Ministry of Health

The Nursing Division

Certification Department

Set for Completing Knowledge for the Functioning of a Registered Nurse in Israel

ערכה להשלמת ידע מקצועי עבור האחות המוסמכת בישראל

November 2007

Preface

A nurse in Israel is required to have a universal professional education and in addition knowledge related to her role as a nurse in the State of Israel.

This tutorial has three chapters:

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The Healthcare System in Israel

Historical overview of the healthcare system

The healthcare system in Israel has been based on public medicine from the early 19th century to this day. Until the twentieth century, healthcare services were usually administered by charity institutions, mostly churches. Since then, hospitals have been built, which stand to this day. For example: Hadassah Hospital, run by the Hadassah Women's Organization, which initiated the construction of hospitals as well as a chain of clinics that were the infrastructure for the community stations serving mothers and their children throughout Israel.

From the 1920s onward, the system has been based on healthcare organizations, which combined provision of services and health insurance and took on hundreds of thousands of new immigrants before and after the founding of the state. In 1920, the Clalit healthcare organization of the Federation of Labor in Israel developed a chain of community clinics throughout the country. In the 1930s, additional healthcare organizations were established. From then onward, hospitals that were built by various bodies started to open: the Federation of Labor, the government and private entities. Medical insurance at healthcare organizations was arranged based on mutual aid for all regardless of income. Everybody paid according to their ability and received services according to their needs. By the late 1970s, the majority of the services were provided by Clalit Healthcare, owned by the Federation of Labor, most of whose revenues were public: direct financing from the government, a tax that employers paid and membership fees paid by members.

The healthcare system was institutionalized upon the founding of the State of Israel, along with all the governmental institutes in the country.
The healthcare system in Israel is composed of a large number of organizations with one central goal: promoting and improving the health of the population.
The system is composed of four groups of institutes and organizations:

- The Ministry of Health
- Healthcare organizations
- Public institutes, such as: Hadassah Hospital, Sha'are Zedek Hospital, Magen David Adom, the Israel Cancer Association.
- Private institutes, such as: private hospitals, dental services.

The Ministry of Health bears overall state responsibility for guaranteeing the health of the residents of the country, setting healthcare policy, priorities and principles for the activity of the healthcare system. The Ministry of Health is in charge of supervision, control, licensing, legislation, setting of standards, research, training, personnel planning, organization for emergencies and investment policies.
The Ministry of Health in Israel has two other central functions:

1) Providing services – the Ministry of Health operates about a third of the hospital beds in Israel and most of the public healthcare services focusing on preventive medicine through community health stations.
2) Insurer – according to the State Health Law, the Ministry of Health is responsible for providing and financing nursing inpatient services, preventive medicine services, mental health services, rehabilitation and mobility devices for disabled people.

The healthcare system in Israel has many achievements:

- Broad deployment of services providing access and availability for every resident

- Broad, universally accessible service package
- High vaccination coverage rate for the population
- High, advanced level of medical knowledge and care

These achievements are expressed in the following healthcare indices:

- The level of the health of the population is high
- The mortality rate for infants is low
- Life expectancy is high compared to western countries

Along with the achievements, the healthcare system in Israel faces many problems: a lack of infrastructures, gaps among different groups, and high costs for the citizens who need the service.

Crisis in the healthcare system in Israel

The system has been facing an ongoing crisis, mainly because healthcare needs are increasing at a pace exceeding the ability of the government to satisfy them.
We are living in a dilemma of shortage – the ability of the healthcare system to diagnose and treat is increasing, but the ability of society to finance these abilities for the entire population is becoming more and more limited.
The healthcare system in Israel is highly complex. Its complexity is a result of the constant need to bridge and find the correct balance between the wish to give optimum care to all applicants, and budgetary restrictions, as well as efficiency and social solidarity considerations, which arise between a competitive system and government involvement. The Ministry of Health is trying to advance legislation for forming a balance between these opposites via a state health insurance law.

Netanyahu committee – the state board of inquiry for assessing the functioning and efficiency of the healthcare system

In June 1988, the government decided to establish a state board of inquiry for examining the functioning and effectiveness of the healthcare system in Israel.
The committee was appointed due to a harsh, chronic crisis in the healthcare system that had resulted from increasing costs that were caused by many factors: the progress of medicine and technology, the aging of the population, increased life expectancy and public expectations from the system. The Netanyahu committee was not the first committee that examined different aspects of the healthcare systems. Most of the proposals for changes in the system had been known for a long time. The main distinction of this committee was the broad attention that it demonstrated, based on an integrative perspective of all the complexities of the entire healthcare system.
The crisis manifested in strikes and disputes in the labor relations of the service providers, heavy debts of hospitals and healthcare organizations, along with long waiting lists for examinations and treatments, and an increasing degree of public dissatisfaction.
Supreme Court Justice Shoshana Netanyahu was appointed as the head of the committee. The committee acted differently compared to other state boards of inquiry in that it examines the entire system with a comprehensive economic and social view.
The committee worked for more than two years and determined that the healthcare system had not adapted itself to the changes that had occurred over the years. The committee submitted three major recommendations:

- Passing a state health insurance law

- Turning government owned and healthcare organization owned hospitals into corporations.
- Turning the Ministry of Health into a body that sets and supervises policy and standards, while terminating its function as a body that provides healthcare services.

The three basic recommendations of the committee were adopted by the government but their application encountered many difficulties. The difficulties resulted from fear of change along with fear of change in political power relations.

The State Health Insurance Law

The passing of the State Health Insurance Law was one of the recommendations of the Netanyahu committee.
One of the important purposes of the law was to install stable financing rules for the healthcare system through a source updating mechanism vested in legislation that would express demographic, technological and other changes in the system.
In the early 1980s, the medical insurance branch became increasingly competitive. The share of Clalit Healthcare decreased, while the proportion of membership of smaller organizations increased. In 1984, Clalit Healthcare insured more than eighty percent of the insured population and in 1994 approximately 65% of the population. The small healthcare organizations made their admission requirements contingent to the age and income level of the insured, which caused long-lasting economic crises in Clalit Healthcare, as the mean age of its members was high, while their average income was low. The selective competition in the medical insurance branch in Israel caused instability and heavy deficits in Clalit Healthcare, from the later 1980s on. Due to this lasting crisis the need for a change in the medical insurance scene in Israel became very urgent.
In June 1994, the Knesset approved the State Health Insurance Law, which took effect in January 1995. The first section of the law stated that "health insurance will be based on principles of mutual justice, equality and help", principles that guided the legislator throughout the sections of the law.
According to the law, all residents of the country were required to have insurance, and every resident was entitled to a defined package of services. The law adopted the principle of absolute freedom of membership choice in a healthcare organization, changed the mechanism for billing and allocation of public sources, and determined the responsibility of the state for financing the package of services that residents were entitled to.

The rights of members according to the State Health Insurance Law (State Health Insurance Law – 1994).

- Every resident of the State of Israel is entitled to healthcare services.
- Every resident is entitled to enroll as a member of one healthcare organization of his choice, without conditions or restrictions relating to age or health condition.
- Every resident is entitled through the healthcare organization that he is a member of to receive all the services included in the healthcare service package, in accordance

with medical judgment, of reasonable quality, within a reasonable time period and a reasonable distance from his home.

- Every member is entitled to receive healthcare services that observe his dignity, privacy and medical secrecy.
- Every resident is entitled to switch from one organization to another.
- Every member is entitled to choose service providers, such as physicians, therapists, hospitals and institutes, out of a list of service providers that his healthcare organization contracts with, and in accordance with the service arrangement that his organization publishes from time to time.
- Every member is entitled to know which hospitals, institutes and other service providers the organization contracts with and the selection arrangements of the organization he is a member of.
- Every member is entitled to review the articles of the healthcare organization and receive a copy of the articles from the healthcare organization.
- Every member is entitled to receive from any healthcare organization full information on the payment arrangements employed therein for healthcare services and the plans of the organization for additional healthcare services.
- Every member is entitled to file a complaint to the public inquiries commissioner of the medical institute that cared for him, to the members' ombudsman of the healthcare organization he is insured by or to the ombudsman for the State Health Insurance Law at the Ministry of Health.
- Every member may file a suit to the regional labor court.

<u>The main changes the law enforced that had a pivotal effect on the healthcare system in Israel:</u>

The duty of insurance – before the passing of the law, healthcare insurance was voluntary, and although most of the population was insured, there were still some 250,000 people (5% of the total population) without health insurance.
A high rate of uninsured people were children, the lower decile population and Arabs (12%). New immigrants and social benefit recipients were insured by state funding for a limited period, and did not always continue their membership beyond the initial insurance.
By law, all residents of Israel have mandatory insurance and each organization must accept any resident who wishes to enroll as a member. Health insurance grants eligibility for receiving healthcare **to every resident**. This eligibility is not conditional. This deliberation of the law expresses the social position of the state that eligibility for healthcare services is a basic right that society must guarantee to all residents, regardless of any other conditions.

Definition of the healthcare services package

The State Health Insurance Law determines that the residents of Israel are entitled to medical services that are defined as "reasonable" within existing budget restrictions: "the healthcare insurance services included in the healthcare services package will be given in Israel, based on medical judgment, at reasonable quality, within a reasonable time period and a reasonable distance from the home of the member, within the financing sources available to the healthcare organizations" (State Health Insurance Law – 1994).
The package of healthcare services includes a range of vital medical services, which each healthcare organization must give all its members unconditionally.

The law replaced the unofficial, opaque mechanisms of defining the package and the terms of its eligibility that existed in the healthcare system before it was passed – with an orderly, transparent and publicly audited system.
The vesting of eligibility for a package of services in legislation was intended to guarantee the rights of the member unconditionally and give these rights publicity.

The law defines the package by fields of service: medical diagnosis, ambulatory medical treatment, hospitalization, drugs, etc., while adopting the package that existed before the law was enacted by Clalit Healthcare.
A number of changes and amendments were introduced to the package of services, such as adding the right of each resident to receive medical services abroad at the expense of the organization, on the condition that the service:

- ✓ Is included in the package
- ✓ Is intended to save life
- ✓ Cannot be given in Israel.

Major emphases on the law concerning the package:

- The services within the package will be given based on medical judgment, at reasonable quality, within a reasonable time period and distance and will be subject to the deductible fees fixed in the law.
- The package of services is wide. The services are given in accordance with specific criteria by which they were added to the package. A drug / service may be given for one disease and not for another.
- There are services/ drugs that are not included in the package.
- The package is updated from time to time. New drugs and technologies are included in the package after examination and assessment by a public committee, with the approval of the Minister of Health and the government.
- A service / drug may not be unlisted from the service package unless approved by the Committee of Labor and Social Affairs of the Knesset.

Update of the package:

The services and drugs that are included in the package within the law requires updating each year, as the process of treatment and medical diagnosis has constant technological improvements that allow for earlier diagnosis of diseases, new methods and innovations in treatment. This update is necessary for maintaining and promoting the current level of medicine.
Healthcare organizations do not have to finance services and drugs that are not included in the package of services by law.

"The Minister of Health, with the consent of the Minister of Finance and the approval of the government is allowed, by issuing an order, to add to ... and detract from the package", but the legislator made a restriction that "No service will be added to the package..., without payment or for payment lower than its cost, unless another source of funding has been found, or a source has been made available due to the canceling or economizing of a service". (State Health Insurance Law - 1994). Over the years, the healthcare organizations have reduced the deficit and streamlined their services. But they still all have a deficit, therefore adding services to the package is only possible by allocating a special budget.

Israel, like other countries in the western world, is facing the need to set priorities in medicine. These priorities are required because of the abundance of new medical technology compared to the limited resources that are allocated to the healthcare system.
Prioritization is a complex process.
Each year, there is a struggle aimed at affecting priorities. Patient and physician groups attempt to promote the addition of a certain drug or technology to the package. The process in Israel is orderly, structured and based on evaluation of technologies, clinical, epidemiological and economic factors, while considering ethical, social, legal and political needs. Beyond the package of services under the responsibility of the healthcare organizations (specified in the second addendum to the law), the law also includes a package of services under the responsibility of the Ministry of Health (the third addendum package), which deals with psychiatric services, nursing hospitalization, personal preventive medicine and rehabilitation services. These services should have been transferred to the responsibility of the healthcare organizations after a three year transition period (which was extended to four years).
The legislator states that the services under the responsibility of the Ministry of Health would be transferred to the healthcare organizations and in doing so concentrate, through a single, central party (the healthcare organizations) the overall responsibility for most of healthcare services, thus guaranteeing continuity of care and leaving the Ministry of Health its ministerial duties alone. This has not been applied.

Freedom of choice
The Health Insurance Law grants absolute freedom of choice of an insuring organization, a right to move from one organization to another and bans organizations from restricting the admission of members for any reason, such as: age, disease or belonging to a workplace or worker organization.
The law determines that an insured individual may move from one organization to another after one year of membership and the organization has no right to restrict leaving or admission. The principle of freedom of choice in an insuring organization is one of the most important principles in the law, and is intended to reduce the phenomenon of vetting or selection of members that characterized the system before the law. The selection discriminated among members and was based on two standards:
1. Selection of members whose predicted medical service consumption would be low, i.e. young and healthy.
2. Selection of members whose member taxes would be high, i.e. high earners.

As a result of this discriminatory selection, the distribution of members between the organizations was uneven. Clalit Healthcare admitted any insured individual as long as he was a member of the Federation of Labor while the other organizations were pickier in admitting members. This phenomenon caused gaps in the financial status of the organizations. On the one hand, there were organizations whose financial status was normal, which allowed them to improve their level of service, while on the other there were organizations, particularly Clalit Healthcare, whose financial situation deteriorated to the point of danger of it being unable to pay its debts and continue providing healthcare services to its members.
Granting freedom of choice for insured individuals was intended to eliminate discriminatory selection and ensure that the member would enjoy the right of equal opportunity in selecting an insuring organization.
This principle was also intended to increase competition between the organizations, retaining the members listed at the organization and encouraging new ones to join up. The competition

was meant to improve the efficiency of the organization and the quality of the service it provides.

Collection of health insurance fees

When the law was applied, the collection of health insurance fees was transferred from the healthcare organizations to the National Insurance Institute. This transfer:

- Increased the volume of revenue from collecting health insurance fees.
- Reduced the political involvement in the healthcare system by severing the link between membership in a labor organization (the Federation of Labor) and membership in one organization or another.
- Severed the connection between payment of member tax and receiving healthcare services. By law, there is no connection between payment to National Insurance for healthcare services and the duty of the organization to administer these services to any resident registered with them.

Complementary insurance

A complementary insurance plan complements the medical coverage given pursuant to the State Health Insurance Law – "a healthcare organization may offer its members insurance for financing additional healthcare services that are not included in the basic package of healthcare services, in accordance with conditions and standards that will be determined by the Minister of Health after consultation with the Minister of Finance" (the State Health Insurance Law- 1994).

- Complementary insurance expands the scope of the coverage that healthcare organizations offer their members, including medical services that are not in the basic package.
- It adds services to the package, such as ancillary inpatient services, including accommodation conditions, food and comfort accessories, short waiting times included in the basic healthcare service for inpatient medical service, as long as the service is given in a non-public medical institute.
- It increases the freedom of choice for members. Each member may voluntarily add "complementary insurance" within the organization he is a member of, in exchange for payment.
- The payment is identical for all members of the same plan, except complementary insurance for nursing services, which considers the age of the member and enrollment date.
- A healthcare organization may not include in complementary insurance the choice of a physician in the community and technological innovations, including drugs.
- Enrolling in complementary insurance is contingent to health status:
  "There is no coverage pursuant to this insurance for any event or claim resulting from a preexisting defective health state, an effect or disease or birth defect, which the member had before the start of the insurance through to the end of the qualification term." (State Health Insurance Law- 1994)
  The qualification term is the time fixed in the insurance contract, from the date of enrolment into the insurance plan and the date from which the enrolling member may enjoy the insurance services.

Law and Legislation in the Healthcare System in Israel

The Public Health Regulations

There are two types of regulations that regulate the practicing of nursing. The Public Health Regulations (Nursing Staff in Clinics,1981) which regulate the action of nursing practitioners in clinics and the Public Health Regulations (Nursing Practitioners in Hospitals,1988) which regulates the work of nurses in hospitals.

"Practicing nursing" is defined in section 1 of the Public Health Regulations (Nursing Practitioners in Hospitals, 1988) as "professional occupation, as an occupation of a person licensed to practice nursing in hospitals, in accordance with the training he has received as stated in the Regulations...", and a "person licensed to practice nursing" is only a person who is registered in the "roll" that constitutes a record of nursing staff.

A person is entitled to be registered in the roll subject to the following general conditions:
1) He is a citizen or resident of Israel;
2) He is 18 years old or older.
3) He has at least basic knowledge of Hebrew;
4) He has professional training in nursing that has been recognized by the Chief Nurse.
5) He has not been convicted of an imprisonable offense that in the opinion of the Chief Nurse should prevent practicing nursing.

In addition, there are special conditions for registration in a certain section in the role of registered nurses, midwives, etc.

Nursing administration
The nursing administration is a staff unit in the Ministry of Health that constitutes policy in nursing within state trends at the ministry with emphasis on developing the nursing profession as an integral part of the healthcare system.

