

# Written Patient Education in Pediatric Nursing - in the Treatment of Child Patients with Infectious diseases

Sari Kuitunen  
Maiju Mäkelä

Bachelor's Thesis  
November 2010

Degree Programme in Nursing  
Social services, health and sport



JYVÄSKYLÄN AMMATTIKORKEAKOULU  
JAMK UNIVERSITY OF APPLIED SCIENCES



Author(s) KUITUNEN Sari and MÄKELÄ Maiju	Type of publication Bachelor's Thesis	Date 15.11.2010
	Pages 25	Language English
	Confidential ( ) Until	Permission for web publication ( X )
Title Written Patient Education in Pediatric Nursing – in treatment of child patients with infectious diseases		
Degree Programme Degree Programme in Nursing		
Tutor(s) TUOMI, Sirpa		
Assigned by Pediatric ward 1, Central Finland Central Hospital		
Abstract <p>The objective was to produce a clear and easy to use information leaflet for the patients, their families, nursing staff and nursing students of Pediatric ward 1 in Central Finland Central Hospital. The leaflet consists of information about the pediatric wards' most common infectious diseases. The additional intention was to create coherent information about the diseases in question and the nursing care related to them.</p> <p>The Bachelor's Thesis' project was to research available scientific literature concerning patient education in pediatric care. A written review was produced based on the gathered knowledge. The product of the project was the leaflet for the ward, which based on the theory that was researched.</p> <p>However all research proves that the area is important to take into consideration in all health care. Through the project, it became clear that there is not enough information available on pediatric patient education.</p> <p>There is a need for development in pediatric patient education, because patient education should be different with children than with adults because the needs are different. There is not enough literature about the topic written during this decade and it would be needed for unite and functional conventions. Hopefully the Bachelor's Thesis inspires future research on this topic because of its relevance.</p>		
Keywords Patient education, written material, pediatric, infectious diseases		
Miscellaneous As appendix, two leaflets both in Finnish and English		



Tekijä(t) KUITUNEN Sari ja MÄKELÄ Maiju	Julkaisun laji Opinnäytetyö	Päivämäärä 15.11.2010
	Sivumäärä 25	Julkaisun kieli English
	Luottamuksellisuus ( ) saakka	Verkojulkaisulupa myönnetty ( X )
Työn nimi Written Patient Education in Pediatric Nursing – in treatment of child patients with infectious diseases		
Koulutusohjelma Degree Programme in Nursing		
Työn ohjaaja(t) TUOMI, Sirpa		
Toimeksiantaja(t) Pediatric ward 1, Central Finland Central Hospital		
Tiivistelmä <p>Opinnäytetyön tavoitteena on tuottaa Keski-Suomen Keskussairaalan lastenosasto 1:n potilaille, heidän perheilleen, hoitohenkilökunnalle ja hoitotyön opiskelijoille selkeä ja helpokäyttöinen kirjallinen opaslehti. Opaslehti sisältää tietoa lastenosastolla yleisimmin esiintyvistä infektiosairauksista. Lisäksi tavoitteena oli luoda yhteneväistä informaatiota kyseessä olevista sairauksista ja niihin liittyvistä hoitotoimenpiteistä.</p> <p>Opinnäytetyön projekti-osuudessa keskityttiin kirjalliseen ja tutkittuun tietoon potilasohjauksesta lapsiin liittyen. Kirjallisuuskatsaus tehtiin tutkitun tiedon perusteella. Projektin tuotoksena oli tutkittuun teoriaan pohjautuva opaslehti osastolle.</p> <p>Kirjallinen selvitys osoittaa, että aihealue on tärkeää ottaa huomioon koko terveydenhuollon eri osa-alueilla. Opinnäytetyöhön liittyvän kirjallisen selvityksen edetessä kävi selväksi, että lapsiin liittyvästä potilasohjausmateriaalista ei ole tarpeeksi tietoa saatavilla.</p> <p>Lasten potilasohjauksen kehittämiseen on tarvetta, siitä syystä, että potilasohjauksen tulisi olla erilaista lapsilla kuin aikuisilla koska tarpeet ovat erilaiset. Tällä vuosikymmenellä aiheesta ei ole kirjoitettu kirjallisuutta tarpeeksi, jota tarvittaisiin yhtenäisten ja toimivien käytänteiden rakentamiseen. Opinnäytetyön toivotaan innostavan tutkimusta tästä aiheesta tulevaisuudesta sen tärkeyden takia.</p>		
Avainsanat (asiasanat) Potilasohjaus, kirjallinen ohjausmateriaali, lastentaudit, infektiotaudit		
Muut tiedot Liitteenä kaksi opaslehtistä suomeksi ja englanniksi		

## Contents

1 Introduction	2
2 Patient education	3
2.1 Definition of patient education	3
2.2 The quality of patient education	4
2.3 Different patient education methods	5
2.4 The technicalities of written patient education material	6
2.5 Significance of patient education	8
2.5.1 The benefits of patient education for children and their families	8
2.5.2 The importance of written material in patient education	9
3 Different perspective and conceptions concerning patient education	10
3.1 Patients' perspectives and conceptions about patient education	10
3.2 The perspectives of adolescents	11
3.3 The ideal patient education session from the adolescents' point of view	13
3.4 The perspectives of the health care staff	14
3.5 Encountering a child patient	15
3.6 Parents' experience on pediatric patient education	16
4. Realization of the project	16
5 Discussion	18
5.1 Evaluation of the project	18
5.2 Evaluation of the leaflet	19
5.3 Conclusions and Future Perspectives	20
References	23
Appendix	

## Introduction

The purpose of this Bachelor's Thesis was to clarify the concept patient education as well as its purpose and significance for the health care professionals, for the patients and for their close ones. Patient education has a major role in health care professional's daily work and it can have considerable effects on patients' lives. One important objective of this project was to develop written patient education material for pediatric care.

In this bachelor's thesis the main focus on pediatric patient education. There is a great deal of studies concerning patient education but not so many concerning pediatric patient education. When working with children and educating them there are several factors that have to be taken into consideration; for example the age and developmental level of the child, the date of diagnosis, the parents and their involvement, the child's current knowledge about the diagnosis and taking the preparation of the child into consideration.

This Bachelor's Thesis has been done as a project. According to Silfverberg (2007, 21) a project is, as its objectives, clearly defined and scheduled ensemble of assignments that are executed by an organization that is created for it with resources that are defined in advance.

The request for the topic came from Central Finland Central Hospital's pediatric ward. They had a demand for an educational leaflet concerning the most common infectious diseases met on their ward. The leaflet was meant for the patients and their parents. The ward's request was that the common vocabulary should be used in the leaflet. The ward expressed their need for written material in English as well as in Finnish, due to the increase of multicultural patients. Due to the short inpatient times and the work load of the health care professionals, the importance of written patient education material has increased. Written material is easy and ready to use.

The theory used in this thesis is based on literature; articles from the internet databases such as Ebsco, Medline and Cochrane. Articles were also found in medical journals and nursing science journals. Some of the keywords used during the information research were pediatric patient education, written patient education, pediatric care, patient education in pediatrics and written patient education material.

Some of the articles were based on relevant research studies. Textbooks and guides were also used during the background search, mainly due to the lack of research on the topic.

The term “patient education” was chosen because after our study, we discovered that this term comprised the widest extent of contexts. For example the term “patient guidance” was seen by some sources to focus more on the emphatic aspect and the term “patient counseling” as more advice giving. We felt that the word “education” was formal enough, but also contained the humane perspective.

## 2 Patient education

Becoming ill is many times a new and strange situation. It can raise many kinds of new feelings for the patient and their close ones. These feelings can be, for example, feelings of being helpless in front of the disease, feelings of insecurity and uncertainty. When coping with such a situation, it is important that both the patient and their close ones receive sufficiently understandable information about the disease, possible clinical examinations and treatments. (Torkkola, Heikkinen & Tiainen 2002, 23-24.)

### 2.1 The definition of patient education

The concept of patient education can be defined in various ways. Leep Hunderfund and Bartleson (2010, 518) have defined patient education to be any advice or information including verbal, audiovisual, written or otherwise given to patients by health care professionals. The aim of patient education is to improve patients' understanding of their health condition and also to help them to understand their possible treatment options. (Leep Hunderfund and Bartleson 2010, 517-536.)

