The Diagnostic Challenge in Occupational Health and Safety
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ABSTRACT
Official Data on Occupational diseases in Indonesia does not yet exist, but there is only a couple of studies on diseases caused by work hazards done in some educational institutions and research carried out sporadic by ministry of Health and Ministry of Manpower. Issues the number of cases of the occupational diseases still a little, it needed to get attention from all of us, especially for the Government and the doctors who work in the health facilities. In 2011, PERDOKI and FKUI working with the Ministry of health of the Republic of Indonesia made the Diagnosis of Occupational Diseases training module for doctors. This module is used to train medical doctors who provide health care/medical job work in order to be able to do early detection of occupational diseases. The basic principles of Occupational Disease Diagnosis should refer to medical doctors curriculum for medical doctor/physician working in the occupational health facilities or doing the occupational medicine approach made by professional organizations, in this case PERDOKI. There are still limitation to collect occupational diseases data in Indonesia, either not all medical Doctors understand and perform 7 step of occupational diagnosis. Therefore required special training of PERDOKI about the occupational diagnosis to detect occupational diseases of the workers. Coordination, collaboration and communication between related parties are needed.

Keywords: seven steps of Occupational Diagnosis, making the occupational diseases

Introduction
The population of Indonesia in 2012 reach 242.46 million, with the number of the labor force reached 121.41 million inhabitants and residents who work there with the millions 112.8 worked in the formal sector of 42.1 millions (37.29%) and in the informal sector amounted to 70.7 millions (62.71%) [1]

Occupational disease is a disease that is found as a result of exposure in the work environment or occupation[2]. Official Data on Occupational diseases in Indonesia does not yet exist, but there is only a couple of studies on diseases caused by work hazards done in some educational institutions and research carried out sporadic by ministry of Health and Ministry of Manpower. The study found that musculoskeletal problems is the most occupational disease (40,5%) related to occupation and the workplace in the informal sector and the formal sector[3]. The issue of hearing loss (noise induced hearing lost), is the
diseases caused by workplace environmental a lot of requested compensation from the insurance company Jamsostek[4] . Issues the number of cases of the diseases due to occupation and the workplace environmental-no data need to get attention from all of us, especially for the Government and the doctors who work in the health facilities.

**Diagnosis for Occupational Diseases**

The International Labor Organization said that cases of occupational disease in the world's largest is the case of violence, followed by musculoskeletal cases [5]. Meanwhile in Indonesia, cases of occupational disease has not been reported too much, so I need to know the causes of the lack of the report .

Occupational disease caused by the presence of exposure in the work environment and the worker do his job, generally known after the long period of exposure. This requires incredible detail from the health, especially doctors, in detecting early of the disease as a result of the work.

For that I need to know that the Diagnosis of Occupational Diseases is one of the ways to detect any health disorders due to workers their jobs and working environment[6]. The Diagnosis is very important because it is related to the case follow up that will be performed by medical doctors against the workers in particular and the recommendations to the management of the company to control the work environment.

Big nothingness Occupational Disease Diagnosis case indirectly shows whether a company can control exposure work environment properly. In addition the company get a lot of benefits when a worker healthy, so that productivity can be increased.

**Occupational Diagnosis Problems**

The problem at least reported cases in Indonesia can be caused from various aspects. The first aspect is the doctor or physicians, who is as a person early detects the health effect of the workers. The other aspect is the procedure for reporting diseases caused by work that may not be understood by all parties. Other aspects are legal and regulations as well as the code of conduct in force at the company, the workers that do not provide complete and detailed
information, as well as aspects related to company's reputation and good name of the company.

The matter will be discussed in this paper are more focused on the aspect of a physician, as its human resources, and the technical medical procedures to be done by the doctor. One of the competencies of physicians in occupational health and occupational medicine is enforcing the occupational disease diagnosis.

The competency can be obtained from the medical or educational institutions of training conducted by professional organizations, in this case is PERDOKI.

Not all doctors in Indonesia has the competence to establish the diagnosis of occupational diseases are making big problems with at least report the diagnosis of occupational disease. The competence of physicians in enforcing the occupational disease diagnosis greatly vary, depending on the individual. This is very detrimental to the workers in question having a disease that most likely influenced by exposure in the work environment or job, so diagnosis may not be immediately enforced, or can be detected too late as diseases caused by work.

