

Classifying health workers: Mapping occupations to the international standard classification

The **international classification of health workers** is largely based on the International Standard Classification of Occupations (ISCO, 2008 revision), a system for classifying and aggregating occupational information obtained by means of population censuses and other statistical surveys, as well as from administrative records. The classification uses a hierarchical structure of occupational titles and codes, essentially reflecting the distinction of subgroups of the health workforce according to assumed differences in skill level and skill specialization required to fulfil the tasks and duties of jobs. The ISCO tool is intended both for statistical users and for client oriented users, and is the basis for many national occupational classifications.

This mapping gives guidelines on how health workers are to be classified into the most detailed groups, with examples of occupations included and excluded, for purposes of statistical delineation, description and analysis. It is intended to serve as a model to facilitate communication about health occupations, to enhance comparability of data on health workers within and across countries and over time, and to make it possible for data and information on health workers obtained from different sources to be produced in a form which can be useful for research as well as for decision-making and action-oriented activities. It is recognized that the full complexity and dynamics of national health labour markets may not be captured. The National Health Workforce Accounts (NHWA) is also aligned with this mapping.

The classification of health workers maps occupation categories into five broad groupings: health professionals, health associate professionals, personal care workers in health services, health management and support personnel, and other health service providers not elsewhere classified.

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
HEALTH PROFESSIONALS				
Health professionals study, advise on or provide preventive, curative, rehabilitative and promotional health services based on an extensive body of theoretical and factual knowledge in diagnosis and treatment of disease and other health problems. They may conduct research on human disorders and illnesses and ways of treating them, and supervise other workers. The knowledge and skills required are usually obtained as the result of study at a higher educational institution in a health-related field for a period of 3–6 years leading to the award of a first degree or higher qualification.				
Generalist medical practitioners	2211	Generalist medical doctors (including family and primary care doctors) diagnose, treat and prevent illness, disease, injury, and other physical and mental impairments and maintain general health in humans through application of the principles and procedures of modern medicine. They plan, supervise and evaluate the implementation of care and treatment plans by other health care providers. They do not limit their practice to certain disease categories or methods of treatment, and may assume responsibility for the provision of continuing and comprehensive medical care to individuals, families and communities.	Medical doctor (general), Medical officer (general), Physician (general), General practitioner, Family medical practitioner, Primary health care physician, District medical doctor, Resident medical officer specializing in general practice, Township medical officer, Station medical officer, Specialist in family medicine, Medical officer	Occupations included in this category require completion of a university-level degree in basic medical education plus postgraduate clinical training or equivalent. Medical interns who have completed their university education in basic medical education and are undertaking postgraduate clinical training are included here. Although in some countries 'general practice' and 'family medicine' may be considered as medical specializations, these occupations should always be classified here.

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
Specialist medical practitioners *	2212	Specialist medical doctors diagnose, treat and prevent illness, disease, injury and other physical and mental impairments using specialized testing, diagnostic, medical, surgical, physical and psychiatric techniques, through application of the principles and procedures of modern medicine. They plan, supervise and evaluate the implementation of care and treatment plans by other health care providers. They specialize in certain disease categories, types of patient or methods of treatment, and may conduct medical education and research activities in their chosen areas of specialization.	Specialist physician (internal medicine), Surgeon, Anaesthetist, Cardiologist, Emergency medicine specialist, Ophthalmologist, Gynaecologist, Obstetrician, Paediatrician, Pathologist, Preventive medicine specialist, Psychiatrist, Radiologist, Resident medical officer in specialist training	Occupations included in this category require completion of a university-level degree in basic medical education plus postgraduate clinical training in a medical specialization (except general practice) or equivalent. Resident medical officers training as specialist practitioners (except general practice) are included here. Although in some countries 'stomatology' may be considered as a medical specialization, stomatologists should be included under 'Dentists'-2261. Medical research professionals who participate in biomedical research using living organisms and do not undertake clinical practice should be excluded from here (classified under 'Life science professionals').
		* Medical doctors by specialty groupings		It is of significance to countries and stakeholders to be able to distinguish the different categories of specialist medical practitioners. For purposes of international comparability, where data pertaining to specialist medical practitioners are reported and classified by medical specialty, they should be mapped to these groupings. Each specialist should only be counted once, according to the main area of practice (or, if this information is not available, the last specialty registered).
		Doctors in obstetric and gynaecological specialties and related branches focusing on the care of the reproductive system of women including before, during and after pregnancy and childbirth.	Gynaecologist, Obstetrician	
		Doctors in paediatrics and related specialties focusing on the prevention, diagnosis and treatment of health problems in infants, children and adolescents.	Paediatrician, Neonatologist	
		Doctors in psychiatric specialties and related branches focusing on the study and treatment of mental illness and behavioural disorders.	Psychiatrist, Child psychiatrist, Gerontopsychiatrist, Neuropsychiatrist	
		Doctors in the medical group of specialties and related branches (not elsewhere classified) focusing on the diagnosis, management and non-surgical treatment of health problems.	Specialist medical doctor in cardiology, dermatovenerology, forensic medicine, gastroenterology, haematology, immunology, infectious disease, internal medicine, neurology, occupational medicine, oncology, radiology, rehabilitative medicine, respiratory medicine, urology	
		Doctors in the surgical group of specialties and related branches (not elsewhere classified) focusing on the treatment of health problems with surgery.	Specialist medical doctor in general surgery, accident and emergency medicine, anaesthesiology, intensive care, neurological surgery, ophthalmology, orthopaedics, otolaryngology, paediatric surgery, plastic surgery, thoracic surgery, vascular surgery	
		Doctors in specialties not elsewhere classified includes medical doctors in specialist practice excepting obstetric, gynaecological, paediatric, psychiatric, surgical or medical specialties as classified elsewhere.		

