt
 - Chromium
 - Manganese
 - Aluminium
 - Strontium
 - Zinc
 - Copper

Glutaraldehyde in Healthcare



Isocyanate Outbreaks