Therefore the competence of physicians in enforcing the occupational diseases newly introduced in early 2003, it's not all working health care provider doctor/medical work has such competence at the time of service. Another thing is the procedures, the procedures of enforcement initiatives applied to the diagnosis of occupational disease is not easy.

Before the joint PERDOKI and FKUI introduced the 7 steps to enforce the occupational disease Diagnosis due to work systematically and based on evidence based, then enforcement of the occupational disease diagnosis by a physicians or medical doctor is required to conduct inspection of the exposure in the work environment in detail and checked the existing biomonitoring exposure in workers. This is often a barrier for medical doctors and the company, bearing in mind the activities carried out should be more detailed and specific, as well as fees incurred become larger.

The Role Of The Occupational Medicine Profession.

The medical profession in Indonesia, especially medical doctors who provide medical services to Employment/occupational health take supervision under PERDOKI, has a very big role. PERDOKI create a standard of competence for these doctors particularly in the
Diagnosis of Occupational measures as doing the 7 steps enforcement of the Occupational Disease. The Competency standards for 7 steps Occupational Diagnosis based on the consensus of the profession of PERDOKI medical Doctor in order fulfillment needs of community workers[7].

In conducting occupational disease diagnosis a doctor are also bound by a code of conduct of Indonesian Medical Doctor and code of ethics of Indonesian Occupational medical doctor .

In 2011, PERDOKI and FKUI working with the Ministry of health of the Republic of Indonesia made the Diagnosis of Occupational Diseases training module for doctors. This module is used to train medical doctors who provide health care/medical job work in order to be able to do early detection of occupational diseases or at least do occupational medicine approach for every worker that comes with health complaints.

Module of competence occupational diagnosis 7 steps for physicians contains 7 steps systematically to be done by the physician at the time of enforcing the occupational disease diagnosis. So, PERDOKI has been training a lot of medical doctor for the 7 steps Occupational Diagnosis to enforce Occupational Diseases

Expected with the number of medical doctors training in occupational health facilities being able to make the diagnosis of occupational diseases will increase. Additionally, on a new medical education curriculum by 2013, has already entered the curriculum 7 steps for determining occupational diagnosis of diseases caused by work, as competencies must be owned by all of the medical doctors in Indonesia. With the curriculum in the education of physicians, then expected all doctors in Indonesia in the future can be an early detection of occupational diseases on the workers caused by work environment.

**The basic principle of the Occupational Diseases Diagnosis (Occupational Diagnosis)**

In the outline of the basic principles of Occupational Disease Diagnosis examination should refer to the health services provider's doctors curriculum work/occupational medicine made by professional organizations, in this case PERDOKI. Systematically, the application of the 7 steps such as the following occupational diagnosis [7]:

Step 1. Determine the clinical diagnosis:
As a first step the Occupational Disease diagnosis is enforcing the clinical diagnosis of the disease. The Diagnosis of Occupational Diseases Occupational Diagnosis/cannot be enforced just based on symptoms or underlying patients symptom, because the Foundation of the enforcement of the occupational disease diagnosis is Evidence Based, where the existing research shows that between an exposure and a disease there is a specific relationship. It means an exposure only causes one or more specific diseases, according to the results of the research there is. Clinical diagnosis of effort may require inspection of the laboratory or other supporting examination and often need to involve specialist doctors associated with the patient's disease.

Step 2. Determine exposure in the workplace or work environment
An occupational disease, it is often not only caused by exposure experienced in the work that is currently done, but can be caused by more exposure on the workenvironment. In addition some exposures can only lead to one disease, so a physician should obtain information about all the exposure and once experienced by his patients, to be able to identify which job or exposure is important and may be further investigated for effect. To obtain the information it needs to do a complete job of anamnesis, which includes:
- Description of all the work in chronological order
- Period of time doing each job (duration time each work)
- What is produced
- The materials used
- How it works
Such information will be increasingly valued, when it is supported by objective data, such as MSDS (Material Safety Data Sheet) of the material used, company records regarding work placements etc.