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
Nursing professionals	2221	Nursing professionals provide treatment, support and care services for people who are in need of nursing care due to the effects of ageing, injury, illness or other physical or mental impairment, or potential risks to health, according to the practice and standards of modern nursing. They assume responsibility for the planning and management of the care of patients, including the supervision of other health care workers, working autonomously or in teams with medical doctors and others in the practical application of preventive and curative measures in clinical and community settings.	Professional nurse, Specialist nurse, Nurse practitioner, Clinical nurse, District nurse, Operating theatre nurse, Public health nurse, Nurse anaesthetist, Nurse educator, Township health Nurse, Public health nursing sister	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in nursing. The distinction between nursing and midwifery professionals and associate professionals should be made on the basis of the nature of the work performed in relation to this definition. The qualifications held by individuals or that predominate in the country are not the main factor in making this distinction, as training arrangements for nurses and midwives vary widely between countries and have varied over time within countries.
Midwifery professionals	2222	Midwifery professionals plan, manage, provide and evaluate midwifery care services before, during and after pregnancy and childbirth. They provide delivery care for reducing health risks to women and newborn children according to the practice and standards of modern midwifery, working autonomously or in teams with other health care providers. They may conduct research on midwifery practices and procedures, and implement midwifery education activities in clinical and community settings.	Professional midwife, Public health midwife	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in midwifery. The distinctions between nursing and midwifery professionals and associate professionals should be made on the basis of the nature of the work performed in relation to this definition. The qualifications held by individuals or that predominate in the country are not the main factor in making this distinction, as training arrangements for nurses and midwives vary widely between countries and have varied over time within countries.
Traditional and complementary medicine professionals	2230	Traditional and complementary medicine professionals examine patients and prevent and treat illness, disease, injury and other physical, mental and psychosocial ailments by applying knowledge, skills and practices acquired through extensive study of the theories and experiences originating in specific cultures. They research, develop and implement treatment plans using applications such as acupuncture, ayurvedic, homoeopathic and herbal medicine.	Acupuncturist, Ayurvedic practitioner, Chinese herbal medicine practitioner, Homeopath, Naturopath, Unani practitioner, Drungtsho	This category includes occupations for which competent performance requires an extensive understanding of the benefits and applications of traditional and complementary therapies, developed as the result of extended formal study of these techniques as well as human anatomy and elements of modern medicine. Practitioners working in the singular application of approaches to herbal medicines, spiritual therapies or manual therapeutic activity are excluded from here.