References

- Public Health Regulations (Nursing Practitioners in Hospitals,1988)
- The Public Health Regulations (Nursing Staff in Clinics,1981)

The Patient's Rights Law, 1996

In 1996, a law related to patients' rights was passed – the Patient's Rights Law. The goal was "to determine the rights of a person wishing to receive or receiving medical care and protect his dignity and privacy" (section 1). The law validates a change that has occurred in recent decades in the western world in the patient-physician relations, which arose from a confidence crisis in scientific medicine. The emphasis on the law is the private relations between the patient and the physician. Instead of a paternalistic approach of the physician that determines what is good for the patient, the law emphasizes the autonomy of the patient as a partner in making decisions concerning his medical care, and reinforces the status of the patient in this regard. The law delineates the rights of a patient beyond receiving the medical care itself and the ethical and professional rights of the physician caring for him, many of which have been defined previously in court adjudications. In addition, the law establishes a criminal sanction for transgressors against its provisions.

The right to medical care
"Anybody who needs medical care is entitled to receive it in accordance with the law and in accordance with the conditions and arrangements employed, from time to time, in the healthcare system in Israel. In a medical emergency, a person is entitled to receive urgent medical care unconditionally"

Prohibition of discrimination
"A caregiver or medical institute will not discriminate among patients on grounds of religion, race, sex, nationality, country, extract or other such grounds."

Adequate medical care
A patient is entitled to receive adequate medical care of professional standard, quality and human relations

Information concerning the right of the caregiver
A patient is entitled to information concerning the identity and function of any person caring for him

Additional opinion
A patient is entitled to obtain, on his own initiative, an additional opinion concerning his medical care; the caregiver and the medical institute will assist the patient in all matters required for exercising this right.

Guaranteeing adequate further care
"If a patient transfers from one caregiver to another or from one medical institute to another, the patient will be entitled, at his request, to the cooperation of caregivers and medical institutes related to his medical care, thereby ensuring adequate continuation of care".

Receiving visitors
A patient who is hospitalized in a medical institute is entitled to receive visitors in accordance with the protocol established by the medical institute.

Safeguarding the dignity and privacy of the patient

A. A caregiver and whoever works under the supervision of the caregiver as well as any other employee of the medical institute are to uphold the dignity and privacy of the patient in all stages of medical care.
B. The director of a medical institute is to determine instructions concerning the safeguarding of the dignity and privacy of the patient in the medical institute.

Medical treatment in cases of medical emergency or severe danger
In circumstances in which there is an apparent medical emergency or severe danger and a caregiver or medical institute is requested to give a person medical care, the caregiver will examine and treat him to the extent of his ability.
If the caregiver or medical institute is unable to care for the patient, they are to refer him to the extent of their ability to a place where the patient may receive the appropriate care.

Medical examination in the emergency room
A. Should a patient report to the emergency room, he is entitled to a medical examination by a physician.
B. If the examining physician finds that the patient needs urgent medical care, he is to give him the medical care; however, if the medical care cannot be administered there, the emergency room physician is to refer the patient to an appropriate medical institute and ensure, to the extent of his ability, his transfer to that medical institute.

Informed consent to medical treatment
Informed consent is the right of the patient to make decisions, freely, concerning the medical treatment he will receive, after receiving relevant medical information needed for making these decisions. The patient's decision may be to agree to or decline receiving the medical treatment. Informed consent also imposes a concurrent duty on the caregiver not to start the treatment before receiving the consent of the patient, after having given the patient relevant information concerning the treatment and an opportunity to understand the medical information and express his wish to receive the treatment.
A. "Medical treatment will not be given to a patient unless the patient has given informed consent thereto..."
B. For receiving informed consent, the caregiver is to give the patient medical information that he requires, to a reasonable extent, to allow him to decide whether to agree to the proposed treatment; for this purpose, "medical information" must include:

1. The diagnosis and prognosis of the medical condition of the patient.
2. Description of the substance, procedure, goal and expected benefit and odds of the proposed treatment
3. The risks involved in the proposed treatment, including adverse effects, pain and discomfort
4. Chances and risks of alternative medical treatments or lack of medical treatment
5. The fact that the treatment is of an innovative nature

D. "The caregiver will give the patient the medical information, as early as possible, in a manner that will allow the patient a maximum degree of understanding of the information for making a decision by of voluntary choice and independence."
E. "Notwithstanding the provisions of subsection (B), the caregiver may abstain from giving certain medical information to the patient relating to his medical condition, if an ethics committee has confirmed that giving it may cause severe damage to the physical or mental health of the patient."

Manner of giving informed consent:

A. Informed consent may be in writing, orally or by way of conduct.
B. In a medical emergency, informed consent to medical treatment listed in the addendum may be given orally, as long as the consent is documented in writing as soon as possible thereafter.

Non-consensual medical treatment
Notwithstanding the provisions of section 13
1. "The caregiver is allowed to give medical treatment even without the informed consent of the patient, if all of the following are fulfilled.

A. The physical or mental condition of the patient precludes his giving informed consent.
B. The caregiver does not know that the patient or his guardian objects to receiving the medical care.
C. There is no way of receiving the consent of the proxy, if a proxy has been appointed for him, or no way of receiving the consent of his guardian, if the patient is a minor or legally incompetent."

2. "In circumstances posing a severe threat to the life of the patient and the patient objects to medical care, which must be promptly administered with regard to the circumstances at hand, a caregiver is allowed to give the medical care against the will of the patient if the ethics committee, having heard the patient, has approved the administration of the treatment, as long as the committee has been convinced that all of the following have been fulfilled:

A. The patient has been given information as required for receiving informed consent.
B. The medical treatment may significantly improve the patient's health.
C. There are reasonable grounds to assume that after administering the medical treatment the patient will give his consent retroactively.

3. In a medical emergency, a caregiver may give urgent medical care even without the informed consent of the patient, if due to the circumstances of the emergency, including the physical or mental condition of the patient, his informed consent may not be obtained, medical care will be administered with the consent of three physicians, unless the circumstances of the emergency preclude this."

Appointment of a proxy for a patient
A patient is allowed to appoint a proxy on his behalf who will be authorized to give consent to receiving medical care in his lieu. The proxy appointment statement must specify the circumstances and the conditions in which the proxy will be authorized to agree to medical care instead of the patient.

The right to receive full medical information about his condition from the medical documents
1. This right reduces the power the physician has due to his expertise and knowledge The abundance of medical information accessible to patients allows them to receive information concerning their condition and possible modes of treatment (section 18 of the Law).
2. The patient has a right to have information kept secret (section 19 of the Law).

In addition, the Law has determined a number of formal mechanisms:

- Examining committee – a committee whose purpose is to examine the complaint of a patient or his representative, or examine an exceptional incident relating to administering medical care. The findings and conclusions of the examining

committee are submitted to the person who appointed the committee, to the patient and the caregiver who may be adversely affected by the conclusions of the committee (section 21 of the law).

- Auditing and quality committee – an internal committee of a medical institute, healthcare organization or the Ministry of Health whose purpose is to evaluate the medical activity and improve the quality of the medical care. The content of the discussions held in the committee, the protocol, any material that has been prepared for the discussion and that has been given thereto, its summaries and conclusions, are confidential and may not be disclosed even to the patient (section 22 of the Law).
- Ethics committee (section 24 of the Law) – a committee whose goal is to settle various issues relating to giving information to a patient when disclosure may cause severe damage to the physical or mental health of the patient (section 13(D)), on issues of administering care in circumstances in which the patient faces severe danger or objects to medical care (section 12(2) of the Law), on issues of disclosing medical information to another person (section 20(A)4), when factual findings have not been documented in a medical record of an auditing and quality committee and the patient has complained thereof (section 23 of the Law).
- Patients' rights officers – their duty is to receive complaints of patients, consult and help them with matters relating to exercising their rights (section 25 of the Law).

References

- A. Carmi, **Health and Law**, Nevo Publishing (2005).
- Carmel Shalev, **Health, Law and Human Rights**, Ramot Publishing (2003).
- The Patient's Rights Law, 5756 – 1996.

The Physicians Ordinance

The Physicians Ordinance, section 59(A):
"59. (A) The director may exempt from the provisions of this Ordinance the following persons:

(1) Nurses or assistants whom the Director has determined and authorized to diagnose and treat conditions as ordered or permitted, in clinics or in types of clinics in hospitals or in types of hospitals of the Ministry of Health or of an institute that the Director General has approved;...

(B) The Director General of the Ministry of Health will determine in the Regulations the competencies required for performing the procedures as stated in section (A)(1); based on these regulations a clinic or hospital director may permit holders of the competency determined herein to perform such procedures.
(B1) The Director General may also permit a registered nurse to perform procedures as stated in subjection (A)(1) in the home or the hospital under conditions determined in the Regulations with the approval of the Labor and Social Affairs Committee of the Knesset."

The Physicians Regulations (Competency for Performing Exceptional Procedures) 2001
The medical and technological developments require the caring staff to adapt itself to changes in their professional activity. These regulations vest the execution of exceptional procedures for nurses and assistants.

Exceptional procedure
"A procedure that is practicing medicine as defined in section 1 of the Ordinance ("The Physicians Ordinance (New Version) 1976"), which is permitted to persons who are not licensed physicians, pursuant to these Regulations."

Guidelines for performing an exceptional procedure
"An exceptional procedure will be executed in accordance with the guidelines for performing exceptional procedures that the Director has approved in the set of guidelines for performing exceptional procedures"
"A registered nurse may perform an exceptional procedure on the condition that she has studied the exceptional procedure in a recognized course that she has participated in.
A registered nurse who has not studied the exceptional procedure, in part or in full, in a recognized course, may perform the exceptional procedure, if she has studied it in a special course for registered nurses that the Director has approved, after consultation with the advisory committee, at an institute that the Director has approved, and has given confirmation thereof to the nursing director of the medical institute at which she is employed."

Characteristics of an exceptional procedure
Legal validity – a procedure that is delegated from a physician to nurses or assistants, according to section 59 of the Physicians Ordinance.
Authorization for execution – may be executed only to a personally authorized individual.
Treatment sites – limited to the unit giving the approval (hospital, clinic, home of the patient).
Validity of execution – limited to the conditions approved.
Responsibility and accountability – full for the executor and the provider of the procedure.
Consent – a procedure may be performed subject to the consent of: the medical director of the institute, the nursing director and the executor of the procedure.

Exceptional procedures that a registered nurse may perform: (second addendum (Regulation 5))

(1) "Adaptation of a ventilation device for withdrawal from a ventilator;
(2) Gathering of peripheral blood stem cells using a plasmaphoresis device;
(3) Removing an epidural catheter;
(4) Injecting morphine into an epidural catheter for end-stage patients;
(5) Injecting radioactive media in epileptic monitoring;
(6) Deep suction from the trachea."

Exceptional procedures that a registered nurse assisting a physician may perform: (fourth addendum (Regulation 7)
(A) "Injection of contrast medium into coronary arteries at a cardiac catheterization institute;
(B) Procedures for assisting a physician specializing in gastroenterology performing a procedure, in accordance with his immediate orders:

(1) Preparing and injecting contrast medium into a catheter that has been inserted into the duct of an endoscope;
(2) Operating a papillotome device and stretching the papillotome;
(3) Turning on and off, connecting and operating a lithotripsy device;
(5) Inserting, operating and removing a pericate;
(6) Taking a biopsy, opening and closing biopsy forceps;
(7) Opening and closing polypectomy forceps that are connected to an electrical diathermy device;
(8) Injection of sclerogenic medium according to the order of a physician using a sclerozation needle;
9) Pneumatic dilatations – inflating a balloon at the order of a physician;
(10) Inserting a prosthesis into the esophagus;
(11) Direct injection of sedatives, narcotics and antidotes intravenously;
(12) Moving an endoscope during colonoscopy."

Exceptional procedures that may be performed by a registered nurse in the home of the patient: (fifth addendum (Regulation 8)
(1) Removing a catheter from an epidural cavity;
(2) Injection of morphine into an epidural catheter for end-stage patients;
(3) Deep suction from the trachea.

Recognition of competence for performing exceptional procedure
Local authorizations:

- Approval by the director of a medical institute for adopting the procedure at the institute.
- Authorization by the commissioner of the sector relevant for adopting the procedure.
- Authorization by the director of the department where the procedure will be performed at.
- Authorization by the head nurse of the department, for procedures that nurses are permitted to perform.

Training:

- The training will be local and its principles and framework will be approved by the exceptional procedures committee.
- Success in the training procedure will be recorded in the personal records of the practitioner to whom the procedure has been delegated.

Execution procedures:

- Each institute is to have application procedures that are available upon demand.
- Each procedure is to have a unique written procedure that is signed by the medical director, the director of the relevant sector and the director of the department.

Supervision and control:

- The director of the institute adopting an exceptional action is responsible for determining a mechanism of supervision and control for ensuring the well-being of patients.
- The exceptional action will be controlled according to the supervision procedures that will be determined by the advisory committee. The results of the control will be used by the advisory committee for exceptional procedures in the Ministry of Health for deciding on the following options:
  1. Maintaining the current status of the procedure.
  2. Canceling the procedure.
  3. Expanding the procedure to additional fields.

  A procedure that has been properly instilled and that has been performed safely and effectively for a long time by registered nurses will be recommended to the director general for definition as a nursing procedure, after all the relevant professional parties have given their consent.

Care for Mental Patients Regulations, 1992

The Care for Mental Patients Law, 1991, is the main law that deals with the care of mental patients, in addition to the regulations installed thereby, the main regulations being the Care for Mental Patients Regulations, 1992.
The law regulates and indicates the ways in which a person may be committed to a psychiatric hospital, whether a minor or adult. The law is relevant to institutes that are involved in caring for mental patients, and their authority, such as: the Head of the Mental Health Services, the district psychiatrist, the psychiatric committee and the directors of the psychiatric institutes. In addition, the law regulates the rights and duties of inpatients.

The structure of the psychiatric service is hierarchical, the pyramid being topped by the **Head of the Mental Health Services**, who is a psychiatrist appointed by the Minister of Health whose duty is to plan, manage, supervise and regulate procedures concerning psychiatric

care. At the second level are **the district psychiatrists**, whose authorities are elaborated below, followed by the directors of the hospitals and the clinics.

The different routes for psychiatric hospitalization and examination:
There are a number of routes for committing a person in a psychiatric institute, which include: committing based on a court decision, based on the decision of the district psychiatrist, according to the decision of the director of a psychiatric hospital and based on a person's will.

Rights and duties of the patient
Upon admitting a patient for hospitalization, the admitting physician must explain to him his rights and give him a form worded according to the law, which specifies his rights and duties. It must be noted that the main purpose of the hospitalization is therapeutic, and therefore no person may be committed only to protect the public or himself. It must further be mentioned that the rights of the patient may not be infringed other than according to the provisions in the law as specified below. The rights of the patient are as follows:
1. Sending and receiving sealed letters.
2. Seeing guests at times and in accordance with conditions determined by the director of the hospital.
3. Keeping in touch with people outside the hospital.
4. Keeping personal effects to a reasonable extent and wearing his own clothes, subject to the conditions of the director.
The director may limit these rights, if required for medical reasons. However, the director is not allowed to restrict the right of the patient to send letters to his lawyer, the district psychiatrist, the psychiatric committee or his guardian.
Other rights of the patient may be enumerated:
5. The patient is entitled to go on furlough in accordance with the following conditions, if the patient is committed pursuant to a court order, then the psychiatric committee may approve his going on furlough at the time determined by the director, whereas if the patient is hospitalized other than by a court order, the director may approve furloughs for him[1]. If the patient or his family objects to his going on furlough, they may appeal to the district psychiatrist and thereafter to the psychiatric committee.
6. A patient who is voluntarily committed will receive treatment only with his consent. However, in the case of emergency care, his consent is not required. If the patient refuses to receive treatment, the director may discharge him.
7. A patient who is involuntarily committed will receive treatment even if he objects, but special treatments such as electroconvulsive therapy will only be administered under the conditions stated in the law and the regulations, which is discussed below.
8. The patient to be informed, to the extent possible, of the treatment plan.
9. The patient is entitled to receive medical information concerning his condition, subject to the discretion of the physician.
10. Patients may engage in occupational therapy and rehabilitation plans.
11. The patient is allowed to continue to administer his assets, unless the director of the hospital has determined that the patient is unable to attend to his affairs. In such a case, a guardian is to be appointed for the patient. If a guardian has not yet been appointed and performing an urgent legal action without delay is not necessary, the director is to apply to the custodian general, a public entity that handles these affairs.

Coercive measures, special instructions and special treatments

1. Coercive measures include two procedures: one is isolating the patient and the other is restraining the patient. In view of the severe infringement on the person's freedom and dignity, the law and regulations have installed special conditions for employing these measures, attention must be paid to their fulfillment. Firstly, these measures must be taken within reason and to the extent required for caring for the patient or preventing danger to himself or others. An order to use these measures will be given by a physician. Nonetheless, **in an emergency**, a nurse may order the use of coercive measures.
The regulations [legal instructions that draw their legality from the law and are granted by a minister] have additional conditions, the main ones being as follows:
Isolation will be in a room that has been prepared especially and includes appropriate safety measures. The restraining of a patient will also be performed in a ventilated room that has been prepared for this purpose, containing a fire detection system and firefighting equipment. In addition, the nurse must deny other patients access to the restraining room.
The restraining time is **four hours**, the physician is authorized after examination to extend the term for four hours. During restraining, the nurse must examine the condition of the bound patient at least **every half hour**.

2. There are two special instructions: special examination and special supervision:
Special examination imposes a duty on the head nurse or another nurse appointed thereby to know, at any time, the condition **and whereabouts** of the patient.
Special supervision imposes a duty on the head nurse or another nurse appointed thereby to stay **next to the patient** at any time and place and not leave him before a relief arrives.
A physician may give a special instruction **in one** of the following cases: the patient **may endanger** himself or others physically or may cause severe property damage; the patient **is in a severe or changing physical condition**; the patient is receiving treatment that may lead to **sudden change in his condition**; the patient is in a state of significant **psychomotor restlessness**; the patient **is at risk of leaving** the department or hospital without permission, and the last option is **at the request of the patient**.

