

HEALTH PROMOTION AND DISEASE PREVENTION A Handbook for Teachers, Researchers, Health Professionals and Decision Makers	
Title	Disease Prevention in Pre-School Children
Module: 3.4	ECTS: 0.5
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Key words	disease prevention, child, pre-school age, systematic preventive examinations, purposed preventive examinations
Learning objectives	After completing this module students should: <ul style="list-style-type: none">• recognise the importance of disease prevention in pre-school age children;• increase knowledge about methods of disease prevention in pre-school age children; and• differentiate between systematic and purposed preventive examinations.
Abstract	One of the most important tasks of health care systems all over the world is to keep watch over health of the youngest population groups. Preventing various diseases by taking preventive measures in this population group saved millions of lives in the past. The paper presents the rough overview of the concept of disease prevention in preschool- and school-age children. The organisational scheme in Slovenia is used as an example. The consultation rooms in Slovenia are intended for healthy babies and children. They are not intended only for child's care, but also for giving practical advice to children's parents. Consultations are not limited only on child's care. Parents are also advised about various determinants of children's health e.g. appropriate diet as well. All the childrens frequent diseases are fought against according to the common doctrine as well. Several preventive systematic health examination and preventive measures are performed.

Teaching methods	Teaching methods include introductory lecture, visit to the dispensary room and attendance of preventive examination, and discussion with mentor after visit. Students after introductory lectures first carefully read the list of preventive activities and their description. Afterwards they visit the dispensary room and attend the course of systematic and/or purposed preventive examinations in practice. At the end, they discuss the lesson learned with their mentors and prepare a report.
Specific recommendations for teachers	<ul style="list-style-type: none">• work under teacher supervision/individual students' work proportion: 30%/70%;• facilities: a dispensary room or other disease-prevention unit;• equipment: no special equipment needed;• training materials: list of preventive activities and their description;• target audience: students of medicine, preferably at the end of the curriculum.
Assessment of students	Assessment is based on written report on visits at the dispensary room.

DISEASE PREVENTION IN PRE-SCHOOL CHILDREN

Martin Bigec, Lijana Zaletel Kragelj

The right of all rights, is the right of being alive,
Of being a child born to be happy,
Of having parents by,
And of being able to hug them for goodbye.
/Tone Pavček, Slovene Poet/

Theoretical background

Definition of disease prevention

Disease prevention is defined as actions aimed at eradicating, eliminating, or minimizing the impact of disease and disability, and if none of these is feasible, retarding the progress of disease and disability. It covers measures not only to prevent the occurrence of disease, such as risk factor reduction, but also to arrest its progress and reduce its consequences once established (1, 2).

Levels of disease prevention

Traditionally, we distinguish between three levels of disease prevention, called primary, secondary, and tertiary. A fourth level, called primordial, was added later (2). The boundaries between these levels are not always perfectly and clearly demarcated. Each of these levels is related to different goal:

- primordial level of prevention is concerned with enhancing health by non-specific measures, health promotion being one of them, e.g. health promotion in kindergartens (3) and schools (4);
- primary level of prevention aims at keeping a disease from ever beginning or a trauma from ever occurring. Examples include immunization, reducing household hazards, motivating abstinence from illegal drugs, and reducing risk factors for heart disease. Primary prevention programmes aim to reach the widest possible population group who is or might become at risk for a given health problem;
- secondary level of prevention involves the early detection and early intervention against disease before it develops fully. Screening programs are prime examples of secondary prevention efforts, providing that persons who screen positive for a disease or condition receive prompt and effective intervention;
- tertiary prevention takes place after a disease or injury has occurred. It seeks not only to prevent deterioration and complications from a disease or injury, but also to rehabilitate and return the patient to as full physical, mental, and social function as possible.

All levels are important in controlling of health problems of children, but for preserving and enhancing their health, especially primordial, primary and secondary levels.

Disease prevention in children and its significance

To keep watch over health of the youngest population groups is (or should be) one of the most important tasks of health care systems all over the world. Preventing various diseases by taking preventive measures in this population group saved millions of lives so far among which especially vaccinations against communicable diseases were important (5).

We know that it is always better to prevent a disease or an external trauma than to treat it after it happens - prevention saves individuals, and their families, from pain, suffering, and loss of function, prolonged disability, or premature death.