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Paramedical practitioners	2240	Paramedical practitioners (including clinical officers and related) provide advisory, diagnostic, curative and preventive medical services more limited in scope and complexity than those carried out by medical doctors. They work autonomously or with limited supervision of medical doctors, and perform clinical, therapeutic and surgical procedures for treating and preventing diseases, injuries, and other physical or mental impairments common to specific communities.	Clinical officer, Primary care paramedic, Advanced care paramedic, Surgical technician, Feldsher	Occupations included in this category normally require completion of tertiary-level training in theoretical and practical medical services. Workers providing services limited to emergency treatment and ambulance practice are classified under 'Ambulance workers'-3258.
Dentists	2261	Dentists (including dental surgeons and related) diagnose, treat and prevent diseases, injuries and abnormalities of the teeth, mouth, jaws and associated tissues by applying the principles and procedures of modern dentistry. They use a broad range of specialized diagnostic, surgical and other techniques to promote and restore oral health.	Dentist, Dental practitioner, Dental surgeon, Endodontist, Oral and maxillofacial surgeon, Oral pathologist, Orthodontist, Paedodontist, Periodontist, Prosthodontist, Stomatologist	Occupations included in this category normally require completion of university-level training in theoretical and practical dentistry or a related field. Although in some countries 'stomatology' and 'dental, oral and maxillofacial surgery' may be considered as medical specializations, occupations in these fields should always be classified here.
Pharmacists	2262	Pharmacists store, preserve, compound and dispense medicinal products. They counsel on the proper use and adverse effects of drugs and medicines following prescriptions issued by medical doctors and other health professionals. They contribute to researching, testing, preparing, prescribing and monitoring medicinal therapies for optimizing human health.	Hospital pharmacist, Industrial pharmacist, Retail pharmacist, Dispensing chemist	Occupations included in this category normally require completion of university-level training in theoretical and practical pharmacy, pharmaceutical chemistry or a related field. Pharmacologists and related professionals who study living organisms are excluded from here (classified under 'Life science professionals').
Environmental and occupational health and hygiene professionals	2263	Environmental and occupational health and hygiene professionals assess, plan and implement programs to recognize, monitor and control environmental factors that can potentially affect human health, to ensure safe and healthy working conditions, and to prevent disease or injury caused by chemical, physical, radiological and biological agents or ergonomic factors.	Environmental health officer, Occupational health and safety adviser, Occupational hygienist, Radiation protection adviser	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in environmental or occupational health and safety, or a related field. Professionals who assess, plan and implement programmes to monitor or control the impact of human activities on the environment are excluded from here (classified under 'Life science professionals').

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Physiotherapists	2264	Physiotherapists assess, plan and implement rehabilitative programs that improve or restore human motor functions, maximize movement ability, relieve pain syndromes, and treat or prevent physical challenges associated with injuries, diseases and other impairments. They apply a broad range of physical therapies and techniques such as movement, ultrasound, heating, laser and other techniques. They may develop and implement programmes for screening and prevention of common physical ailments and disorders.	Physiotherapist, Geriatric physical therapist, Orthopaedic physical therapist, Paediatric physical therapist	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in physiotherapy or a related field.
Dieticians and nutritionists	2265	Dieticians and nutritionists assess, plan and implement programs to enhance the impact of food and nutrition on human health. They may conduct research, assessments and education to improve nutritional levels among individuals and communities.	Dietician, Clinical dietician, Food service dietician, Nutritionist, Public health nutritionist, Sports nutritionist	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in food and nutritional science, nutrition education, dietetics, or a related field.
Audiologists and speech therapists	2266	Audiologists and speech therapists evaluate, manage and treat physical disorders affecting human hearing, speech communication and swallowing. They prescribe corrective devices or rehabilitative therapies for hearing loss, speech disorders, and related sensory and neural problems. They plan hearing screening programs and provide counselling on hearing safety and communication performance.	Audiologist, Speech therapist, Speech pathologist, Language therapist	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in audiology, speech pathology, clinical language sciences or a related field.
Optometrists and ophthalmic opticians	2267	Optometrists and ophthalmic opticians provide diagnosis, management and treatment services for disorders of the eyes and visual system. They counsel and advise on eye care and safety, and prescribe optical aids or other therapies for visual disturbance.	Optometrist, Ophthalmic optician, Orthoptist	This category includes occupations for which competent performance usually requires formal training at a higher educational institution in optometry, orthoptics or a related field.
Health professionals not elsewhere classified	2269	This group covers health professionals not classified elsewhere such as podiatrists, occupational therapists, recreational therapists and other professionals providing diagnostic, preventive, curative and rehabilitative health services.	Podiatrist, Occupational therapist, Recreational therapist, Arts therapist, Dance and movement therapist	