Yoon, Conway and McMillan (2006, 131) state development of health-care has led to changes in the definition of the concept of patient education. Yoon and co-authors (2006) say that nowadays the concept of patient education is means the support of patient empowerment and participation in the more comprehensive domains of health promotion and disease prevention where as it used to mean only narrowly

focused and medically dominated patient teaching. Patient education has also shifted from unplanned, fragmented and informal delivery of information to carefully planned and thoroughly implemented systematic programmes that improve the informal teaching given by health care professionals. (Yoon, Conway & McMillan, 2006 129-35.)

*Education is one of the means of improving health and is often the main one that is used by the health care professionals. Health education is concerned with communicating information and with building the motivation, skills and confidence necessary to take action to improve health. (Promoting health 2007, 16.)*

According to Hirvonen (1992) and Palmu & Suominen (1999), the patients are able to take part in the decision-making and they are able to take better care of themselves when they have had information about their condition and about their disease. Mäkelä and Nikunen (1997) say that the patient education given to the patients themselves and to their close ones reduces fear and anxiety related to the disease. The objectives of patient education is to help the patients take care of themselves as well as possible and to help them cope with the disease. Many times the patient needs personal education. Well-succeeded patient education can shorten the time of the treatment in a hospital and reduce the number of hospital visits. (Torkkola et al 2002, 24.)

## 2.2 The quality in patient education

The quality in patient education can be defined in various ways. One of the definitions states that the quality in patient education is action that is bound to the backgrounds of the nurse and the patient and based on the nurse's professional responsibility, as well as interactive relationship between the nurse and the patient. In addition being active and target-oriented, effective, adequate and equipped with proper resources belong to the definition of quality in patient education. (Kääriäinen 2008, 10.)

Good quality patient education is part of good care. The patients have a right to receive education and the health care professionals are bound by the law,

regulations, guidelines and professional ethics to educate the patients. In order to give good quality patient education the nurse has to have a willingness to do it, knowledge and skills related to the matters in need of education. Moreover, knowing how to educate the patients, why to educate and when to educate is important in order to give good quality patient education. Double-checking that the patient has had enough education and really understands what is being told is important because the continuity of the nursing care is in many cases left to the patients' and their relatives' responsibility. (Kääriäinen 2008, 10-13.)

### 2.3 Different patient education methods

Choosing the right method for patient education requires knowledge about how the patient absorbs the information that is given and about what the objective of the patient education is. It is the health care professional's responsibility and job to find out what the best way is for the patients to receive information. Some patients understand the matter of discussion when there are pictures related to the issue. Some patients have a strong reaction to the educator's voice; in these situations one can use the rhythm of the speech as a teaching method. (Kyngäs, Kääriäinen, Poskiparta, Johansson, Hirvonen & Renfors 2007, 73.)

Patient education can be both **verbal and nonverbal interaction**. Verbal communication is related both to spoken and written language. Nonverbal communication is related to all that is not said out loud, for example gestures, body movements, senses, voice control and emphasis, physical appearance, the use of space and time. Nonverbal communication is regulated by the socio-economic background, cultural traditions, education, ethnical background and race. (Kettunen, Liimatainen & Poskiparta 1996, 52.)

It is estimated that the patients remember 75% what they have seen, 10% what they have heard and 90% of the information they have received both visually and aurally (Philips 1993). This means that patient education should include many different methods. According to Divertie (2002), the patients remember best the information they received first and the issues that they are told in the very end of the patient education session. (Kääriäinen, Lahdenperä & Kyngäs 2005, 28-29.)



**Written patient education material** can be short. It can contain only one page or it can be small book or leaflet with many pages. The need for written patient education material is important especially in the situations where there is no time for verbal patient education. Due to the fact that the time of hospitalization has shortened nowadays, the significance of written information has become greater. (Kyngäs et al 2007, 8.)

According to the patients, written information is important alongside with the verbal information. The good side in the written material is that the patient can focus on the material at any suitable time and place and that they can return to the information many times. Still, written material should not be given just because it is available, it should always support the matters discussed during the patient education session. (Kyngäs et al 2007, 124.)

#### 2.4 The technicalities of written patient education material

Written patient education material should be as high quality as possible; in this way the patients can receive the best information from them. The Audit Commission (1993) stated that many written materials produced by the hospital were almost impossible to read because of their spelling, layout, language and design. The health care professionals need to take into consideration that the reader's age and the content may be in congruent with each other. In many information leaflets the font size was too small and the sentences were too long and medical jargon was used. (Walsh & Shawn 2000, 660.)

Several readability formulas (calculating one or more of the following: average sentence length in words, average word length in syllables, proportion of common words used, proportion of words containing three or more syllables and proportion of words which are monosyllabic) have been developed since the 1940s, but they are criticized that if the writer pays too much attention on readability formulas, the content of the written information "suffers" from that. Therefore, when writing to the patients, the aim should be keeping the text as simple as possible. (Walsh & Shawn 2000, 661-662.)

When beginning to write written material that is meant for patients, the first step is to decide the topic and determine what the patients need to learn and know. Written patient education material should be logical and clear. Information should be presented in a way that it is understandable to the target audience. Using medical jargon should be avoided and everyday language should be used instead. The written information should address the patient directly by using words such as “you” instead of using the word “patients”. (Walsh & Shawn 2000, 662.)

As long sentences are hard to remember, sentences with less than 20 words are acceptable, those with 20-30 words are probably acceptable, those with 30-40 are doubtful, and sentences with over 40 words should be rewritten. The font sizes 10 and 12 are used in the text when writing it for the “normal” readers, sizes 14 and 16 can be used in headings. When producing written material for partially sighted readers, bigger fonts should be used. The font type used should be clear so that the numbers are not mistaken as letters and vice versa. All fonts can be divided in two categories, serif and sans serif. In serif there are finishing strokes at the end of the letters and sans serifs do not have them.

This is a sentence written in Times New Roman font and it is an example of a serif-font type.

This is size 12 Times New Roman. This is size 10 Times New Roman.

This is a sentence written in Arial font and it is an example of an sans serif-font type.

This is size 12 Arial. This is size 10 Arial.

Because it is estimated that there are 10 000 different font types available, choosing the right one is important. (Walsh & Shawn 2000, 663.)

Using colors in a text is a good way to draw attention to certain points in the text. The contrast between the type and the paper should be clear and color should be used only in places where extra emphasis is needed. Pictures are helpful especially to poor readers because they can provide cues and directions and they also help to maintain interest in the text. (Walsh & Shawn 2000, 664.)

## 2.5 Significance of patient education

Patient education supports the patients to empower themselves and take responsibility for their own health, in conclusion, to take better care of themselves. The importance of patient education will be accentuated in health care due to shorter inpatient times. This means that there is less time for patient education, and, therefore, it needs to be more effective so that the patients will manage their recovery well after discharge from the hospital. It is essential that evidence-based information is provided to the patient, so that they can change their life style as wished and take responsibility for their own health care. (Kyngäs, Kääriäinen, Poskiparta, Johansson, Hirvonen & Renfors 2007, 5.)

Various studies have shown that for patient education to be of high quality, the patients do not receive a sufficient amount of information. They need more information about their disease and its symptoms, the reasons that lie behind it and about medical care. (Kääriäinen 2007, 34.)

When the patients are provided with the information, possibilities and challenges of patient education, they can use their own judgment and knowledge about them, and with these they help to create their own health. By patient education, it is possible to support the patients' autonomy. (Kyngäs et al 2007, 12.)

### 2.5.1 The benefits of patient education for children and their families

Primarily children should be the main subject in patient education when they are the patients. However, their age level needs to be taken into consideration, and this often leads to complete or partial interaction with the parents. (Falvo 2004, 102.)

It is important for health care professionals to be aware of the emphatic relationship they must establish with both the child and the parents. For this to succeed, the health care professional needs to assess the learning readiness of the child and the parents. Assessing the parents' abilities to comprehend the education is crucial. It can be restrained because of multiple reasons, such as their level of anxiety. (Falvo 2004, 102.)

According to Hopia (2006, 65) parents wish that they would be encouraged to receive help and education when it is offered. When parents learn how to take care of their

child, they become the experts on their child's care. This can be seen as a lift in confidence and as a resource for the whole family. (Hopia 2006, 64.)

The families should be educated in a way in which their individual situation is taken into consideration, so that they can manage it at home. In patient education, it is important to foresee possible situations that can occur. This enables the patients and their families to cope with new situations. When patient education has been comprehensive and forethought, the family has less to wear out of their own resources and, hence, it is easier for them to prepare their for coping with everyday life. (Hopia 2006, 66.)