Prevention programs, especially prevention programmes in childhood, also save money, although maybe this is not visible directly:

- health-promoting prenatal care, can deliver healthier babies, and preventive medicine in infancy and childhood will produce healthier children who can grow to their full potential and learn a full array of cognitive and motor skills;
- effective programs to protect children and youth from injury and violence also will generate a healthier work force and lower the frequency of disabled persons needing health care;
- introducing healthy lifestyle habits early in childhood, and reinforcing them through young adulthood, will prevent much of the current morbidity and mortality rates due to cardiovascular and respiratory diseases and cancers, which attack adults.

There exist more or less similar systems for disease prevention in children all over the world. The system for disease prevention in children in Slovenia is used as an example of such a system.

Case study – the disease prevention system for pre-school children in Slovenia

Basic aspects of disease prevention system for children and youth in Slovenia

The health care system for children and youth is in Slovenia extremely well organized. Its main characteristic is that it is comprehensive and integrative.

As such, it is regulated by several legal documents. The most important legal regulation that regulates the implementation and schedule of preventive activities for children in Slovenia is a special regulation »Navodilo za izvajanje preventivnega zdravstvenega varstva na primarni ravni« (in English: »Instructions for the implementation of preventive health protection at the primary level«) (Instructions) (6). It was adopted in 1998, on the basis of Health Care and Health Insurance Act (in Slovene »Zakon o zdravstvenem varstvu in zdravstvenem zavarovanju) (7).

The purpose of the examinations is getting to know child's medical state (on an individual and on a group level), active medical supervision, finding medical problems and consulting parents and children. It includes a measurement of physical growth and development, an estimation of physical and mental health, discovering negative social factors and unhealthy life habits of the family environment.

According to the Instructions regulation (6), a preventive medical care on a primary level includes systematic health examinations for population groups from birth up to the end of high education (Table 1).

Table 1. The list of systematic preventive examinations for children and youth according to Instructions for the implementation of preventive health protection at the primary level in Slovenia (6).

Age group	Systematic examination
Pre-school children (age: birth-5 years):	<ul style="list-style-type: none">• a systematic examination of a child in the age of one month,• a systematic examination of a child in the age of three months,• a systematic examination of a child in the age of nine months,• a systematic examination of a child in the age of twelve months,• a systematic examination of a child in the age of eighteen months,• a systematic examination of a child in the age of three years,• a systematic examination of a child in the age of five years
School children (age: up to 19 years):	<ul style="list-style-type: none">• a systematic examination of a child at entry to the school,• a systematic examination of a child in the 1st class of the primary school,• a systematic examination of a child in the 3rd class of the primary school,• a systematic examination of a child in the 5th class of the primary school,• a systematic examination of a child in the 7th class of the primary school,• a systematic examination of a child in the 1st grade of the secondary school,• a systematic examination of a child in the 3rd grade of the secondary school,
Students	<ul style="list-style-type: none">• a systematic examination of a student in the 1st grade of the university study,• a systematic examination of a student in the last grade of the university study

In continuation, systematic and purposed examinations in pre-school children are presented with detailed description of activities (8). These activities are carried out at special health care units, known as Dispensaries for Children. Administratively, these units are special units of Community Health Centres.

Dispensaries for Children

Definition

Dispensaries for Children are special units aimed at organizing and implementing comprehensive health care programmes for children. They are defined as:

- the highest organisational form of pediatric out-hospital comprehensive and sustainable treatment of newborns, babies, and pre-school children; it is not only preventive unit, and it is not only curative unit (9);
- the specific unit of a community health centre, which in a defined territory, in collaboration with general primary health care, directly performs the primary health care of children from birth to the age of 6 years (8).

Short history

Community health centres are the institutions, which bear traditions from the ideas of Andrija Štampar, a distinguished scholar in the field of social medicine, and one of the “fathers” of World Health Organization, born in Croatia. The first community health centre in Slovenia was established in 1926 (10, 11). The original idea was to deliver primary health care to the population at the level of the local communities, and to provide various

types of care in an integrated approach, especially to endangered population groups. For this purpose community health centres had special units, called dispensaries (10, 11). Dispensaries for children were one of the most important of them, and every community health centre had such a unit.