The following instructions apply to the special instructions, i.e. special examination and special supervision, and to the coercive methods, i.e. isolation and restraining:
1. The physician or nurse must log the instruction in an allocated notebook, indicating the reasons for the decision.
2. The nurse in charge may perform the instruction herself or instruct another nurse to do so. The nurse in charge is to indicate in the nursing the log the patients for which a special instruction or coercive measure has been given and give the list to the relieving nurse[2].
3. Only a physician may authorize a visit during these procedures. The nurse must be present during the visit.
4. The nurse must take any dangerous object from the patient before these instructions may be commenced.

3. Special treatment – electroconvulsive therapy:
The third issue is that of special treatment. Special treatment is treatment that requires obtaining **separate and additional consent** from a patient who his voluntarily hospitalized. This is written consent in accordance with the provisions of the law. **Electroconvulsive therapy** is classified in the regulations as a special treatment and its execution necessitates the following conditions:
1. Three physicians have decided to administer this treatment, including the hospital director, department director, clinic director or any acting director in these positions.

2. The patient has undergone a medical examination and there is no reason not to administer this treatment.
3. If the patient has been voluntarily committed, the consent of the patient is necessary.
4. The order will be given in writing and will specify the reasons for the treatment.
5. The treatment will be administered only under general anesthesia only and will be performed with an electroconvulsive device in good order that has been inspected at least every six months.

Regulations regarding Dangerous Narcotics in Hospitals, 1999

The law defines a narcotic in accordance with its chemical components. The law defines many types. The law prohibits the possession of narcotics other than in accordance with the law. The law determines a number of cases in which narcotics may be possessed, for example:
1. The possessor of the narcotic is a pharmacist and he is keeping the narcotic under a license that has been issued to him by the director of the Ministry of Health, hereinafter the Director.
2. The possessor of the narcotic is a physician, dentist or veterinarian and he may possess the narcotic by law.
3. The possessor proves that he has obtained the narcotic in his possession from a pharmacist and that the narcotic has been dispensed to him according to the provisions of the Pharmacists Ordinance, or has been obtained from a physician or veterinarian who are lawfully allowed to dispense narcotics or drugs.
4. The use of the narcotic is permitted as the user is receiving it for curative purposes. The narcotic has been dispensed to him by a pharmacist, physician or veterinarian or a license has been received for using narcotics.

There are a number of duties imposed on the possessor of a narcotic, such as safeguarding it from theft and loss. In the case of theft or loss, the pharmacist or physician must report to the police and the district pharmacist.
As part of the process of controlling and supervising narcotics, the legislator has determined that the Director may enter a place containing narcotics at any reasonable time in accordance with the licenses he has issued, and is allowed to inspect the quantity of narcotics and prescriptions made and whether they have been made in accordance with the law.

Alongside the instructions dealing with the authorities for dispensing dangerous narcotics by pharmacists and physicians and the conditions for this, there are further regulations that regulate the issue of dangerous narcotics in hospitals. These regulations determine the procedure for receiving the narcotic for the various departments, its storage place and the functions of the nurse in charge of the department and her substitute on the issue of hazardous narcotics.

The regulations differentiate between a hospital with a pharmacy and a hospital that does not have a pharmacy. We shall start with the provisions of the law that regulate the first type:
A hospital that has a pharmacy:
The only entity that is authorized to dispense dangerous narcotics to the various departments is **the pharmacy** in the hospital. Dangerous narcotics may not be received from any other source.
A physician is authorized to order dangerous narcotics from the pharmacy. The order will be made out on special, serially numbered forms, each department having a separate book of orders. The director of the pharmacy will adjust the narcotic stock in accordance with the needs of the department.
Upon receipt of the narcotic at the department, the head nurse, and in her absence the acting head nurse, will compare the order with the narcotic dispensed and confirm the receipt of the narcotic with her signature on the prescription form attached to the narcotic. After signing, the form will be returned and kept at the pharmacy. The director of the pharmacy will indicate this in a special book. If the form is not returned, the pharmacy may not dispense a narcotic to the department.

A hospital that does not have a pharmacy:

In a hospital that does **not** have a pharmacy, dangerous narcotics will be ordered according to a medical prescription, in accordance with the conditions mentioned above. A copy of the prescriptions will be kept in the department.

The department will maintain a departmental narcotic prescription book (hereinafter: "**the Book**"). The pages of the Book will be bound and signed by the district health bureau and serially numbered.

When the narcotic is received at the department in accordance with the medical prescription, the nurse must note in the Book on a page bearing the name of the patient, the name of the drug, its dosage, strength, quantity and source from which it was received to the department. In addition, the nurse must write on the copy of the medical prescription – which as noted indicates when the drug was received, a copy which must be kept – including the date of receipt of the narcotic and the page number of the Book in which the receipt of the narcotic was noted.

A separate page must be designated to the patient in accordance with the narcotic he receives. If a further quantity of narcotic has been received for that patient, this must be indicated in addition to the previous entry bearing the name of that patient.

In a case when the administration of the narcotic is stopped completely, it must be indicated in the book and the reason for the discontinuing of the administration of the narcotics noted.

It must be noted that when the hospital has no pharmacy, the box of the drug must indicate the name of the patient to which the narcotic was dispensed. It must further state that the patient must be administered narcotics only from the box bearing his name. This rule has an exception whereby if the patient **completely stops** receiving a narcotic, the nurse in charge is allowed to transfer the remaining narcotic to another patient who is receiving that narcotic, as long as the following conditions are fulfilled: **first**, the nurse must indicate this in the Book, both on the page of the patient who has ceased to receive the narcotic and the page of the patient to which the narcotic has been transferred. **Secondly**, the box of the drug is to indicate the name of the patient to which the narcotic has been transferred as well as the name of the patient who stopped receiving the narcotic.

General instructions that must be fulfilled by all of the hospitals:

Dangerous narcotics and books must be kept in a locked cupboard, the key kept by the nurse in charge or the acting nurse in charge. Nothing else must be kept in this cupboard.

The nurse in charge is responsible for the stock of narcotics in the department. Upon any transfer of shift between nurses, the nurse receiving the shift is to examine the stock of the narcotics in the department and note the result in the log form. Two nurses are to sign by the entry, the one receiving the shift and the one passing over the shift.

If a discrepancy is found between the stock and the entry, the nurse must inform the head nurse of the hospital in writing or the person appointed thereby (orally and in writing). The nurse must also inform the director of the hospital or the person appointed thereby.

In departments where there is no continuity of shifts of nurses, for example in the case of an outpatients clinic in a hospital, and the key may not be transferred from one nurse in charge to another. The stock of narcotics is to be kept in separate locked cupboards and each nurse is to keep a key for her own cupboard.

It must further be stated that any entry made pursuant to these regulations is to be made in an indelible manner. Any change is to be made alongside the page, indicating the date of the correction and the signature of the corrector. This means that no entry is to be erased or deleted in any other way.

Public Health Regulations (Notice of Fear of Violence) 1975.

According to the Public Health Regulations (Notice of Fear of Violence) 1975, if the person in charge of admitting patients (a person in charge of admitting patients according to the Public Health Regulations is a physician or nurse authorized to decide on admitting patients for care) has suspicion that an injured, unconscious or dead person who has come to the hospital was involved in an act of violence, he is required to report to the nearest police station. If an attending physician, or in his absence the attending nurse, has this suspicion, they must report to the director of the hospital, who is to have a report issued to the authorities. This duty applies to nurses and physicians in emergency rooms, inpatient departments and outpatient clinics of the hospital.

Violence is the use of force, whether physical, psychological or other, injuring or attempting to injure a person, animal or any other object. Previously, the use of violence was much more acceptable and was carried out for purposes of punishment, education, discharge of pressure, expression emotions, settling conflicts and differences of opinion, amusement, etc. Today, many societies in the world have disowned the use of violence and condemn violence of any kind, Countries have passed laws against violence and international regulations against the use of violence have been accepted.

The social legitimacy of violence depends on the context in which the violence is carried out. While in most cases the use of violence is perceived as negative and a transgression of social norms, as well as the law, in certain cases violence is perceived as legitimate, mainly in the case of self-defense or by a person authorized to use violence by the state.

Domestic violence: physical violence, sexual abuse, threats or mental abuse. Many victims also suffer from control of their economic resources by the violent person and lack of independence. Many victims of domestic violence suffer from one form of violence or another, for an extended period, before they seek any help. Many do not know that they are eligible for help from various aid parties.

Sexual abuse: sexual abuse is not only rape; it includes any forced sexual connection, such as verbal threat, exposure of sex organs, undressing, voyeurism, petting and physical contact. In more than 80% of cases, the abuse is carried out by somebody that the child knows. In such a case there is a great chance for the abuse not recurring. The abusers may be of any age and from any class of the population, people who otherwise appear to be normal.

Child abuse: physical, sexual or mental abuse, whether by act, default or extended neglect. The abuse usually involves a fixed pattern over time, occurring within the family of the child (his natural, adoptive or foster family or a person to whom the custody of the child has been given) or outside it. The abusers may be relatives, acquaintances or strangers. Injury, assault or abuse may also be single events of severe character.

Violence between spouses: a chronic behavior pattern of the partner that manifests by assault, duress, intimidation, terrorism and use of various manipulation techniques, occurring during everyday events. The behavior is aimed at achieving control, obedience and submission of the partner. Any action of violence that causes or is likely to cause damage or physical, sexual or mental suffering to one of the partners, including threats, coercive actions and denial of freedom.

Physical violence
A broad spectrum of behaviors that are carried out by the violent person that injure the body or health of the victim, pushing, beating, spitting, pinching, hair tugging, kicks, stabbing, burns, shooting, restricting freedom of movement, injury using objects, intimidation, damage to property, damage to animals, forcing the victim to perform humiliating actions.

Sexual violence
Aggressive activity against the body of the victim, against the victim's will. A broad spectrum of behaviors that constitute injury to the body of the victim, unwanted touching of body parts, sexual activity that is accompanied by physical abuse, sexual activity with a third person against his will, using physical force or threats, including a sex offense that is carried out without using force, such as incest and indecent actions.

Nursing in Emergencies

The Therapeutic Approach to a Multisystem Casualty in Life Threatening Situations according to the ATLS Principles

The treatment of a casualty in a shock room is intensive and complex. An incoming casualty may have injuries of multiple systems as a result of a number of traumas. The attending staff must prepare to treat an unfamiliar patient under the pressure of time with the aim of saving his life and maintaining the functioning of organs.

The principles of treatment are based on the advanced trauma life support (ATLS) theory, which guides the treatment according to the following principles –

- **Treat the casualty, not the injury** – the injury causes damage to various body systems, such as the skeleton, respiratory system, central nervous system and also affects the hemodynamic system. Therefore, the guiding principle is not to treat a visually obvious injury or one that the casualty complains of. Conduct a systematic examination based on the ABCDE principles, which will be clarified below.
- First, treat or rule out immediately life threatening conditions such as obstruction of the airways, respiratory problems and bleeding.

After managing or ruling out life threatening conditions, the treatment must be completed by a careful examination of the casualty, imaging, laboratory tests, reaching a diagnosis, and if necessary surgical care.

The principles of caring of a casualty according to ATLS in hospital care
The casualty treatment is divided into 4 stages:
A. Rapid primary survey
B. Resuscitation
C. Secondary survey
D. Definitive care

When necessary, stages A (rapid primary survey) and B (resuscitation) are performed simultaneously. Under no circumstances may the caregiver advance to stage C (secondary survey, examination of the casualty) before concluding the first two stages.
It is important to emphasize that in the case of an unstable casualty, the quick primary survey and resuscitation stages will be extended and there are cases in which the casualty is treated in the operating room as part of the resuscitation stage, before performing the stages of the secondary survey and the complementary treatment.

Rapid primary survey
The purpose of this stage is to identify **immediate life threatening** conditions and treat them in the order in which they are discovered. It must be noted that this stage is called primary survey rather than primary examination, because the casualty is not examined at this stage, but rather immediate life threatening conditions are ruled out.
Because this is a critical stage, it is necessary to use a rational and binding order of examination, which is built in the following stages:
A. Airway and cervical spine control
B. Breathing
C. Circulation
D. Disability – neurological condition
E. Exposure & environment – undressing and covering

The order of examination is not coincidental, and it is determined by the dangers of the various pathologies.
At this stage, we are trying to treat or rule out life threatening pathologies and are not seeking an exact diagnosis;

A – airway
The most important thing in caring for a casualty is ruling out the possibility that the patient has a problem with his upper airway.
The rule is that a casualty who is speaking (pertinently or otherwise) does not have an acute upper airway problem. In the case of unconsciousness or muteness, it is difficult to rule out an airway problem, so we must listen to the casualty's breathing (not lungs) and look at his face.
Snoring or gurgling is a clear sign of an immediate life threatening disorder in the airway, necessitating immediate treatment. It is necessary to warn that extending the head backwards (a good, standard way of opening the airways) **is strictly prohibited**, out of concern for cervical spine injury. This is also the reason that stage A also involves protecting the cervical spine, if there is a problem with the airways, this is the time where lack of attention may cause irreversible spinal cord damage.
After caring for the problem at stage A or the problem being ruled out, stage B is undertaken.

B – breathing
At this stage we shall check whether the casualty has an immediate life threatening problem in the chest.
There are a number of disorders, which may be diagnosed without sophisticated diagnostic measures.
The disorders are as follows:
Tension pneumothorax
Open pneumothorax – sucking wound
Massive hemothorax
Flail chest
Cardiac tamponade

The approach is that initially it must be ensured that there is an immediate life threatening pathology in the chest, instead of trying to rule out each of the pathologies.
All of these five pathologies cause respiratory distress, therefore, a casualty who does not have respiratory distress probably does not have a severe respiratory disorder.
Respiratory distress means respiratory tachypnea, and in an adult (unlike in the case of a child) – a breathing rate of 10 to 30 breaths per minute is considered normal.
Therefore, in B, we count the breaths. Only if there are more than 30 per minute, we seek the pathology and provide care immediately.
If the number of breaths is normal or the pathologies have been treated, we continue to C.

C – circulation
At this stage, immediate life threatening external bleeding is sought and treated.
A definition of life threatening bleeding (in a dressed patient) is bleeding that is visible through the cloths.
At this stage we identify and treat shock.
Shock is defined in an adult (unlike a child) with a heart rate of more than 100 beats per minute. If a heart rate of more than 100 beats per minute is found, 2 peripheral infusions

must be inserted (through a large venous canula) and fluids administered (normal saline/ Hartman).
An internal bleeding source in the abdomen, pelvis and chest must be ruled out.
After this we continue to stage D.

D – disability
At this stage, we want to evaluate the neurological and level of consciousness of the casualty.
You must check the level of consciousness, the state of his pupils and whether he moves 4 limbs by using the Glasgow coma scale (GCS).
This must be done before the next stage, stage E.

E – exposure and environment
The stage of undressing and heating the casualty.
It is very important at this stage to remove all of the casualty's clothes and after doing so cover him to ensure body warmth.

These are the five stages in the initial survey – the most important emphasis in the overall approach to the casualty.
Breakdown of the therapeutic procedure:
One talks to the patient while taking notice of any shortness of breath. If you are unsure, count the number of breaths. Then measure the patient's heart rate or check the pulse oxymeter.
Infusions are inserted when necessary. Consciousness, pupils and limb movements are checked, and the casualty is undressed.
The slighter the injury, the less time the initial survey takes (because there is no pathology requiring treatment). The more severe the condition, the more important the survey is and the longer it takes.

The resuscitation stage
This stage is an attempt to normalize the physiological indices of the casualty.
It is emphasized that this is not conventional resuscitation, i.e. cardiopulmonary resuscitation.
The need for CPR in trauma is very limited and it is rarely carried out.

At this stage, a number of procedures are performed:
A. Life saving procedures, such as inserting a drain, intubation and aggressive management of shock.
B. Monitoring - including heart rate, blood pressure, O_2 saturation, body temperature and CO_2.

- The casualty is monitored in the following order:

O_2 Saturation by use of the pulse oxymeter.
Measurement of blood pressure at fixed intervals.
Placing ECG electrodes.
Checking end tidal CO2 for a ventilated casualty.
Counting breaths.
Measurement of temperature – through the rectum (only <u>after</u> a rectal examination by a physician).
Noting and reporting vital signs every 10 minutes in the shock room.

C. **Radiograms** – the mandatory x-ray in trauma cases is a chest x-ray.

- **Insertion of tubes** – a canula into the stomach and a catheter into the urinary bladder.

Contraindications to inserting a catheter: Blood in the meatus
Damage to the penis and testes.
Non-palpated prostate.
Hematoma in the scrotum.

- **Taking of blood tests** – arterial blood is taken, which includes: blood gases, blood count and coagulation. In addition, blood is taken for typing and cross matching and blood is ordered.
- A fast US is carried out to rule out bleeding in internal organs in the abdomen.
- Specific tests, such as diagnostic peritoneal lavage, DPL and CT of the abdomen. Before DPL, it is mandatory to insert a canula into the stomach and a catheter into the urethra.

D. Secondary survey

The stage of examining the patient and managing the problems observed, including a full body examination.

1. The casualty is turned over to look for hidden injuries.
2. Radiograms.
3. Immobilization of limbs.

During the treatment, US findings are related to and the continuation of the treatment is decided upon.

