	Basic Training Occupational Health and Scientific Research **September 2016** **Assignment 4.1 Extra (in pairs)**	
ESPrIT		

What is the real 'cause' of an increased number of occupational asthma in hairdressers as printed in a newspaper?

Learning objectives:

Increased basic knowledge and skills on recognizing research designs that are appropriate for the question being asked, basic mistakes in presentation of figures, doing a good analysis and interpreting results responsibly.

Description of the assignment:

The newspaper states:

The number of hairdressers with occupational asthma in Turkey has doubled from 2006 to 2015. Workers and their unions are seriously concerned about new toxic chemicals at the work floor. The Minister of Health and the Minister of Labor and Social Security ask PHIT for advice.

Discuss in pairs:

1. What are basic questions that you would want to answer, given such a report in a newspaper? Please first read the Annex on Types of Questions

2. What could have caused the rise in numbers? Find at least three explanations.

3. How would you investigate whether there is a true increase of casualties on the hair dresser's work floor or not?

4. Is there a difference in strategies on the short run versus on the long run?

Write down your answers below.

You have 1 hour for this assignment.

Source: Frank van Dijk and Gert van der Laan

Basic Extra Assignment

Title

What is the real 'cause' of an increased numbers of occupational asthma in hairdressers as printed in a newspaper?

Participants names:

1. …………………………………………………………………………
2. …………………………………………………………………………

Basic questions to answer:

…………………………………………………..

Explanations for the rise in numbers? (at least three)

…………………………………………………..

Adequate strategies to investigate the issue:

…………………………………………………..

Short term strategies:

…………………………………………………..

Long term strategies:

…………………………………………………..

Occupational Safety and Health online

How to find reliable information

Third edition in English 2016

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Chapter 1.1   Type of questions

There are two types of questions in the practice of occupational safety and health, regardless of the discipline involved:

- **General:** a general or 'background' question asks for general knowledge. General knowledge is often to find in handbooks (although containing often outdated information) but is nowadays increasingly available online. Examples of questions could be: What are the causes of a health condition? What are the ten most common safety risks in construction industry? What are typical features of one type of intervention such as a risk assessment or monitoring health of workers after exposure? What are the most common causes for occupational skin diseases?

- **Specific:** a specific or 'foreground' question asks for more exact and up-to-date information, needed for a concrete decision or activity. Such up-to-date detailed knowledge is only seldom present in handbooks, so online information sources are needed. The PICO strategy is developed for specific questions (see further). Examples could be: Does hexavalent chromium have carcinogenic properties as far as we know today?

Evidence-based search strategies are developed for a specific question that needs an answer. Sources of scientific research for such questions could be found using some of the following online resources: PubMed, Virtual Health Library or Cochrane Library. Evidence-based search strategies can also be used to look for answers on more general, overarching questions. Questions could also be related to a number of central themes or domains in occupational safety and health. Examples of such domains and related questions are:

> *Diagnostic*: is the assessment of a disease or work disability. An example of this type of question could be: What is the best diagnostic test for post-traumatic stress disorder? What is the best diagnostic test to determine the work ability for shift work?

> *Aetiology*: the causation of a disease, work disability or accident. Questions of this type could include: What are the possible occupational factors that may cause asthma for a hairdresser? What are the possible risks to reproduction during pregnancy from the inhalation of solvents?

> *Interventions:* intervening activities, in occupational safety and health often used for activities to prevent, control or cure an undesirable condition. Actors can be professionals, workers themselves, supervisors or others. A variety of measures and purposeful activities is included. Examples are therapy, hazard assessment and education or supervision as a form of prevention. An example could be: What is the effectiveness of specific periodical medical examinations for agricultural workers? How protective is education on the use of a specific type disposable respirator given exposure to asbestos at a work site?

> *Predictions*: questions about predicting. We talk about the prognosis when there is already a disease, injury or disability. An example could be: What could be the consequences of a severe depression for safe work as a lorry driver or as a pilot in commercial aviation? **What will be in general** the course of an illness, injury or disability? What are strong prognostic factors?

> *Frequencies*: questions regarding how often a risk is present in a branch of industry, or regarding an estimation about current levels of exposure. An example could be: What are the frequencies of a number of occupational hazards and risks in a classic music orchestra (noise, allergens, mental stressors)? Or more focused: How many workers in the printing industry are exposed to high levels of solvents?

> *Prevalence/incidence*: these are questions on the prevalence or incidence of an occupational injury or disease. An example could be: What is the incidence of occupational dermatitis in apprentice hairdressers? What is the incidence of burn injuries in mechanics?

> *Measurement*: here we can look at all the questions concerning methods for measurement. An example could be: What are the best methods for measuring noise levels in the metal industry? What are the

best methods for measuring lead pollution, taking into account several contamination routes for workers in the cable industry?

> *Good practice*: these are questions on good practice e.g. on how to prevent a disease or injury. An example could be: What are the best preventative measures against asbestos exposure in a garage?

Different categories of questions may correspond to different types of research. For example, questions of aetiology are generally best answered by cohort type studies. Questions on the effectiveness of an intervention are often best answered by a randomized controlled trial or another form of controlled trial. Based on this understanding you can filter the results of your search after work-related causes of e.g. depression using a filter that selects all cohort studies in your sample of studies (abstracts). Mostly such filters will be used in the final stage of a search.