The role of Dispensaries for Children

A Dispensary for Children is obliged to organize a consulting network and to provide everything needed for work, like the material, the experts, etc.

For healthy babies and children in the age from 0 to 18 months, at the Dispensaries for Children there exist special Consultation rooms for children and parents.

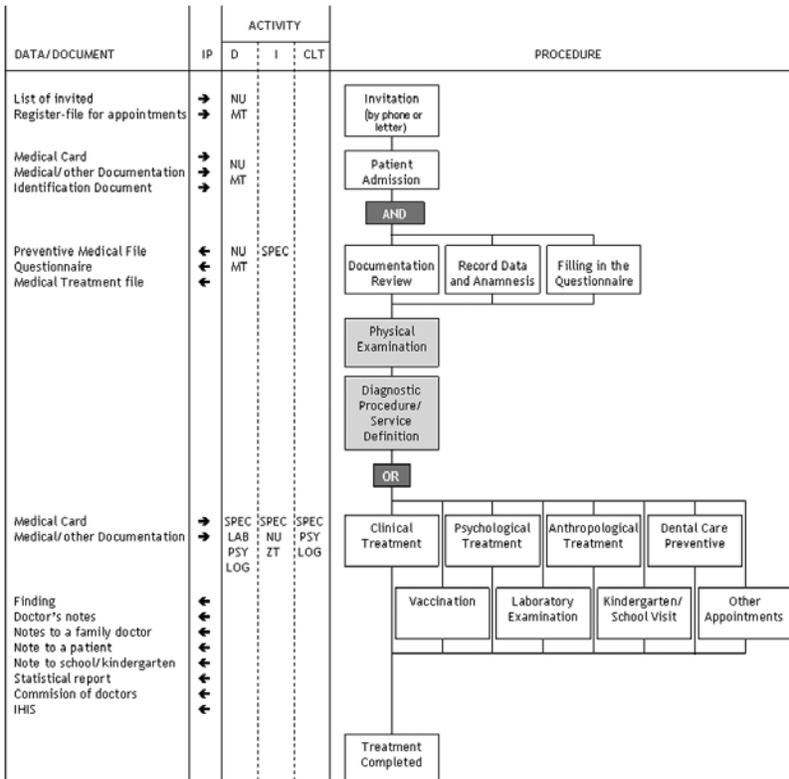
The Dispensary also has to set the minimum of what a medical examination should involve with each child according to the requirements specified in Instructions (6).

- child's growth and development is observed globally in Dispensaries for Children. The results are registered in files. At each visit, a child is weighed and his head is measured. Special attention is paid to the motive functions, to psycho-physical functions, and to the size and growth of the set of teeth. In case of any deviations, an individual consulting and directing a child to another institution or arranging for the following examination, has to be provided. At the next examination we check whether the measurements have been taken or not;
- health personnel advise parents about appropriate nutrition according to up-to-date doctrine. The great emphasis is put on the breastfeeding as an exclusive nutrition up to six months of age. A fact that an each child an individual being is, has to be considered, therefore comestible schemata only mean directions for consulting;
- a doctor and a nurse consult about adequate nutrition;
- the consultation rooms are intended for child's care, for giving practical advice, which is not limited only on child's care also parents are advised about day time management, about needs for sleep, clothes, hygiene, about needs of being active on fresh air, about arranging their homes, beds, microclimate, washing linen and the use of washing detergents and modern domestic devices. A nurse in the home care service plays an important role in an examination of a child's moving space and a social environment. She is a part of a team of experts and she reports to the doctor about the state of conditions of the child's environment at the time of her visit;
- in the consulting rooms, all the children's frequent diseases are fought against according to the common doctrine. The most frequently appearing diseases with children are rickets, caries and an inborn hips deformation. In compliance with the pre-mentioned, parents are given the instructions and the prescribed vitamin preparations, iron and minerals; and the children are directed to the required examinations (e.g. ultrasound examination of hips, lab, etc.). We carry out required measurements and practical demonstrations e.g. broad swaddling which is supervised and registered in files;
- a continual vaccination according to the prescribed immunization programme or a calendar of the vaccination is carried out in the consultation rooms;
- highly responsible task of the consultation rooms is carrying out screenings, which help us find even the smallest suspicion of the deviation in growth which leads to directing a child to an appropriate expert or to another institution;
- if a paediatrician establishes an disease, he/she prescribes a suitable therapy and refers a patient to his selected paediatrician-family doctor;

- of the utmost importance for the medical doctor is the knowledge about child's social environment. This knowledge improves expert work since he/she is familiar with positive and negative factors that influence a child and what he/she is going to be exposed to. Nurses in the home care service working in the team are the most suitable for this task. Further education and better qualifications are required to establish health in comparison to disease. For that reason, a team in the consulting rooms includes at least a doctor – in Slovenia a specialised paediatrician - and a registered nurse from the Dispensary for Children. In the case of specific problem, other medical experts are asked for cooperation.