During any treatment of the casualty, it is necessary to continue making a current evaluation of his condition by tracking until he reaches the next destination:

1. Vital signs.
2. State of consciousness.
3. Examination of pupils.
4. Fluid balance (in / out).
5. Check for bleeding – strong or resuming in wounds.
6. Temperature and pulse in an immobilized limb

Any unexplained deterioration in the condition of the casualty requires a repeat survey based on the ABC principle.

Definitive care

The complementary stage of treatment, including dressing, immobilization and operations, with attention to the issue of **pain relief.**

- The casualty must be free of pain throughout the treatment.
- A pain assessment must be performed if possible. During the treatment in the secondary round, the VAS (visual analog scale) is used.
- Pain must be managed according to the results of the assessment and according to the orders of the physician.
- The intervention on the issue of pain must be documented on the "summary of data for a complex injury casualty" form.
- Each ventilated patient must receive analgesic drugs routinely, a casualty who is ventilated cannot express pain and ventilation does not manage pain.

Principles for the work of a multidisciplinary team when caring for a casualty in the shock room

The treatment of a casualty in the shock room involves dynamic care in a joint effort to save the life of the casualty under the pressure of time. The resuscitation of the casualty requires skilled, multidisciplinary team work that is aimed at a uniform goal.

A team is defined as a group of people (at least two members) who work together with a common, agreed goal, and distribution of specific tasks in order to achieve the goal.
The initial treatment includes early identification of problems, and treatment of symptoms according to standing orders and work procedures.
The care team in the shock room is composed of a team that operates in two circles: the "inner circle", which is close to the casualty, and an "external circle". The "inner circle" has two general surgeons, 2-3 nurses from the department of urgent medicine who are specialists in the field of intensive care for casualties, a physician who is a trauma specialist on standby, a trauma coordinating nurse and an anesthetist. The "external circle" includes consulting physicians from surgical and intensive fields, a social worker, secretaries, technicians and orderlies.
The therapeutic model requires knowledge of each participant concerning his function at each stage of treatment and the role of the staff members who work at the same stage concurrently.
The treatment according to the ATLS principles is performed simultaneously so that while stage A is being performed by one team member, another team member concurrently performs stage B.
This system requires specialization, coordination, professionalism, decision making ability, division of responsibility and distribution of specific tasks. The attending team members depend on each other for performing each part of the care. The care includes providing verbal and written information throughout the stages.

Preparation of shock room:
The shock room is used by the team for caring for complex casualties.

Organization of the shock room:
The room must be kept usable throughout the day, and prepared for admitting a casualty. Bag lists list the content of the shock room.

Composition of the team and distribution of functions:
Teamwork is the key to the success of the treatment. Keeping to the work principles and sharing of functions using proper communication will guarantee quality treatment.
The team attending to the casualty includes:
Two surgeons, two nurses, a trauma coordinator and a trauma standby operator.
Additional team: stretcher bearer, ventilation technician, medical secretary (office worker) and social worker.
The senior surgeon is the head of the team and is responsible for the treatment. All of the other physicians are advisors – they will wait for the approval of the team leader to perform an examination and treatment after finishing the initial explanation.
Nurse number one manages an incident in arrangement with the senior surgeon – the treatment manager.
A second nurse works in arrangement with her.
<u>The attending team will stay with the casualty throughout the treatment</u> – an effort must be made to avoid changing team members. If the attending team is replaced, the replacing team must be noted in the designated place and the information on the casualty forwarded in an orderly manner.
If the senior physician is not in the shock room when the casualty is admitted, the casualty will be examined according to the ATLS rules listed by the admitting physician, who will not focus on the examination based on his field of personal expertise, until the senior surgeon arrives.

The functions of the nurse during the treatment of the casualty
A. Admitting the casualty
Nurse number 1 – manages the treatment of the casualty
Responsibility for the casualty's airway.
Stands on the left of the casualty, next to the top of the bed, opposite the care manager.
Helps in transferring the casualty – from the stretcher to the trauma bed:
A ventilated casualty must be disconnected from the Ambu mask / ventilation team during the transfer and when he lies on the trauma bed. He is to be ventilated with the Ambu connected to 100% oxygen, until the lungs are auscultated by a physician and he is connected to a ventilation machine, whose values are adjusted by a physician.
A casualty with a backboard / collar is to be transferred with the equipment. If necessary, the collar must be fixed.
An oxygen mask must be applied to **any** casualty who is not ventilated!!!
Ventilated casualty – ventilation using Ambu mask with a reservoir connected to oxygen, with concurrent auscultation of the lungs by a physician.
Connection to a ventilation machine that was adjusted by a physician.

B. Medication
Administering anesthetics:
It must be ensured that all of the intubation equipment is ready, including drugs, before starting intubation.
Before intubation, it is necessary to reassure the patient while ventilating him with an Ambu with mask.
During the intubation process, the casualty must be kept oxygenated.
At the end of the procedure – fixing of tube.
The location of the tube must be made certain by auscultation of the lungs, followed by a chest radiogram.
During the treatment –
Help in any action that is necessary: needle/ trocar for the chest.
Later helps in undressing the casualty and ABC-related procedures and inserting a canula into a ventilated casualty.

Nurse number 2
Stands on the right of the casualty, beside the legs of the casualty
Monitors the casualty in the following order:

- Saturation
- Sphygmomanometer
- ECG monitor
- Rectal thermometer - to be inserted by the surgeon after a rectal examination only!

At the same time / after undressing the casualty, **will declare initial indices**.
Covers the casualty and heat him with a heating lamp.
Connects hot infusions, inserts an infusion (green Venflon) as necessary.
Takes a syringe with blood from the physician and sends them to the test tubes and the syringe for blood gases (rinsed with heparin).

Fills in forms: Laboratory tests
Blood gases
Blood type. After physician signs a label and form, she confirms the details with her signature.

Sends tests to laboratories:

- Blood gases, including lactate
- Blood bank
- Urgent laboratory

Notes signs, orders tests and contacts other caregivers.
When the casualty arrives, radiograms and US of abdomen are to be ordered.
Ordering of the imaging and consultations:
Makes sure that the patient is enrolled and prepares labels for the receptionists.
Ordering of chest and pelvic radiograms.

Principles for monitoring the casualty
Principles of monitoring
The order of actions for monitoring is base on the ABC principles and helps the team reassess the condition of the casualty.
It must be remembered that the monitoring of the casualty by **the nursing team**, i.e. knowing the normal values, relating to the age and injuries of the casualty, will determine the care that the casualty receives.
1. Saturation meter
2. Blood pressure measurement
3. ECG
4. $ETCO_2$
5. Rectal temperature measurement.

Emphases –

Saturation meter – a finger should be placed on the casualty. Pay attention – a saturation measurement may be affected by the frequency of measurement of the blood pressure with magenta, a tourniquet, damage to blood vessels, impaired perfusion and a cold limb.
If the saturation is low or not measured, the device and the condition of the limb must be checked along with the handling of the airway of the casualty.

Blood pressure is measured from an upper or lower limb. A blood pressure magenta must not be placed on a broken limb or over a peripheral infusion. Blood pressure must be measured every 5 minutes. If blood pressure cannot be measured, the magenta must be checked (for inflating) and that the inflator tube is not blocked.

ECG – do not place the electrodes on the thorax itself. If there are disturbances in the wave, check whether it has been properly affixed.

$ETCO_2$ – the casualty must be connected for measurement immediately after connection to the ventilation machine. Low values indicate that the tube is not in the trachea! High values indicate too low a number of breaths / too low a ventilation volume / obstruction due to discharge.

Rectal temperature – the purpose of measuring the temperature is **preventing hypothermia** that can cause coagulation disorders.

Planning of the removal of the casualty from the shock room

Nurse number 1:

When the care manager decides to remove the patient from the shock room, the nurse must ensure the following actions are performed according to the exit procedures:

- Arranging the exit with next destination
- Noting vital signs and issuing a printout of the signs
- Collecting the casualty's documents and radiograms in a brown envelope
- Verifying with the surgeon that the chest radiogram and BG are normal
- Ensuring presence of identity bracelet, removal of remaining valuables and giving them to the family for safekeeping
- Checking immobilizations – tube, canula, wounds
- Closing dressings
- Transferring infusion bags to the bedpost
- Replacing empty infusion bags
- Covering the casualty and honoring his privacy
- Taking patient transfer case + Ambu
- Connection of ventilation machine to oxygen cylinder (100 atmosphere pressure at least)
- Assigning a nurse to accompany casualty to next destination
- When transferring to an operating room / unit – taking department admission labels
- Contacting and updating the family

Nurse number 2:

Assisting nurse number 1 in preparing the casualty for exit.
Exit from shock room – accompanied by a physician only

Delivery of the casualty to next destination:

Giving details orally about the casualty, from nurse to nurse:

- Age
- Injury mechanism
- Description of injuries / diagnoses
- Course of treatment in shock room
- Breakdown of the actions carried out or any other important information
- Important psychosocial information - contact with the family
- Help in transferring the casualty

Mental support for the patient, the family and the team

Traumatic events are unpredictable and are of serious significance for the casualty, his family and the attending team.
The evaluation of the mental damage and administration of early supportive care will reduce the risks for the occurrence of long-lasting mental damage that results from exposure to the traumatic event.
The efforts of the medical team in the various treatment stages are focused on an effort to prevent posttraumatic stress disorder, which is defined as a clinical syndrome that develops after exposure to a traumatic event involving a direct threat to the life or wellbeing of the patient.
The clinical symptoms that are observed upon exposure are aversion, recurring experiences and elevated anxiety.
In the course of care for the patient, an assessment of the severity of the symptoms observed must be made, and therapeutic intervention exercised accordingly.
Usually, at the first stage, the patient will have an acute stress reaction – an emotional response to a traumatic event limited to the first month, characterized by symptoms such as:

recurring experiences, aversion, elevated arousal and detachment of medical care, including psychological support by psychotherapy based on cognitive behavioral therapy, dynamic support and therapy. The medical care includes antidepressants, hypotonic drugs for sleep and benzodiazepines for anxiety and anger.
The family of the patient should be accompanied by the attending team and the multidisciplinary team. Exposure to traumatic events may cause ASR effects.
Using a combined care model in which the nursing team and psychological teams work together will ensure optimum care and early diagnosis.
The principles of care include giving immediate relief for a crisis, evaluation of mental stress and aiding the patient in reaching early functioning.
The care techniques include giving legitimacy and normalization, reducing anxiety, giving information and education. Aid in empowerment through the developing of support systems.
The care of the patient is complex and has many broad aspects, including clinical, mental and social. Correct preparation will ensure that optimal, quality treatment is given and will return the patient as early as possible to his previous life style.

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Evaluation and Management of Mental Trauma Resulting from Injury or Exposure to a Traumatic Event

The American Psychiatry Association defines a traumatic event as one that appears when a person is exposed to or experiences an event or events that involve a genuine or potential threat of death or significant injury or damage to his or others' physical wellbeing.
The response of the exposed person involves fear, a sense of helplessness and terror. This response may appear as a result of events such as rape, disasters, accident, combat, violence-related injury, etc.
The subject experiences discomfort that combines invasive thoughts and physical symptoms of anxiety, such as nausea, hot flushes and rapid heart rate. These sensations are normative after a traumatic event.
The patient's degree of risk for developing posttraumatic stress disorder is accompanied by previous mental reactions, strength and risk factors such as acquired resourcefulness, capability and previous losses. Trauma research shows proof that physical injury and a life threatening experience are related to posttraumatic stress disorder (PTSD).
Early post trauma intervention that allows casualties to talk about their feelings may greatly help the patient process the trauma he has experience.
Over time, it will be possible to identify three conditions that are related to a mental response after a traumatic event
Acute stress reaction (ASR)
Acute stress disorder (ASD)
PTSD (posttraumatic stress disorder)

Acute stress reaction (ASR)

The person experiencing the trauma may enter a state of acute stress reaction.
The degree of risk for this phenomenon is increased when the person experiences combined physical injury.
The person's previous coping abilities are significant for predicting the development of ASR.
The initial reactions and symptoms include a sensation of reduced attention, aversion from the existing situation or a feeling of excess arousal, autonomous signs such as physical anxiety (tachycardia, diaphoresis, blushing). The symptoms appear within minutes of the stressful event and disappear within 2-3 days.
When the signs resolve after the stressful event ends, there is no need for treatment, talking with a friend or caregiver may help. When the signs do not resolve, aid may be given in the form of guidelines on how to relax using relaxation techniques, correct breathing techniques and other anxiety reduction methods. Sometimes, antianxiety medication may be used. Social support is important for coping with the traumatic event.
When the symptoms do not resolve after the time indicated, the patient may experience posttraumatic stress disorder.

Acute stress disorder (ASD)

ASD is an anxiety disorder that develops within a month of a traumatic event. This is a transient experience that may appear in patients who have no previous mental disorders in response to mental and physical stress.
The phenomenon involves dissociative signs such as depersonalization, derealization, dissociative amnesia, anxiety, depression, restlessness, decreased attention and difficulty in coping with stimuli. The patient experiences disorientation. The patient relives the trauma by recurring memories, recurring thoughts, nightmares, flashbacks and aversion to stimuli that may revive the event such as thoughts about the event and occurrences around it and aversion

to sensations and actions that were related to the event. The symptoms also include anxiety disorders such as hyperarousal, sleeping difficulties, restlessness and concentration disorders. Sometimes the affected individual may experience panic anxiety with perspiration, tachycardia and flushing.

PTSD (posttraumatic stress disorder)

This reaction develops some 3-6 months after the event. The affected individual experiences recurrent visions, dreams and nightmares of the traumatic event. The affected individual tries to ignore cues that may remind him of the event, sometimes forgetting parts of the event, may have hyperarousal, depressive mode, social detachment, memory difficulties and nightmares, and may be easily led. Diagnosis involves DSM4 PTSD diagnosis criteria: the patient suffered a traumatic event, the individual has recurrent thoughts and invasive thoughts of the traumatic event, the patient is aversive to cues related to the event; the individual has no recollection of the traumatic event or has difficulty in sleeping, anger and concentration difficulty. Diagnosis involves the use of structured questionnaires and a psychiatrist's examination.

The syndrome is more common in women.

PTSD may become a chronic mental disorder that affects the affected individual's relationships, ability to return to the job market and social relations.

Recovery is dependent on early professional support.

Principles of management

Studies have proved good results for multistage therapy that is focused on behavioral cognitive therapy for post-ASD patients up to a month post trauma and for patients with PTSD for a term of 1-3 months post trauma. Any early intervention must be adapted to the individual needs of the patient.

The initial step is providing support and family and social accompaniment, and sometimes even support involving financial and other issues. Some patients will need therapeutic intervention for psychiatric disorders or combination social and mental therapy.

In the short term after the traumatic event, it is advisable to instruct patients concerning symptoms and possible reactions that may appear.

A psychological method of administering first aid that takes into account the personal strengths of the casualties must be taken into account. This is built on something that may be defined as psychological assessment and administering coordinated care. Casualties cope with stress in different ways and there is no formal intervention that is mandatory for all patient types.

The use of support groups must be on a voluntary basis according to the wish of the patient.

Administering primary mental care to casualties with physical injuries

Primary mental care for a patient with physical injuries may prevent the occurrence of chronic PTSD. PTSD may cause morbidity and loss of ability to return to creative life.

In trauma centers, it is worthwhile adopting a model that combines physical care with mental care thereby reducing the risk of casualties who experience PTSD. The multidisciplinary staff members must be educated on the issue of mental reactions, therapy range and reducing of anxiety.

The nurse in the team will engage in providing first aid against crises, initial evaluation concerning sources of difficulty and bad experiences that result from physical trauma. This helps prevent mental deterioration and allows the patient to resume his pre-trauma mental functioning.

It is recommended to follow up on the patient after discharge in order to identify patients with symptoms. Information should be given concerning the transfer of patients to institutions in the community and assistance in contacting these institutes.
The family of the patient and other survivors who have experienced trauma as secondary casualties must be remembered. The problems of the patient may result in problems with other family members. These families may develop a broad spectrum of psychological difficulties and may also be assisted by support and counseling.

The needs of the caregivers must be taken into account. The teams in the emergency room and in the intensive care unit, working with casualties, are exposed to difficult scenes, death, the death of children and severe injuries.
Giving the team an opportunity to talk about the experiences and feelings as well as the possibility of professional help and aid in with patients is important and advisable.

Familiarity with the Healthcare System in Emergencies

Emergency outlines

Emergency outlines deal with different emergency scenarios that are related to war, natural disasters, accidents and terrorism. Emergency outline scenarios are divided into two groups:

- **Wartime scenarios**
- **Peacetime scenarios**

The main difference between the two groups is the process of their occurrence, preparedness, scope and partners in coping with the scenario.

Wartime scenarios	Peacetime scenarios
Conventional scenario (trauma)	Conventional scenario: Multi-casualty incident Limited scope incident
Unconventional scenarios: Chemical scenario Biological scenario	Unconventional scenarios: Toxicological scenario (mass toxicological incident) Radiological scenario Biological scenario

Wartime scenarios have levels of alert that develop and change gradually.
A significant part of the team is mobilized, meaning that manpower must be regulated differently. In wartime scenarios, the army is a full participant in organizing the hospital array, providing organizational doctrines in hospitals, aiding in manpower and specific guidelines. In wartime, the hospital is defined as a "vital establishment" and its staff as "mobilized" for its work at the hospital.
In peacetime scenarios, there are usually no levels of alert and no ability for gradual preparation of the hospital. The hospital is expected to conduct regular preparation and training sessions throughout the year.
During an incident scenario, some of the hospital departments reduce their regular activity and divert their resources toward casualties from the incident. For example, the emergency room and operating rooms stop their regular work and divert resources toward coping with incident casualties. The blood bank and laboratories help to answer the needs of caring for casualties, the social service is required to give an answer to the general public seeking its relatives, and the management allocates it resources toward managing the incident.
Once the admission of and care for casualties is over, each department returns to its routine work. Some departments will return more quickly to routine, such as the emergency room, and some departments, the emergency room, information center for the public and the social workers unit will return later.