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
HEALTH ASSOCIATE PROFESSIONALS				
Health associate professionals perform technical and practical tasks to support diagnosis and treatment of illness, disease, injuries and impairments, and to support implementation of health care, treatment and referral plans usually established by medical, nursing and other health professionals. Appropriate formal qualifications are often an essential requirement for entry to these occupations; in some cases relevant work experience and prolonged on-the-job training may substitute for the formal education.				
Medical imaging and therapeutic equipment technicians	3211	Medical imaging and therapeutic equipment technicians test and operate radiographic, ultrasound and other medical imaging equipment to produce images of body structures for the diagnosis and treatment of injury, disease and other impairments. They may administer radiation treatments and monitor patients' conditions under the supervision of a radiologist or other health professional.	Diagnostic medical radiographer, Medical radiation therapist, Magnetic resonance imaging technologist, Nuclear medicine technologist, Mammographer, Sonographer	This category includes occupations for which competent performance usually requires formal training in medical technology, radiology, sonography, nuclear medical technology or a related field.
Medical and pathology laboratory technicians	3212	Medical and pathology laboratory technicians perform clinical tests on specimens of bodily fluids and tissues in order to get information about the health of a patient or cause of death. They test and operate equipment such as spectrophotometers, calorimeters and flame photometers for analysis of biological material including blood, urine and spinal fluid.	Medical laboratory technician, Medical laboratory assistant, Blood bank technician, Cytology technician, Pathology technician	This category includes occupations for which competent performance usually requires formal training in biomedical science, medical technology or a related field. Technicians who conduct laboratory tests on living organisms should be classified under 'Life science technicians'. Forensic science technicians, who perform clinical tests to aid in the investigation of crimes, should be classified under 'Physical and engineering science technicians'.
Pharmaceutical technicians and assistants	3213	Pharmaceutical technicians and assistants perform a variety of tasks associated with dispensing medicinal products under the guidance of a pharmacist or other health professional. They inventory, prepare and store medications and other pharmaceutical compounds and supplies, and may dispense medicines and drugs to clients and instruct on their use as prescribed by health professionals.	Pharmaceutical technician, Pharmaceutical assistant, Dispensing technician	Occupations included in this category normally require knowledge and skills in pharmaceutical services as obtained through formal training. Pharmacology technicians and related associate professionals who work with living organisms are excluded from here (classified under 'Life science technicians').
Medical and dental prosthetic technicians	3214	Medical and dental prosthetic technicians design, fit, service and repair medical and dental devices and appliances following prescriptions or instructions established by a health professional. They may service a wide range of support instruments to correct physical medical or dental problems such as neck braces, orthopaedic splints, artificial limbs, hearing aides, arch supports, dentures, and dental crowns and bridges.	Medical appliance technician, Orthotist, Orthotic technician, Prosthetist, Prosthetic technician, Denturist, Dental technician	Occupations included in this category normally require some medical, dental and anatomical knowledge obtained through formal training. Technicians who construct and repair precision medical and surgical instruments are excluded from here (classified under 'Trades workers').

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Nursing associate professionals	3221	Nursing associate professionals provide basic nursing and personal care for people in need of such care due to effects of ageing, illness, injury, or other physical or mental impairment. They provide health advice to patients and families; monitor patients' conditions; and implement care, treatment and referral plans usually established by medical, nursing and other health professionals.	Assistant nurse, Enrolled nurse, Practical nurse	This category includes occupations for which competent performance usually requires knowledge and skills obtained as the result of study in nursing; in some cases, extensive on-the-job training may substitute for the formal education formal. The criteria for inclusion of individuals in this category should be made on the basis of the nature of the work performed in relation to this definition, and not the qualifications held by individuals or that predominate in the country.
Midwifery associate professionals	3222	Midwifery associate professionals provide basic health care and advice before, during and after pregnancy and childbirth. They provide advice to women, families and communities on birth and emergency plans, breastfeeding, infant care, family planning and related topics; monitor health status during pregnancy and childbirth; and implement care, treatment and referral plans usually established by medical, midwifery and other health professionals.	Assistant midwife, Auxiliary midwife, Traditional midwife	This category includes occupations for which competent performance requires knowledge and skills in routine and emergency midwifery care acquired through formal or informal training. The criteria for inclusion of individuals in this category should be made on the basis of the nature of the work performed in relation to this definition, and not the qualifications held by individuals or that predominate in the country. Traditional and lay midwives, who provide basic pregnancy and birthing care and advice based primarily on experience and knowledge acquired informally through the traditions and practices of the communities where they originated, are included here. Birth assistants, who provide emotional support and general care and advice to women and families during pregnancy and labour, are excluded from here (classified under 'Personal care workers in health services').
Traditional and complementary medicine associate professionals	3230	Traditional and complementary medicine associate professionals prevent, care for and treat physical and mental illnesses, disorders and injuries using herbal and other therapies based on theories and experiences originating in specific cultures. They administer treatments using traditional techniques and medicaments, either acting independently or according to therapeutic care plans established by a traditional medicine or other health professional.	Acupuncture technician, Ayurvedic technician, Bonesetter, Herbalist, Homeopathy technician, Scraping and cupping therapist, Village healer, sMenpas	This category includes occupations for which competent performance requires knowledge and skills acquired through relatively short periods of education and training, or informally through the traditions and practices of the communities where they originated. Faith healers, who treat human ailments through spiritual therapies, without using herbal therapies or other medicaments or physical treatments, are excluded from here (classified under 'Religious associate professionals'). Occupations that provide therapy using traditional forms of massage and the application of pressure, such as acupressure and shiatsu therapists, are classified under 'Physiotherapy technicians and assistants'-3255.