Figure 1 shows roughly the organisation of work during the preventive examination according to an organisational regulation, which determines a person responsible for each activity during the course of the examination.

Figure 1. Preventive examination procedure for pre-school and school children in Slovenia. LEGEND: IP – information pathway, D – documentation, I – information, CLT – clinical treatment, NU – nurse, MT – medical technician, SPEC – physician specialist (paediatrician, school specialist, pedontologist), LAB – laboratory, PSY – clinical psychologist, LOG – expert skilled in logopedia, IHIS – Institute of Health Insurance of Slovenia.



Systematic preventive examinations for pre-school children

A systematic examination of a child in the age of one month

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. A maternity hospital or a nurse in the home care service directs a child to an examination. She introduces child's health care to his parents from the time of his birth until the time of starting school. The examination is carried out by a preschool doctor's team. It includes:

- review of a medical documentation:
 - a maternal book,
 - a letter of dismissal from a maternity hospital;
- child's personal history and social development:
 - health status starting from the time of birth on,
 - child's temper,
 - child's individualities,
 - taking up his/her role in a family;
- family history:
 - hereditary diseases,
 - health problems,
 - chronic diseases and disabilities of family members,
 - family life style,
 - awareness of importance of healthy lifestyle,
 - addiction diseases of family members;
- social history:
 - family economic status,
 - dwelling standard,
 - parents' level of education,
 - type of a family community;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination;
- health education - individual consulting about:
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing of a baby,
 - swaddling,
 - sleeping, and
 - mental development of a child;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment and ultrasound examination (US) of the hips, and

- eventual note to a personal paediatrician;
- vaccination according to the national immunization programme, and registration of information on performed vaccination in the medical file and personal document.

A systematic examination of a child in the age of three months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - a discussion about problem occurring about child's feelings within the family,
 - a discussion about problems occurring;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing of a baby,
 - swaddling, and sleeping, and
 - mental and physical development of a child;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed health examination and vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

A systematic examination of a child in the age of nine months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about problem occurring about child's feelings within the family,
 - discussion about problems occurring;

- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing,
 - swaddling,
 - sleeping,
 - mental and physical development:
- conclusion of the examination:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed health examination,
 - evaluation of the side effects after vaccination,
 - eventual vaccination according to the national immunization programme,
 - eventual note to a personal paediatrician;

A systematic examination of a child in the age of twelve months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about child's feelings within the family,
 - discussion about child's development,
 - discussion about problems occurring,
 - discussion about conquering fear of separation from mother/parents before admission to the kindergarten,
 - discussion about getting used to a chamber pot,
 - discussion about caries prevention;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,

- laboratory examination as for indications,
- estimation of contraindications for vaccination,
- US of the hips;
- health education - individual consulting about:
 - nutrition,
 - preventing a deficiency diseases and caries,
 - nursing,
 - swaddling,
 - sleeping,
 - mental and physical development;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed examination,
 - estimation of the side effects after vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

A systematic examination of a child in the age of eighteen months

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. The children are appointed to this examination at the previous examination. The examination is carried out by a team of a preschool doctor. It includes:

- review of a medical documentation and instructions for parents or guardians;
- personal history:
 - discussion about child's feelings within the family,
 - discussion about child's development,
 - discussion about problems occurring,
 - discussion about asserting child's will,
 - discussion about conquering fear of separation from mother/parents before/after admission to the kindergarten,
 - discussion about getting used to a chamber pot,
 - discussion about caries prevention;
- physical examination:
 - screening tests: body weight, height, head's dimension, chest's dimension, a dimension of calves, an evaluation of vision and hearing (set for Denver test), Denver developmental screening test, developmental neurological status, detection of possible birth injuries and developmental anomalies;
 - comprehensive physical status,
 - laboratory examination as for indications,
 - estimation of contraindications for vaccination,
 - US of the hips;
- health education - individual consulting about:
 - nutrition,

- preventing a deficiency diseases and caries,
- nursing,
- swaddling,
- sleeping,
- mental and physical development;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - appointing a child to the following systematic examination,
 - directing a child to a purposed examination,
 - estimation of the side effects after vaccination,
 - eventual note to a personal paediatrician;
- vaccination according to the national immunization programme.

