SHORT HISTORY AND CURRENT STATE OF
THE OCCUPATIONAL HEALTH IN GEORGIA

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Abstract
Following the break-up of the Soviet Union in 1991, there has been a significant
decline in the standard of occupational health and safety in the newly independent
Georgia.

This study was carried out as part of MSc dissertation work at the University of
Birmingham, Institute of Occupational Health, to understand the existing status of
occupational health care in Georgia, including its key legislation, human resources,
professional development, arrangements for occupational health services provision,
and occupational health research. Considering that Georgia is currently undergoing
the process of legal harmonisation with Europe, this information was reviewed
against some of the national European examples of occupational health services,
and the provisions of certain EU and other international framework documents on
occupational health.

The study involved series of interviews with the members of the occupational health
and public health societies of Georgia, representatives of different Ministries,
industries, and other relevant entities. Relevant literature and legislation was reviewed
and analysed.

MATERIALS AND METHODS
As part of this work, expert
interviews were conducted to
understand the main features of the
occupational health function in the
country before independence.
Review its current status, and source
expert opinions about what future
role occupational health should have
in Georgia, and what steps need to
be taken for its achievement.

The interviewees were comprised of
distinguished members of the
academic, occupational health and
public health society of Georgia. Also
included were Representatives of the
Ministry of Labor, Health and Social
Affairs’ State Sanitary Supervision
Inspection, the State Minister of
European Integration. The
management and safety representa-
tives from three large industries
that once had their own built-in
health care services including staff
members of those health care units;
and the representative from the
Georgian Trade Unions Amalgamation.
Additional short discussions were
held with people from organisations
collecting data on current health
activities in the country;

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representatives of the State Medical University and its continuing medical education unit, the Academy of Sciences of Georgia. Internet and libraries were searched for national Occupational Health Care system descriptions. Occupational Health Care system analysis and international comparisons; examples of financial systems used in funding Occupational Health Services; most significant international framework/guideline documents on occupational health; medical history books about health care in Georgia before and after Soviet rule.

HISTORICAL OVERVIEW OF OCCUPATIONAL HEALTH IN GEORGIA BEFORE INDEPENDENCE

A mandatory system of registration of occupational illnesses was introduced in the Soviet Union by a State decree as early as 1924. In Georgia, all information about cases of occupational illness was concentrated in one place, the Makhviladze Institute of Industrial Hygiene, Occupational and Health and Ecology. Here experts analyzed the received data, prepared quarterly reports about the detected occupational diseases and intoxication’s, and forwarded it to the Ministry of Health of Georgia with an accompanying explanatory note. Further, the report, checked and signed by one of the deputy ministers, went to the Ministry of Health of USSR in Moscow.

In the Soviet Union all information about the registered occupational diseases was confidential and was marked “for service use only”. This circumstance was partially responsible for instances of under-reporting or biased reporting of occupational diseases by the enterprises. In addition, under-reporting has been claimed to occur, because of the high incidence of industrial injuries or occupational diseases contradicted the “image” of a Soviet enterprise. This was supposed to ensure maximal care for the well being of the workers. Whereas in reality, working conditions very often didn’t meet the established norms. That were established with the Basic Law on Health in the USSR and Soviet Republics, primary, specialised and, to an extent, preventative health care for workers was organized on an “industrial” basis, with Medical - Sanitary Departments (MSD) existing within large industrial enterprises. Health care in the Soviet Union was curative in its orientation, reliant on inpatient care and, to a lesser extent, on outpatient care delivered at polyclinics. The system of MSD’s became particularly popular after the 2nd World War when it served well for the defense enterprises. Each MSD was financed by a particular enterprise, and usually included a large multi-profile outpatient clinic. Also a hospital with diagnostic and laboratory with in-patient capabilities a system of support facilities, access to designated
recreational centers and spas, all of which were designed to look after the health of the workers of that enterprise and their families and were provided free of charge.

15 MSD’s existed in Georgia, these belonged to the industries in Kvaisa (lead and zinc production); Tkvarcheli (coal mining); Gori (light industry); Tkibuli (coal mining); Zestaphoni (ferro-alloy industry); Kutaisi (machine – building industry); Chiatura (manganese mining); Inguri (paper and cellulose manufacturing); 2 in Tbilisi (Aviation factory and Isani); Kochubei (sheep farming); 2 in Rustavi (Metallurgy factory and Chemical plant “Azot”); Madneuli.

For example, the MSD designated for Rustavi Metallurgic factory employed 300 staff, and the MSD of the Chemical plant “Azot”, located within 15 minutes’ drive from it, was of a comparable size. The MSD at the Chiatura manganese mining plant had a 250-bed hospital along with a large polyclinic, sanitary-epidemiological station and a network of site facilities. Usually, the head doctor of an MSD participated in weekly meetings with the management of the enterprise.