From childrens' perspective, they rank caring and communication to be the highest form of quality care (Pelander 2008, 81). This reinforces the idea of the importance of pediatric patient education.

#### 2.5.2 The importance of written material in patient education

Different kinds of written materials are widely used in patient education. They can vary from simple and concrete directions to more abstract guidelines. Written materials have value only when they achieve what they are supposed to achieve. (Lorig 2001, 183.)

As in all patient education, written material needs to be produced on the basis of the patients' needs. It is beneficial to study the patient group and base the material on the collected information. It is important to take into consideration that the written material needs to consist of what the patient wants to know and what the professional thinks the patient needs to know. Moreover, in order for the material to be successful, the patients need to understand and use the material they are provided with. (Lorig 2001, 184.)

Assessing the patients' needs might provide some new insight to patient education. There might be information available on diseases, their symptoms and care but less so about the feelings that they bear. (Lorig 2001, 184.)

### 3 Different perspectives and conceptions concerning patient education

Patient education is an important part of the nursing process. According to Hayes and Bufrum (2001), with the time of hospitalization becoming shorter all the time, the patients are discharged earlier, and the nursing staff does not have enough time for proper patient education. Still, the patients should be given the readiness to take care of themselves properly, and patient education should be carried out in every part of the nursing process. Soohbany (1999) says that the needs of the patient should be identified and the patients should be supported to process their own situations. (Kääriäinen, Kyngäs, Ukkola & Torppa 2005, 10.)

Donovan and Ward (2001) state that patient-centered education is bound to the patient's physical, mental, social and environmental background. According to Mattila (1998), Soohbany (1999), Stenman and Toljander (2002), patient education is two-way interaction; the patients expect encouragement, listening, positive feed-back and the possibility to express their feelings related to disease. Stenman and Toljander (2002) say that the patients are not always encouraged and do not always have the possibility to talk about their feelings during patient education, which complicates the development of an equal education relationship. (Kääriäinen et al 2005, 10.)

#### 3.1 Patients' perspectives and conceptions about patient education

Kääriäinen, Kyngäs, Ukkola & Torppa (2005) conducted a study on the patients' perspectives and conceptions when talking about patient education. They found out that 66% of patients felt they had had a sufficient amount of education, 22% felt the amount had been insufficient and 12% answered that they did not need education. The patients felt that the information about the operations, examinations and preparations for the treatment was adequate. Inadequate patient education concerned the prognosis of the disease, the risks of the treatment and the length of recovery (Kääriäinen et al 2005, 12.)

A study conducted by Kääriäinen and co-authors (2005) states, that patients need more extensive education before the admission to the hospital than during

hospitalization. Even though patient education is in most cases patient-centered, it is still necessary to pay attention to the patient's context, for example on the individual life situation. Being aware of patient-centered care is the requirement of the success of patient education. The nursing staff should have a positive attitude towards patient education because it has an effect on the patient's knowledge, attitudes and acceptance of the treatment of the disease. (Kääriäinen et al 2005, 14.)

A patient's physical appearance is a major factor in patient education. The patient's age, gender and current health condition may affect the needs of patient education. For example, when educating children there is usually a parent or parents present. The child's age and developmental level defines what and how much can be told directly to the child. If the child sufficiently old to understand the matter being discussed, it is important that the health care professional does not speak only to the adults and leave the child "outside". With adolescents there might be some contradictions because they might not want their parents to be present in the education session. In these situations it is important to have open discussions if the adolescent and the parents are being educated at the same time or at separated times. (Kyngäs et al 2007, 29.)

An elderly patient in need of patient education can be challenge to a health care professional. Educating children or adolescents is a different matter from education elderly patients because they might have, for example, poor eye sight, physical limitations or memory disorders. Many times the elderly patients require a short time education that is focused on the main points of the matter of education. Moreover, repeating the education can be required. Remembering also to educate the relatives and close ones of the elderly patients is important. (Kyngäs et al 2007, 29-30.)

### 3.2 The perspectives of adolescents

If adolescents do not have the adequate knowledge and skills about their own health condition, they are unable to take care of themselves. Since adolescents have a need to be independent, adequate patient education can support their willingness to take responsibility to take care of their own condition independently. Kyngäs (2003) conducted a study that shows that from adolescents perspective patient education

can be divided into several categories: routine programmes, problematic planning issues, the atmosphere of patient the education session and written patient education material. (Kyngäs 2003, 744.)

- Routine programme
- Problematic planning issues
- Atmosphere of the patient education session
- Written patient education material

According to studies made by Kyngäs (2003), adolescents felt that a routine programme meant that patient education was not based on their needs but on the professional knowledge of the health care staff. Patient education was carried out in a schedule that was suitable for the nursing staff and based on the hospital's daily schedule. Moreover, the place of patient education was not good for that purpose. In addition the level of the adolescents' developmental stage was not met by patient education. (Kyngäs 2003, 747.)

According to the study, the adolescents felt that there were two aspects wrong in patient education: either there was a poorly written plan of patient education or the education was not continuous or systematic. A good written plan gives the adolescent an opportunity to familiarize himself with the content and the timing of patient education. If the content is familiarized beforehand, it is easier to ask questions about the areas of interest. In this way the questions can be more personal and the motivation to learn increases. Many times the adolescents felt that they had had good patient education when they received their diagnoses but the follow-up education needs were not met. The adolescents wanted to know about new ways of treatment, new medications and more updated information about the disease that they had been diagnosed to have. (Kyngäs 2003, 748.)

When having a patient education session, the atmosphere has a major role. The study participants felt that the atmosphere during education sessions was either encouraging and positive or depressive. When the educators motivated the adolescents, respected their opinions, encouraged them to show their feelings and ask questions, an encouraging and positive patient education session was created.

The language used during the sessions also had a major role. If the language used by the educator was easy and kind, the adolescents understood it better. If the educators used a great deal of medical terms and did not explain them well enough, the motivation to learn was lost. (Kyngäs 2003, 748-749.)

In the study the adolescents stated that the written patient education material should support the oral education given by the health care staff. However, the adolescents said that the written material was often general and simple information that was useful when the diagnosis had just been made but not after that. Also the adolescents felt that the internet and computers were only seldom used. When there was information available on the internet, the information was not updated sufficiently well. (Kyngäs 2003, 749.)

### 3.3 Ideal patient education session from the adolescents' point of view

According to Kyngäs (2003) when asked from the adolescents, the ideal patient education session would be carefully planned beforehand and based on the needs of the adolescents and to the written patient education material. The adolescents hoped that the patient education would give them enough information that could be used in problem solving and surviving from different situations. The adolescents also hoped for training in the skills that are needed in the treatment of a certain diseases. The adolescents stated that the emotional support was an important part of the ideal patient education. (Kyngäs 2003, 749.)

Kyngäs (2003) found out that the adolescents have many demands for the good patient educator. One of the things that the adolescents required was that the educator would understand their developmental level, their disease and its symptoms. The adolescents pointed out that the educators should understand their capabilities and feelings and be sensitive with them. Getting the adolescents motivated and willing to learn through the whole patient education session was also one demand for the educators. The educators should also point out more clearly that they are there only for the adolescents themselves and that the educators have time and willingness to educate the adolescents. (Kyngäs 2003, 749.)



### 3.4 The perspectives of the health care staff

Kääriäinen, Kyngäs, Ukkola and Torppa (2006) studied the perspectives of health care staff concerning patient education. The health care staff's patient education readiness was estimated based on their skills, attitudes and knowledge. (Kääriäinen, Kyngäs, Ukkola & Torppa 2006, 8.)

According to the study, the skills to perform good patient education were excellent with 15% of the staff, good with 76% of the staff and poor with 9%. The best patient education skills were related to the nurse-patient interaction, during the education the discussions were interactive and the nonverbal messages sent by the patient were noticed by the health care staff. In addition, the health care staff had the skills needed for the preparations of a treatment. The research showed that the health care staff had the skills of making the patients motivated to take part in the treatment and to evaluation of the patient's education needs. The skills to evaluate the learning process during patient education and guiding the patient to peer groups were deemed inadequate. (Kääriäinen et al 2006, 8-9.)

99% of the health care staff had a positive attitude towards patient education. This was seen in the motivation to perform patient education, commitment to patient education and appreciation of patient education. (Kääriäinen et al, 2006, 9.)