Each systematic examination in the age from 0 to 18 months has to include Denver II development screening test. It has to be carried out according to principles of the doctrine. In case when a child does not pass the examination partly or entirely, he is again invited to testing, following the instruction for DENVER II. In case when a child does not pass the test entirely or partly more than once or repeatedly, he has to be directed to a proper specialist or to a developmental dispensary. DENVER II findings are registered in the child's medical file.

It takes 15 minutes to carry out the DENVER II. It is carried out by a specially trained doctor or a nurse or a medical technician. In the case, that it is carried out by a nurse or a medical technician, positive and negative findings are transferred in knowledge to a doctor.

A systematic examination of a child in the age of three years

The examination is performed in the presence of one or both parents or guardians at the health centre or in private consulting rooms. They are invited in writing with a card, which contains pictures of the objects and animals that are on the vision testing chart. At home the child names the pictures, so that vision testing is not doubtful because of incorrect naming of the picture. The test is performed by the preschool doctor's team and the psychologist's team from the mental health department.

First part of the systematic examination at the age of three years is systematic psychological examination (SPE) is a comprehensive procedure for assessment of children's difficulties in character and psychomotor development. The aim of this examination is the detection of causative factors in the family and the child's wider surroundings. The SPP-3 method is used, which comprises:

- questionnaire for parents-1,
- questionnaire for parents-2,
- test trials,
- list for summarizing data on the child,
- discussion with parents and eventual counselling.

Second part of the systematic examination comprises:

- review of a medical documentation;
- personal history:
 - discussion of the child's general feeling in the family,
 - discussion of the child's development,
 - discussion about problems occurring,
 - discussion about asserting child's will,
 - discussion of how the child feels in kindergarten or with peers,
 - discussion on appetite, bedwetting, defecation;
- physical examination:
 - screening tests: body weight, height, head circumference, chest circumference, Denver developmental screening test, general neurological status, testing of vision (chart with pictures of objects and animals), Adam's forward-bend test, measurement of blood pressure, blood film (haemogram: E, Hb, Ht), assessment of urinary tract function (urine: spec. gravity, protein, sediment), stool for parasites,
 - comprehensive physical status,
 - laboratory examination as for indications;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - consultation with psychologist,
 - eventual note to a personal paediatrician;
- vaccination according to national immunization programme.

A systematic examination of a child in the age of five years

The examination is performed in the presence of one or both parents or guardians at the health centre or in private consulting rooms. They are invited in writing with a card, which contains pictures of the objects and animals that are on the vision testing chart. At home, the child names the pictures, so that vision testing is not doubtful because of incorrect naming of the picture. The test is performed by the preschool doctor's team, and the speech therapist from the mental health department.

The preventive speech therapy assessment in the 5-year-old child detects speech, language and communication disturbances. The systematic speech therapy assessment comprises:

- diagnostic procedures for assessing speech and language abilities and communication: examination of articulation, grammar, syntax and semantics, and
- assessment of communication.

The systematic medical examination comprises:

- review of a medical documentation;
- personal history:
 - discussion of the child's general feeling in the family,
 - discussion of the child's development,
 - discussion of how the child feels in kindergarten or with peers,
 - discussion on lifestyle of a family;

- physical examination:
 - screening tests: body weight, height, head circumference, chest circumference, Denver developmental screening test, general neurological status, Adam's forward-bend test, testing of vision (chart with pictures), testing of hearing (ADG) according to indications, measurement of blood pressure, blood film (haemogram: E, Hb, Ht), assessment of urinary tract function (urine: spec. gravity, protein, sediment), blood cholesterol level,
 - comprehensive physical status,
 - laboratory examination as for indications;
- health examination conclusions:
 - evaluation of findings,
 - eventual diagnosis of diseases,
 - preparing doctor's notes for further treatment,
 - consultation with speech therapist and psychologist,
 - eventual note to a personal paediatrician;
- vaccination according to national immunization programme.

