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Basic Occupational Health Services in Agriculture: A Strategy to Increase Interventions for Rural Workers and Reduce Health Inequalities in Rural Areas



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Introduction

About half of the human population lives and works in rural areas, very often engaged in agricultural activities, that mainly consist in food and feed production through land use. This means that the activities of these workers are directly linked with the wellbeing and healthiness of millions of people, as demonstrated by the cases of environmental pollution and depletion attributable to unsound agricultural practices, as well as by the evident link of recent public health emergencies with agriculture and animal breeding: specific examples are "mad cow disease", SARS, avian influenza and new influenza, directly attributed to unsafe intensive animal breeding procedures, or simply affected in their severity or incidence by specific and identified agricultural activities. It is therefore evident that agricultural workers are a patrimony of any country, and only healthy and well trained agricultural workers can produce healthy food, in the healthiness of the living environment. Despite this social and economic relevance, and their role in promoting the wellbeing of entire nations, it seems that agricultural workers are not adequately addressed by prevention, and their access to occupational safety and health is limited. Making the point of the situation, and identifying the main objectives for occupational and public health, is therefore a primary and urgent need.

Materials and methods

Since occupational and public health interventions should be based on evidence, we have firstly collected the existing evidence regarding the global size and structure of agricultural workforce and its access to occupational health surveillance at the workplace, taking into account different country typologies, as well as data regarding the health conditions of this specific workforce. After that, based on these data, we have pointed out specific needs in terms of both health needs of agricultural workers and characteristics and typologies of the structures supposed to provide it.

Results and discussion

Official and updated data show that the global workforce is made of about 3 billion workers. Six hundred and forty seven million are located in highly indebted and poor countries, 2.245 millions in middle income, and only 346 million (16%) in high income countries. The composition of the global workforce, its distribution in the world together with the agricultural contribution is depicted in figure 1.

Figure 1 shows that most of the global and agricultural workforce is concentrated in the east Asia-Pacific Region, followed by South Asia and Europe. The highest agricultural component is present in sub-Saharan Africa (55.7%), south Asia (54 %) and east and pacific Asia (53,8%). It is worth writing that the informal component increases as the economic development decreases, and that in South and East Asia, Africa, and pacific region most of the workforce is employed in informal activities, in particular in agriculture.

As for the occupational health and safety coverage, a realistic estimate is that in typical developing regions it ranges from 5 % to 10 % at best, that self-employed, small-scale enterprises and informal sector are usually not covered at all, whilst in European region a wide variation among countries is reported, ranging from 5 to 90% coverage, with the highest coverage rates in the "old" European Union countries and very variable levels in the countries in transition. USA, Canada, Japan, Australia and Israel show coverage rates comparable to Western Europe. However, due to the high prevalence of self-employed and family workers, also in these highly covered countries agricultural workers result underserved. Also the high prevalence, even in developed countries, of daily-paid workers in plantations, seasonal or migrant workers, and working children, dramatically reduces the coverage rate in the agricultural sector.

In this light, it is possible to estimate the levels of OHS in different areas of the world and in the agricultural sector (see figure 2).

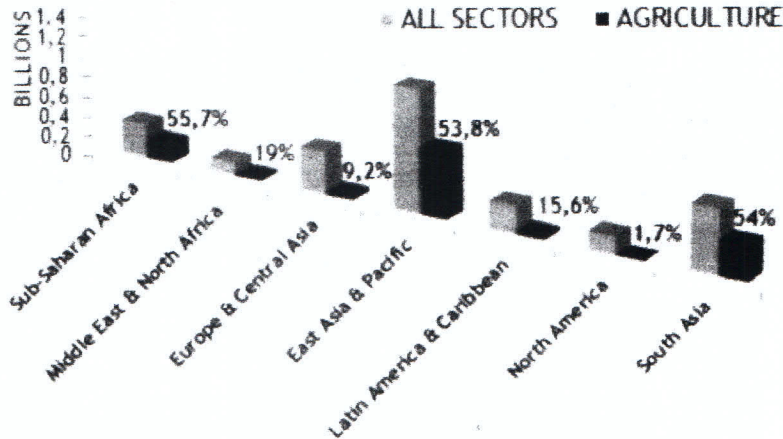
Figure 2 clearly shows that a proportion exceeding 95% of rural and agricultural workers in the world is not provided with any occupational health care and very often do not have any access to welfare structures.

On the other hand, it is clear without any doubt that agriculture is still a very dangerous human activity: based on ILO estimates on fatal occupational injuries in the world, the yearly number of deaths

THE SCENARIO

RURAL CONTRIBUTE

Figure 1: the global workforce, the rural component and the distribution in different areas of the world.