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Dental assistants and therapists	3251	Dental assistants and therapists provide basic dental care services for the prevention and treatment of diseases and disorders of the teeth and mouth, as per care plans and procedures established by a dentist or other oral health professional. They examine patients' mouths, teeth and related structures to assess oral health status; provide advice on dental hygiene; perform basic or routine clinical dental procedures; and assisting dentists during complex dental procedures.	Dental assistant, Dental hygienist, Dental therapist	This category includes occupations for which competent performance usually requires formal training in dental hygiene, dental-assisting or a related field.
Medical records and health information technicians	3252	Medical records and health information technicians develop, implement and assess health records processing, storage and retrieval systems in medical facilities and other health care settings to meet the legal, professional, ethical and administrative records-keeping requirements of health services delivery.	Medical records technician, Health information clerk, Medical records analyst, Medical records unit supervisor, Clinical coder, Disease registry technician	Occupations included in this category require knowledge of medical terminology, legal aspects of health information, health data standards, and computer- or paper-based data management as obtained through formal education and/or prolonged on-the-job training. General secretarial or clerical workers are excluded from here.
Community health workers	3253	Community health workers provide health education, referral and follow up, case management, and basic preventive health care and home visiting services to specific communities. They provide support and assistance to individuals and families in navigating the health and social services system.	Community health worker, Community health aide, Community health promoter, Village health worker, Kaders (community volunteer)	Occupations included in this category normally require formal or informal training and supervision recognized by the health and social services authorities. Providers of routine personal care services and traditional medicine practitioners are not included here.
Dispensing opticians	3254	Dispensing opticians design, fit and dispense optical lenses based on a prescription from an ophthalmologist or optometrist for the correction of reduced visual acuity. They service corrective eyeglasses, contact lenses, low-vision aids and other optical devices.	Dispensing optician, Contact lens optician	This category includes occupations for which competent performance usually requires formal training in opticianry.
Physiotherapy technicians and assistants	3255	Physiotherapy technicians and assistants provide physical therapeutic treatments to patients in circumstances where functional movement is threatened by injury, disease or impairment. They fit patients for physical supportive devices and administer and monitor manual treatments, electrical modality treatments, ultrasound and other physical therapies. Therapies are usually provided as per rehabilitative plans established by a physiotherapist or other health professional.	Physiotherapy technician, Physical rehabilitation technician, Acupressure therapist, Electrotherapist, Hydrotherapist, Massage therapist, Shiatsu therapist	This category includes occupations for which competent performance usually requires formal training in physical rehabilitation therapy or a related field. Fitness instructors, who teach body movements used in fitness routines and recreational activities, are excluded from here (classified under 'Social, cultural and related associate professionals').

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
Medical assistants	3256	Medical assistants perform basic clinical and administrative tasks to support patient care under the direct supervision of a medical practitioner or other health professional. They perform routine tasks and procedures such as measuring patients' vital signs, administering medications and injections, recording information in medical records-keeping systems, preparing and handling medical instruments and supplies, and collecting and preparing specimens of bodily fluids and tissues for laboratory testing.	Medical assistant, Clinical assistant, Ophthalmic assistant, Health assistant	This category includes occupations for which competent performance normally requires formal training in health services provision. Clinical care providers with advanced training and skills to provide independent medical diagnostic and treatment services should be classified under 'Paramedical practitioners'-2240.
Environmental and occupational health inspectors and associates	3257	Environmental and occupational health inspectors and associates investigate the implementation of rules and regulations relating to environmental factors that can potentially affect human health, health and safety in the workplace, and safety of processes for the production of goods and services. They may implement and evaluate programs to restore or improve safety and sanitary conditions under the supervision of a health professional.	Health inspector, Food sanitation and safety inspector, Occupational health and safety inspector, Sanitarian, Sanitary inspector	This category includes occupations for which competent performance usually requires formal training in sanitary sciences, occupational and institutional safety and sanitation, or a related field.
Ambulance workers	3258	Ambulance workers provide emergency health care to patients who are injured, sick, infirm or otherwise physically or mentally impaired prior to and during transport to medical, rehabilitation and other health care facilities. They monitor changes in health status of patients during transport and perform procedures according to protocol for emergency medical treatment. They may patrol and provide information on first aid at large-scale public gatherings and other events where health emergencies are more likely to occur.	Ambulance officer, Ambulance paramedic, Emergency medical technician, Emergency paramedic	Occupations included in this category normally require formal training in emergency medical treatment, patient transport, ambulance principles and practice, or a related field. Ambulance drivers who do not provide health care are excluded from here (classified under 'Plant and machine operators').
Health associate professionals not elsewhere classified	3259	This group covers health associate professionals not classified elsewhere including, for instance, chiropractors, osteopaths, respiratory and anaesthesia technicians, HIV counsellors and others performing technical tasks and providing support for diagnostic, preventive, curative, promotional and rehabilitative health services.	Chiropractor, Osteopath, Respiratory technologist, Anaesthesia technician, HIV counsellor, Family planning counsellor	This category includes occupations for which competent performance usually requires formal training in health service provision. Although in some jurisdictions chiropractic and osteopathic are considered to have the attributes of medical specialties, practitioners in these disciplines should always be classified here.