Wartime scenarios

Levels of alert

There is a definition of levels of alert whose aim is to guide hospitals on actions that they must take in order to be prepared for admitting casualties. This definition includes different activities based on predetermined schedules.
At each stage, the hospital should be willing to receive casualties at predefined times and each stage requires a number of preparations that are not included in the previous stage.
The definition of levels of alert is dictated by the supreme hospitalization authority in addition with the emergency time division and the Home Front Command.
Wartime scenarios refer to a number of scenarios:

- A conventional scenario – conventional warfare
- Unconventional scenarios –
    - Chemical scenario
    - Biological scenario
    - Radiation scenario

Conventional scenario

The scenario relates to a state of admitting trauma victims to the hospital in wartime.
In this scenario, the deployment of beds in the hospital and personnel changes as well as the regular activity of the hospital also changes.
Bed deployment – in this outline, the hospital is committed to expand its hospitalization ability by 40% and change the patient mix. The hospital should be able to admit and hospitalize more trauma casualties and fewer non-trauma cases. The preparation is for 10% casualties needing an intensive care unit.
This situation requires the hospital to change the makeup of its inpatient departments.
Personnel – in a state of war, a large proportion of the staff is mobilized, and there is a shortage of manpower. This fact on the one hand and the increased need for personnel on the other requires finding ways to maximize the utility of the personnel working in the hospital.
Regular activity – during war, the hospital is required to continue giving treatment to the population on the home front in general as well as special populations, including dialysis patients, women in labor and others.
Equipment and logistics – the hospital needs to care for emergency storerooms that have equipment that is suitable for expanding the activity at the hospital. Logistically, a more extensive transport system must be prepared, along with daycare centers for staff members' children, contact with outside parties, wartime equipment orders, protection of hospitals, dining facilities for more staff members, etc.
Emergency purposes – the hospital in its wartime format is run by an emergency staff that is composed of management representatives and senior members of the hospital staff who are responsible for running the hospital.

Unconventional scenarios

Chemical scenario

A chemical warfare scenario deals with warfare involving missiles or bombs with chemical warheads. In this scenario, the hospital should take into consideration receiving many chemical agent casualties (mainly nerve gas and organic phosphates).

History – before World War One it was customary to utilize natural toxins that were extracted from plants or animals, such as poisonous darts, incendiary mixtures, substances with bad odors or irritants such as sulfur, arsenic and others. During World War One, the French used tear gas (1914) and cyanide, the Germans first used chlorine, mustard gas and phosgene.
In World War Two, Germany used gas for committing genocide against the Jewish people, and the Japanese used cyanide, phosgene and mustard gas.
After World War Two, the development of chemical agents improved.
In the 1970s, Vietnam and the USSR used yellow rain, and in the 1980s, soviet chemical agents, including mustard gas, were used in Afghanistan.
In the Iran – Iraq war, mustard gas was used, and in 1987 Libya used chemical agents against Chad.
Organization of the hospital - the hospital should prepare to admit chemical agent casualties from areas contaminated by chemical agents. The functions of the hospital are to regulate, classify and decontaminate patients, provide them primary care and admit them for further care. The hospital organization for this outline is complex and necessitates a large number of personnel. The Home Front sends dedicated personnel to help the hospitals.
A hospital that is in the contaminated area will not admit chemical agent casualties.
Recently, examination and care centers have been set up for examination and care of slightly affected chemical agent casualties outside hospitals.
Slightly affected casualties are referred to examination and care centers, which are staffed by military and community medical personnel, while moderately and severely affected casualties are sent to hospitals.
The organization of hospitals involves opening dedicated sides for regulating casualties outside – at regulating sites. Contaminated casualties are decontaminated at decontamination sites, casualties are sorted by injury types and sent to relevant sites and later admitted to specific departments for further care.

Organic phosphate weapons

These agents are one of the main threats in chemical warfare or terrorism.
The pathogen – organic phosphates are divided into a number of groups:
Volatile organic phosphates
Persistent organic phosphates
Some organic phosphates are very volatile.
Organic phosphates are highly toxic.
Organic phosphates are irreversible inhibitors of the enzyme acetylcholine esterase in the synaptic space. This inhibition causes an increase in acetylcholine levels, which leads to multi-system damage, culminating in death.
This increase in acetylcholine levels causes a cholingergic stress condition that manifests in characteristic clinical phenomena.
Modes of contamination – organic phosphates penetrate the body through the respiratory system, by ingestion or through the skin.

In respiratory exposure, the clinical signs appear within seconds to minutes, reaching a peak within 5-20 minutes. In cutaneous exposure, the signs appear more slowly – tens of minutes to hours, reaching a peak within 4-6 hours. In oral absorption, it is found that the absorption may last for days after the exposure.

Clinical signs – the full-blown clinical presentation results from excess muscarine, nicotine and central cholinergic activity. As noted, the time for the onset of signs depends on the form of exposure.

Intoxication phenomena:

- Eyes: lacrimation, erythema of the conjunctivae, meiosis (pinpoint pupils) and blurred vision.
- Respiratory system: rhinitis, profuse discharge from the respiratory system, bronchospasm, dyspnea, respiratory insufficiency.
- Skin: diaphoresis, fasciculations.
- Skeletal muscles: tremor, weakness to the point of paralysis.
- Digestive system: mucus discharge, nausea, vomiting, diarrhea, incontinence
- Urinary system: urinary frequency and incontinence
- Central nervous system: anxiety, restlessness, confusion, impaired consciousness, convulsions, lack of consciousness.
- Cardiovascular: slowed heart rate and decreased blood pressure, slow pulse, low blood pressure, cardiac arrythmias; occasionally the first stage of intoxication features a rapid heart rate and high blood pressure.
- Later – chest pain or pressure, severe headaches.

Cause of death:

- Respiratory insufficiency caused by profuse bronchial discharge, weakness of respiratory muscles and depression of the respiration center in the brain stem.
- Frequent arrythmias.

Modes of treatment

The principles for managing organic phosphate intoxication are composed of a number of options –

- Physical protection - protective clothing and mask
- Premedication – pyridostigmine
- Medication following exposure – including anticholinergic preparations (atropine, scopolamine and benactyzine). Oximes – toxogonin (opdoxime), diazepam, TMB4 and dizsolam is available in automatic syringes (TA).
- Post-intoxication care – supportive care (oxygenation, ventilation, administration of fluids, correction of blood pressure).

Post-exposure medication

In Israel, autoinjectors are distributed to the population, the army and rescue forces.

Atropine – a peripheral anticholinergic drug. Early administration of the drug improves its efficacy. The treatment with the drug is given until signs of atropinization, the most important of which is drying up of bronchial discharges.

Other, less reliable signs of atropinization include:

- Warm, dry skin, dry mucosae – checking the axilla and oral mucosa is recommended.
- Rapid heart rate.
- Dilated pupils.
- These signs are only assistive and are not a good indicator as they are affected by many other factors.

Atropinization is achieved at dosages that cannot be known in advance, meaning that the continued treatment is determined according to the onset of the clinical signs. The drug is administered in repeat doses - for adults 1-2 mg every 20-30 minutes in slightly affected casualties by IM administration, for moderate and severe cases every 5-10 minutes by IV administration. For a severely affected casualty who is being ventilated without an infusion, it is administered directly into the tracheal tube.
It must be remembered that atropine does not affect the neuromuscular junction, so despite atropinization, the patient may still need further ventilation due to paralysis of the respiratory muscles.
Because of the fear of recurrence of intoxication signs, the extended absorption time of the toxin and continued release from reservoirs in the body, atropinization follow up must be continued and atropine added accordingly. For a moderately to severely affected casualty, the recommended follow up is 24-48 hours.
Atropine intoxication – excess atropine causes dryness of the mucosae, dilation of the pupils blurring of vision, stopping of urination, warm, dry skin and flushing in the face. Sometimes there is fatigue, increased body temperature, rapid heart rate and tremor. Restlessness, lack of concentration to the point of hallucinations and arrythmias occur in severe cases. These effects usually resolve in a healthy individual after a few hours. In these cases external cooling and observation are necessary. In severe cases there will be hyperreflexia, drowsiness, aphasia, nystagmus, hyperthermia, delirium, convulsion and loss of consciousness. In severe cases, administration of physostigmine at a dosage of 1.2 mg IV should be considered. It is noted that the mechanism of action of physostigmine is also inhibition of acetylcholine esterase, meaning that it must be used with caution in the case of organic phosphate intoxication.
Other anticholinergic drugs: the drugs penetrate the blood-brain barrier well and affect some of the central effects caused by organic phosphates.
Scopolamine – as opposed to atropine, scopolamine is administered only on a physician's orders, according to central intoxication signs that include impaired consciousness, restlessness, confusion and ataxia.
Diazepam – administered IV on a physician's orders at a dosage of 10 mg, with repeat doses until convulsions end, while oxygenating the casualty and monitoring possible respiratory suppression.

Mustard agents
The pathogen – mustard agents are chemical agents that belong to the blister agent group. Mustard gas has been in use in the form of chemical agents since World War One. From 1984-88, in the Iran – Iraq war, these agents were extensively used, and were probably used by the Egyptians in Yemen too.
Mustard agents are oily, yellow liquids that are not water soluble. They have a strong smell of mustard, garlic or fish. Mustard agents are considered a persistent chemical agent that contaminates the area after dispersal.
Modes of contamination – mustard agents have high ability to penetrate through various materials and easily penetrate the skin and mucosae. Most of the cutaneous penetration occurs within 20-30 minutes of exposure. Mustard "gas" is absorbed in the bloodstream, disperses in the body and concentrates mainly in the adipose tissues, brain, kidneys, liver and muscles. 50% of the quantity absorbed in the blood is secreted in the urine within 24 hours. A reservoir of the agent remains in the subcutaneous tissue and is slowly discharged, thus adding to the long course of intoxication.
Clinical signs – the clinical symptomatology may last from days to weeks – respiratory exposure will result in a quicker presentation. The dispersal of the injuries depends on the

protective measures that were used. The immediate symptomatology appears within a range of 6-12 hours, and includes irritation of the eyes and lacrimation, nausea and vomiting, pruritis and soreness of the skin.

Modes of treatment – the treatment for mustard gas casualties is symptomatic – there is no antidotal treatment.

Initially, the casualty must be distanced from the mustard agent and decontaminated using Fuller's earth as soon as possible after the exposure. The eyes must be washed with saline or another isotonic solution. The treatment will continue as recommended by the ophthalmologist, and may include antibiotics and steroids.

Respiratorily – supportive respiratory care.

For the skin – treatment in accordance with a burn protocol.

Gastrointestinal tract – supportive care, fluids and electrolytes, inquiry concerning burns through the gastrointestinal tract, as necessary.

Bone marrow – as necessary, myeloproliferative treatment and bone marrow transplant.

Biological scenario
A biological scenario is a scenario in which there is dispersal of biological pathogens or toxins as a combat agent or a terrorist incident. In wartime, this scenario involves a state of increased alert, an all-out, regional or other emergency.
Iraq previously declared having biological weapons in its possession. It declared having anthrax and botulism, Clostridium spores and ricin, and they are studying other pathogens such as Yersinia pestis.
The main challenges that face the healthcare system include early identification of heightened morbidity, detection and identification of the pathogen at the laboratory level as soon as possible, prudent risk evaluation, containment of the event and correct preparation by the healthcare system.
Biological pathogens cause high morbidity and mortality, have potential for person to person transmission, a low dose causes infection and rapid transmission, problems in diagnostic availability, low immunization and anxiety.

Biological agents are divided into a number of groups –

- Bacteria – non-contagious (anthrax), contagious – (Y. pestis, cholera, tularemia and others).
- Viruses – smallpox, "hemorrhagic viruses", Ebola and others.
- Toxins – botulinum, ricin and others.

History – biological warfare has been used since the Middle Ages, when plague ridden bodies were hurled over the walls of besieged cities. In Indo-French War, the British provided the Indians blankets that were infected with smallpox. In World War Two, Japan's Unit 731 conducted human experiments with anthrax on prisoners of war in Manchuria. As recently as 2001, anthrax spores were used.

Anthrax
A bacterial biological agent. The first industrial disease that was identified in the latter 19^{th} century. Anthrax is a veterinary disease of herbivores with sporadic infection in humans. Anthrax exists in most regions in the world, including Israel. There are hundreds of anthrax casualties per year in the world. Pulmonary anthrax, on the other hand, is very rare and does not feature person to person transmission.
The pathogen – the anthrax bacterium is an aerobic gram positive rod called Bacillus anthracis, which appears on a slide in short chains. The bacterium is known to produce spores. In most cases, gram positive rods in cultures are a result of contamination of specimens by light bacteria, meaning that when there is suspicion of anthrax, the laboratory must be informed. The growth of the bacterium in a blood culture is rapid and may appear in as early as 8 hours.
The spores of anthrax may be found in the ground. Herbivores are infected with the disease upon sporadic ingestion of spore infested soil. The disease in animals is lethal. The body of an animal that decomposes on the ground causes repeat dispersal of anthrax spores in the soil. The spores are very resistant to ambient conditions and may survive in animal remains or in the soil for many years.
Modes of contamination – transmission to humans is sporadic, resulting from contact with an infected animal carcass or contaminated products (such as pelts, bones, etc.) or as a result of eating the carcass or infected animal.
In cutaneous anthrax – the spores penetrate through a wound in the skin. In gastrointestinal anthrax the spores / bacteria will penetrate following eating infected meat or products thereof. In pulmonary anthrax, the spores penetrate the lungs after inhalation. This form of

the disease is extremely rare and is a major indicator of bioterrorism. There is no person to person transmission.
Clinical signs – signs arousing suspicion of anthrax: a young patient, without background diseases, appearing with a severe respiratory syndrome that rapidly deteriorates. A chest radiogram shows dilation of the mediastinum. A cluster of patients with similar findings will increase the suspicion. The findings that may be expected in examinations: chest radiogram – dilation of the mediastinum, infiltration and effusion, CT – lymphadenitis of the mediastinal lymph nodes, non-specific laboratory tests, sputum culture – usually non-diagnostic, blood culture – large, gram positive bacilli (is usually interpreted as contaminants of the culture).
Modes of treatment –
The timing of treatment is of great importance. Treatment should be given as quickly as possible by antibiotics (Doxilin - doxycycline). The treatment lasts 60 days. Treatment at the acute stage is ineffectual, according to literature.
Preventive care – prophylaxis is administered to persons who have been in the pathogen's dispersal area, during an unusual biological event (there is no person to person transmission, meaning that there is no need for prophylaxis for contacts with a patient).

Bubonic plague
Represents the group of contagious bacteria. It is the most famous plague pathogen in human history, also known as the "black death", which broke out in Europe in the 14th century, eliminating about a third of the population of the continent. The last pandemic occurred in India and China, causing some 12 million deaths. Today, bubonic plague is used only as a biological agent, and there are testimonies of production and storage of plague bacteria in the biological weapon project of the Former Soviet Union.
The pathogen – an aerobic gram negative rod bacteria called Yersinia pestis.
Modes of contamination – the bacteria proliferates in the gastrointestinal tract of fleas, causing its obstruction. Stings transfer the bacteria to the body of the animal thus stung. There are descriptions whereby before outbreaks of bubonic plague, massive rat death was observed. Following this death, the fleas migrated from their natural host, the rat, to transmit the disease to humans too. Persons are infected sporadically after being stung by an infected flea, after the fleabite. The pneumonic form is contagious, in droplet form, and is the one that caused the outbreak the great bubonic plague pandemics in the world. Pneumonic plague involves person to person transmission by droplets. It is feared that the plague bacterium will be dispersed in a bioterrorism incident in an aerosol compatible form, causing the pneumonic disease in infected individuals.
Clinical signs – a respiratory disease that manifests as pneumonia. The disease will be diagnosed when there is a high degree of suspicion, following a cluster of relatively young patients who are normally healthy, with severe, rapidly progressing pneumonia. The diagnosis is made by isolating the bacterium from the blood or sputum.
Modes of treatment – streptomycin intramuscularly or another aminoglycoside intravenously.
Prophylaxis – oral doxycycline or ciprofloxacin. The disease is highly contagious and requires prophylaxis and follow up for the care giving staff.

Smallpox
A viral biological agent. Smallpox is caused by the Variola virus. The disease was eradicated in a global vaccination campaign.
The pathogen – a virus of the orthopoxviruses family. A large brick-shaped DNA virus. Other viruses in the family: chickenpox, monkey pox, camelpox, vaccinia. The virus is

relatively resistant to ambient conditions and is suitable for dispersal as an aerosol, making it suitable for bioterrorism.
The only natural host of smallpox is man.
Modes of contamination – the disease is transmitted from person to person in droplets, by contact and through the air (depending on the level of infection).
After 10-14 days of incubation, a nonspecific febrile illness (prodrome) sets in, which features fever, weakness, muscle aches and backache. After 2-4 days of fever, the rash starts in the oral mucosae, and at this stage the patient starts to be infectious.
Clinical signs – characteristics of the rash – centrifugal, mainly in the hands and feet, with lesions at an identical development stage. The content of the vesicles becomes cloudy and they become pustules on days 10-14 of the rash - if the patient recovers the pustules dry out and form scabs that slough away. Hypo- or hyperpigmentous scars remain at the site of the lesions. Some scars, mainly in the face, will remain for the rest of the patient's life. The scabs contain live, contagious viruses until after they are shed. The mortality rate of the disease is up to 30%.
Modes of treatment – treatment for smallpox is mainly supportive. Antibiotic treatment is administered in cases of secondary infection. There is an active vaccine for the drub that is based on the vaccinia virus. The vaccine induces an immune response in as early as 4 days. Following the eradication of the disease, the WHO recommended stopping the vaccination for the entire population.
The disease is considered as highly contagious, with a clinical presentation composed of high temperature and cutaneous rash.
There is an active vaccine that is based on the vaccinia virus, which is intended for pre-exposure vaccination.