Where no designated MSD’s were available, an enterprise was assigned to a regional outpatient polyclinic.

Apart from industrial MSD’s there was a network of large departmental medical facilities that fell under parallel systems besides the Ministry of Health and served employees of a particular industrial branch or high-ranking officials or dignitaries. Examples include the hospitals, outpatient clinics, maternity homes and other facilities under the Railway Department; outpatient clinics of the Academy of Sciences, and so on.

In most cases, MSDs did not employ an occupational physician, but even if they did, all suspected cases of occupational diseases had to be referred to the Institute in Tbilisi (see below). During this time, despite the lack of formal occupational health training, over the years of experience with a specific industry MSD doctors usually became familiar with the more typical industrial hazards and occupational health problems for that enterprise and were able to pick cases at their early stages and refer them to the Institute.

A mandatory starting point of rendering health care on a site was a so-called “health office” (zdravpunkt) run by a “shop doctor”, a “shop nurse”, or a “feldsher” (who usually had more training and clinical autonomy than a nurse), - the staffing and the size were usually determined by the enterprise as its financier. These were not independent facilities; their work was supervised by one of the senior MSD doctors; in case no MSD was available, by the head of a regional polyclinic.

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2 At the peak of its activity the factory itself had approximately 15,000 employees
outpatient polyclinic looking after that enterprise [7]. Often MSD or polyclinic doctors ran daily sessions at the “health offices” and this was a formal part of their job duty. At the enterprise level, shop doctors were accountable to the safety engineer.

In Georgia, in the early days of the Soviet State, the number of “zdravpunkts” grew from 43 in 1931 to 206 in 1934 [6]. The same Chiatura manganese enterprise had, for example, three doctors – and fourteen nurses – run “health offices” [9].

The duties of a “shop doctor” included first aid and emergency medical care in acute occupational intoxication’s and injuries; routine medical care; referral of workers for further treatment; regular reporting to MSD and the enterprise management. In many cases a “shop doctor” played an important role in the prevention of occupational ill health, participating in periodic health checks, health awareness and education site visits and risk assessments, advice to management, regular health surveillance and rehabilitation of workers after illness. Not infrequently, however, their role was limited to rendering first aid, stabilisation and referral.

In the majority of cases, neither MSD staff nor shop doctors had special training in occupational medicine. A study, carried out in Moscow in 1987, showed that out of 207 “shop doctors” participating in a qualification improvement course in occupational medicine in one of the educational centres in Moscow. Only 12.5% (26 people) had ever attended a similar course before and only 4 of them more than once. Most of those doctors had worked as “shop doctors” for 15 or more years’ [8]. It is reasonable to assume that the situation in Georgia would have been similar.

Each large enterprise had a Safety Department led by a Safety Engineer, usually a deputy Chief Engineer of the enterprise. The head of Safety was responsible for all occupational health and safety provisions, including organisation of site medical facilities.

Some large enterprises also had special departments and labs looking after working environment (air, water, soil) and industrial hygiene. For example, at Rustavi Metallurgic factory this department used to be under a deputy Chief Engineer and had 15 employees looking after 125 workplaces (a workplace defined as where people spent at least 5 hours every day). Its roles included carrying out risk assessments, regular sampling, measurements of the levels of noise, vibration, humidity, radiation, chemical composition of air and so on. The staff was mainly chemical engineers, sometimes doctor – hygienists, but this wasn’t mandatory. People were
usually trained on the job; 2 – 3 months’ long training courses were also available from Sanitary supervision in Tbilisi; some people were sent to Russia for further training. The factory paid for all such qualification courses. Where present, these departments had close working relationships with the local (city) sanitary – epidemiological stations, as well as the Tbilisi-based Institute of Work Hygiene. There didn’t appear to be any formal link between these departments and the enterprise “health office” or MSD staff; any relevant information was channelled through the safety department.

Another key participant in the system of industrial health and safety were worker Unions. As part of a Union’s overall role of carrying out public observation over labor protection activities, a system of so-called “trusted doctors” existed, with one such doctor assigned to each industrial branch; in Georgia there were 30 “trusted doctors” in total. Their main role was to observe how the industry complied with the implementation of health and safety legislation. Any unresolved issues were first raised with the top industry management (e.g. a Minister, where applicable); if the issue persisted, in some cases the Union’s management was raised it in front of the Government of the country.