Step 3. Determine whether there is a relationship between exposure to the disease
Identify any exposure-related diseases. This relationship should be based on the results of epidemiological studies ever done (evidence based). Identification of whether or not there is a relationship between exposure and disease can be done by reviewing existing literature/references. When there is no evidence that an exposure there is a connection with a disease, the diagnosis of occupational diseases could not be enforced. When there has been no research that shows the existence of a relationship between exposure and a specific
disease, but from the experience of the very existence of a suspected relationship, then that can relied upon to do the initial research.

The relationship between exposure to the disease should also be seen from the time of the onset of symptoms or onset of a disease, for example, that person is exposed by specific ingredients in advance, before starting to arise or symptoms of the disease. Another example is Bronkhiiale on asthma. When available, more asthma attacks that occur at the time the work day and reduced on the day of the leave period, libu or unexposed at the time, this will strongly support the diagnosis of Occupational Asthma. So, the anamnesis of the relationship of symptoms with the job needs to be done carefully, too. The results of the work of pre-registration examination of disease will make it easier to determine, that disease occurs when exposed, but the lack of pre-season work inspection results and/or periodic inspection results doesn't mean it's not possible the diagnosis of diseases caused by work.

**Step 4. Determine whether the exposure is experienced enough**

To be able to assess whether a considerable exposure to certain diseases can cause, it is necessary to understand the disease of patofosiologi and epidemiological evidence. A magnitude enough exposure can be assessed qualitatively, i.e. by asking the patient about how it works, the work process and how the work environment. Important is also doing observations and taking into account the work, that is how long a worker has been exposed. Quantitative assessment can use data measurements of the working environment to the exposure, which has been carried out periodically by the company or the biological monitoring data exist. When no measurement can be made, at the time of diagnosis of a disease will be carried out as a result of the work and when there is no change in the process and how it works by means of the worker during the period of work, it can be assumed that the employment of workers during the period gained exposure in the same amount. Measurement results obtained need to be judged whether a threshold value is exceeded, or including high-exposed or not. The wearing of protective equipment should be also assessed whether the exposure can reduce significantly or not, that is when the type of protective equipment appropriate self, weared correctly and consistently.

**Step 5. Determine if any individual factors that play a role**

Any disease other than caused by environmental factors and/or job factors, individual factors are certainly at play. Need to be assessed how much individual factors that play a role, so it is
understandable why the individual is exposed to the worker and not all workers in the same place. Individual factors that may play a role is a history of atopy allergic, or within the family history, personal hygiene etc. The presence of individual factors which act does not mean a diagnosis of occupational diseases to be void but needed to assess how big the individual factors contributed.

**Step 6. Determine whether there are other factors outside work**

Other factors outside work, is another exposure can also cause the same disease, but not a factor of the job, such as smoking, exposure is experienced at home, the presence of hobby etc. If it turns out there is no job factors associated with the disease, there is the possibility of a job outside of the cause factors more acting. But the presence of certain habits of workers, for example smoke, can't negate the cause factor at work.

**Step 7. Determine The Diagnosis Of Occupational Disease Diagnosis/Occupational**

Review the information that has been gathered from previous steps. Based on the evidence and up-to-date reference, make a decision whether the disease suffered is a result of work or not. The Diagnosis of occupational diseases as can be made when the steps above it can be concluded, that there is a causal relationship between exposure and illness experienced by the work factor a factor which means against the occurrence of illness and cannot be ignored, although there are individual factors or other factors that contributed to the onset of the disease. The end result is Occupational Disease or illness afforded by occupation or Occupational Disease or Not is still an additional data ID or bills Of the seven steps above, step three is searching relevant data based on research and the results of the review of existing data. This step is an activity that needs a review or study be limited

While step 4 is an important step which can be done by the physician in determining the adequacy of exposure can lead to health problems of workers. In this step is to calculate the number of semiquantitatif of exposure. The expectation with can calculate exposure, then logically the doctor can assume whether exposure at workplace caused quite a disturbance of health
Conclusions and suggestions

There are still limitations to collect occupational diseases data in Indonesia, either not all medical doctors understand and perform 7 steps of occupational diagnosis. Therefore, it is required special training of PERDOKI about the occupational diagnosis to detect occupational diseases of the workers.

Coordination, collaboration, and communication between related parties, such as the medical profession Occupational (PERDOKI) as the consultant/supervisions of the wellness service giver, medical doctors working with the Ministry of Health, the Ministry of Labor and Transmigration and the businessmen/industry, workers/trade unions.

References