Botulism
A biological agent in the form of a toxin.
The pathogen – botulism is caused by a toxin that is extracted from the bacterium Clostridium botulinum. The toxin is a protein with proteolytic activity that causes the cleavage of proteins and termination of acetylcholine secretion into the synaptic space. This results in flaccid paralysis of muscles.
Botulism has five natural forms of disease, in addition to the form expected in bioterrorism: infant botulism, occult botulism, wound botulism, iatrogenic botulism and foodborne botulism.
Modes of contamination – the pulmonary form is the one expected in a terrorist scenario and is the most dangerous with regard to prognosis.
Clinical signs – botulism is a neurological syndrome of acute, symmetrical descending flaccid botulism, without fever, which always starts with the cranial nerves and later spreads to the skeletal muscles. The diagnosis of the disease is based on clinical suspicion and epidemiological signs.
Modes of treatment – the treatment includes massive supportive therapy, mainly respiratory, and administering a specific antitoxin, which must be administered as soon as possible after the time of intoxication.

Peacetime Scenarios

These scenarios may occur in peacetime without early warning – such as a road accident, terrorist incident, hazardous substance disaster or plane accident.
The principles for running the hospital when admitting many causalities who arrive within a short period of time and in quantities exceeding the resources available to the hospital in peacetime, necessitate special organization.
As mentioned, this is a state that requires mobilizing hospital resources in a non-routine manner for a limited time.
Hospitals are only part of the rescue and emergency services that participate in handling such an incident. They cooperate with Magen David Adom, the Israel Police, the fire brigade and the Ministry for Environmental Protection. In addition, the Ministry of Health and the IDF are in charge of organizing and handling incidents.

Conventional scenario

We know a number of conventional peacetime incidents – both large and limited.
The difference between these two elements is the hospital's ability to cope. This ability depends, as noted, on the presence of sufficient skilled staff for handling such a quantity of casualties, the number of operating rooms that are available, the availability and presence of imaging devices that are suitable and sufficient appropriate equipment. In other words, we are dealing with the number of casualties versus treatment resources that provide care for casualties as if they were isolated cases.

Multi-casualty incident

A state in which the number of casualties exceeds the ability of the hospital to provide treatment within a reasonable time necessitates reorganization of the hospital system.
The hospital copes with such a situation by dividing causalities into three main admission sites – a waiting site for casualties for slight physical injuries with a chance of survival, an immediate casualty site and a critical casualty site.
In a multi-casualty incident, most resources are allocated to caring for casualties who need resources. In other words, the immediate casualty site will receive most of the resources, including priority for operating rooms, the majority of and the most skilled personnel, priority in imaging tests, etc.
Limited multi-casualty incident - an incident in which the number of casualties and the nature of their injury necessitates organization other than routine in order to care for the casualties as isolated cases.
All peacetime incidents will be handled accordingly. A limited incident will be handled in an urgent medicine department and each casualty will receive care as an isolated case. If the hospital is unable to care for each casualty (the hospital director or his proxy or the time of emergency division) will declare a multi-casualty incident, with resulting implications.
Expected distribution of admission of casualties:
It is expected that 2/3 of conventional (trauma) casualties will be slightly injured casualties.
It is expected that 10% of casualties will need surgery.
Organization of work:-
In any multi-casualty or limited incident it is necessary to reinforce the emergency medicine department. In a multi-casualty incident it is also necessary to reinforce the waiting, stress and critical casualties site. This reinforcement includes medical, nursing and paramedical personnel from the hospital, and the department must also be bolstered with extensive equipment. This team must be skilled and therefore trained throughout the year. For this purpose, concentrated training days are conducted in each hospital.
At the beginning of the incident, the enforcement team is called to the admission and treatment sites. The site managers post the team in its stations and if there is time, a brief

reminder is made concerning the expected function of each member (utilizing precious time). It is advisable that there be a fixed, known distribution of work. A physician and two nurses care for each casualty at the immediate site.
Triage – medical selection: this is a process that takes place from the field to the inpatient department. The purpose of triage is to prioritize for care, evacuation or surgery.
Initial triage of casualties arriving at the three main groups is conducted in the casualty absorption and care area –
1. Casualties who need urgent care will be transferred to the immediate site. These are casualties requiring urgent care for saving their life or a limb. In most cases, there is damage to airways, significant physiological compromising of respiration and active, uncontrolled bleeding or bleeding requiring a tourniquet.
2. Casualties who do not need urgent care will be referred to the waiting casualties site. These are mainly casualties whose surgical care or other in-depth inquiry may be deferred for a few hours without resulting in significant, irreparable damage.
3. Critical casualties – will be transferred to the critical site, and will receive relatively low priority for care.
Deceased casualties will be transferred to a separate area / mortuary.
The purposes of medical care in a multi-casualty incident –

- Saving life.
- Stabilizing causalities and their transfer for care at other hospitals, if the admitting hospital cannot care for them within reasonable time.
- Prevention of disability.

Demographic medical recording:
In a multi-casualty incident, special casualty files containing all relevant paperwork are used. All forms and sheets are numbered with iron numbers. The recording must be brief and efficient.
The record pages are used to indicate special identifying signs such as scars, tattoos and other signs that can help identify the patient.
In addition, keeping entries and safekeeping valuables and help in identifying anonymous patients must be performed.
Handling of deceased patients -
Differs from the routine procedures. Deceased patients are handled by the Israeli Police. The hospital must make no record or description of the dead arriving at the hospital. No jewels may be removed, nor must they be undressed.
Public central information site –
Functions of the site –

- Gathering information on casualties that are admitted at the hospital.
- Giving information to families who make inquiries.
- Preparing relatives for meeting casualties.
- Giving mental first aid to relatives of casualties.
- Aid in locating civil family members.

Unconventional scenarios

Toxicological scenario – mass toxicological incident

An incident in which toxic substances are involved. This incident, like multi-casualty incidents, may be of mass size or a limited incident.

The incident may occur, for example, as a result of a road accident involving a vehicle transporting a toxic substance, a fault in a factory using toxic substances or a terrorist incident.

The preparation of the hospital will be identical to that of a multi-casualty incident (20% severe, 30% moderate and 50% slight). Most severe/ moderate casualties will arrive at the hospital immediately.

There will be the same admission and care sites at the hospital as in a multi-casualty incident.

The inpatient departments will be different – with more emphasis on internal orientation than trauma.

As opposed to the multi-casualty incident organization, the toxological contaminant must be removed quickly.

Removing the toxological contaminant is performed in the field, the casualty being removed from the contaminated area by undressing and decontaminating him with running water.

Radiological scenario

Radiation is the transfer of energy from one source to another.

There are a number of radiation types –

Ionizing radiation: ionizing radiation is radiation that impacts on an animal cell and may cause direct damage to nucleic acids (DNA) or form free radicals that attack and damage nucleic acid. The degree of damage depends on the type of radiation.

The quantity of radiation absorbed by the substance is measured in grays, or formerly rads.

Non-ionizing radiation, such as radio radiation, radiation from cellular phones, microwave radiation and others. This type of radiation is not included in a radiological incident.

The ability of radiation to penetrate tissue depends on its type.

Acute radiation diseases may appear after exposure to 100 rads.

A radiological scenario relates to exposure of casualties to substances that emit ionizing radiation or contamination thereby.

A radiological event may occur in a range of outlines. Scenarios are categorized according to information on involvement of radiation in the incident – before or after the casualties / exposed individuals arrive at the hospital.

<u>Type of radiological scenarios</u>

Noisy scenario – an incident in which the information arrives before the casualties reach the hospital.

Preliminary information allows the system to prepare for the arrival of casualties and protect staff and infrastructures from contamination.

- These incidents can be from an accident, fire or sabotage of a nuclear reactor, at industrial plants or radiotherapy institutes possessing radioactive material.
- Events originating from an accident or damage in the conveying of radioactive substances by a vehicle, vessel or aircraft.
- Events originating from a terrorist incident.

Quiet scenario – an incident in which the information arrives after the casualties reach the hospital.

Characterized by lack of preliminary information of the incident. The detection of a quiet event is likely to be based on finding suspicious signs in persons exposed to the incident – usually when they seek primary medical care. The lack of preliminary information means

that casualties are admitted as conventional incident casualties and endanger themselves to further exposure as long as the contamination / source has not been removed or neutralized. In addition, there may be low exposure of the staff and contamination of the hospital with radioactive material / contamination.
Once the incident is detected, there may be a heavy psychological burden on the attending team due to the fear of exposure.
The preparation of the hospital for radiation is based on principles of preparation for a mass toxicological incident, while creating a direct (contaminated) route to the operating room.
Forms of exposure:
Casualties of a radiological incident may present with at least one of the following forms of injury –

- Exposure to external radiation.
- External radioactive contamination.
- Internal radioactive contamination.
- Combined injury – trauma injury combined with exposure to radiation.

Modes of treatment –
The approach to a casualty who has been contaminated by radioactive material is similar to that of a casualty in a mass toxicological incident.
The following radiation safety principles must be observed –

- Limit the number of people who are exposed to radiation.
- Limit the radiation exposure time.
- Keep a distance from radioactive sources.
- Use appropriate protection.

In order to fulfill these principles –

- Undressing the casualty and decontamination using soap and water.
- Monitoring casualties using a Geiger counter for identifying contaminated areas.

Self protection and containment of the contamination are necessary actions before caring for any casualty from a radiological incident.
The approach to a casualty from an incident that is suspected to be of radiological nature:

- Self protection.
- Actions for restricting contamination.
- Specific documentation.
- Medication, antidote and other types of care.
- Short and long term medical follow-up.

Organization of the hospital
The organization of the hospital for a radiological incident is similar to the organization of the hospital for a mass toxicological incident. In this case, we are talking about a multi-casualty inducement with a deployment of sites like in a multi-casualty incident or limited incident. In such a case, it is necessary to undress and decontaminate the casualties, meaning that a decontamination site must be opened. The difference in this incident is that decontamination must include soap and that the casualties must be monitored. This requires adding radiation controllers to the attending team in order to attempt to identify and monitor the radioactive material using a Geiger counter.

Biological scenario
Pandemic

In the twentieth century there were three pandemics (worldwide plagues), the most famous occurring in 1918 known as the Spanish flu. In this outbreak 50-100 million persons died throughout the world, particularly young adults. Despite later pandemics, which occurred in 1957 and 1968, had a smaller number of victims, but still involved significant morbidity, mortality and damage to society and its economy as a whole.
Pandemic influenza may be caused by the appearance of a new type A virus using two main mechanisms:

- Reassortment of animal (mainly avian) viruses and human viruses to form a virus that is suitable for person to person transmission but has an antigenic structure that is unfamiliar to the population.
- Genetic shift – which leads to a significant change in the antigenic structure of human influenza viruses.

Importance
The World Health Organization has been warning of a pandemic (world epidemic) outbreak of influenza for several years. The great fear is the appearance of an influenza A strain that is not one of the three strains that is included in vaccines that are determined by the World Health Organization before winter. Until twenty five years ago, such a pandemic would break out every decade. We have not gone through more than a quarter of a century without a pandemic. Most experts believe that the next pandemic is inevitable, but its date of onset cannot be predicted.
In recent years we have witnessed a number of indications of increasing likelihood for the appearance of pandemic strains. The appearance of the H5N1 strain in Hong Kong in 1997 was the first warning. A number of infections of humans with avian viruses having occurred in the years since then, with varying degrees of lethality.
The events since late 2003 with the spread and consolidation of the H5N1 virus with a high lethal rate in Southeast Asia, which harmed humans, and the continuing risk of this strain becoming effectively transmissible from person to person – constitute another indication of the urgent need for Israel's preparation for the appearance of pandemic influenza.
The continued spread of the avian virus to Eastern Europe and the fear of the transmission of the disease by migratory birds next winter, increases the risk for avian flu in Israel as well.

Preparation of the healthcare system for an influenza pandemic outbreak:
1. Reducing the morbidity and mortality rate of pandemic influenza.
2. Maintaining a normal as possible lifestyle during a pandemic (with emphasis on activity of the police, army, fire brigade and other vital agencies).
3. Minimizing the expected workload for the healthcare system and preventing insufficiency due to excess applications and hospitalizations.
4. Minimizing the economic damage caused to the economy due to the pandemic.

Characteristics of the pandemic – basic assumptions:
1. Time of onset – a pandemic of influenza may appear throughout the year, not necessarily during the regular activity period of influenza in Israel (November – March).
2. Duration of appearance – in accordance with past experience, it may be assumed that the expected duration of the peak of the outbreak would be about 6-8 weeks, although the spread may occur gradually over months. The number of morbidity waves occurring may not be anticipated in advance.
3. Incubation period – according to the characteristics of the virus and past experience, the incubation period at the individual level may last 24-72 hours.

4. Infection time – according to nasopharynx swab tests, adults are infectious for 4-5 days. In children, the infecting time is longer.
5. Incidence of the disease – the World Health Organizations proposes preparing for a scenario involving morbidity in about 25% of the population.
6. Contagiousness of the disease – the contagiousness of the pandemic strain may not be anticipated, but this figure will materially affect the efficacy of various preventive steps for checking the outbreak, such as prophylactic medication, isolation of patients, blockading, etc. Determining coping principles will be after the pandemic breaks out in the world and initial data is received on the virus characteristics.
7. Age of onset of morbidity – regularly, most of the morbidity is in children, whereas the severe morbidity and mortality concentrate in adults with primary diseases. This pattern of appearance may also vary with the appearance of a pandemic in children under the age of 5 and in the elderly population.
8. Mortality – deaths occur in seasonal influenza mainly at extreme ages – children and the elderly.
9. Medical services – the pandemic of influenza is a community disease. The large number of patients forms a tremendous burden on the healthcare services in the community, as well as in emergency rooms and inpatient departments. According to CDC estimates, in accordance with State of Israel data, some 3,500 people may be hospitalized per week at the peak of the outbreak.
10. Absence from work – during a pandemic, a significant percentage of the population will be absent from work.
11. Schools – influenza may spread quickly in schools. During the onset of a pandemic, the possibility of closing down schools as a step for checking the outbreak must be prepared for.
12. Vaccination – a few months are necessary for preparing a new vaccine (about 4-6 months at least) from the time of insulation of the new virus. Therefore, at the time of onset of a pandemic, there will probably be no specific vaccines available for the pandemic virus.
13. Antiviral drug – there is medication that is used for caring for patients and as prophylaxis for preventing mortality and complications.
14. Drug resistance – seasonal influenza strains are mostly sensitive to amantadine, whereas avian flue strains thus far isolated are probably resistant to this drug.

Severe acute respiratory syndrome (SARS)

Today, the outbreak of the disease is being considered as a global pandemic that has spread to all continents and to many countries. Reports indicate about 8,500 known patients and 800 persons who have died in 30 countries worldwide (WHO 2003b). As of May 7, 2003, the mortality rates in countries that have experienced deaths from the disease range from 10% to 15% of all patients. It has been found that the death rates vary among the different age groups. Mortality in 0-24 year olds is close to 1%, in 25-44 year olds 6%, in 45-64 year olds about 15% and in patients aged 65+ the mortality rate reaches about 50% (WHO 2003b).
The pathogen – the disease is caused by a virus of the coronavirus family – SARS coronavirus. The pathogenesis is still not fully understood. SARS is a contagious disease with a tendency for severe respiratory complications. It has been proved that SARS is an extreme example of coping with a new infectious disease that lacks a specific treatment – conveyed between persons in a number of modes of transmission, with potential for a high rate of morbidity and mortality, with preference for infecting medical personnel at hospitals.
Modes of transmission – the team must protect itself before undertaking any treatment of a patient suspected of having SAS. Because it is a contagious disease with lethal potential, without specific treatment that spreads particularly in hospitals, self-protection for contact with a SARS patient or suspected patient must be maximal. The sources of infection at hospitals may be the patient himself, visitors and the attending staff. The source may be an

acutelty ill patient, a person who is in the incubation period of the disease or carriers who lack signs of the pathogen. In addition, the source of the infection may be in different objects in the vicinity of the hospital, such as sanitary fixtures, housekeeping equipment and medical instrumentation. Age, various background diseases and certain immune responses increase the probability for the onset of the disease in exposed individuals.

Clinical signs – the incubation term lasts 2-10 days (usually 2-7). This stage involves a high fever around 39 degrees Celsius, shivers, muscle ache, lymphopenia, coughing and headaches, thrombocytopenia, dizziness, diarrhea, nausea and vomiting. At the respiratory stage, the cough intensifies (hacking cough), respiratory difficulties appear, and respiratory insufficiency to the point of ventilation may appear (10%-20%). In a chest radiogram, 80% of cases show infiltration in the lungs, but the chest radiogram may show no evidence of the disease.

The diagnosis of the disease is based on history, clinical presentation, chest radiogram findings and laboratory tests.