The Sanitary – Epidemiological Service, or “san-epid”, was one of the key players responsible for environmental and occupational health in the country. The role of the san-epid network was to undertake risk assessments, inspections, and epidemiological surveillance, investigate disease outbreaks, carry out environmental health functions and other. The service covered the use of chemicals, radiation, communal services, work hygiene, children – related hygiene, food hygiene, and was supported by their own labs for chemistry, bacteriology, toxicology, and physical factors. It was a powerful service position for whoever was chosen to hold the title, The Head Sanitary Physician of the Georgian Republic, was appointed by the Cabinet of Ministers; his orders were mandatory for authorities of any level.

Sanitary doctors work with hygienists to carry out inspections and work site assessments; they issued hygiene certificates to all new facilities prior to their commissioning; established workplace hazards; carried out joint assessments with the enterprise IH services in residential areas around the plant. They examined “sanitary books” of employees; conducted workplace assessments if an occupational illness was suspected. They also played one of the central roles in the organization of periodic health assessments (see more below) in the industries and other eligible facilities.
The inspection work was divided into two main parts: preliminary assessments of facilities before their commissioning; and ongoing assessments per established schedule. Each facility “belonged” to a particular san-epid station and each of the sanitary doctors – hygienists used to have a specific number of enterprises assigned to them. Additional visits were carried out if there were any complaints.

Inspectors had significant power: they issued warnings, participated in the development of improvement plans. Some enterprises were fined or stopped.

Being part of the law enforcement system on environmental and occupational health issues in the country, as far as the enterprises were concerned, san-epid also played a constancy role and covered certain areas of occupational health service provision for them.

In Georgia, Prof. N. Makhviladze, following his return from Germany in 1926 founded the first polyclinic focussing on occupational diseases in Tbilisi. During the very first year of its existence, the clinic’s roles became so diverse that in 1927 it was reorganised into a Scientific – Research Institute of Industrial Hygiene and Occupational Diseases. Post 1929, in Tbilisi there were institutes of Sanitation and Hygiene, Social Hygiene, Industrial Hygiene and Occupational Diseases, as well as work hygiene research centres under the Workers’ Union system. The VI Congress of Georgian Physicians (1934) had identified occupational diseases as one of the main agenda topics. Industrial toxicology developed into a separate department within the Institute of Industrial Hygiene and Occupational Diseases in 1962.

The Department of Industrial Hygiene of Tbilisi State Medical Institute was formed in 1943; it was located at the Scientific – Research Institute of Industrial Hygiene and Occupational Diseases. Since 1974 it is known as the Department of Industrial Hygiene and Occupational Diseases. From this time, development of work hygienists and occupational physicians started actively in Georgia. In parallel, the safety engineer’s position became mandatory at large enterprises and these were mostly graduates from the Georgian Technical University.

Professional Development in Occupational Health. Even in Soviet times, professional development in occupational pathology was recognised as a problem area. Within the system of higher medical education, occupational pathology was a mandatory clinical discipline at the faculties of Therapy, Paediatrics, Military and Preventative medicine (formerly, the Sanitary/Hygienic faculty). The full undergraduate course of lectures in occupational medicine constituted
36 hours with an examination at the end of the course. Any graduate from the faculty of Therapy was then considered eligible to work as a “shop doctor” or an occupational physician [2].

In contrast, the graduates of the Sanitation and Hygiene faculty (currently the faculty of Preventative Medicine) of the same Institute, whose syllabus included 144 hrs of work hygiene and 106 hrs of occupational diseases, were not allowed to work as occupational physicians. Upon graduation, they worked as doctor-hygienists in work, food, communal services and other fields of hygiene, mainly under the system of sanitary – epidemiological stations. Occasionally these graduates ended up working as occupational physicians but this was arranged illegally.

Pre-employment and Periodic Health Assessments The system of mandatory pre-employment and periodic health checks for designated professions existed in the Soviet Union from 1922/25, while the latest Soviet Order (N555) on this subject came out in 1989. Such checks were seen as the key to detecting occupational illness at its early stages, preventing its development and improving working conditions. It would be fair to say that periodic health checks were the central activity in the field of occupational medicine in general, and were regarded as the main lever towards reducing the number of occupational disease cases.

The types of exposures, scope and composition of the examining team, along with the frequency of checks for each category, were prescribed by law. Regional san – epid stations were responsible for determining eligible job categories at each enterprise in their area of responsibility based on the assessed workplace exposures; the enterprise management (with workers’ union’s participation) developed individualised lists of employees and ensured their timely attendance. The checks were carried out by a team of physicians working for MSD or, in its absence, a regional polyclinic. The main hazards of the job (e.g. lead) were usually identified. Across the country, the Institute rendered professional guidance for this process.

Each identified occupational disease was registered and investigated. The results of the periodic checks were discussed jointly with the relevant medical staff and the enterprise management (safety engineer or the head of the safety department). The results were documented. Often this summary document served as the basis for the planning of health and safety measures at this enterprise.