Kääriäinen and co-authors (2006) evaluated the health care staff's knowledge on three fields: the knowledge about the disease, knowledge about the condition after the treatment and the knowledge about the related rehabilitation. The knowledge about the disease and its treatment were the best; 21% of the staff had excellent knowledge, 76% had good and 3% poor. The best knowledge concerned the disease itself, the risk factors, examinations and the treatment. The weakest knowledge concerned the effect of the disease on family life and the alternatives of the treatments. The health care staff had good knowledge about the possible complication that can occur after the treatment but only a little knowledge about the convalescence time. The weakest knowledge concerned rehabilitation, only 8% of the staff has excellent knowledge about it, 70% had good knowledge and 22% poor. Concerning rehabilitation, the best knowledge was about its effect on family and the

weakest knowledge was about the welfare benefits, rehabilitation services and discharging. (Kääriäinen et al 2006, 8.)

### 3.5 Encountering a child patient

When hospitalized, the child may have to undergo many different new examinations and operations that can create fears and anxiety. The biggest reasons for fear and anxiety are usually the fear of pain, being separated from the parents or being physically damaged. Adolescents can have fear of losing their control of the situation. Preparation is a nursing care method that emphasizes the individual's earlier experiences and takes into consideration the individual's survival rituals. (Muurinen & Surakka 2001, 96.)

Being able to feel safe in every situation children require information that is suitable to their developmental level. They need explanations that are clear and concrete. Children want to know for example why they are being examined and treated and what is being done to them. The information about these things creates safety instead of being afraid of things that happen without warning. Also telling the parents beforehand what is going to happen and why is important because the children are susceptible to sense if the parents are afraid. (Muurinen & Surakka 2001, 96-97.)

It is important to clear out for child and their parents why the operation is done, what is being done during it, when it is done and where, who performs the operation, what kind of limitations there are after the operation and what is expected from the child. The object is that the child and parents stay motivated and they accept the operation as a part of the treatment. (Surakka & Muurinen 2001, 98.)

It is important to take the child's age into account when talking to children. All children should be approached calmly and the health care personnel should maintain the eye contact all the time. The usage of voice is important, the voice should never be raised because it can create fears and anxiety. The children should be encouraged to ask questions and when the child is older, their perspectives should be respected. When talking about adolescent, the childish manner of speaking or handling should never be used. (Muurinen & Surakka, 2001, 99-101.)

Children should also receive written material about their diseases and conditions if it is available. The language used in material suitable for children should be plain and easy to understand. Using pictures and colors makes the written material easier to read and more interesting for children. Pictures can have an effect on emotions and attitudes and they also provide information and can clarify matters discussed on the leaflet. (Parkkunen, Vertio & Koskinen-Ollonqvist 2001,17.)

### 3.6 Parents' experience on pediatric patient education

According to Falvo (2004, 102) health care professionals should attentively regard the parents' perception situation at hand and deal with their emotions as much as possible. The parents expect the health care professionals to have authentic interest for their whole family and respect for their parenthood (Hopia 2006, 21-22).

The parents need instructions and knowledge about the child's disease but in addition to that, emotional support as well. Trustworthy interactions and reinforcement of the parents' survival methods are needed for them to get through a child's illness and possible hospital care. Parents often hope for consistent guidance and active support on how to be parents during the child's illness and what can they do for their child. They also wish that the siblings would be taken into consideration more in the care by the professionals. (Hopia 2006, 22.)

## 4 Realization of the project

This Bachelor's Thesis project begun on the spring of 2010. Even on the beginning of our studies we both decided that we wanted to specialize in the field of pediatric nursing and in the future work on the pediatric ward. During spring 2010 we had our specializing studies and we came up with an idea that our Bachelor's Thesis should be related to pediatrics.

Earlier during our studies we both had been doing our practical trainings on Central Finland Central Hospital on pediatric ward 1. We had been talking on the ward that we would like to do some kind of information leaflet. We received a request from the

ward's assistant head nurse that they had a need for an information leaflet for the patients and their parents about the ward's most common infection diseases.

We were eager to get started with the Bachelor's thesis and its final products, the information leaflet. We visited the ward 1 several times during spring and autumn 2010 and had conversations with the nurses specialized in infections and also with the pediatrician. We wanted to clarify what were the most common infectious diseases present on the ward, what kind of information the ward wanted us to write on the leaflet and how much information from each disease. We agreed with the assistant head nurse that the information on the leaflet should be clear, easy to read and understandable, without any medical jargon. The object of the leaflet would be giving the basic information about the diseases; the symptoms of the disease, the transmission routes and the treatment. The ward also requested that the leaflet would be written both in English and in Finnish. The assistant head nurse wanted us to use white paper as a background, black text and the names of the diseases should be written in blue.

In the end of the spring semester 2010 our Bachelor's Thesis' topic got the decision of approval. We had decided that the written part of our thesis would be related to patient education and especially to pediatric patient education. The form of our thesis would be operational thesis. The school informed us who our tutoring teacher would be and we continued working on our thesis with her.

On autumn 2010 we wrote our plan and scheduled the project. On this time we noticed that we were in a hurry if we still wanted to graduate before Christmas 2010 like our original plan was. We wrote our plan for the thesis and our tutor approved it, with some feedback that we were pleased to receive. We had conversations about our topic and we agreed that patient education would be our main topic but that we also would have to link the pediatric point of view on it. We also wrote the leaflet for the ward 1 and showed it to our tutor. She commented it and suggested some changes in the layout.

The whole time we had been doing information research for the thesis, mainly from the library and from the internet databases. The librarians were quite helpful during the information research; they helped us to find good articles and latest books

concerning our topic. We read through many of the same references and discussed about them.

We agreed with the assistant head nurse that the nursing staff on the ward could comment our leaflet that was firstly written in Finnish and after that we would make changes on it if they were needed and only after that we would translate it in English. We agreed that one week would be enough for the ward staff to comment the leaflet and after that we would make the corrections needed. The layout of the leaflet was decided together with the assistant head nurse.

The writing was time consuming, we mostly wrote separately because we were working at the time and finding a common time was quite troublesome. The whole time we were in contact with each other even though we did some of the writing apart. The last month we wrote everything together sharing information and experiences. We contacted the department of Languages and Communications for the language inspection. It was agreed that the inspection would be done at the same time when we received the last feedback from our tutoring teacher.

## 5 Discussion

### 5.1 Evaluation of the Project

The project begun, with us two deciding on doing our Bachelor's Thesis together. We were both were specializing our studies in the field of pediatric nursing. We had already a wide experience on practicing and working in pediatric nursing. That is why we thought that it would be beneficial for us both to unite our knowledge for the goal of learning more.

When we received the request from the ward for the leaflet, we were pleased with the fact that our work would be asked for and useful. This kind of operational Bachelor's Thesis was a good choice for us, because our time schedule was not beneficial for surveys. We started doing research on the useful literature.

Acquisition of information with this topic was fairly easy with the help we received from the schools' library and our tutor teacher. We realized in the very beginning of

literature research, that we had to search topics wider than just concerning pediatric patient education. We were surprised to find that there was not much research or other literature concerning pediatric patient education available. We had to start by finding general information about patient education and then proceed to find out about what special characteristics it might have when the patient is a child. This also made the defining of the topic more challenging.

Another problem we faced was the lack of references in English, or at least we seemed to find more relevant references in Finnish. When reading our references list, it is noticeable that we used several pieces of literature by M. Kääriäinen and H. Kynngäs, both in Finnish and English. These two authors are significant factors in Finnish research of patient education and they provided us with a lot of useful information for the Bachelor's Thesis.

In this whole project, we were somewhat overwhelmed with the amount of work concerning the project. The project consisted of multiple phases that required a lot of time and teamwork with different collaborative instances, such as the school, the hospital and each other.

We found patient education and its development an interesting topic, because it is an important and constant part of nurse's job in any field of nursing. The importance even grew more when realizing that on the field of pediatrics, this is not a broadly researched area. It is commonly known, that patient education with children should be different than with adults, but still the topic has not raised enough interest for it to be researched more.

## 5.2 Evaluation of the Leaflet

We faced some problems with finding up to date information for our leaflet and knowing about the ward's practices, especially for the treatment part. Eventually we decided on finding the newest information about the diseases and trust them.

We assembled the leaflet based on the literature we found and the knowledge we had gathered from our project literature. We wanted our leaflet to reflect the theory we had learned about quality patient education in pediatric care.

According to Parkkunen and co-writers (2001, 17), it is important to use easily understandable language on written patient education material, for both the child and parents comprehend. That is why there was no medical jargon used in the leaflet and the context was executed in standard language, while keeping it formal.