Special purpose preventive examinations

Special purpose examination for babies in the age of two months

The examination is carried out by nurse or a medical technician in the Dispensary for Children. In case of problems in child's development, a child is directed to an examination by a paediatrician.

Special purpose examination for children after a systematic examination

The purpose of the examination is to follow the growth and development of children, in whom deviation from normal is found on regular systematic examination. Although this still cannot be defined as a disease state, it requires more frequent examinations than the normal intervals between the prescribed systematic examinations.

Special purpose examination before admission to the kindergarten

The examination is carried out in the presence of one or both parents or guardians in the health institution premises or private medical premises. Parents make an appointment for their child before they start attending kindergarten. In case of starting the kindergarten at the same time simultaneous with the systematic examination at the age of 9, 12 or 18 months, only the missing part of the purposed examination is carried out. Before starting a kindergarten a child has to be vaccinated according to republic programme of prophylaxis and chemoprophylaxis. The examination is carried out by a team of a preschool children's doctor.

The purpose of this examination is to encourage breastfeeding, which is at this checking point highly endangered activity, and prevent consequences of developmental dystrophies. It includes:

- measuring body weight and height (increase in a month), eventual supervision of the breastfeeding;
- review of a medical documentation;
- personal history;
- physical examination:

- screening tests: body weight, height, head's dimensions, chest's dimensions,
- comprehensive physical status,
- laboratory examination as for indications (haemogram: E, Hb; urine, albumen, sediment; excrement for parasites and germs),
- review of vaccination data,
- eventual vaccination;
- health education about conquering fear of separation before attending kindergarten;
- health examination conclusions:
 - evaluation of findings,
 - eventual note to the kindergarten.

Special purpose examination of children before attendance at organized health camp

The specific purpose examination is performed before attendance at an organized health camp, chiefly to detect infectious diseases, which could also threaten other healthy participants. It is important to establish whether the child at present has such a state of health that he could decrease the rehabilitative effect of the camp. The doctor gives written instructions and prescribes the necessary medication for the duration of the camp. The examination is normally performed at the health centre or in private consulting rooms. The test is performed by the doctor and nurse. The examination comprises:

- examination of medical records,
- recommendation to the committee for referral for treatment at a health resort;
- notification to the camp paediatrician.

Special purpose examination of children before treatment at a health resort

The purpose of this examination is to check the state of the child's disease, for which he/she is being sent to the health resort, exclude infectious diseases before departure, notify the doctor about the child's disease and possibly other chronic diseases, food allergies, drug allergies and regular treatment. The examination comprises:

- examination of medical records, including immunization records;
- immunization if indicated;
- recommendation to the committee for referral for treatment at a health resort;
- notification to the resort paediatrician.

Special purpose examination of children to prevent the spread of infectious diseases – those not fully immunized

Special purpose examination of children before immunizations in the 4th, 5th and 13th to 15th month and in children with temporary contraindications and those not fully immunized for age according to the republic immunization programme, otherwise immunization is linked to the systematic examination. The examination comprises:

- exclusion of clinical signs of infection,
- epidemiological situation at home, at preschool and in the child's wider environment,
- examination of the medical records for contraindications for immunization,
- assessment of contraindications, and
- vaccination.

Special purpose examination of children at the outbreak of epidemics of infectious diseases

This special purpose examination is compulsory under the law on infectious diseases because of the particular social interest and timely protection of the healthy population, early detection of patients, immediate treatment of the sick and various preventive activities (isolation, hygienic measures, drug prophylaxis, specific health education etc.) and prevention of complications and consequences of diseases. The contents of and magnitude of the service depends on the epidemiological situation.

Programmed health education for pre-school children

For these activities the public health centre and private doctor must annually prepare a plan, on the basis of analysis from the previous year, from which the specific needs of the particular health region are evident.

The purpose of health education is to inform and motivate individuals to actively care for their own health. Health education programmes enable the individual to gain knowledge, form points of view and behavioural patterns for a healthy lifestyle. Targeted groups for health education by the preschool doctor's team are: parents, teachers and children.