Depending on the condition detected during health checks the workers could have been offered the following options:
1) ongoing surveillance by a doctor, if an illness or intoxication was suspected;
2) treatment, - out-patient, in-patient or at a recreational centre;
3) temporary job transfer (e.g. in the early stages of an occupational disease or poisoning);
4) permanent job transfer [7].

By law, all patients suffering from occupational diseases, including at the very early stages, had to be enrolled into a so-called “dispanserisation” program. A regular supervision by a specialist physician(s) carried out per strictly defined special guidelines and schedules depending on the nature of the illness (e.g. cases of vibration illness were supervised by a neurologist. While occupational dermatitis was treated by a dermatologist). Patients with occupational diseases had to receive in-patient treatment annually at the occupational diseases clinic of the Institute in Tbilisi. Once enrolled, most of those suffering from an occupational disease remained under the programme for the rest of their life, even when retired by age.

Even though the management, san-epid stations and others involved in the process, usually took compliance with the programme of pre-employment and periodic health checks seriously, their quality left something to be desired. This was mainly due to the poor understanding of occupational pathology and work hazards by the examining physicians; poor organisation of the assessments, including the available diagnostic methods and tools, lack of attendance by the employees. The overall reduction in financing of the health care system from the early 70's lead to its significant bureaucratisation. In some cases health assessments were done as a mere formality that resulted in a “tick in a box”. Thus, very often even quite advanced forms of occupational illnesses remained undetected, sometimes for years.

Diagnosing, Recording and Reporting Occupational Illnesses. Recognising the lack of knowledge of occupational pathology by shop doctors, general practitioners or other non-occupational physicians, by law, only specialist occupational pathology centres had the right to confirm the diagnosis of a chronic occupational disease (acute poisonings were treated as industrial accidents). In Georgia, every patient with a suspected case of an occupational disease had to be referred to the Institute [1]. Prior to this, however, the employer or the referring physician, had to provide a detailed sanitary and hygiene description of the individual’s workplace prepared by a work hygienist, and approved by the Head of the regional (city) Sanitary - Epidemiological station (its Sanitary Supervision Department). Without such a report, as well as a detailed
clinical reference, the case would not be considered.

A clinical diagnosis must be based on a published “List of Occupational Diseases” accompanied by its user guide. The latest “List” (Order N555, 1989) contained 7 broad headings (e.g. “poisonings”) and was organised in three columns: the names of the diseases; hazards that could lead to these diseases; and, a tentative list of jobs and industries where the mentioned diseases may occur. While the first two columns were exhaustive, the 3rd one provided only examples.

Apart from confirming/rejecting the occupational nature of the referred cases. The Institute experts developed treatment plans, provided specialist in-patient and out-patient treatment of confirmed cases, jointly with the sanitary – epidemiological stations developed proposals for measures to prevent occupational ill health at certain enterprises, carried out periodic visits / consultations / audits at “zdravpuncts” and MSD’s across the country [7]. Part of the Institute’s services was paid for by the enterprises where occupational illnesses occurred.

Disability and Compensation: In the Soviet Union, in all confirmed cases of occupational ill health that resulted in a degree of disability, the employees were eligible for certain benefits. Temporary release from work due to an acute or chronic occupational ill health condition, and the cases of a temporary job transfer (up to 2 months), were decided by a Clinical / Expert Commission (CEC) that existed within the MSD or the designated regional polyclinic. Those affected received 100% of their pay; any difference between the permanent and the temporary job salaries was compensated through a social security fund.

All cases of a more permanent loss of professional ability had to be referred to a MLEC to establish the degree of disability (I, II or III) and to quantify the percentage of loss of professional ability due to an occupational ill health condition. Pensions for a disability, or the loss of the breadwinner, due to an occupational ill health condition, were given regardless of the employee’s duration of work, and were usually higher than those given for non-occupational disability. Apart from the basic pension, those suffering from occupational ill health had the right to seek financial compensation from the enterprise, in an amount corresponding to the percentage of their loss of professional ability established by MLEC (except in pneumoconiosis). The enterprise only paid this compensation if it was found to be at fault in the occurrence of the ill health condition. Often, such cases were resolved through a court.
Current Status of Occupational Health Provision in the Country.
Following the break-up of the Soviet Union and declaration of the country’s independence in 1991, Georgia experienced a series of dramatic economic declines, which resulted in a sharp fall in the standard of living. The economic collapse, civil wars and flows of refugees, as well as the drastic reduction in public moneys to fund the system led to a breakdown in health care. Government expenditure on health as a percentage of GDP dropped substantially from just over 4% in 1991 to 0.59% in 1999 and is currently among the lowest in the European region [15].