OHS Coverage in the World

Figure 2: Occupational Health and safety coverage in the world, with a comparison between total workforce and agricultural workers.



in agriculture can be about 170.000, and the number of non-fatal occupational accidents in the sector around 130 million. As for occupational diseases, figures are less clear, because of a significant underreporting rate; it is however evident that the most common occupational diseases in the sector are noise induced hearing loss and muscle-skeletal disorders, followed by respiratory diseases, skin diseases and allergies. Overall mortality and cancer mortality are lower in agricultural workers, due to a lower incidence of cardiovascular diseases and of lung, bladder and liver cancers, but some cancers show and higher incidence, such as those of lip, skin, brain, prostate, soft tissue and hemolymphopoietic system, and the increase of these cancer may be attributed to specific and not fully identified risk factors present in the sector. Moreover, some risks and diseases not previously addressed by research and prevention are emerging, such as zoonoses, whose

increase is at least partially affected by climate changes, exposure to oncoviruses in animal breeding, abatement and veterinary activities. Also the presence of an oncogenic risk for the new generations should be taken in due account, since there is some evidence that prenatal and childhood pesticide exposure brings about and increased risk of hematologic cancers.

Conclusions

The evidence of data clearly shows that, despite exposure to relevant health and safety risks, agricultural workers are not adequately addressed by prevention and their access to occupational health care is very poor. The highest levels of coverage are reported in the industrialized countries, where agriculture is not one of the main

relevant activities. However, also in these countries the levels of OHS coverage are still poor, and very often workers exposed to the same risk factors are not addressed in the same way, based only on a social difference (employed vs self-employed, for example) with an evident inequality among workers in the access to prevention and health care. Occupational health and safety care is not provided at all to agricultural workers in the developing world, and the levels of coverage in the countries in transition are variable. Several reasons can explain this gap: remoteness, isolation and distance from the welfare structures, prevalence of small size and family based enterprises, and of self-employed, seasonal and informal workers, usually not addressed by occupational health and safety legislation but also because variability and instability of working conditions and practices, and difficulties in doing sound risk assessment and management. Moreover, in particular in developing and underdeveloped countries, the access of rural population to the welfare structures is limited. Having in mind that in these countries the main objective is, according to the Almaty Declaration, providing any human being with essential health care, that must be universally accessible to individuals and families in the community through their full participation, and with cost that communities and countries can afford, and considering that the first contact between a human being and the health care system is called "Primary Health Care", the first objective to be reached is the incorporation of occupational health in primary health care. This objective brings about the need for general practitioner to collect tools adequate to address specific occupational health issues, and the necessity for occupational health physician to holistically address the workers' health. In this general scenario, the keyword is creating conditions for reaching rural workers at the workplace, through specific tools, the Basic Occupational Health Structures (BOHS). They must be spread in the territory, according to local needs, equipped with a minimum set of instruments such as, for example, those necessary to do electrocardiography, hearing and respiratory function evaluation and to collect biological specimens.

Activities must be run by adequately trained personnel, with the full support of employers and employees and a full involvement of rural GPs. Very useful and recommended running pilot experiences, based on local specificities and needs.

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Services de Santé et Sécurité au Travail dans l'Agriculture: Une Stratégie pour Réduire les Inégalités et Accroître les Interventions en Zones Rurales

Introduction

Environ la moitié de la population humaine vit et travaille dans des zones rurales, très souvent engagés dans des activités agricoles, qui consistent principalement dans la production d'aliments par le biais de l'utilisation des terres. Cela signifie que les activités de ces employés sont directement liées au bien-être et la salubrité de millions de personnes. Ceci est démontré par les cas d'épuisement et de pollution environnemental attribuables aux pratiques agricoles mal fondées ainsi que par le lien évident de ces urgences de santé publique en agriculture et élevage. Des exemples précis sont «la maladie de la vache folle», SRAS, grippe aviaire et la nouvelle grippe, directement attribués aux procédures dangereuse d'élevage intensif ou l'incidence étant d'une sévérité par des activités agricoles spécifiques et identifiées. Il est donc évident que les employés agricoles sont un patrimoine de tous les pays, et seulement des employés agricoles en bonne santé et bien formés peuvent produire des aliments sains, dans la salubrité de la nature vivante. En dépit de cette pertinence sociale et économique, et leur rôle dans la promotion du bien-être de nations entières, il semble que les employés agricoles ne soient pas adéquatement informés de la

prévention et leur accès aux services de santé et sécurité au travail est limité. Il faut donc faire le point et identifier les principaux objectifs de la santé publique, et faire tout ceci un besoin primaire urgent.

Matériel et méthodes

Comme les interventions de santé publique et professionnelle devraient être fondées sur des preuves, nous avons tout d'abord collecté les données existantes. Ces données, concernant la taille et la structure globale de la main-d'œuvre agricole et son accès aux professionnels de surveillance de la santé au travail, est traité en tenant compte des différents pays. Des données concernant les conditions sanitaires de cette main-d'œuvre spécifique ont aussi été récolté. A partir de ces données, nous avons souligné les besoins spécifiques pour la santé des agriculteurs et les caractéristiques et les typologies des structures qu'on devrait leur fournir.

Résultats et discussion

Les données courantes et officielles montrent que la population