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PERSONAL CARE WORKERS IN HEALTH SERVICES				
Personal care workers provide direct personal care services in health care and residential settings, assist with health care procedures, and perform a variety of other tasks of a simple and routine nature for the provision of health services. These occupations typically require relatively advanced literacy and numeracy skills, a high level of manual dexterity, and good interpersonal communication skills.				
Health care assistants	5321	Health care assistants provide routine personal care, support and assistance with activities of daily living to patients and residents in a variety of health care settings such as hospitals, clinics and residential nursing care facilities. They assist patients with personal, physical mobility and therapeutic care needs as per established care plans and practices, and generally under the direct supervision of medical, nursing or other health professionals or associate professionals.	Nursing aide (hospital or clinic), Patient care assistant, Birth assistant (hospital or clinic), Psychiatric aide	Occupations included in this category generally do not require extensive health care knowledge or training. Classified here are workers providing services in health care settings such as hospitals, health care facilities, rehabilitation centres, residential nursing care facilities, and other establishments with permanent medical or nursing supervision.
Home-based personal care workers	5322	Home-based personal care workers provide routine personal care, support and assistance with activities of daily living to persons who are in need of such care due to effects of ageing, illness, injury, or other physical or mental condition in private homes and other independent residential settings. They assist clients with personal, physical mobility and therapeutic care needs, usually as per care plans established by a health professional.	Nursing aide (home), Home care aide, Home birth assistant, Personal care provider	Occupations included in this category generally do not require extensive health care knowledge or training. Classified here are workers providing services in primary residential settings including assisted-living facilities, continuing care retirement communities, and other types of residential facilities with minimal or no on-site medical or nursing supervision. Home birth assistants, who provide emotional support and general care and advice to women and families during pregnancy and labour, but not delivery care to reduce health risks, are included here. Care workers who provide care and supervision for children in residential homes and care centres are excluded from here.
Personal care workers in health services not elsewhere classified	5329	This group covers personal care workers in health services not classified elsewhere including, for instance, dental aides, hospital orderlies, medical imaging assistants, pharmacy aides and other providers of routine health and personal care support services.	Dental aide, First-aid attendant, Hospital orderly, Medical imaging assistant, Pharmacy aide, Phlebotomist, Sterilization aide	

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HEALTH MANAGEMENT AND SUPPORT PERSONNEL				
Health management and support personnel include a wide range of other types of health systems personnel, such as health service managers, health economists, health policy lawyers, biomedical engineers, medical physicists, clinical psychologists, social workers, medical secretaries, ambulance drivers, building maintenance staff, and other general management, professional, technical, administrative and support staff.				
Health service managers	1342	Health service managers plan, direct, coordinate and evaluate the provision of clinical and community health care services in hospitals, clinics, public health agencies and similar organizations. They provide overall direction, policy standards and operational criteria for the units they manage, including supervising and evaluating the recruitment, training and work activities of personnel. They monitor the use of health services and resources. They liaise with other health and welfare service providers, boards and funding bodies to coordinate the provision of services.	Health facility administrator, Medical administrator, Clinical director, Director of nursing, Hospital matron, Community health care coordinator, Chief public health officer	The main tasks and duties for jobs in this occupational category include guiding and directing the activities of organizations, departments and other workers, and other tasks which require complex problem solving and decision making based on knowledge and skills normally obtained as the result of some combination of higher education, extensive work experience and prolonged on-the-job training.
Health management personnel not elsewhere classified		This group covers managers and administrators not classified elsewhere (except health service managers) working in health systems including, for instance, government health department heads, human resource managers, supply chain managers, regional health policy and planning directors, and others whose main tasks and duties include guiding and directing the activities of organizations, departments and other workers.	Government health department head, Human resource manager, Medical commodities procurement manager, Regional health planning director, Aged care service manager, Social welfare manager, Information and communications technology service manager	
Life science professionals	2131, 2133	Life science professionals (including bacteriologists, pharmacologists and related) study living organisms and their interactions with each other and the environment, and apply this knowledge to solve human health and environmental problems. They gather, examine and analyse human, animal, insect, plant, soil, water and air specimens and samples in laboratories and in the field using specialised equipment, instruments, technologies and techniques. They work in diverse fields such as bacteriology, biochemistry, genetics, immunology, pharmacology, toxicology and virology.	Air pollution analyst, Bacteriologist, Biotechnologist, Cell geneticist, Ecologist, Environmental protection adviser, Microbiologist, Molecular biologist, Molecular geneticist, Pharmacologist, Water quality analyst	The tasks and duties for occupations in this category include collecting, analyzing and evaluating experimental and field data to identify and develop new products, processes and techniques for pharmaceutical and environmental use. The knowledge and skills required are usually obtained as the result of study at a higher educational institution in life science or related field for a period of 3–6 years leading to the award of a first degree or higher qualification.