Large enterprises went out of business, dramatically reduced their capacities or changed their profile. The main producers of agricultural1 products (more than 90%) in today’s Georgia are farming households, of which there are more than 600 000. [25]

As a result of the decline in heavy industry, changes in agricultural practice, the development of small enterprises, increased unemployment and child labour, including among internally displaced people, the country also experienced a structural shift in occupational exposure. In addition, wars, unemployment, and internal and external migration of the population have led to worsening of living conditions of the population and have had a negative effect on the health of the nation [11; 23].

HEALTH CARE SYSTEM REFORM
Since 1995 the health care system in Georgia has been undergoing a major reorganisation as part of health care reform supported by international donor organisations. New concepts such as social insurance, privatisation, official user fees and new provider payment mechanisms have been introduced.

In 1999 the Ministry of Health joined with the Ministry of Welfare to become the Ministry of Labor, Health and Social Affairs (thereafter the Ministry). The Ministry is responsible for the implementation of government policy on health care and medical research; its social welfare responsibilities include distribution of pensions and provision of care for the disabled and other vulnerable groups.

As part of the reform, the overwhelming majority of health care providers in the country have been privatized; they are autonomous from the Ministry, and are expected to manage their own affairs. Republican hospitals, research centers and medical schools were kept at a national level. Much decision – making power and responsibility for funding at local level have been handed to twelve

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1 Agriculture contributes about 20% of Georgia’s total GDP
regional health departments that have responsibility for the hospitals, polyclinics and primary health care (PHC) services in the local area.

As part of the health care reform, the former Sanitary – Epidemiological Service was divided into two parts: the Department of Public Health and the State Sanitary Supervision Inspection within the Ministry. In 2003, the Parliament adopted the Law of Georgia, The “Sanitary Code of Georgia” (8th May 2003), which was designed to regulate legal relationships related to the provision of a safe environment for human health. Also to prescribe, the way the state supervision over the implementation of sanitary norms and preventative sanitary-hygienic and epidemiological measures.

The author felt that a more detailed review of this law here would be appropriate and a brief informal summary is provided below.

According to the Code [18], the Ministry executes state control over the State Sanitary Supervision Central Inspection¹ managed by the Head of Inspection appointed or released by the Minister. City and Regional State Sanitary Supervision Inspection services are established with local, city and regional, governing bodies². The Ministry and the Central Inspection provide their methodological guidance and supervision.

According to the Code, the Ministry’s roles include:
- Establishment of the priority directions in this field
- Establishment of state norms
- Organization of scientific – research work; approval and financing within the limits of the state health care subsidy program
- Organization and management of state sanitary supervision
- Coordinating san – hygiene – epid activities carried out by other agencies
- Organization of social – hygienic monitoring (such monitoring is defined as the analysis, assessment and forecasting of the environmental and health data, as well as establishment of causal relationships between the population’s health and environmental factors, aimed at providing safe environment for the population’s heath)
- Development of the program of sanitary and hygienic education of the public.

All physical and legal bodies in the country are responsible for:
- Observing sanitary norms
- Developing and implementing preventative sanitary-hygienic and sanitary – epidemiological measures aimed against pollution of the environment;

¹ And At-border Crossing Points Sanitary Inspection
² These are former san-epid stations that employ work hygienists and/or environmental health officers
occurrence of infectious and other mass, non-infectious diseases and poisonings; the improvement of working conditions.
- Informing relevant state bodies about emergency situations, about industrial and technological processes that may affect the sanitary norm compliance;
- Providing institutions of the State Sanitary Supervision with information requested for the execution of their supervisory role.

The State Sanitary Supervision:
- controls
- develops measures aimed at a safe environment and issues hygiene conclusions
- carries out hygiene evaluation and certification of facilities or products
- applies official power over the violators

The responsibilities of the inspectors include, (among other things): ensuring timely implementation of norms by various physical and legal bodies. Issuing them with hygiene summaries; taking part in the identification, investigation of the spread, and the implementation of liquidation measures against occupational, infectious and non-infectious mass diseases and poisonings; controlling hygiene education of the “prescribed” groups of workers.

They have the right:
- To enter the facility under supervision according to the legally established rule;
- Demand compliance with the established sanitary – hygienic norms within certain deadlines;
- Only in exceptional circumstances, take samples (free of charge) of air, water, soil or water...
- Investigate and establish the reasons for and the conditions of occurrence of occupational, infectious and mass non-infectious diseases and poisonings;
- Raise before the management of the enterprise the issue of temporary release from work of those employees who have not been through medical examination established for certain “prescribed” jobs, and who carry the causal agent for the disease.

The Head State Sanitary Doctor (or his deputy) has the right to ban or stop the operation of a facility, or industrial activity, until the violation has been rectified or a hygiene certificate issued. S/he has the right to take such cases to court.