According to Parkkunen and co-writers (2001, 17), the use of color and pictures can make written material more appealing, but also have an effect on emotions and clarify the context. We used white paper as a base for the leaflet to be formal, black in the text but blue color consistently in the headlines to accent different diseases. Because the leaflet was requested by a children's ward, we wanted to include some pictures to make it more appealing for children. We also wanted to include the child's parents and sibling in the leaflet and explain how they are taken into consideration on the ward. According to Hopia (2006, 22) this is beneficial for the whole family.

After writing the leaflet, we received feedback from the ward, personally and on paper. The three main subjects of the feedback were the linguistic form, context and practical details. Some of the feedback was exactly what we had hoped for; about the customs within the ward's staff and contextual knowledge. A part of the feedback was concerning about the whole relevance of the leaflet and its' form. A few nurses from the infection side of the ward, thought that it was not a beneficial idea, that all the diseases were put in one leaflet.

We contacted the assistant head nurse, who had requested for the leaflet, and discussed about the feedback we had received. We agreed that there was a lack of information between the nurses and the assistant head nurse and the nurses did not know the purpose and reason behind the leaflet. The assistant head nurse still thought that we should keep the leaflet's structure as planned. We felt that we had used the theory from the Bachelor's Thesis in the making of the leaflet and that it lends itself well to the children's ward because of its context, language and layout.

### 5.3 Conclusions and Future Perspectives

We think that we could have given more effort to the project with more time in our hands, but due our hectic schedule with other school work it was not possible, given consideration to our ambitious goals to graduate in time. We found it to be most

fruitful to do the actual writing a part of the project together, because it was important to remind ourselves what our concepts are and define our topic. It would have been easy to get on sidetrack with our topic, especially due to the lack of literature, but we tried to find creative ways to find information.

When doing any written material for a hospital ward, we found that it would be essential to inform the wards staff about the work. This would prevent the staff to have false expectations on the work, which was shown from our feed back, and overall when they receive and have the opportunity to use it as a part of their work.

After our feed back from the leaflet, we also started considering whether it was a good idea to place all the asked diseases and their descriptions in one leaflet. This was our request from the ward, and that is why we did not start making any changes. However for some patients and their parents it might be beneficial to copy only the parts of the leaflet concerning their stay in the hospital and the disease and treatment, this is left for the nursing staff to consider on the ward.

It would be beneficial for the whole family, if the nursing staff would go through the leaflet with the patient and their family during a calm event when they have arrived on the ward. When the necessary information has been discussed, the patient has the possibility to ask questions and the professional can avoid any possible misunderstandings. After the patient has gone through the essential parts from the leaflet with the professional, they can still keep the written material as a reminder of the information provided.

The main points that we concluded with, are

- To receive useful feed back, the ward's staff should be informed about the context of the project
- The written material is most useful when it is used with consideration and provided by the nursing staff
- The project is productive when there is enough time and literature available.

We see great opportunities for further research on patient education in pediatric care. There is so little information after the year 2000 so we can safely state, that the need and opportunities are there for someone to grasp them. Patient education has



been researched in other fields of health care but for some reason pediatric care is not one of them. For the education to be of quality and unite, it is necessary to make research and set goals and guidelines to it. We hope to see someone seize this opportunity in the future.

## References

- Kettunen, T., Liimatainen, L., Poskiparta, M. 1996. Terveyskasvatus arjen neuvontatyössä. Kirjayhtymä Oy. Tampere.
- Kyngäs, H., Kääriäinen, M., Poskiparta, M., Johansson, K., Hirvonen, E. & Renfors, T. 2007. Ohjaaminen hoitotyössä. WSOY Oppimateriaalit OY.
- Muurinen, E. & Surakka, T. Lasten ja nuorten hoitotyö. 2001. Kustannusosakeyhtiö Tammi. Tammer-paino Oy. Tampere.
- Torkkola, S., Heikkinen H., Tiainen S. 2002. Potilasohjeet ymmärrettäviksi. Kustannusosakeyhtiö Tammi.
- Lorig, K. 2001. Patient Education : A Practical Approach. Third Edition. Sage Publications, Inc.
- Promoting health. 2007. Edited by Wills, J. Blackwell Publishing Ltd.
- Falvo, D. 2004. Patient Education: A Guide to Increased Compliance. Jones and Bartlett Publishers, Inc. Referred to 3.11.2010.  
[Http://books.google.fi/books?id=B2KtVwly07cC&pg=PA102&dq=patient+education+with+children&source=bl&ots=roLE3cfdc&sig=kkPWsqYZs2dtYyr9-y5CUUEVh-Y&hl=fi&ei=Mf\\_STMKYM8jJswb-kJDyDA&sa=X&oi=book\\_resource&ct=result&resnum=8&ved=0CEYQ6AEwBw#v=onepage&q=patient%education%with%children&f=false](http://books.google.fi/books?id=B2KtVwly07cC&pg=PA102&dq=patient+education+with+children&source=bl&ots=roLE3cfdc&sig=kkPWsqYZs2dtYyr9-y5CUUEVh-Y&hl=fi&ei=Mf_STMKYM8jJswb-kJDyDA&sa=X&oi=book_resource&ct=result&resnum=8&ved=0CEYQ6AEwBw#v=onepage&q=patient%education%with%children&f=false). Google books.
- Kääriäinen, M., Kyngäs, H., Ukkola, L. & Torppa, K. 2005. Potilaiden käsityksiä heidän saamastaan ohjauksesta. Tutkiva hoitotyö 3 (1) 10 -15.
- Kääriäinen, M., Lahdenperä, T. & Kyngäs, H. 2005. Kirjallisuuskatsaus: Asiakaslähtöinen ohjausprosessi. Tutkiva hoitotyö 3 (3) 27 -31.
- Kääriäinen, M., Kyngäs, H., Ukkola, L. & Torppa, K. 2006. Terveystenhoitohenkilökunnan käsitykset ohjauksesta sairaalassa. Hoitotiede 18 (1) 4-13.

Kääriäinen, M. 2008. Potilasohjauksen laatuun vaikuttavat tekijät. Tutkiva hoitotiede 6 (4) 10-15.

Leep Hunderfund, AN. & Bartleson, JD. 2010. Patient education in neurology. Neurologic Clinics. 2010 May; 28 (2): 517-36. Referred to 25.10.2010.  
[Http://jamk.fi/kirjasto](http://jamk.fi/kirjasto), Nelli-portal, EBSCO

Kyngäs, H. 2003. Patient education: perspective of adolescents with a chronic disease. Journal of Clinical Nursing. 2003 Sep; 12(5): 744-51. Referred to 31.10.2010.  
[Http://jamk.fi/kirjasto](http://jamk.fi/kirjasto), Nelli-portal, EBSCO.

Walsh, D. & Shawn, DG. 2000. The design of written information for cardiac patients: a review of the literature. Journal Of Clinical Nursing. 2000 Sep; 9(5): 658-67. Referred to 5.11.2010. [Http://jamk.fi/kirjasto](http://jamk.fi/kirjasto), Nelli-portal, EBSCO.

Yoon, SJ., Conway, J., McMillan, M. 2006. International Journal of Nursing Practice. 2006 Jun; 12 (3): 129-35. Referred to 31.10.2010. [Http://jamk.fi/kirjasto](http://jamk.fi/kirjasto), Nelli-portal, EBSCO.

Pelander, T. 2008. The Quality of Paediatric Nursing Care – Children’s Perspective. Painosalama Oy. Turku. Referred to 3.11.2010.  
[Http://www.doria.fi/handle/10024/42602](http://www.doria.fi/handle/10024/42602), Turun yliopisto, Medica database.

Parkkunen, N., Vertio, H. & Koskinen-Olloqvist, P. 2001. Terveysaineiston suunnittelun ja arvioinnin opas. Terveystiedon keskuksen julkaisuja-sarja 7/2001. Trio-offset, Helsinki.

Silfverberg, P. 2007. Ideasta projektiksi – Projektityön käsikirja. Edita Publishing oy. Helsinki.

### References used in the information leaflet

Lasten ja nuorten sairaudet. 2002. Edited by Huttunen, N-P. Porvoo: WS Bookwell OY

Lastenosasto 1 – lastentaudit ja lastenkirurgia. 2007. Keski-Suomen sairaanhoitopiirin osastoesite. Referred to 22.10.2010.

Lastentaudit. 2010. Edited by Rajantie, J., Mertsola, J. & Heikinheimo, M. Fourth edition. Hämeenlinna: Kariston Kirjapaino OY

Mikä on RSV?. 2009. Abbott. Referred to 22.10.2010.