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Biomedical engineers	2149	The group includes those who conduct research and advise on or develop engineering procedures and solutions concerning biomedical engineering.	Biomedical engineer	
Clinical psychologists	2634	Psychologists research into and study mental processes and behaviour of human beings as individuals or in groups, and apply this knowledge to promote personal, social, educational or occupational adjustment and development.	Clinical psychologist, Educational psychologist, Psychotherapist	
Social work and counselling professionals	2635	Social work and counselling professionals provide counselling, therapy and mediation services to individuals, families, groups and communities in response to social and personal difficulties. They assist clients to develop skills and access resources and support services needed to respond to issues arising from health problems, life transitions, addictions, and other personal, family and social problems. They liaise with other social service agencies, educational institutions and health care providers to advocate for client and community needs.	Addictions counsellor, Bereavement counsellor, Clinical social worker, District social welfare officer, Sexual assault counsellor, Women's welfare organizer	The tasks and duties for occupations in this category include planning and providing counselling, skills development, crisis intervention and mediation services in individual, family or group settings to assist clients function within the limitations of their environment, improve their relationships, and solve personal and family problems. The knowledge and skills required are usually obtained as the result of study at a higher educational institution in social work and counselling for a period of 3–6 years leading to the award of a first degree or higher qualification.
Non-health professional not elsewhere classified		This group covers professionals not classified elsewhere (except health, life science and social work) working in health systems including, for instance, physical, mathematical and engineering science professionals, teaching professionals, business and administration professionals, information and communications technology professionals, legal professionals and social science professionals.	Accountant, Biomedical engineer, Clinical psychologist, Environmental engineer, Health economist, Health policy analyst, Health policy lawyer, Health statistician, Health vocational education teacher, Medical and pharmaceutical products sales representative, Medical physicist, Operations research analyst, Optical engineer, Safety engineer, Software developer, Staff training officer, University medical lecturer, Veterinary epidemiologist	The tasks and duties of occupations in this category include conducting analysis and research and advising on applications of the physical, mathematical, engineering and social sciences to the medical and health fields; teaching the theory and practice of health science and services at higher education levels; and providing various technological, business and legal services in health systems.
Life science technicians	3141	Life science technicians (excluding medical) provide technical support for research, analysis and testing of living organisms, and development and application of products and processes resulting from research to solve human health and environmental problems. They collect and prepare specimens and samples generally under the guidance of a life science professional, calibrate and operate laboratory instruments and equipment, perform routine field and laboratory tests, and monitor experiments to ensure adherence to quality control procedures and health and safety guidelines. They work in areas such as biology, biochemistry, biotechnology, environmental protection and pharmacology.	Bacteriology technician, Biochemistry technician, Pharmacology technician, Serology technician, Tissue culture technician	Occupations included in this category usually require knowledge and skills as obtained through formal training in life science or related field.