Every facility is subject to a hygiene certification, which is issued by State Sanitary Supervision’s institution. Such certificate is a mandatory precondition for the exploitation of a facility. The procedure implies hygiene assessment of the facility (if

"Prescribed" refers to food and water-handlers as well as children care takers, health care and communal services workers
necessary with laboratory testing); review of the presented documents (hygiene certificates for the materials used, equipment, etc) and issue of the certificate.

According to the Code, any physical or legal body must ensure implementation of sanitary norms at their facilities and stop the activity where the norms are exceeded. It states that working conditions, workplace and work process must not harm worker’s health.

The Code sets requirements for mandatory health examinations in that representatives of certain professions, enterprises, institutions or organizations\(^1\) shall, as per Georgian law, undergo pre-employment and periodic medical examinations and that the enterprise administration (physical or legal bodies) shall ensure the timely examination of employees. Those who refuse to undergo such examinations shall not be employed.

It further states that the administration of an enterprise, institution or organization shall, at its own expense, provide those employees working in hazardous and dangerous conditions with medical care.

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\(^1\) The Ministry develops the list of hazardous and dangerous factors, work activities and occupations, as well as of those enterprises, institutions and organizations, whose employees must undergo medical examinations.

**INDUSTRIAL HEALTH CARE**

After the collapse of the USSR the industrial health care system described above fell apart. Like the rest of Soviet health care, this system was very resource intensive and was not economically viable: during Soviet times the state could afford to spend even unnecessary funds. With the emergence of private enterprises it could no longer be responsible for the risks created by them, therefore maintaining the industrial health care facilities became both impossible and, to an extent, unnecessary for the state.

As a result of health-care reform in the country, many of the old MSDs and regional outpatient polyclinics have been privatized in the form of a Limited Liability Enterprise.

In some cases MSDs continue to cooperate with “their” enterprises on a contractual basis. For example, employees of Rustavi Metallurgic factory (now approximately 2000 of them) have been offered the opportunity to purchase a private insurance package allowing them to get medical care from the MSD with a 60% discount. The plant continues to cover part of MSD’s costs (whose staff is still 300), and the chief doctor continues to meet with the plant management. Until recently the MSD had real problems running itself as due funds didn’t get transferred for long periods of time, while the customers’ ability to pay for the services has also been very low.
Now the situation has slightly improved reportedly.

A similar system operates at the currently privatized departmental polyclinic of the Academy of Sciences of Georgia. Those employees who volunteer to procure services from this polyclinic pay 3% of their salary\(^1\) (and 4% for each family member they subscribe) to access the agreed list of services from this facility free of charge.

MSD’s of the chemical plant “Azot” and Tkibuli coal mining enterprise are completely independent from these enterprises. Recently these MSDs started a program of periodic health assessments for the workers based on the contracts. Pre-employment health assessments for “Azot” employees are carried out at two local facilities different from the MSD, while for general medical care the plant offers a voluntary medical insurance scheme, and the employees are free to go to any clinic or hospital they wish if they decide to purchase it. The MSD in Zestaphoni is financed by the local municipality.

All of these clinics are in a very difficult financial state, while their former patients cannot afford treatment there in most instances.

Some of the former MSDs have ceased to exist.

The number of “shop” medical facilities and personnel has also reduced dramatically. It appears in general that, even where large industrial enterprises continue some form of health care provision for staff, it is limited to general health care, first aid and, in some cases, periodic health checks, and does not extend to any other occupational health services.

It must also be noted that information on the existing MSDs (their numbers / form of activity) is hidden in the overall health statistics. While data on site “health offices”, “shop” doctors, nurses, feldshers, or the coverage of the working population by these services is totally missing, - These entries do not even appear as separate items in any available statistical sources.

Despite the lack of official data it could be assumed with a degree of confidence that a large number of small and medium size enterprises that appeared in Georgia since the independence\(^2\) do not provide any form of workplace health service to their employees.

The largest Western Company operating in Georgia has been offering its employees a combination of in-house and sub-contracted occupational and primary health care services following a Western model. The main provider of these services is a recently established local

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1. This is on top of the 1% state health care tax.
2. Estimates by the State Department of Statistics show that the non-observed economy accounts for more than half of the entrepreneurial sector’s activities and 33-34% of the country’s GDP [25].
private health care centre that offers GP, emergency and occupational health care services, though the latter is limited in its scope due to lack of certain skills (e.g. industrial hygiene, occupational psychology, ergonomics). Health professionals involved in this service have better access to Western training opportunities and are generally better paid.