Muscari, M. 2005. Pediatric Nursing. Fourth edition. Lippincott Williams & Wilkins

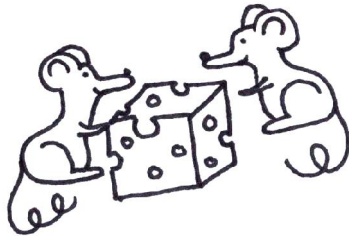
RSV – Respiratory syncytial Virus. 2009. Abbott. Referred to 22.10.2010

## Bronchiolitis

Bronchiolitis is the inflammation of the bronchioles, and it is most commonly caused by the RS-virus. It is usually met in under 1-year old children. The symptoms are increased secretion of mucus, head cold, cough, quickened breath, quickened heartbeat and general nausea.

### Treatment

The treatment for bronchiolitis is hydration, bronchodilators, adequate oxygenation and hydrated breathing air. For ensuring the oxygenation in the hospital, one can aspirate mucus from the nose.



### References:

- Muscari, M. 2005. Pediatric nursing. 4.painos. Lippincott Williams & Wilkins
- Lasten ja nuorten sairaudet. 2002. Edited by N-P. Huttunen. Porvoo: WS Bookwell OY
- Lastentaudit. 2010. Toim. J. Rajantie, J. Mertsola & M. Heikinheimo. 4. edition. Hämeenlinna: Kariston kirjapaino OY
- Terveysportti. Terveysportti on Kustannus Oy Duodecimin ylläpitämä sisältöpalvelu terveydenhuollon ammattilaisille [www.terveysportti.fi](http://www.terveysportti.fi) (viitattu 22.10.2010)
- Lastenosasto 1 – lastentaudit ja lastenkirurgia. 2007. Keski-Suomen sairaanhoitopiirin osastoiesite. Viitattu 22.10.2010
- Mikä on RSV?. 2009. Abbott. Viitattu 22.10.2010.
- RSV – Respiratory Syncytial Virus. 2009. Abbott. Referred to 22.10.2010
- All illustrations by Maiju Mäkelä 2010

Central Finland

Central Hospital

## Children's Ward 1



Information leaflet for patients and their parents about the most common infectious diseases on the ward

### Treatment

Bronchitis is taken care with painkillers and antipyretics. It is also important to relieve the breathing difficulties, it is usually done with bronchodilators. Antibiotics have not had any proved effect on the care of bronchitis.

### Respiratory syncytial virus (RSV)

RSV is a common cause for a respiratory infection. RSV causes epidemics during spring and at the end of the year. RSV-infection's symptoms resemble usually a normal cold. Symptoms can degenerate after the virus spreads to lower respiratory tracts and lungs. After that there can be cough, quickened breath and other breathing difficulties.

Virus can be transmitted very easily, it spreads via touch and air. It also stays contagious for several hours e.g. on used handkerchiefs and handles.

### Treatment

A healthy pre-school child can be treated at home by parents with antipyretics and steam inhalation. Respiration can also be relieved by aspirating mucus from the nose.

## Respiratory infections

During the first years of one's life children take in approximately 5 – 10 respiratory infections per year. They are the most common reason for absence in daycare and school. Usually they are caused by viruses.

## Pneumonia

Pneumonia is an infection of the parenchyma. The most common cause for pneumonia is some virus causing respiratory infections. The symptoms are cough, fever and rapid breath. The cause for pneumonia will often stay unsolved.

### Treatment

Pneumonia is diagnosed by listening to the lungs or taking an x-ray from the lungs (thorax). Antibiotics are often used for the treatment of pneumonia.

## Bronchitis

Bronchitis is a lower respiratory tract infection caused by a virus. The symptoms of bronchitis are head cold, cough, fever symptoms and shortness of breath.

Bronchitis can also play out as a congestive bronchitis when it is called obstructive bronchitis. One can usually hear wheezing from the lungs when breathing, with a stethoscope or even with mere ear.

## General Information about Children's Ward 1

Our ward is located in the 1st floor of the main building of the hospital.

The ward has been divided into two parts. The rooms from 1 to 10 are mainly for children with infectious diseases. Rooms 11 – 18 are for children in need of clinical and surgical care. There are also some patients coming for various examinations. It is possible to receive medical treatment on our ward after discharge by visiting from your home.

The age distribution on our ward is from newborns to 16-year olds.

There are several individuals participating on your child's care. Doctors and specializing doctors are responsible for the medical care on our ward and registered nurses, children's nurses and nursing students for nursing. There are secretaries and ward domestics working on our ward as well. When required, physiotherapists, psychologist, dietician, social worker and specialist doctors from other fields will participate in the care.

In the hospital, your child will be taken care of by an individual care plan. The doctor together with a nurse, are responsible for the individual care plan. Your child's care will be attempted to carry through with same nurses.

## General Information about the Infection part of the Ward

It is not recommended for the infection patients to leave their rooms due to prevention of spreading infections. For the same reason, other patients are not recommended to move in the infection side's hallway. The nurse can easily be called to the room with the bells in the rooms.

Your child's stay on the ward will be made as comfortable as possible by bringing e.g. games, toys and videos in the room as wished.

The ward provides meals for mothers who are exclusively breastfeeding. However, it is possible to eat packed lunch in the child's room. The ward also provides an opportunity for one parent to stay overnight on the ward with the child.

### Visiting

Visiting hours on our ward are free, but we try to calm the ward for night by 9:00pm.

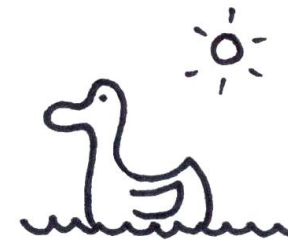
If there are infectious diseases present in your family, visits are not recommended. Visitors under school age are neither recommended due to the risk of infection. You can contact the nursing staff with unclear situations.

## Inflammation of the ear (otitis)

Inflammation of the ear is the most common bacterial infection for small children. It is the most common reason for going to the doctor's appointment for children. Ear infection appears often after a respiratory infection, when the swelling of the mucous membrane and secretion of mucus cause the auditory tube to become congested. There are also ideal circumstances for the bacteria in the nasopharynx to cause inflammation. Symptoms are head cold, cough, earache, restlessness and fever.

### Treatment

The inflammation is diagnosed by ear examination made with an ear light. The inflammation can clear by itself but usually it is treated with painkillers and antipyretics, numbing ear drops and/or antibiotics.





## Febrile seizure

Febrile seizure is the most common reason for children's unconsciousness-convulsion seizures. It can be caused by a quick raise in body temperature or especially high fever. During convulsions child's hands and legs twitch and stiffen, and the child cannot usually get contacted with. A conventional seizure usually lasts less than 15 minutes. A febrile seizure is not a sign of epilepsy.

### Treatment

The cause for febrile seizure is unknown. During the convulsions, it is important to prevent the child from harming oneself and take care that the airways stay free. The child's body temperature should be lowered and adequate hydration should be taken care of after convulsions. Convulsions can be treated with rectal medicine.

## Sepsis

Sepsis is a whole-body infection caused by bacteria, where bacteria are spread through blood circulation everywhere in the organs.

Typical symptoms are e.g. fever or low body temperature, nausea and vomiting, quickened respiration and confusion

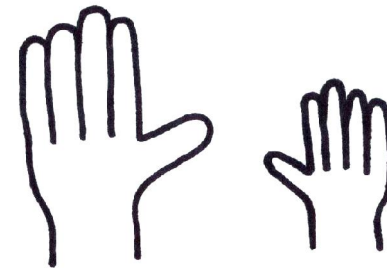
### Treatment

Sepsis can be caused by several bacteria and fungus. Exposing factors can be skin damage, inflammation and bite wounds. In the treatment, quickly begun follow-up of the condition on the ward is fundamental. Sepsis is treated with antibiotics.

## General information about infections

Infections or infectious diseases can be harmful for people of all age, but especially for small children. Infections are the most common reason for a child acutely becoming ill. Infections can be caused by either viruses, bacteria, fungus, protozoa or parasites.

It is especially important for the whole family to take care of hand hygiene during visits, both for big and small!



## Gastroenterological diseases

Over 90% of acute diarrhea diseases are caused by viruses and they usually occur as epidemics. The viruses causing diarrhea usually spread via hands, so hand hygiene has an essential significance in transmission of the epidemic. The basis of care in children's diarrhea diseases is adequate hydration. In the summer, diarrhea is usually caused by adenoviruses and during the winter, rotaviruses.