Management – there is still no treatment for the pathogen, so most of the medical effort is devoted to preventing infection, symptomatic care for respiratory insufficiency and antipyretic interventions (CDC, 2003).

Self-protection includes:

- Standard N.95 mask
- 2 pairs of gloves
- Glasses or visor
- Head cover
- Shoe cover
- Hand washing
- Long, disposable gown with cuffs
- Room with separate ventilation

Nursing Division

Periodical File
Ministry of Health

Appendix to Set for Completing Knowledge for the Functioning of a Registered Nurse in Israel

Certification Department – the Nursing Division
November 2007

State of Israel, Ministry of Health

Nursing Division Circular

No. 44 Dated: July 4, 2001

Subject: Professional Guidelines – Pain Assessment

Making a patient comfortable is one of the important goals of the practice of the nurse.

Identifying pain in its early stages, before it is defined as a complaint of the patient, is an initial stage in applying this goal.

The guideline for pain assessment as a routine procedure allows for directed intervention in order to ensure the comfort and wellbeing of the patient.

The attached guideline was formed by the Nursing Division in collaboration with hospital and community nurses and physicians.

Best regards,

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

CC: Dr. Boaz Lev – Director General, the Ministry
Dr. Yitzhak Berlovich – Assistant Director General, the Ministry

ND-44

The Professional Guidelines Department

Subject: **Pain**

Field: **Pain Assessment**

Date of Director General approval: July 2, 2001

The signature of the National Head Nurse and Head of the Nursing Division

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background

Pain is a subjective symptom. It is everything that the patient has defined as pain.
Lack of pain and a feeling of comfort are defined in literature as vital signs that require routine measurement, although not defined as vital signs of life.
Pain assessment is an initial stage for managing pain. The professional guideline detailed below is intended to determine the responsibility and authority of the registered nurse in the field of pain assessment for patients.

Authority

Pain assessment for patients is performed by a registered nurse.

Highlights of the guideline

- Pain assessment must be defined as a binding, vital measurement.
- Pain must be measured alongside routine measurement of vital signs.

GL-9,1

Breakdown of the guideline

1. Frequency of routine assessment

1.1 Each inpatient or nursing institute patient is to undergo pain assessment within 12 hours admission, as necessary, and at least once a day;
1.2 An outpatient, upon any visit of a facility whose routine treatment requires measurement of vital signs;
3.1 A home patient, upon any home visit.

2. Characteristics of the assessment tool

2.1 Differentiates pain relief from exacerbation;
2.2 Sensitive to changes in pain sensation following movement;
2.3 Suitable for expression verbally and non-verbally.

3. Documentation
3.1 Pain assessment of a patient is documented in the patient records.
3.2 Documentation includes:
- Findings of assessment
- Date
- Time
- Name of the nurse

4. Responsibility

The Nursing Division is responsible for applying the guideline.

State of Israel, Ministry of Health

Nursing Division Circular

No. 53 Dated: August 5, 2002

Subject: "Management of Medication – **Update** of Guideline of December 1, 2002"

An update of the guideline "medical management" is attached.

The guideline updates section 2.1.1, "Orders for medication". The sentence "Signature and stamp of the giver of the order", is to be replaced with:

Name, license number and signature of the giver of the order.

The section is as follows:

"2.1 Written instructions:

2.1.1 The order will be listed in the patient's records, in Latin capital letters and will be confirmed with the signature of the giver of the order, indicating his or her name and license number (an electronic signature will be made according to the Ministry of Health procedures, once these are published)".

The update replaces the guideline on the subject "Management of Medication" that is specified in the Nursing Division Circular of December 1, 2002.

The amended guideline may be found on the website of the Nursing Division at the address: www.health.gov.il/nursing

Best regards,

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CC: Dr. B. Lev – Director General
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Y. Baruch, Head of the Medical Division

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Internet: www.health.gov.il/nursing

The Professional Guidelines Department

Subject: Drugs

Field: Management of Medication

Date of update: August 5, 2003

Replaces guideline of December 1, 2002

The signature of the National Head Nurse and Head of the Nursing Division

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background:

The instruction below establishes a binding basis for giving an order and medication.

The guideline updates the procedure for dispensing drugs, which nurses perform routinely, and elaborates by relating to the authority of the registered nurse to make decisions based on protocols as permitted by law.

The update is intended to satisfy needs that result from technological developments, including the use of communication accessories, such as: telephone, fax, email.

This guideline replaces the medication management guideline of December 1, 2002.

1. Authority and responsibility:
   A decision on medication, change of dosage and discontinuing is within the authority of the attending physician. Decisions on medication in conditions that have been defined and approved by the Labor, Social Affairs and Health Committee of the Knesset (Exceptional Procedures) and/or by the Director General (Nursing Procedures) are within the authority of a registered nurse.

   Administering the drug is at the responsibility of the performer of the procedure.

2. Order for medication:

   2.1 Written order:

      2.1.1 The order will be noted in the patient records, in Latin capital letters and will include the signature of the order giver, indicating the name and license number of the order giver (an electronic signature will be

made according to the Ministry of Health procedures, once these are published)".

2.1.2 The order will include:
Date, time of issue of order; full name of the preparation; form; dosage; strength; frequency; mode of administration; duration of administration; special instructions for administering the drug.

2.2 Oral order:

2.2.1 Conditions for issuing oral orders will be determined in the procedures of the institute / organization.

2.2.2 The order will be written by a registered nurse in the patient records in Latin capital letters, according to the details of the order specified in section 2.1, including the name of the order giver, and will be confirmed with her stamp and signature.

2.3 Protocols for medication:

2.3.1 A departmental protocol for a defined clinical state must be signed by the department director and will include conditions and qualifications for administering medication.

2.3.2 A medication protocol for a patient will be noted as specified in section 2.1.1, including: date, full name of preparation, mode of administration, strength and mode of administration.

3. <u>Administering medication:</u>

3.1 Binding procedures in administering drugs by a nurse:

3.1.1 Comparison of the details of the order, the patient and the drug.
3.1.2 Identifying sensitivities and checking for contraindications.
3.1.3 Explanation / guidance.

3.2 Binding procedures in administering drugs as prepared by the nurse and administered by the physician: showing the original case of the preparation, the case of the diluting agent and the details of the order, including the particulars of the patient.

4. <u>Self-administration of drugs in inpatient settings:</u>

Will be performed under the following conditions:

4.1 There is documented consent of the patient.
4.2 There is documentation of a qualified nurse covering the ability and understanding of the patient to self-administer drugs.
4.3 A decision for self-administering drugs is within the authority of a physician.

4.4 Guiding the patient to self-administer drugs, their effect, adverse effects and drug administration plan will be performed, evaluated and documented by a registered nurse.

4.5 The patient will be given the drugs in separate boxes. Each case is to include instructions as specified in section 2.1.2.

4.6 Reassessment of the ability and understanding of the patient to self-administer drugs will be conducted in accordance with the condition of the patient.

5. Giving of instructions for self-medication to patients at home, using communication accessories (telephone/ fax/ email, etc.):

There is an option for give medication instructions through communication accessories for patients who take medication and conduct follow up tests independently.

Conditions

5.1 Written consent of the patient / guardian to receive medication instructions through select means of communication, including modes of confirmation of receipt of the instruction.

5.2 Determining a significant other agreed upon by the patient, in order to receive an instruction as necessary.

5.3 The instructions will be given by a physician / registered nurse.

6. Documentation of administration of a drug:

6.1 The drug administrator will confirm the administration in the patient record, with his stamp and signature, indicating the date and time of administration (an electronic signature will be made according to the Ministry of Health procedures, once these are published).

6.2 Self-administration of a drug in an inpatient setting will be documented in the patient record by the nurse, in accordance with the protocol and as specified in section 2.1.

6.3 Documentation of giving of medication instructions to patients at home:
A registered nurse giving the instruction will document the details of the instruction according to section 2.1 and confirm doing so in the patient record, indicating the notice recipient, date and time.

7. Error in medication management

7.1 An error is to be reported to the attending physician immediately by the caregiver or the identifier of the error, the nurse in charge and other parties as stated in the procedures of the institute / organization.

7.2 The error is to be reported in the records of the patient and the relevant records employed by the institute / organization.

7.3 The patient will be informed of the error subject to the Patient's Rights Law and the procedures of the institute / organization.

State of Israel, Ministry of Health

Nursing Division Circular

No. 55 Dated: September 23, 2003

Subject: Identifying Patients Who Need Help in Mobility

Difficulty in mobility is a common handicap of inpatients in healthcare institutions.

Mobilization of patients using the correct method provides for safe care and prevents difficulties for caregivers.

This guideline is intended to place emphasis on the duty of the nurse in charge to identify patients who have restricted movement, who need help in mobility and determine the appropriate method for mobilizing them.

Best regards,

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

CC: Dr. B. Lev – Director General
Dr. Y. Berlovich – Assistant Director General

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The Professional Guidelines Department

Subject: **Identifying patients who need help in mobility**

Field: **Management of mobility care**

The signature of the National Head Nurse and Head of the Nursing Division

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background

Difficulty in mobility is a common restriction that accompanies many health disorders and requires mobilizing handicapped patients by their caregivers.
Technological development has led to diverse technological accessories that provide for helping caregivers mobilize patients with mobility restrictions.
The identification of patients who have restricted movement and the use of intelligent methods and technologies may guarantee safe nursing / medical care for the patient and prevent him or her physical injuries.

Highlights of the guideline

- Identifying patients who need help in mobility in an understandable format.
- Establishing the appropriate method and/or vital accessories for mobilizing each patient.

Details of the guideline

1. **Authority and responsibility**
   - Identification of patients who need help in mobility and adapting the mobility method are within the authority of a registered nurse who is running the shift.

2. **Frequency**
   - Examination of the need for help in mobility will be conducted and documented no later than 12 hours from the admission of the patient.
   - Later in his or her hospitalization, when necessary, there is to be a reassessment of the need for help in mobility, not less than once every 24 hours.

3. **Documentation**
   - The documentation will be made in a dedicated record, in accordance with the requirements of the procedures of the institute/ organization, and will include:
     - Name of the patient, description of the handicap and instruction of the nurse in charge concerning the mobilization method.

State of Israel, Ministry of Health

Nursing Division Circular

No. 56 Dated: December 23, 2003

Subject: Signature of a Nurse and Signature of a Midwife

The Patients Rights Law 5756 – 1996, section 17A, indicates that "A caregiver is to document the course of the medical treatment in a medical record; the medical record will include, inter alia, identifying particulars of the patient and the caregiver...".
Medical Division circular no. 27/95 "Procedure for inpatient record", section 2.3, requires each record or change in record to indicate: "Date, time, name, stamp and signature of the executor". Documentation of the course of treatment and clear identification of the caregiver allows tracking of the continuum of care, particularly when it is performed by a number of staff members.

From a legal standpoint, documentation in a record serves as central evidence in any litigation, meaning that clear identification of each caregiver making entries in the patient records is crucial.

The attached instruction requires writing, wherever "Signature of the nurse" is stated, the given name and surname in a clear, legible way, with a signature beside it.

In cases in which "Signature of midwife" is required, the midwife will add her license number to her given name and surname.

Best regards,

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The Professional Guidelines Department

Subject: **Signature of nurse and signature of midwife**

Field: **Administration**

The signature of the National Head Nurse and Head of the Nursing Division

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background

The Patients Rights Law – 1996 requires keeping a medical record documenting all medical information related to the patient, including the course of his or her care.

Exact, full documentation of all medical information, including identification of the caregiver, is medically important. It allows for medical identification, monitoring and maintaining the therapeutic continuum, particularly when it is performed by a number of staff members.

From a legal standpoint, documentation in the record serves as evidence in any litigation concerning the treatment and its results.
As an integral part of the record keeping, the nurse must sign her full name in a clear and legible manner.

Highlights of the guideline

1. Wherever the signature of the nurse is required, the nurse is to write her given name and surname in a clear, legible manner, or affix a personal stamp that indicates her given name, surname and registration number.

2. Wherever the signature of the midwife is required, the midwife is to write her given name, surname and license number in a clear, legible manner, or affix a personal stamp that indicates her given name, surname and license number.

Responsibility for application

- Monitoring and control of application of the guideline will be performed by the registered nurse responsible for the unit.

State of Israel, Ministry of Health

Nursing Division Circular

No. 61 Dated: November 27, 2005

Subject: Replacement or Return of a Gastrostomy Tube (Feeding Tube)

Feeding by gastrostomy tube allows feeding patients who have swallowing disorders and eating difficulties.
Over time, the gastrostomy tube tends to wear down or retreat.
These conditions require the gastrostomy tube to be replaced or returned as an urgent action, otherwise the insertion opening is likely to close.

Replacement or return of the gastrostomy tube under the conditions listed in the guideline is a nursing procedure for a registered nurse.

Best regards,

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

CC: Prof. A. Israeli – Director General
Dr. B. Lev – Assistant Director General
Dr. Y. Berlovich – Assistant Director General and Head of the Medical Division

ND-61int

2 Ben Tabai St., Jerusalem 93591, P.O.B. 1176 Jerusalem 91010, Tel.: (02) 6705852, Fax: (02) 6787782
Internet: www.health.gov.il/nursing

The Professional Guidelines Department

Subject: **Replacement or Return of a Gastostomy Tube (Feeding Tube)**

Field: **Treatment**

The signature of the National Head Nurse and Head of the Nursing Division

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background
Feeding by gastrostomy tube allows feeding patients who have swallowing disorders and eating difficulties.
Over a period of time, the gastrostomy tube tends to wear down or retreat.
These conditions require the gastrostomy tube to be replaced or returned as an urgent action, otherwise the insertion opening is likely to close.

Highlights of the guideline
A decision to replace or return a gastrostomy tube that has been damaged or retreated and performing the action is under the responsibility of a registered nurse.

Breakdown of the guideline
Conditions for execution for replacement or return of a gastrostomy tube:
1. A registered nurse who has passed training and who is employed by a recognized medical institute.
2. The procedure is to be performed only if the first replacement or return at least has been performed by a physician.
3. Insertion of the gastrostomy tube will be performed after an assessment that confirms that the stomach wall is flush with the abdominal wall and there is a tract.
4. A balloon replacement or silicone polycatheter type gastrostomy tube will be inserted.
5. The procedure will be reported and documented in the patient record and accompanied by the signature and stamp of the nurse.

Responsibility and authority
The execution of the procedure will be under the authority and responsibility of a registered nurse who has been trained to perform the procedure.

State of Israel, Ministry of Health

Nursing Division Circular

No. 66 Dated: October 2, 2006

Subject: Prevention and Treatment of Pressure Sores

Activity for preventing pressure sores by nurses has been proved as being a great contribution. This activity reduces the cost of care for patients who are at risk for developing pressure sores.
In addition, it has been proved that managing the treatment for pressure sores by nurses has a pivotal effect for improving the quality of life of these patients.

A guideline determining the authority and responsibility of the registered nurse in preventing and treating pressure sores is attached.

Best regards,

Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

CC: Prof. A. Israeli – Director General
Dr. B. Lev – Assistant Director General
Dr. Y. Berlovich – Assistant Director General and Head of the Medical Division

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State of Israel

Ministry of Health, Jerusalem
Nursing Division

Guidelines

Name of the guideline: Prevention and Treatment of Pressure sores
Guideline no.: 6-HM-0206

Field: external functioning Unit: professional guidelines:

Highlights of the guideline: a registered nurse will determine the risk level for developing pressure sores by means of the initial data gathered and will determine a prevention and treatment plan in accordance with an assessment for each inpatient or patient confined to his or her home.

Target population: registered nurses

Responsibility for application: nurses in charge (sisters)

Date of publication: August 2, 2006 Application date: January 1, 2007

Signature: _____
Shoshana Riba., Ph.D.
National Chief Nurse
and Head of the Nursing Division

Background:

The frequency for developing pressure sores in general inpatients in hospitals is 4—30%*, and in extended commitment in institutes and in the community is 17%-28%[1,2].

We consider investing resources to prevent and treat pressure sores to be of great importance. When there is a pressure sore, it is important to manage correct treatment.
Pressure prevention activity by nurses has been proved to have a great contribution. This activity reduces the cost of care for patients who are at risk for developing pressure sores. In addition it has been proved that managing the treatment of pressure sores by nurses is of pivotal effect over the improvement of qualify of life of these patients.

The guideline detailed below establishes the authority and responsibility of the registered nurse for determining the risk level of the patient in developing pressure sores, their prevention and treatment, while integrating a multidisciplinary team.

1. Allman RM. Pressure ulcer prevalence, incidents, risk factors and impact. Clin Geriat Med 1997; 13:421-35.
2. Bennett G, Dealey C, Posnett J. The cost of pressure ulcers in the UK. Age and Aging 2004; 33:230-35.

Details of the guideline

1. Responsibility and authority:

It is the responsibility of the registered nurse to determine the risk of the patient for developing pressure sores and manage the intervention plan for preventing and treating pressure sores.

2. Principles for determining risk level:

2.1 Timing and frequency of assessment

- The risk level for developing pressure sores will be determined by initial data gathering for each inpatient or patient confined to home by a registered nurse.
- The institute/ organization will establish criteria for reassessing the risk level of the patient for developing pressure sores.

2.2 Characteristics of the assessment tool:

- A structured tool that is classified by at least three levels,
1 = low risk, 2 = moderate risk, 3 = high risk.
- The tool will cover the following criteria:
Sphincter control
Mobility
Relevant comorbidities (such as diabetes mellitus)
State of consciousness
Degree of independence in everyday life
Nutrition

3. The principles of intervention:

3.1 A prevention plan will be developed for any patient who has been defined as having a moderate or higher risk level for developing pressure sores.