CONCLUSIONS AND RECOMMENDATIONS

According to the WHO, each year work-related injuries and diseases kill an estimated 1.1 million people worldwide. This figure includes about 300,000 fatalities from 250 million accidents that happen in the workplace annually. An estimated 160 million new cases of work-related disease occur worldwide each year, including respiratory and cardiovascular diseases, cancer, hearing loss, musculoskeletal and reproductive disorders, mental and neurological illnesses. The economic impact of occupational ill health is also well documented; the ILO has estimated that in 1997 the overall economic losses resulting from work-related diseases and injuries were approximately 4% of the world’s gross national product [27].

In Georgia, occupational illness and injury data collection is extremely poor. At the same time, according to the official Medical Statistics Manual for 2002 [23], out of all deaths, 71.6% died from cardiovascular diseases; malignant neoplasm’s -10.7%; gastrointestinal diseases - 2.8%; diseases of the respiratory system – 2.6%. Cardiovascular, respiratory, ontological and certain infectious diseases are generally on the rise. It would be irresponsible not to question whether cases of occupational ill health are “masked” under general morbidity and mortality data, and what contribution uncontrolled workplace exposures make in reality. Likewise, even though no estimates of the economic impact of occupational ill health have been made for Georgia, the country cannot be immune from its significant burden on the national economy.

“In making the working conditions safe and healthy – the raison d’être of occupational health – is in the interests of workers, employers and the government, as well as the public at large” (WHO) [27]. It is, therefore very easy to justify the need for taking prompt action in the field of occupational health in Georgia. Where, despite significant historical experience and a number of recent legislative and organizational initiatives, the overall impression is that occupational health as such has been forgotten or not given meaningful recognition by the decision-makers.

Experts interviewed as part of this dissertation work expressed their views about what needed to be done to improve the situation with workplace health and safety in the
country. Their recommendations can be summarised as follows:

- New legislation, including
  ✓ Enforcement of employers’ responsibility for Health and Safety
  ✓ Penalising system for non-compliance
  ✓ Mandatory insurance of workers against occupational illnesses and injuries
  ✓ Provision of health care for the working population
  ✓ Strengthening primary health care provision
- Re-establishing the system and increasing the quality and the effectiveness of pre-employment and periodic health assessments
- Strengthening the role of the Scientific – Research Institute of Industrial Hygiene, Occupational Diseases and Ecology
- Increased role of the Workers’ Unions
- Improved understanding of new occupational health hazards that have emerged in the country since independence
- Improved financing of occupational health and san-epid services, including facilities and installations available to them
- Educating the general public (including employees, employers and decision makers) about their legal rights and labor protection issues
- Educating general practitioners and other health care providers in occupational health and industrial hygiene issues

The process of legal harmonization between Georgia and the European Union, as part of the Partnership and Cooperation Agreement between the two, covers the area of employee protection in the workplace, identified as one of the legal harmonization priorities. Hence, the actions recommended below take into account the latest European guidance and experience in the field of occupational health care; their likely feasibility under the country’s economic state; and Georgia’s historical experience and resources in the field.

The recommendations are in line with WHO’s Global Strategy for Occupational Health for All [43]; ILO’s Occupational Health Services Convention 161 [29]. They also meet some of the main directions and objectives outlined in the strategic document “Georgian Health System Reorientation Major Directions” (1996) [15]. Some of these recommendations are also reflected in the Sanitary Code of Georgia [18]; if addressed, they would facilitate the implementation of the Code’s strong principle “that working conditions, workplace and work process must not harm worker’s health”.

A. Framework Legislation
It appears that in contrast to most industrialized states, Georgia still doesn’t have a single legal act that would establish a clear legal framework on occupational health
and safety. The country’s policy in relation to occupational health isn’t clearly stated; the roles and responsibilities of different players, including various existing H&S resources, aren’t specifically defined.

**Recommendations:**
- Stress the significance of the employers’ responsibility for health and safety in workplaces; their legal obligation to perform documented risk assessments, and to properly manage all health and safety risks involved in their business activity
- Ensure that all other legislation concerning workplace health and safety is in line with the new Act

**B. Provision of Occupational Health Services**
As of today, most workplaces in Georgia provide no occupational health service at all. Even though globally only 5%-10% of workers in developing countries, and 20%-50% of workers in industrialised countries¹ have access too adequate occupational health services. [27]. There is no reason why Georgia, with its wealth of recent experience and resources, shouldn’t follow the positive examples, and mandate provision of modern occupational health services for all employees by employers, thereby pioneering this initiative in the region.