## Rotavirus

Rotavirus is the most common cause of diarrhea. Rotavirus most commonly spreads by contact and droplet infection, and it is difficult to prevent it from spreading. The incubation time of the disease is short, only a few days.

Usually the symptoms start with fever and vomiting; usually within 24 hours starts watery diarrhea, which can continue from two days to two weeks. These symptoms together usually conclude to dehydration.

## Adenovirus

Adenovirus usually causes approximately 10% of diarrhea on small children. Typical symptoms for adenovirus diarrhea are fever, watery diarrhea and respiratory symptoms. The symptoms can last up to 10 days. Dehydration is milder in adenovirus diarrhea than in rotavirus, because vomiting is usually not one of the symptoms. A raise in the CRP levels is usually noted with adenovirus diarrhea.

### Treatment

Rota- and adenovirus are diagnosed with a sample taken from faeces. Hydration, either per os or intravenously, is used as a treatment for acute diarrhea. There is a vaccination for rotavirus, which came to Finland's general vaccination program in the year 2009.

## Fever diseases

Fever is higher than normal body temperature. In children it is usually caused by a viral infection. The cause for fever should be determined. Fever as itself is not dangerous, but it increases the need for hydration and can tire the child.

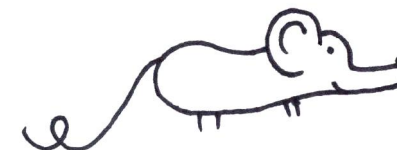
## Urinary tract infection (UTI)

Urinary tract infection is one of the most common children's bacterial infections. It is seen on infants with boys and girls, but is more common with pre-school and school age girls.

A focal symptom for children with UTI is fever. In pre-school and school age children symptoms are usually local, such as pain when urinating, bad smelling urine, bleary urine or blood in urine. The pathogen is usually a bacteria from the child's own intestines.

### Treatment

UTI is diagnosed with a urine sample before the treatment is begun. The treatment of children in good condition can get started at home with medication taken per os. Intravenous treatment is begun in the hospital with small children and patients with high fever.

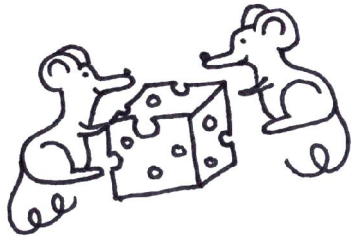


## Bronkioliitti

Bronkioliitti eli ilmatiehyttulehdus on tavallisimmin RS-viruksen aiheuttama pienten keuhkoputkien tulehdus. Sitä esiintyy yleensä alle 1-vuotiailla lapsilla. Oireina taudilla ovat kasvanut limaneritys, nuha, yskä, tiheytynyt hengitys ja sydämen tiheälyöntisyys sekä yleinen huonovointisuus.

### Hoito

Bronkioliitin hoitona ovat nesteytyksestä huolehtiminen, keuhkoputkia avaava lääkitys, riittävä hapetus ja hengitysilman kosteutus. Hapensaannin turvaamiseksi voidaan imeä limaa nenästä sairaalahoidossa.



### Lähteet:

Muscari, M. 2005. Pediatric nursing. 4.painos. Lippincott Williams & Wilkins  
Lasten ja nuorten sairaudet. 2002. Toim. N-P. Huttunen. Porvoo: WS Bookwell OY  
Lastentaudit. 2010. Toim. J. Rajantie, J. Mertsola & M. Heikinheimo. 4. painos.  
Hämeenlinna: Kariston kirjapaino OY  
Terveysportti. Terveysportti on Kustannus Oy Duodecimin ylläpitämä  
sisältöpalvelu terveydenhuollon ammattilaisille [www.terveysportti.fi](http://www.terveysportti.fi) (viitattu 22.10.2010)  
Lastenosasto 1 – lastentaudit ja lastenkirurgia. 2007. Keski-Suomen sairaanhoitopiirin osastoesite. Viitattu 22.10.2010  
Mikä on RSV?. 2009. Abbott. Viitattu 22.10.2010.  
RSV – Respiratory Syncytial Virus. 2009. Abbott. Referred to 22.10.2010  
Kuvitus Maiju Mäkelä 2010

## Keski-Suomen Keskussairaala

### Lastenosasto 1



Esite potilaille ja heidän vanhemmilleen osaston yleisimmistä  
infektioitaudeista

## Hoito

Bronkiittia hoidetaan särky- ja kuumelääkkeellä. Tärkeää on myös helpottaa hengenahdistusta ja lääkkeinä siihen käytetään keuhkoputkia avaavia lääkkeitä. Antibiooteilla ei ole todettu olevan tehoa bronkiitin hoidossa.

## RSV-infektio (respiratory syncytial –virus)

RSV on yleinen hengitysinfektion aiheuttaja. RSV aiheuttaa epidemioita keväisin ja loppuvuodesta. RSV-infektion oireet muistuttavat yleensä tavallista nuhakuumetta. Oireet voivat pahentua viruksen levittyä alahengitysteihin ja keuhkoihin, silloin voi esiintyä myös esimerkiksi yskää, tihentynyttä hengitystä ja muita hengitysvaikeuksia.

Virus tarttuu erittäin helposti, se leviää sekä kosketuksessa että ilmassa. Se myös pysyy tartuntakykyisenä useita tunteja esimerkiksi käytetyissä nenäliinoissa ja kädensijoissa. Vauvoista varsinkin keskoset, synnynnäisesti sydän- ja keuhkotauteja sairastavat ovat suuremmassa riskissä saada vaikea RSV-infektio. Pienille imeväisille RSV voi aiheuttaa myös bronkioliitin.

## Hoito

Terveellä leikki-ikäisellä lapsella hoito voidaan toteuttaa kotona vanhempien toimesta kuumelääkkeen ja höyryhengityksen avulla. Hengitystä voidaan helpottaa myös imemällä limaa nenästä.

## Hengitystieinfektiot

Ensimmäisinä elinvuosinaan lapset sairastavat keskimäärin 5 – 10 hengitystieinfektiota vuosittain. Ne ovatkin tärkein syy poissaoloon päivähoidosta ja koulusta. Tavallisimmin ne ovat virusten aiheuttamia.

### Keuhkokuume (pneumonia)

Keuhkokuume tarkoittaa keuhkokudoksen infektiota. Tavallisin keuhkokuumeen aiheuttaja on jokin hengitysteiden tulehduksia aiheuttava virus. Oireina ovat yskä, kuume, tiheä hengitys. Keuhkokuumeen aiheuttaja jää usein avoimeksi.

#### Hoito

Keuhkokuume todetaan keuhkoja kuuntelemalla tai keuhkoista otettavalla röntgenkuvalla (keuhkokuva eli thorax-kuva). Keuhkokuumeeseen hoitona käytetään yleensä antibiootteja.

### Bronkiitti

Keuhkoputkitulehdus eli bronkiitti on virusten aiheuttama alahengitystieinfektio. Bronkiitin oireita ovat nuha, yskä ja kuumeoireet sekä hengenahdistus.

Bronkiittiä esiintyy myös ahtauttavana keuhkoputkitulehduksena milloin sitä kutsutaan obstruktiiviseksi bronkiitiksi. Keuhkoista yleensä kuulee stetoskoopilla tai jopa paljaalla korvalla rahinaa tai vinkunaa hengityksen aikana.

## Yleistä tietoa lastenosastosta 1

Osastomme sijaitsee sairaalan päärakennuksessa 1. kerroksessa.

Osasto on jaettu kahteen osaan. Huoneet 1 - 10 ovat pääasiassa infektioita sairastavia lapsia varten. Huoneissa 11 - 18 hoidetaan sisätautista ja kirurgista hoitoa tarvitsevia lapsia. Osa potilaista tulee myös erilaisia tutkimuksia varten. Osastollamme on mahdollista käydä saamassa lääkehoitoa kotoa käsin sairaalahoidon loputtua.

Osastomme ikäjakauma on vastasyntyneistä 16-vuotiaisiin nuoriin.

Lapsenne hoitoon osallistuu useita eri henkilöitä.

Lääketieteellisestä hoidosta vastaavat osaston lääkärit ja erikoistuvat lääkärit, hoitotyöstä sairaanhoitajat ja lastenhoitajat sekä opiskelijat. Lisäksi osastollamme työskentelevät osastonsihteerit ja laitoshuoltajat. Tarvittaessa hoitoon osallistuvat myös fysioterapeutit, psykologi, ravitsemussuunnittelija ja sosiaalityöntekijä, sekä muiden alojen erikoislääkärit.