Health education can be implemented in the health centre or consulting rooms (in the counselling room, areas used for preventive activities etc.) or in preschools. The programme is implemented by a paediatrician and nursing sister, who both have training in health education.

Programmed health education takes place in the following forms:

- health education in counselling rooms for parents and children
- health education for tutors, parents and children (lectures, teaching workshops, work in small groups)
- consultation with parents, tutors and social workers over the health and behavioural problem of children.

Consultation and treatment are aimed at solving specific problems of children connected with their bio-psycho-social development, health problems, behavioural problems etc. Parents, tutors and guidance workers must be included in the management. The consultation is not advice given at a visit to the consulting rooms, nor work in the guidance room or team management. The work takes place in the preschool dispensary.

- preventive work of the paediatrician's team in nurseries, preschools and centres (where there is no paediatrician permanently employed)

The purpose of this work is to remove or decrease harmful influences on the health of children that arise from their living environment and comprises:

- continued cooperation with principal and guidance staff;
- analysis of the state of health of children and report on this to the director and guidance staff at the preschool;
- preparation of programme for health education in the preschool for the current school year;
- participation in two teachers' conferences (lecture with one programmed theme and one theme of own choice);
- counselling on nutrition, menu preparation and diets;
- counselling on preparation of activities from the viewpoint of improving healthy lifestyle;

- counselling on safety in the room;
- judgement and assessment of children's work area from the point of view of ergonomics and suitability of furniture;
- counselling on the basis of findings on hygienic conditions in the preschool in cooperation with the health inspector and specialist hygiene doctor from the regional institute.

Disease prevention programme limitations and deficiency

From the Instructions document, which is publicly available, it is clear, that an important segment of preventive paediatric preventive activities for pre-school children has been omitted, and that is the care of the unborn child and newborn.

The Instructions need urgently to be supplemented with contents of preventive examinations aimed at the care of the foetus and healthy pregnancy and the newborn. It is necessary to emphasize the significance of breastfeeding before the child's birth, and also in the clinic for women and at preventive examinations of pregnant women, at classes for parents and at visits from the home nursing service. It is especially important to emphasize breastfeeding in the maternity hospital and in the first months of life. Breastfeeding is unfortunately not precisely defined anywhere, although it is indirectly at each systematic examination under healthy nutrition in the framework of health education.

The specific purpose examination at the age of 2 months is aimed mainly at supervision of the child's progress and feeding. At this examination and the systematic examination of the baby in the first month of life, and at neonatal home visits from the home nursing sister, it is extremely important to advise on the meaning of and correct breastfeeding, as it is known that the majority of breastfeeding mothers stop breastfeeding when the child is about 6–8 weeks of age.

Exercise

Task 1:

Carefully read the instructions for the implementation of preventive health protection at the primary level in your country, e.g.:

Instructions for the implementation of preventive health protection at the primary level. Official Gazette of the Republic of Slovenia, 1998; 19: 1253-1282.

and

Bigec M. Preventive programmes in the children's dispensary (in Slovene). *Slov Pediatr* 2000;7(Suppl 1):23-31.

Task 2:

Visit one of children's dispensaries (choose your destination from the list of appointed dispensaries and potential mentors) and be present at least three times (preferably three working days) at systematic/purposed preventive examinations.

Task 3:

Discuss your experience with the mentor.

Task 4:

Write a report on your visit, including your opinion on importance of this kind of medical activities.

References

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4. World Health Organization. Promoting health through schools. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion. Geneva: World Health Organization, Technical Report Series No.870. WHO, 1997.
5. Centers for Disease Control and Prevention Atlanta. Ten Great Public Health Achievements - United States, 1900-1999. MMWR. 1999;48:241-3. Available from: URL: <http://jama.ama-assn.org/cgi/reprint/281/16/1482.pdf> (Accessed: August 28, 2007).
6. Instructions for the implementation of preventive health protection at the primary level. Official Gazette of the Republic of Slovenia, 1998; 19: 1253-1282.
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8. Bigec M. Preventive programmes in the children's dispensary (in Slovene). *Slov Pediatr* 2000;7(Suppl 1):23-31.
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Recommended readings

1. Instructions for the implementation of preventive health protection at the primary level. Official Gazette of the Republic of Slovenia, 1998; 19: 1253-1282.