**Recommendations:**
- Mandate the provision of occupational health services by employers for all employees by law. Those self-employed may be excluded from this requirement, but should nevertheless be provided with a mechanism to easily access occupational health services (e.g. through compulsory insurance)
- Formalise the new definition of “Occupational Health Services” as being primarily preventative (rather than curative) and multi-profile; and their minimum scope, with the focus on risk evaluation and assessment; surveillance of the work environment and the health of workers; health education and promotion
- Support (financially and institutionally) a Primary Health Care model of occupational health service (OHS) provision, but allow other forms; establish employers’ flexibility in how they meet their legal obligation to provide OHS. Establish a Quality Control and an accreditation system for the new OHS.
C. Other Relevant Legislation
Despite the existence of both new and old legal acts concerning workplace health and safety, some of them do not address the issues adequately, or in line with best international practices, while others even hinder the process.

Recommendations:
- Withdraw the piece of legislation that restricts the access of sanitary–epidemiological inspectors to workplaces
- Revise and update the Presidential Decree N275 (1997 May 30) about “Medical examination of citizens etc.” in line with best European examples
- Introduce compulsory insurance against industrial injuries and illnesses. Introduce a “no-fault” compensation principle
- Mandate reporting of occupational illnesses to the authorities and introduce penalties to deal with non-compliance with this requirement
- Develop an updated Georgia-specific List of Occupational Diseases based on European recommendations

D. Law Enforcement
Recommendations
- Improve the enforcement of H&S legislation through enhanced authority of the law enforcement bodies; their staffing; Union’s participation; employee education; system of penalties for non-compliance; other.
- Consider improvement of the financial state of the San – Epid Inspection: consider splitting their work into law-enforcement and consulting roles, which they could get paid for avoiding conflict of interest implications.

OCCUPATIONAL HEALTH RESEARCH AND DATA COLLECTION
Despite the emergence of new, poorly controlled or understood occupational hazards, brought about by socio-economic changes, as well as other serious concerns, research in the field of occupational health and medicine has been extremely limited. Occupational health research priorities haven’t been established. Data collection systems and occupational health statistics are virtually non-existent in the country.

Recommendations:
- Identify priority occupational health research areas for Georgia. Seek international technical assistance for this project
- Include the identified priority occupational health research topics into research topics supported centrally (or seek sponsorship from international donor organisations)
- Conduct an inventory of types of activities / hazards in Georgia in collaboration with the State Department of Statistics who have experience in similar tasks
- Conduct population-based epidemiological studies to assess
the occurrence and determinants of work-related illness
- Improve occupational health data collection and statistics on the following: Occupational illnesses Occupational injuries

THE INSTITUTE OF INDUSTRIAL HYGIENE, OCCUPATIONAL HEALTH AND ECOLOGY

It appears that the potential role of the Institute’s resources and experience, and the contribution it could make to the management of environmental and public health concerns in the country have been seriously underestimated.

Recommendations:
- Clearly define the place and the roles of the Institute in the Occupational Health Care System (see 6.3 above)
- Finance strategic parts of the Institute’s activities centrally

TRAINING AND PROFESSIONAL DEVELOPMENT IN OCCUPATIONAL HEALTH

Training and professional development in occupational health and safety in Georgia needs to be addressed at different levels: OH professionals, government officials, employers, employees, and the public at large.

Recommendations:
- Include occupational health, safety and labor protection education and awareness into the list of health promotion topics supported centrally or by local governments.

Such training courses on occupational health hazards / risks / risk mitigation measures / risk assessment process, for the industries, employees, medical practitioners and others could be provided by the Institute, the Institute of Hygiene, Sanitary Inspection etc.
- Strengthen the existing undergraduate training program at the Medical University, which would require less money and would capture more people.
- With the involvement of leading local and, if possible, international OH experts, consider what can be done regarding post-graduate training availability in the country. Seek international sponsorship for this initiative
- Likewise, consider the introduction of professional development of: occupational health nurses, agronomists, occupational psychologists, agricultural advisors, and other OH staff in country. Priority should be placed on the identified higher risks for

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1 Such training courses on occupational health hazards / risks / risk mitigation measures / risk assessment process, for the industries, employees, medical practitioners and others could be provided by the Institute, the Institute of Hygiene, Sanitary Inspection etc.
Georgia (see Research recommendations above).

- Plan and deliver tailor-made training programs addressing the needs of Primary Health Care units offering OH services. Train the trainer – type programs with particular emphasis on risk assessment and other key tools of ill health prevention in the workplace should be given priority. Technical assistance should be sought for these.

GENERAL

The Government needs to recognize Occupational Health and Safety as one of its priority areas with significant implications for the nation’s health and the country’s well being. The Parliament of Georgia, the Ministry of Labor, Health and Social Affairs of Georgia, and other relevant ministries should give the above recommendations. Technical assistance from international donor organizations should be sought for supporting improvements in the field of Occupational Health and Safety in Georgia.

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