Lastanne hoidetaan sairaalassa yksilöllisen hoitosuunnitelman mukaan, josta vastaa lääkäri yhdessä hoitajan kanssa. Lapsenne hoito osastolla pyritään toteuttamaan samojen hoitajien voimin.

## Yleistä tietoa osaston infektiopuolesta

Infektiopotilaiden ei suositella poistuvan huoneistaan infektioiden leviämisen ehkäisemiseksi. Muiden potilaiden ei suositella liikkuvan infektiopuolen käytävällä samasta syystä. Hoitajan voi kutsua huoneeseen helposti huoneissa olevilla soittokelloilla.

Lapsenne oleminen osastolla pyritään tekemään mahdollisimman viihtyisäksi tuomalla huoneisiin esimerkiksi pelejä, leluja ja videoita, toivomuksien mukaan.

Osasto tarjoaa ruuan vain täysimettäville äideille, omia eväitä on kuitenkin mahdollista syödä lapsen huoneessa. Osasto tarjoaa myös mahdollisuuden toiselle lapsen vanhemmista yöpyä lapsen kanssa osastolla.

## Vierailut

Vierailuajat ovat osastolla vapaat, osasto kuitenkin pyritään rauhoittamaan yöksi klo 21:00.

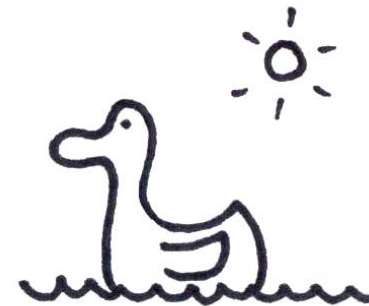
Mikäli perheessänne on tarttuvia tauteja, vierailuja ei suositella. Alle kouluikäisiä vierailijoita ei myöskään suositella infektioiden tartuntavaaran takia. Voitte ottaa yhteyttä hoitohenkilökuntaan epäselvissä tilanteissa.

## Korvatulehdus (otiitti)

Korvatulehdus on pienten lasten yleisin bakteeri-infektio. Se on lasten yleisin lääkärisäkäynnin syy. Korvatulehdus ilmaantuu usein hengitystietulehduksen jälkeen jolloin limakalvojen turvotus ja limaneritys ahtaavat korvatorvea, ja nenänielun bakteereille syntyy otolliset olosuhteet tulehduksen aiheuttamiseksi. Oireita ovat nuha, yskä, korvasärky ja levottomuus sekä kuume.

## Hoito

Tulehdus todetaan korvatutkimuksella joka tehdään korvalampun avulla. Tulehdus voi mennä ohi itsestään, mutta yleisesti sitä hoidetaan särky- ja kuumelääkkeellä, puuduttavilla korvatipoilla ja/ tai antibiooteilla.



## Kuumekouristus

Kuumekouristus on yleisin tajuttomuus-kouristuskohtauksen syy lapsilla. Sen voi aiheuttaa nopea kuumeen nousu tai erityisen korkea kuume. Kouristuksen aikana lapsen kädet ja jalat nykivät ja jäykistyvät eikä lapseen yleensä saada kontaktia, tavanomainen kouristuskohtaus kestää alle 15 minuuttia. Kuumekouristus ei ole merkki epilepsiasta.

### Hoito

Kuumekouristuksen aiheuttajaa ei tiedetä. Kouristuksen aikana on tärkeää estää lasta vahingoittamasta itseään ja huolehtia, että hengitys on esteetöntä. Lapsen kehon lämpötilaa tulee alentaa ja kouristuksen jälkeen riittävästä nesteytyksestä tulee huolehtia. Kouristuskohtausta voidaan hoitaa peräsuoleen annettavalla kouristuslääkkeellä.

## Sepsis

Sepsis on bakteerien aiheuttama yleisinfektio, jossa bakteerit leviävät verenkierron välityksellä kaikkialle elimistöön. Tyypillisiä oireita ovat esimerkiksi kuume tai alilämpö, pahoinvointi ja oksentelu, tihentynyt hengitys ja sekavuus.

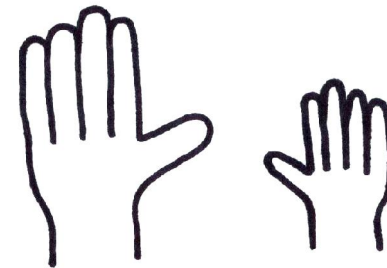
### Hoito

Sepsiksen voivat aiheuttaa monet bakteerit ja sienet. Altistavia tekijöitä ovat myös ihovauriot, tulehdukset ja puremahaavat. Olennaista hoidossa on nopeasti aloitettu voinnin seuranta osastolla. Sepsistä hoidetaan antibiooteilla.

## Yleistä tietoa infektioista

Infektio- eli tartuntataudit voivat olla haitallisia kaikenikäisille, mutta erityisesti pikkulapsille. Infektiot ovat tavallisin lasten äkillisen sairastumisen syy. Infektioita voivat aiheuttaa joko virukset, bakteerit, sienet, alkueläimet ja loiseläimet.

Käsihygieniasta huolehtiminen on erityisen tärkeää vierailujen aikana koko perheelle, niin isoille kuin pienillekin!



## Vatsataudit

Yli 90 % lasten äkillisistä ripulitaudeista on virusten aiheuttamia, ja ne esiintyvät yleensä epidemioina. Ripulia aiheuttavat virukset leviävät yleensä käsien välityksellä, joten käsihygienialla on keskeinen merkitys epidemian leviämisen kannalta. Lasten ripulitautien hoidon perusta on riittävä nesteytys. Kesällä ripulia aiheuttavat yleensä adenovirukset ja talvella rotavirukset.

## Rotavirus

Rotavirus on yleisin ripulitaudin aiheuttaja. Rotavirus leviää yleisimmin kosketus- ja pisaratartuntana ja sen leviämistä on vaikea estää. Taudin itämisaika on lyhyt, vain muutama päivä.

Oireilu alkaa yleensä kuumeella ja oksentelulla; yleensä vuorokauden sisällä alkaa vesiripuli joka saattaa kestää kahdesta vuorokaudesta kahteen viikkoon. Nämä oireet yhdessä johtavat helposti kuivumiseen.

## Adenovirus

Adenovirus aiheuttaa noin 10 % pienten lasten ripuleista. Adenovirusripulille on tyypillistä myös kuumeilu ja vesiripuli sekä myös hengitystieoireet. Oireet voivat kestää jopa 10 vuorokautta. Oksentelua ei yleensä kuulu adenovirusripuliin niin yleisesti kuin rotavirusripuliin joten kuivuminenkin jää vähäisemmäksi. Adenovirusripulin yhteydessä todetaan yleensä koholla oleva CRP eli tulehdusarvo.

## Hoito

Rota- ja adenovirus todetaan ulosteesta otettavalla näytteellä. Akuutin ripulin hoitona on nesteytys, joko suunkautta tai suonensisäisesti. Rotavirukseen on rokote, joka on tullut Suomen yleiseen rokotusohjelmaan vuonna 2009.

## Kuumetaudit

Kuume on normaalia korkeampi kehonlämpötila. Sen aiheuttaa lapsilla tavallisimmin virusinfektio. Kuumeen syy tulisi pyrkiä selvittämään. Kuume ei itsessään ole vaarallista, mutta se lisää nesteentarvetta ja voi väsyttää lasta

## Virtsatieinfektio (VTI)

Virtsatieinfektio on yksi yleisimmistä lasten bakteeritulehduksista, sitä tavataan imeväisiässä niin pojilla kuin tytöilläkin, mutta leikki- ja kouluikässä tauti on yleisemmin tyttöjen vaiva.

Lapsilla keskeinen oire VTI:ssä on kuume. Leikki- ja kouluikäisillä esiintyy usein paikallisoireita kuten kipua virtsatessa, vatsakipua, tiheää virtsaamisen tarvetta, virtsan pahaa hajua ja sameutta tai verta virtsassa. Taudin aiheuttajana on yleensä lapsen omasta suolistosta peräisin oleva bakteeri.

## Hoito

Ennen hoidon aloitusta VTI todetaan virtsanäytteellä. Tulehdus hoidetaan aina antibiooteilla. Hyväkuntoisten lasten hoito voidaan toteuttaa kotona suun kautta annettavalla lääkityksellä. Pienten lasten ja korkeakuumeisten potilaiden suonensisäinen hoito aloitetaan sairaalassa.