3.2 A treatment plan will be developed for any patient with a pressure sore.

3.3 The intervention plan for prevention and treatment will be established by a registered nurse, and will include at least:
Adaptation of nutrition plan
Adaptation of mobility plan
Determining treatment measures

3.4 The nurse managing the intervention plan will be responsible for integrating other team members in accordance with the needs of the patient.

4. Principles of documentation:

4.1 Any entry will be confirmed by the stamp of the nurse indicating her given name, surname and license number.

4.2 Documentation of risk level and intervention will be part of the official record of the patient.

State of Israel – Ministry of Health
The Division for Health Affairs

Medical Division

Circular no.: 69/2002

Jerusalem, 11th Tevet 5763
December 16, 2002

File no.: 2/16/5

To: Directors of general hospital
Directors of blood banks

Re: Procedures for running blood bank and administering blood transfusion
Reference: our circular no. 94/95 of December 26, 1995

We hereby bring to your attention an updated booklet of procedures for running a blood bank and administering a blood transfusion.

This booklet updates and expands on the booklet of procedures of 1995.

This booklet replaces its predecessor, revokes our referenced circular and includes all of the updates made until its issue.

Please bring the content of this booklet to the attention of the relevant parties in your institute.

For your information: These guidelines are valid from January 1, 2003
This circular and all appendices hereof can be retrieved through the circular retrieval system at the Ministry of Health website.
Address of the website: http://www.moh.health.gov.il

Best regards,
Yehuda Baruch, M.D.
Head of the Medical Division

CC: The Director General
The Assistant to the Director General
Senior VP for administration and human resources
Senior VP for planning and construction of medical institutes
Senior VP for health economy
Senior VP for planning, budgeting and pricing.

Address of ministry: 29 Rivkah St., Floor 3, Jerusalem
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Telephone: 02-5081200 Fax: 02-6725821
Email: berlo@matat.health.gov.il

G. Blood Transfusion Components

1. Administering blood to the patient

1.1 At the blood bank, a form or label with the following details will be attached to a blood unit:

A. Particulars of the recipient – surname, given name, identity number, ABO and Rh type.

B. Particulars of the unit – which are to include the type and number of the component, AO and Rh type and results of cross matching, if performed, and its date.

C. Expiry date of the unit.

1.2 All of the following processes are to be performed next to the patient's bed:

1.2.1 Identification of the data and verification of the data of the components of the blood administered will be performed by two caregivers or a caregiver and staff member or two registered nurses (according to Director General Circular no. 13/ 2001).

1.2.2 The identification will include matching the particulars of the patient, including: given name, surname and identity card number appearing on the foot band or label on the inpatient or identity card in outpatients. In addition, the patient himself, parents and relatives may assist in providing details appearing on the blood unit for infusion and the particulars of the patient in the medical record.

1.2.3 The data that is to be checked on the blood unit is:

A. Particulars of the patient (given name, surname, identity card).

B. Expiry date of the blood unit.

C. Performing necessary tests on the blood unit, including: blood type, antibody assay and tests for identifying infectious diseases that may be transmitted in a blood unit.

D. Performing cross reaction test in the blood bank.

E. Matching of the patient's blood type as indicated on the form accompanying the unit, with the blood type of the designated blood unit.

1.2.4 The two caregivers or staff members who performed the identification checks above will indicate their full particulars (given name, surname and license no.) and are to sign in their handwriting next to the patient's bed on the form attached to the unit, in the medical record of the inpatient, to indicate that they have identified the patient and the designated unit (unit type and number).

1.2.5 Immediately after performing the identification and records as stated above, one of the identifiers who identified the patient is to connect the blood transfusion to the patient.

1.2.6 The identifier who connected the blood transfusion to the patient is to note, in the presence of the other identifier, in the medical record of the inpatient, the time and date of starting the blood transfusion.

1.2.7 A staff member is to monitor the patient at the start of the transfusion.

1.2.8 The patient will receive information related to receiving blood, including the need to report adverse signs during the receipt of the blood.

1.3 At the end of the administration of the transfusion, the form with the blood unit is to be filed in the medical record of the inpatient, the date, time of ending the blood transfusion administration, and any adverse effects thereto, are to be noted.

2. Treatment with a blood unit in a department

2.1 A blood component transfusion will be administered through a sterile set containing a filter that is suitable for a blood transfusion only.

2.2 Blood may be heated only through a heating device that is designed for this purpose, with temperature monitoring while the blood is passed through the transfusion set. Blood must not be heated to above 40 °C.

2.3 Thawing of plasma and cryoprecipitate may be performed only at the bank blood, section 4.1, 4.2 below.

2.4 Do not add any fluid or drug to blood units or their components other than saline (NaCl 0.9%) to the transfusion.

2.5 Transfuse one blood unit or any blood component within 4 hours.

3. Administering irradiated blood units and components

3.1 Irradiated blood components

Blood components are irradiated in order to reduce the risk for graft versus host disease (GVHD) in high risk patients.

3.2 Blood will be irradiated by exposing the blood unit, thrombocytes or leukocytes to radiation of at least 2500 cGy. The irradiated unit and the irradiation date must be noted.

3.3 An irradiated blood unit is valid for 28 days from the irradiation date. If the regular expiry date precedes this date, the former will take precedence.

4. Blood component transfusion

4.1 Fresh frozen plasma (FFP) transfusion

Plasma is to be thawed in the blood bank at a temperature of 30-37 °C. This component may be transfused within 24 hours of its thawing is kept at a temperature of 1-6 °C (if used as a source for unstable coagulation factors).

4.2 Cryoprecipitate transfusion

Cryoprecipitate is to be thawed at a temperature of 30-37 °C. Transfuse it within 6 hours of the thawing time, if it is being used as a coagulation factor source (AHF), on the condition that the bag has not been opened.

4.3 Granulocyte transfusion

Do not administer granulocytes into a transfusion through leukocyte removing filters but through a regular blood transfusion set.

5. Administering Rh immunoglobulin

5.1 All pregnant women, women whose pregnancy is being terminated or women undergoing an invasive obstetric procedure must have their Rh type established based on standard methods (chapter B, section 9.2, chapter D section 5.2). A woman who has a positive D or weak D test will be considered as Rh positive. A D or weak D negative woman will be considered as Rh negative.

5.2 A woman who is in the 28^{th} week of gestation who is Rh negative without anti-D antibodies must receive 300 micrograms of Rh immunoglobulin intramuscularly.

5.3 Pregnant women who are Rh negative must receive Rh immunoglobulin within 72 hours of performing a procedure that may cause the transfer of fetal erythrocytes into the maternal bloodstream, such as: delivery, termination of pregnancy, amniocentesis, biopsy, trauma, caesarian section, etc.

5.4 There is no need for administering this vaccination in the following cases:
- A. When it is obvious that the fetus is Rh negative.
- B. When there is testimony of active immunity to D regardless of administering Rh immunoglobulin in the 28th week of pregnancy.

5.5 Women who have received an anti-D injection in the 28th week of pregnancy will receive a repeat injection within 72 hours after the delivery of a newborn who is Rh positive.

5.6 Women of childbearing age and girls who have received thrombocytes from Rh+ donors will receive an anti-D injection – 300 micrograms intramuscularly. There is no need for administering anti-D when thrombocyte disease are Rh negative. During repeat administration of thrombocytes, the presence of Anti D must be tested for in the serum and the results implemented for administering another injection of anti-D.

H. Reaction to Transfusion

1. General

1.1 Each blood bank must have a method for detecting and noting reactions to a transfusion. The team caring for a patient must report to the physician in charge in the department and the bank blood of any suspected reaction to a transfusion.

1.2 A hemolytic reaction to a transfusion must be tested at the bank blood as described below.

1.3 Treatment of a patient must not be delayed until receiving an answer from the blood bank.

2. Immediate reaction to a transfusion

2.1 Any adverse reaction during a transfusion and immediately thereafter is considered as a reaction to a transfusion. Excess fluid or an allergic reaction (rash) following a transfusion are not hemolytic reactions and do not require an inquiry at the bank blood as hemolytic reactions.

2.2 If there are signs that indicate a hemolytic reaction (fever, shivers, backache, reduced blood pressure, red urine, anterior chest pain, dyspnea, etc.) the transfusion must be stopped immediately and the following procedures performed in the department:

2.2.1 Check whether there was an error in identifying the patient or in identifying the blood unit.

2.2.2 Taking a new blood sample that is marked according to the rules and sending it with the blood unit (including transfusion set and fluids) to the blood bank.

2.2.3 The tests recommended for inquiring on a transfusion reaction in the blood bank or at the physician's discretion are:

2.2.3.1 Test of unit type – ABO, Rh.

2.2.3.2 Check of blood type on the old and new blood samples.

2.2.3.3 Direct Coombs test on the new and old sample.

2.2.3.4 Antibody screening of both samples.

2.2.3.5 Cross reaction of the blood unit with the two samples (before and after the transfusion).

2.2.3.6 Consider sending a blood sample from the unit and a blood culture from the patient for bacteriology, if there is suspicion of infection.

2.3 The result of an inquiry of a transfusion reaction is to be reported to the attending physician by the physician in charge at the blood bank or the party authorized thereby.

2.4 A non-hemolytic reaction to a transfusion:

Fever and shivers may appear as a result of antibodies against granulocytes, leukocytes or cytokines. In these reactions, some of the tests listed in section 2.2.3 may be performed in accordance with the decision of the director of the blood bank or a party authorized thereby.

2.5 Severe recurrent reactions of fever and shivers necessitate administering blood through a filter for removing leukocytes.

2.6 Recurrent allergic reactions of rash following a blood or thrombocyte transfusion necessitate rinsing the units in order to remove plasma.

3. Late reactions to the transfusion

3.1 Late hemolytic reaction

May appear within a few days after a transfusion. Despite a negative antibody assay and negative cross reaction, and cause late hemolysis. For finding the reason for the hemolysis, all of the tests indicated in section 2.2.3 must be performed. The inquiry and its reactions are to be kept in the patient card.

3.2 Post-transfusion infections

3.2.1 All cases suspected as infections after a transfusion must be investigated and the donation taking source informed.

3.2.1 All cases of liver damage from two weeks to 12 months after a transfusion must be investigated.

State of Israel, Ministry of Health

Director General Circular

No. 35/05 Dated: 2nd of Elul 5765 (September 26, 2005)

Subject: Preparation of the healthcare system for a pandemic of influenza

Background: The influenza virus undergoes frequent genetic changes that cause it to spread anew among the world population, causing morbidity and mortality, mainly among infants and elderly people. Populations at high risk for complications and healthcare system personnel are vaccinated against this influenza each year.

Pandemic of influenza: Periodically, a substantial change occurs in the structure of the virus, due to which the entire population of the world becomes particularly vulnerable to the new virus, resulting in it spreading rapidly across the world. There is a chance that this new virus will be particularly virulent, causing many deaths in all age groups. In the influenza pandemic that occurred in 1918, 50-100 million persons died, and enormous social and economic damage occurred. This pandemic is considered one of the most severe in human history.

Avian flu in humans: In 1997, a new virulent strain of avian flu appeared in Hong Kong, which infected humans too, and it continues to be active.
The disease is now considered diffuse and endemic in Southeast Asia and has spread to Eastern Europe as well. The latest reports indicate continued infection of humans from birds. As for September 2005, more than 60 people have died of the disease - about 50% of identified patients. Continued morbidity in humans increases the fear among professionals that there will be an exchange of genetic material between the avian flu strain and the human influenza strain, which may lead to a lethal pandemic, the formation of a human to human strain and rapid worldwide spread.

Preparedness for pandemic: the World Health Organization has recently warned that the danger of this strain becoming contagious to humans has substantially increased, and it has recommended that all countries prepare a plan to prepare for an outbreak of a violent pandemic.

Israel is preparing for the pandemic and has purchased antiviral drugs and has formed principles to prepare the healthcare system, the relevant government ministries and the various emergency agencies.

Preparations for a pandemic in the healthcare system:

The Ministry of Health has written a doctrine for the preparation of the healthcare system for a pandemic scenario.
The doctrine includes master principles for the preparation of hospitals for admitting and caring for patients and principles directed at giving reasonable conditions for care for all patients who report to healthcare organizations during the pandemic, while protecting the health of medical personnel.
The doctrine also has master principles for writing procedures in different settings.

Managers of units at all levels are requested to guide and ensure preparation based on the principles listed in the doctrine. These principles include writing procedures for relevant units and levels (management of healthcare organization, districts, administrations, clinics, hospitals), which include the issues listed in the master principles for writing dedicated procedures.

The management of the healthcare organizations must ensure readiness of all of the institutes under their responsibility, including receiving a copy of the pandemic procedure to be written at the various levels, and examining it, per standard procedure.
The directors of the healthcare organizations are requested to forward a copy of the pandemic procedure by healthcare organization management, to Dr. Dror Goberman, the director of the community medicine department at the Ministry of Health, by November 10, 2005.
The directors of hospitals are requested to forward a copy of the pandemic procedure written at the hospitals to the emergency division by November 10, 2005.

For questions concerning the principles of the doctrine, you may contact Mr. Shmuel Reznikovich (0577242319) or Dr. Ran Blitzer (0544757447) or the chairpersons of the professional committees.

The doctrine is available at the Ministry of Health website, www.health.gov.il with a link from the homepage.

Best regards,

Prof. Avi Shmueli

CC: MK Danny Naveh, Minister of Health
Dr. Boaz Lev., Assistant Director General
Dr. Yitzhak Berlovich – Assistant Director General, and head of the Medical Division
Prof. Manfred Green, Head of the National Center for Disease Control
Dr. Alex Loewenthal, Head of the Public Healthcare Services
Dr. Dror Guberman, Director of the Department of Community Medicine and Chairman of the Community Committee.
Dr. Meir Oren, Director of Hillel Yaffe Hospital and Chairman of the Advisory Committee to Hospitals
Dr. Danny Laor, Head of Senior Division for Emergencies
Mr. Shmuel Reznikovich, Administrative Manager, Netanya Geriatric Center and Coordinator of Pandemic Preparation
SB/73760

C – Preparation for Avian Flu

C1 – Avian Flu – Response to a Suspected or Diagnosed Patient

Definition of a case of a patient suspected of having avian flu

It has been decided to adopt the case definition of England that covers two aspects:
Clinical presentation and epidemiological criteria.
Clinical presentation:
Onset of fever (38° or higher) or a history of fever and respiratory symptoms (cough or dyspnea) necessitating hospitalization.
or

- Death due to a respiratory illness without a clear reason
- Epidemiological criteria, history of travel 7 days before the onset of the disease to a country or region in which avian flu has been reported in animals.
- The list of affected countries appears in the site: http://www.oie.int/eng/en_index.htm
- Direct contact (less than a meter) with live or dead domestic fowl, wild fowl or swine anywhere, including poultry markets.

or
At least one of the following exposures:

- Direct contact (at touching / talking distance) with an ill person suffering from severe respiratory symptoms or with a person from the regions above who has died for an unclear reason.
- A member of a group of sick healthcare workers who have severe respiratory symptoms without a clear cause.
- A laboratory worker with a risk for exposure to influenza A virus (H5N1).

Conditions of hospitalization and care for a patient who is suspected of having avian flu
Guidelines for treating a patient suspected of having SARS as specified in Medical Division Circular no. 17/44 disseminated on May 11, 2004 must be employed. The patient must be kept under contact and respiratory isolation. All laboratory tests required for identifying the pathogen must be performed as quickly as possible (including tests for identifying uncommon pathogens, chest radiogram if not performed previously. Additional samples must be kept separately for performing later additional diagnostic tests), there is no need to refer the patient to a specialized hospital.

Treatment of a patient with avian flu using neuraminidase inhibitors – oseltamivir 75 mg per os, twice a day for 5 days.
If the patient is diagnosed with avian flu, the isolation conditions must be continued: for adults, act according to these guidelines for 7 days after fever decreases, and for children younger than 12, years, continue 21 days from the onset of illness. If the clinical situation allows the patient to be discharged home before the end of this period, isolation conditions must be maintained at home as required for a patient with SARS.

Epidemiological investigation and chain of reporting
A report must be made immediately to a physician specializing in infectious diseases at the hospital, the director of the hospital and the district physician.

The district physician will investigate any case that has been defined by a specialist in infectious diseases as suspected of being avian flu while gathering epidemiological and other data that is necessary for deciding whether the case is suspected of being avian flu.
The district physician is to report any case that is suspected as avian flu to the department of epidemiology and infectious diseases in the Ministry of Health, which is to report it immediately to the Head of Public Healthcare Services and the Director of the National Center for Disease Control.
The head of the Public Healthcare Services will update the Director General of the Ministry of Health and the Chairman of the Pandemic Treatment Team.

Laboratory testing for diagnosing avian flu
See appendix that was prepared by the Central Virus Laboratory at Tel Hashomer. The tests are performed after approval from the district physician and an infectious disease specialist who have established the suspicion of avian flu.

Vaccination for healthcare personnel against influenza
Medical staff, Ministry of Agricultural staff (veterinarians, inspectors, laboratory staff, etc.) must be encouraged to be vaccinated every winter for influenza, thus for reducing the risk for recombination of a human virus with a H5N1 virus.

Treatment of healthcare personnel
Active monitoring by the health bureaus of fever and respiratory symptoms for healthcare personnel who come into contact with a patient suspected as having avian flu is recommended a week after contact, even if they continue to work.
If symptoms appear and their medical condition requires hospitalization, workers who report for medical care must report their exposure to avian flu. They will then receive all diagnostic and therapeutic considerations listed above.