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
Medical secretaries	3344	Medical secretaries , using specialized knowledge of medical terminology and health care delivery procedures, perform a variety of communication, documentation, administrative and internal coordination functions, to support health workers in medical facilities and other health care-related organizations. They schedule medical appointments, record and review medical charts and correspondence, interview patients to complete case histories, prepare health insurance claims and acquisition orders, and supervise the work of other office support workers.	Medical secretary, Medical office administrative assistant, Hospital ward secretary, Patient care secretary, Medical insurance billing secretary, Medical laboratory secretary, Medical stenographer, Medical transcriptionist, Pathology secretary, Dental secretary	Occupations included in this category require basic knowledge of medical terminology and health care delivery procedures as obtained through formal education and/or prolonged on-the-job training. General secretaries, receptionists and clerical workers are excluded from here.
Social work associate professionals	3412	Social work associate professionals administer and implement social assistance programmes and community services and assist clients to deal with personal and social problems.	Community development worker, Community services worker, Disability services worker, Family services worker, Mental health support worker	
Non-health technicians and associate professionals not elsewhere classified		This group covers technicians and associate professionals not classified elsewhere (except health, life science and medical secretarial) working in health systems including, for instance, physical and engineering science technicians, information and communications technicians, business and administration associate professionals, and social and religious associate professionals.	Bookkeeper, Computer network technician, Data entry supervisor, Disability services officer, Faith healer, Fitness instructor, Forensic science technician, Health insurance claims officer, Health facility licensing officer, Medical supplies procurement officer, Mental health support worker, Water treatment plant operator	The tasks and duties of occupations in this category include technical and related tasks connected with scientific research and operational methods and their applications to the medical and health fields; technical and practical services and support functions in finance, regulation and administration of health and social services; and technical tasks connected with the practical application of knowledge relating to sport, culture and religion to improve health and well-being.
Clerical support workers		This group covers clerical support workers (excluding specialized health information technicians and medical secretaries) working in health systems including, for instance, general clerks, keyboard clerks, client services clerks, material recording clerks and others who record, organize, store, compute and retrieve information, and perform clerical and secretarial duties in connection with money-handling operations, requests for information and appointments.	General office clerk, General secretary, General receptionist, Accounts clerk, Data entry clerk, Health insurance clerk, Hospital admissions clerk, Human resource assistant, Medical appointments schedule clerk, Medical commodities stock controller, Payroll clerk	Many occupations in this category require relatively advanced literacy and numeracy skills, good interpersonal communication skills and a high level of manual dexterity. The knowledge and skills required are usually obtained as the result of secondary education and, in some case, specialized post-secondary vocational education and/or prolonged on-the-job training.
Service and sales workers		This group covers service and sales workers (except personal care workers) working in health systems who provide personal and protective services, or demonstrate and sell goods in wholesale or retail shops and similar establishments.	Building caretaker, Facility cafeteria cook, Hospital security guard, Medical products sales demonstrator, Undertaker, Pharmaceuticals retail shop cashier	Many occupations in this category require relatively advanced literacy and numeracy skills, good interpersonal communication skills and a high level of manual dexterity. In some case, specialized post-secondary vocational education and/or prolonged on-the-job training may be required.

Occupation group	ISCO code	Definition	Examples of occupations classified here	Notes
Trades workers		This group covers trades workers working in health systems including, for instance, building trades workers, electrical and electronics trades workers, machinery trades workers, precision-instrument makers and others who apply knowledge and skills to construct and maintain buildings, make and control equipment or tools, or apply chemical products on surroundings to prevent health risks.	Ambulance mechanic, Building exteriors cleaner, Computer hardware technician, Health information typesetter, Malaria control sprayer, Optical lens moulder, Orthopaedic appliance maker, Surgical instruments maker, Refrigeration mechanic	The tasks and duties of occupations in this category generally require understanding of all stages of the production process, the materials and tools used, and the nature and purpose of the final product, as usually obtained through the completion of secondary education and, in some case, specialized post-secondary vocational education and/or prolonged on-the-job training.
Plant and machine operators and assemblers		This group covers plant and machine operators and assemblers working in health systems including, for instance, assemblers, drivers and others who operate and monitor machinery and equipment, drive motor vehicles and mobile machinery, or assemble products from component parts according to specifications.	Ambulance driver, Eyeglass frame assembler, Laundry machine operator, Pharmaceutical products machine operator	The tasks and duties of occupations in this category generally call for experience with and an understanding of industrial machinery and equipment as well as an ability to cope with machine-paced operations and to adapt to technological innovations. A high level of manual dexterity is often required.
Elementary occupations		This group covers elementary occupations in health systems including, for instance, cleaners, food preparation assistants, refuse workers and others who perform simple and routine tasks which may require the use of hand-held tools and considerable physical effort.	Hospital garden labourer, Kitchen helper, Lavatory attendant, Medical commodities stock handler, Refuse collector, Window washer	Most occupations in this category require knowledge and skills generally obtained through primary education and/or a short period of on-the-job training.
HEALTH SERVICE PROVIDERS NOT ELSEWHERE CLASSIFIED				
Armed forces occupations		This group covers members of the armed forces (not classified elsewhere) engaged in actions with primary intent to enhance health including, for instance, commissioned medical and nursing officers and combat medical technicians.	Commissioned armed forces medical doctor, Combat medical technician, Navy corps nurse, Veteran hospital nursing aide	Many jobs performed by members of the armed forces are similar, in terms of the nature of the work performed, to civilian occupations. For purposes of international comparability, where data pertaining to members of the armed forces are reported and classified by occupation, they should be included under 'Armed forces occupations'. Where it is not possible to produce information about the nature of work performed by members of the armed forces, they may be included with similar civilian jobs. In adapting this classification for national purposes, countries may wish to consider what approach best suits their circumstances and user needs.
Other health service providers not elsewhere classified		This group covers other categories not classifiable as participating in the formal or informal health labour market but providing health services including, for instance, medical interns and trainees who are providing clinical services as part of their basic medical education.	Medical student intern, Hospital volunteer	

Source: Adapted from International Labour Organization, *International Standard Classification of Occupations: ISCO-08* (www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm).