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This journal brings authentic experiences of social workers, doctors and teachers working for the International Scientific Group of Applied Preventive Medicine I-GAP Vienna in Austria, where they have been preparing students for the social practise over a number of years. Our goal is to create an appropriate studying programme for social workers. A programme which would help them to fully develop their knowledge, skills and qualification as the quality level in social work studying programmes is increasing along with the growing demand for social workers.

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IMPRESSUM
CLINICAL SOCIAL WORK, 2012

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Few words from the Editor-in-Chief

This journal brings authentic experiences of our social workers, doctors and teachers working for the International Scientific Group of Applied Preventive Medicine I-GAP Vienna in Austria, where we have been preparing students for the social practise over a number of years. Our goal is to create an appropriate studying programme for social workers, a programme which would help them to fully develop their knowledge, skills and qualification. The quality level in social work studying programme is increasing along with the growing demand for social workers.

Students want to grasp both: theoretical knowledge and also the practical models used in social work. And it is our obligation to present and help students understand the theory of social work as well as showing them how to use these theoretical findings in evaluating the current social situation, setting the right goals and planning their projects. This is a multidimensional process including integration on many levels. Students must respect client's individuality, value the social work and ethics. They must be attentive to their client's problems and do their best in applying their theoretical knowledge into practice.

It is a challenge to deliver all this to our students. That is also why we have decided to start publishing our journal. We prefer to use the term 'clinical social work' rather than social work even though the second term mentioned is more common. There is some tension in the profession of a social worker coming from the incongruity about the aim of the actual social work practice. The question is whether its mission is a global change of society or an individual change within families. What we can agree on, is that our commitment is to help people reducing and solving the problems which result from their unfortunate social conditions. We believe that it is not only our professional but also ethical responsibility to provide therapeutic help to individual and families whose lives have been marked with serious social difficulties.

Finding answers and solutions to these problems should be a part of a free and independent discussion forum within this journal. We would like to encourage you – social workers, students, teachers and all who are interested, to express your opinions and ideas by publishing in our journal. Also, there is an individual category for students' projects. In the past few years there have been a lot of talks about the language suitable for use in the field of the social work. According to Freud, a client may be understood as a patient and a therapist is to be seen as a doctor. Terminology used to describe the relationship between the two also depends on theoretical approach. Different theories use different vocabulary as you can see also on the pages of our journal.

Specialization of clinical social work programmes provides a wide range of education. We are determined to pass our knowledge to the students and train their skills so they can one day become professionals in the field of social work. Lately, we have been witnessing some crisis in the development of theories and methods used in clinical social work. All the contributions in this journal are expressing efforts to improve the current state. This issue of CWS Journal brings articles about social work, psychology and other social sciences.

Michal Oláh
Peter G. Fedor-Freybergh
Edition of journal

MIGRATION AND ASYLUM POLICY IN THE SLOVAK REPUBLIC

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ABSTRACT

Slovakia in the last few years has become transition but also target country for many foreigners. Intricacy of refugee and migration problems in Slovakia, as well as an access of Slovak Republic to the international legal obligations in the field of care for refugees is not very well known. Integration of refugees to a society represents complicated complex interaction of individual person and social environment of host country, economic and legal conditions and factors. Perception and acceptation of refugees by the society into which they come can largely influence possibilities of their connection to the society. The actual escape from the country of origin and subsequent arrival in the country of asylum for refugees operates very stressful and traumatic, so it is necessary to provide them with adequate assistance and support.

Key words: Migrant. Illegal migrant. Asylum. Asylum seeker. Refugee. Integration o refugees into a society. Integration.

Introduction

The transition from a centrally planned economy in the Slovak Republic to the market economy and after the fall of the Iron Curtain has seen many significant changes, which witnessed and became influenced by the overall social development in the country. With the transformation of society began to discover new social phenomena, in the meantime, unrecognized and related problems that affected the everyday life of the citizens of Slovakia. By that time prohibited theme of migration-immigration began after the fall of totalitarian regime reach in new dimensions, which may include the movement of citizens for the borders of Slovakia to countries which, until then, it was not possible to visit freely.

Due to the fact that not all countries, which by that time had gone down the same path as the totalitarian establishment, the Slovak Republic, thus the path of democracy, the citizens of the SLOVAK REPUBLIC may, from the time of entry into the EU and the opening of the Schengen area, SR freely without a travel document. Of course, this option is not given to all countries, especially the countries of the Asian continent. Many citizens of democratic countries in this area to ensure a better life for themselves and for their children, leaving their hometown and go to the adventurous journey to States with democratic establishment, which belongs also to the Slovak Republic.

The migration is objectively part of our everyday life. Even without our involvement of its importance is growing constantly, and if it'll work, it can deliberately benefit the company. In the case that we underestimate or ignore it, it may cause problems in the political, economic, and social life of our country. The existence of the migration of all political actors must be accepted and must become an integral part of the activities of individual government departments.

The transition from a centrally planned economy in the Slovak Republic from the market economy and after the fall of the Iron Curtain has seen many significant changes, which witnessed and became influenced by the overall social development in the country. With the transformation of society began to discover new social phenomena, in the meantime, unrecognized and related problems that affected the everyday life of the citizens of Slovakia. By that time prohibited the theme of migration-immigration began after the fall of totalitarian regime reached new dimensions, which may include the movement of citizens for the borders of Slovakia to countries which, until then, it was not possible to visit freely.

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The issue of migration – immigration is subject of each countries government, and there are also organizations for the fulfilment of the tasks of the asylum policy in the Slovak Republic. The nongovernmental, supranational and international institutions also devote to this activity.

Institutions dealing with tasks of asylum issues in the Slovak Republic

In principle is the most transparent decomposition of these institutions to governmental, the nongovernmental and multinational (international) institutions.

The State Administration – Ministry of the Interior, Ministry of labour and (the Migration Office of the Ministry of the Interior of the Slovak Republic) Social Affairs and Family of the Slovak Republic, the Ministry of Education, Science, Research and Sport of the Slovak Republic, Ministry of Foreign Affairs of the Slovak Republic;

The non-governmental sector – the Slovak Humanitarian Council., the Company of people of good will, a Man in danger, the League for human rights, the Slovak Catholic charity, the Evangelical diaconus, Association of towns and municipalities of Slovakia;

The competent international organisations in the Slovak Republic- The Office of the UN High Commissioner for refugees, The International Organization for migration, The United Nations Children's Fund, Amnesty International.

Migration is a historical phenomenon that affects significantly the policy, economy, social aspects, but also the security of States and changes the population composition of the individual countries. May be a source of conflict, but also of development, however, is a phenomenon that affects the future of individual countries in particular, and thus of the whole of mankind. Migration therefore requires the system access and qualified management. It should not be political, however, Governments must not fear to receive and accept adequate political decisions in its management. Whereas the objective of migration will affect our future, we have to influence the migration.

The main causes of migration

By the term of migration we shall understand transfer from one place to the other, the movement of labour, movement of the masses of the people, also their relocation. The migration means the movement. The current globalization, integration processes, the development of information technology and transport, differences in standards of living have become an important factor of growing importance and intensity of migration. Migration has become one of the most significant phenomena of 21st century all over the world.

"Migration is a phenomenon accompanying almost the entire human history, its intensity varies depending on the political, social, economic and demographic conditions." (Popper, 2006). With observance of the human rights of a closely related occurrence which is

becoming an integral part of the modern epoch of the Slovak Republic, and it is the migration of the population. Foreign migration is defined as the type of the spatial mobility of population, whose essential part is the movement of persons across borders with a view to establishment in another country for a certain period. (Divinský, 2005)

According to the International Organization for migration to foreign migrants (immigrants, emigrants), under the direction of movement, foreigner - is the person who changes the country of his residency. Currently in the category of foreign migrants includes more than 175 million people, with an estimated increase of their status on the 250 million people in 2050. The share of migrants in the world population currently represents approximately 3% of the population so it means that every thirty-fifth person of the planet is a migrant. (Divinský 2005).

Nowadays the main causes of human migration are the escapes of citizens from their country of origin or the latest permanent residence, to avoid the persecution mainly for the following reasons:

racial,
religious,
ethnic,
political,
as well as the consequences of armed conflict
and ethnic cleansing.

The largest group consists of economic migrants that left the country of origin for the adverse economic and living conditions. International migration is one of the key factors of globalisation.

Other applicable criteria of migration is voluntary or enforced decision to leave your country of origin, the migration of the voluntary or forced migration. Voluntary migration representatives are persons migrating abroad for the purpose of employment, study, the reunification of families. Forced migrants leaving the country of origin, to avoid for example persecution, discrimination, armed conflict, environmental degradation, natural disasters and wars, or other situation threatening their lives, health, way of life or freedom. (Divinský, 2005)

Asylum and migration issues in the European Union After the entrance of Slovak Republic into the European Union there has been a change in the solutions to asylum issues, which requested to implement fundamental changes in migration and asylum strategy in acceptance of a number of international documents aiming their content to the gradual creation of the unified migration and asylum policy of the Member States of the European Union (Priecel 2006).

In 1993 the Government adopted the Principle of migration policy of the Slovak Republic and subsequently in 1996 was adopted a document “Comprehensive solution to the integration of foreigners”, which regulates the conditions of treatment of asylum seekers, as well as the main areas of care for them (e.g. search for job opportunities, and creating the conditions for the adoption of the corresponding social accommodation to select sites, tutorial and asylum flows across the municipalities of collectivities of the Slovak language, ensure education and possible social security and the provision of health care, retraining).

The aim of this solution was that the asylum-seeker has become a self sustaining, capable, without the aid of the State (the Resolution of the Government of Slovak Republic number 105 of 1996). Due to the fact that this situation is constantly changing, received documents did not respond to the development. Therefore it was necessary to adopt from the Slovak Government, also under the pressure of the European Union a new Concept of migration policy in the form of the concept of migration policy – the Migration Office of Ministry of the Interior of the Slovak Republic (Popper, 2006). This document contains the basic framework

to deal with issues of migration and migrants and is the result of efforts to unify the migration policies of the member countries of the European Union.
The concept of migration policy is guided by the following principles:
The principle of sovereignty of the Slovak Republic— Slovak Republic regulates migration pursuant to their abilities, according to the international agreements.
The principle of patterns - respect of the Constitution of the Slovak Republic , as well as international agreements and documents
The principle of legal migration – migration support, which may be the benefit of the State, creating a controlled immigration policy;
The principle of active cooperation with the European Union – the emphasis is on a uniform policy for the countries of the European Union;
The principle of non-discrimination – ensuring equal opportunities for all, excluded discrimination and the provision of privileges to individual groups of foreigners;
The principle of flexibility -assuming the innovation of accepted arrangements (Popper, 2006).
The legal standards in the area of migration and asylum policy of the Slovak Republic
The Constitution of the Slovak Republic is the highest legal norm of the Slovak Republic. The Constitution of the Slovak Republic adopted Act No. 460 of 1992 Coll. as amended, which addresses, inter alia, the question of human rights and the rights of foreigners.
In connection with the issue of migration of Slovakia is subject to international standards, arising from membership in international institutions, such as the UN and the European Union. These standards define the basic framework of the migration law of the Slovak Republic, while the most basic agreements and instruments are implemented in the Constitution of the Slovak Republic and concerning migrants and citizens of Slovakia.
Between the most basic documents include:
Charter of fundamental rights and freedoms-the Constitutional Act No. 23\/1991 Coll.,
The International Covenant on Civil and political rights, International Covenant on economic, social and cultural rights (Convention No 102/1976 Coll.), The Convention on the rights of the child, Convention for the protection of human rights and fundamental freedoms.
Another important document that the Slovak Republic adopted was the law No. 480\/2002 Coll. on asylum and on amendments to certain laws, which entered into force on 1 January 2003. In this law reflects the main requirements of the EU for the implementation of the tasks in the area of asylum, to which the Slovakia as a Contracting State of the Geneva Convention and the New York Protocol is committed. The purpose of the law on asylum is to achieve the level of the European standard for deciding on applications for asylum by foreigners – refugees, which in countries of origin or in the country of their last residence is threatened with persecution on account of race, religion, nationality, political affiliation or membership of a particular social group. Joint efforts of the individual Member States is aimed at the establishment and functioning of the common European asylum regime modified uniform legislation, in particular by strengthening the efficiency and fairness of asylum procedures, including the increasing convergence of decisions relating to applications for asylum of foreigners. If the applicant was granted asylum, gets the evidence of a residence permit with the identity as an asylum- seeker, which lasts the most for a period of 5 years.

Conclusion

Migration is objectively part of our everyday life. Even without our involvement of its importance is growing constantly, and if it will work, deliberately can benefit the company. In the case that we underestimate or ignore it, it may cause problems in the political, economic, and social life of our country. The existence of the migration must be accepted by all of

political subjects and must become an integral part of the activities of individual government departments.
The perception and reception of refugees in the society they are coming to, may greatly affect the possibility of their involvement in society. The preparedness of the competent authorities, the synergies and professionalism has significant impact on the conditions of integration, which we will be willing and able to create for the refugees. Maximization of all entities involved in the solutions and the implementation of the integration process is that this was what the fastest both in the interest of refugees as well as in the interest of reducing the expenditure of the State budget. Co-existence of different cultures within a single space should be based on tolerance and respect for cultural, religious and social differences that lead to mutual enrichment and ultimately to increase the cohesion of society. Alignment of the objective possibilities of providing assistance to integration with rational and objective needs of the refugees, the education of refugees to the autonomy and responsibility, it is necessary to be regarded as one of the current issues in the current integration of migrants.

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USING THE DRAMATHERAPEUTIC TECHNIQUES DURING THE WORK WITH MENTAL HANDICAPPED PEOPLE

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ABSTRACT

This review deals with the using of the dramatherapy as a method which helps in self-understanding and self-cognition. The using of the dramatherapeutic techniques is able in a wide spectrum of clients. The review focus on the analysis of the basic means of the dramatherapy, the attitude of the dramatherapeutist to the group work and a group dynamic. At the end there are defined the specific factors in the work with mental disabled clients and the effectiveness of the techniques during the work.

Key words: Dramatherapy. Cohesion. Group dynamic. Personality of the dramatherapeutist.

Introduction

The dramatherapy as a form of the psychotherapy, expressive therapy strikes its roots in the Czech republic deeper and deeper. However it is much retarded than in the UK, USA or Netherlands, because these countries are the place of birth. It raised in Amersfoote after the 2nd World War as a therapy of orphans, who lost their parents in the war. Nowadays it applies in the western institutes for people with mental disease, at the psychiatric clinics, it is applied in the cases of children with problem of concentration and learning; pre-deliquent youth and more. In our countries it is a way which slowly finds its meaning in a wide spcetrum of social services users and patients of psychiatric and psychologic care.

The using of dramatherapeutic techniques was studied by Charyparova (2008). The subject of her was using the techniques of the dramatherapy in a processing work in stacionary with mentaly handicapped people and its influence on a progress of social abilities.

What is a dramatherapy

There is plenty of defininitions which help in describing its goal and meaning. Valenta (2007, p.23) uses: 'Dramatherapy is therapeutically formative discipline which has the majority of group activities used in the group dynamic those dramatic and theatric techniques for reaching the symptomatic relief; personally social growth and integration of personalities.'

Majzlanova (2004, p.9) finds it as: '...one of the medical-educating acces, which helps people to know themselves much better; to get a better orientation in various situations; helps them to understand; stay who they are; control their attitudes; the possibility of changes and the empathy...'

The National Association for the dramatherapy in the USA gives the specification (in Valenta, 2007, p.23): 'Dramatherapy can be defined as conscious using of dramatic/theatric techniques for reaching the therapeutic goal of symptomatic reliefm mental and psychical

integration and personal growth.'

The position of the dramatherapy in a system of methods of working with a client

The position and specification can be defined into many categories. Valenta (2006) shows this meaning of dramatherapy as:

-a part of aplicated psychology-psychotherapy, special pedagogy or an authenthic specilisation of an interdisciplinary meaning
-one the art-therapeutic disciplines
-expressive or active therapy
-therapeutically-formative discipline
-one of paratheatrical system (therapeutic)
-one the paratheatrical system (educative)

The clients

It has a wise spectrum of clients. The majority are mental handicapped people. The 2nd most affected people are people with psychiatric diagnosis, young people with specific evolution problems of learning and behaviour, teenagers with other behaviour problems and psychosocially handicapped. Among the clients belong also people in a processing punishment, postpenitenciary care and gerontologic clients (Valenta, 2007).

We can say that the most closest job is a special pedagogues, psychologists, social workers, doctors and specialists working in a locality of prevention the social patologic acts.

The goals of the dramatherapy

The goals are very specific and various, based on focusing on the surveilled group. F.e. the gerontological clients can be surveilled for specific goal to achieve-training the orphans' memory for reducing their psychi deprivation and etc.

Famous californian dramtherapeutist René Emunah (in Valenta, 2007) points to these unspecific goals:

-raising the social interaction and interpersonal intelligence
-gaining the new abilities of relaxing
-ability of controlling our emotions
-changing the deconstructive behaviour
-widening the spectrum of life roles
-gaining the ability of spontaneous behaviour
-improving the imagination and concentration
-strengthening the self-confidence; self-reflection and raising the level of interpersonal intelligence
-gain of the ability to understand and accept our limits and possibilities

Majzlanova (2004) speaks about short.time and long-time goals, main and side goals, predicted and final goals and specifically or globaly focused ones. Mainly there are specified goals, sometimes they can came of present or global goals, which are given in the absence of client's informations or during the changes of new informations form which we can decide new goals.

The author's dramatherapeutic intervention with clients of Daily stacionary for mental handicapped people was affected by a change of goals and formulation of more specified ones finally based on the client's meeting.

The goals of the dramatherapeutic program were: the global goal was chosen at the

beginning of the work-improving the social abilities; extending a repertoire of roles for life and increasing the social interaction. The goal 'extending the repertoire of the life's roles' was finally left away in cause of a fact that it does not cooperate with slightly mental handicapped people, but with a group on a middle or high level of the retardation. In this case, the goal of education is not learning the new roles, but modelling the right social or acceptable behaviour in social roles, which have been already learned by a patient.

The formulation of the concrete goals was done on the fundamentals of meeting the patients. After recognizing their needs, abillities and limits, the author made those goals, which were focused exactly on this group and finally those goals, which could be achieved in relatively short time period (august-march). Except the goals for the group as an unit were chosen the goals for every member of the group too.

The basic means of the dramatherapy

One of the basic means is an improvisation.Improvisation mirrors the patient from inside, its conflicts and his free asociations much better than a structured game, it allows the expression of a condition in a moment, developes the spontanity and we can experiment with a different roles during it. The improvisation supports the inner look to the model situations. 'Improvisation is closer to the real life more than any other structured shape'(Valenta, 2007, p.33).

Reneé Emunah divides three types of an improvisation in the dramatherapy (in Valenta, 2007):

-*Planned* impr.: the clients decides at first, which place he will také in the improvisation. However, the client has got short time for recognizing and understanding his role, that is why the result of the test is often unknown at the beginning.

-*Unplanned* impr.: the client has to decide at the moment, if he accepts or declines the role, which was given.

-*Unprepared* impr.: Is completely out of the therapeutist's plan and client fluently changes the roles.

Other means of the dramatherapy are: mimical and speech excercises, dramatic game, verbal game, game in a role, a script, the myths and stories, work with a text, narrating the stories, makeup, masks, puppet show, movement, pantomime, game with objects and painting, simulation and describing. (Valenta, 2001) Dramatherapy does not use only theatric means, but it uses also the elements of music-therapy and art-therapy. It works with metaphore, signs, stylisation and creativity. We can also use the fairytales, clients' life stories, improvisation with objects and expressing the feelings and imagine, which showed up during the dramatherapeutic meeting.

The enumeration of mentioned means is not complete at all. As the techniques developes, new experiments are done and new experience from the past, present and the future of the theatre, we can suppose that it will develope much more in the future.

The structure of a dramatherapeutic progress

In the dramatherapy is left a place for the improvisation, so the structure of the meeting can be adjusted to the actual situation and we do not have to strictly follow the planned parts.

The number of meetings and its time depend on the type of the group. The most frequent dramatherapeutic model is: 1-2 meetings a week, which takes one and half an hour.

Majzlanova (2004) divides the dramatherapeutic meetings into these parts:

-***the introducing part***-warming up, relaxing methods,...

-***the heart of the meeting***-work with a text, dramatic games, role games, improvisation and other

-***the ending, relaxing***-the self-relection of the clients, discussion, relaxation, easier dramatic elements, getting out of the roles,...

The dramatherapeutist's personality in the group work

The condition of successful dramatherapeutic work is professional and human potentional of the dramatherapeutist. He is a guide of the dramatherapeutic progress, the quality in affecting the client's psychic in this progress is affected by a quality of the guide's personality. The important ability, which every dramatherapeutist shoul have is getting on well with clients and making a good atmosphere of safety and belief, which make the progress of expression and relaxing of the clients much easier. The natural leader's authority is another quality, which should the leader has. In easier way: the dramatherapeutist must coordinate the group even in the case of its resistantion, agressive expressing (f.e. Teenagers with behavioural disorder) and so on. We use the theatrical means in the dramatherapy, a possitive relation among the leader and the theatrical art is of course an advantage. The dramatherapeutist should be able to play roles, suggestively narrate, improvise, evoke different dramatic situations. The needed element of relaxation brings to the dramatherapeutical progress a sense of humour. (Charyparova, 2008)

During the work with mental handicapped peopleis the one of the most important things a patience, kindness, ability of giving instructions in the way, which is acceptable and understandable by group and and ability of predicting the clients' reactions in different situations. We have to talk to clients kindly, slowly, understandably and the attention should be given also to the fact if the dramatherapeutist does not speak too fast and use long sentences. The important presumption of successful cooperation with people with mental handicap is a possitive atittude and relation with these people.

The other presumptions of dramatherapeutist's work are active life atittude, resisting the stress, creative thinking, ability of solving problematic situations, empathy, keeping secret and kind access to clients.

Dramatherapeutical group as a social group

The human being is a social being. One of the basic condition of its existence are the social relationships. During the life we become the memebers of many different social groups, which can be closed or opened and they can mix together.

Social groups can be divided in many ways. For example in the addiction to the size of the group exist big and small groups, to the character of relations among the members to the primary and secundary, to the formality to the formal and informal...There are many of the ways, we will focus just on those ones, which are connected with the dramatherapeutic groups.

The dramatherapeutic groups can be divided by a global criterion, which we enrich with specific lines, charasteric exactly for the dramatherapeutic meetings. Valenta (2007) divides them to the coeducated (males and females) and izosexual, the first ones are more often and functional than the izosexual ones. About the izosexual groups we think in the cases of 'izosexual' institutes as etopedic educational institutes. Further we divide the groups by a kind and a type of the handicap to homogeneous and heterogeneous. The more often are the heterogeneous ones.

The group of clients which who Charyparova (2008) was working can be defined as:

-*small*: contained 9 members
-*secundary*: the relationships were created based on the fact that they all are members of the same one group
-*formal*: clients arrive to the stacionary thanks to the contract and rules
-*still*: the group has not changed during my wrok with them, clients come to the stacionary regularly for a longtime
-*homogeneous*: based on the fact that it is a group of people with mental handicap
-*heterogeneous*: based on the fact of different health condition (move ability)
-*coeducated*: the frequents are men and women

As we mentioned before, social (and so the dramatherapeutic) groups can be divided by many criterions. This summary is not complete, we can look on the group from a different points of view. Our proof can be for example, our description of the group as homogeneous and also the heterogeneous one. Upper mentioned limits should be used for reader's help with making a basic imagine of the clients, who were the object of the dramatherapeutic work of one of the authors.

Next to the dividing of the social groups should be mentioned their structure too. It is made of a system of the positions and the roles in the group. Mostly it is hierarchic and it is influenced by the relationships among the group members. The structure of the group has outer and inner limits; outer divides the group from the other people and influences, inner are made by the formal and informal rules.

In the case of clients, who has one of the authors worked with we can talk as a group with strictly given outer limits, comparing with the majority of the society, if we take the group of the mental handicapped people as a minority. The inner limits are connected to the group dynamic.

The group dynamic

The dramatherapeutists needs to have the knowledge about the group dynamic in the planning of the intervention. The progress which cause the group clima mainly affect the results of the group work. The group dynamic (cohesion, tension) is used for achieving the dramatherapeutic goals.

Kratochvil (1997) involves the goals, norms of the group, cohesion, tension, leadership, recalling the past experience and relations to the present interactions, building sub-groups, relations among people and group, group evolution during the time.

The most highlighted elements during my practice with the mental handicapped group have become the cohesion and tension, goals and norms. So let's focus on these parts of the group acting.

-***Cohesion and tension***: Cohesion is a bound which connect group members. It creates friendly and safe atmophere. It is a stabilizing factor but without it the group would not be able to work or even exist. Tension is a dynamic factor, provocking to change and working harder even if the conditions are harder or the skills are more difficult (Matousek and col., 2003).

Cohesion and tension are the basic elements of the group dynamic. For the group operating is very important the dynamic equality. Too high and longtĺasting level of the cohesion leads to the stagnation in the evolution of the group. It creates an illusion that there is no need of trying to change. Too much of tension leads to the increase of of attention, no trust and agresivity. There are possible results as trying to escape from the group.

The clients of the Daily stacionary created the cohesive group. However, sometimes there were signs of tension, specially in the cases of the clients, who felt a resistance. The resistance affected the mood and activity of other members in a negative way. (Charyparova, 2008)

-***Group goals and norms***: The group choses its own goals and it focus on its members and specialisation. It can be a support among each other, providing the informations, understanding the people's problems, personal growth, removing the diseased symptoms, preparing for the return to the everyday life or understanding own maladaptive examples of behaviour which are a step to its own change in the sense of a social adaptation (Kratochvil, 1978).

The group norms are as usual, unwritten rules which explain what is from the group's point of view right and what is wrong. Following these norms group demands and its members pushes to respecting it (Matousek and col., 2003).

The clients who Charyparova worked with, knew the exact time when the dramatherapeutic lesson starts. If they were late, they were charged by a group. Comming soon was one of the group's norms. (Charyparova, 2008)

Specific factors of the group work

One of the affective factors during the group work are:

– A membership in the group: even participation in the activities of the group can make a change or have a terapeutic effect
– Emotional support: there is a psychic safety climate, members accept each other, tolerate, listen, support and give a hope for reaching the goal, which they chose. The most affective is an emotional support f.e. in the self-helping group
– Helping each other: the feeling that a client is able to help someone (empathy, advice, support, sharing) can have a terapeutic effect
– self-exploration and self-expression: members have a free choice in expresing themselves and revealing their hidden thoughts
– relax: it is connected with a full emotional life in the group, it makes a client's relief
– feedback: feedback from the other members can help to client in reducing his own blind part and it deepens the group dynamic
– view: is an understanding of the reality and connections, which were not visible before. A view is the highest top of the social working in the group.
– Earning new informations and social abilities:
– Training the new way of behaviour

In the group of mental handicapped people were the most visible factors a membership, emotional support, helping each other and earning new informations and social abilities. The emotional support was a very strong sign which influenced the group. More active members were helping passive members, group supported those who were not as self-confident as others.

The result, global summary of exact dramaterapeutic program

Creating a new own systém of choosing the techniques, its dividing and predicting the atractivity of the program for clients was at the beginning really hard for the social worker who was starting using the dramaterapeutic techniques. She had to predict if the clients will manage and accept, be able to react to the arranged techniques.

She used the same straight interpretation with an example, in need even the repeating. The main factor was continuous supporting, giving a self-confidence to the clients.

Sometimes she commended them for a little progress. In more mediate lessons, when the clients were used to the dramatherapy, she let a big place for their improvisation which strengthened their self-confidence and the feeling 'we can do it on our own now, alone'.

Even she had perfectly chosen program and the structure of a meeting, she couldn't strictly follow it everytime. During every meeting she had to think about the number and contain of the group and their present moods. It was necessary to react on the behaviour and feelings of the clients and trying to make a nice atmosphere. Sometimes happened that she was forced to improvise and change the prepared program completely. We suppose that the improvisation is one of the basic dramatherapeutist's abilities which heas to have.

Based on the Charyparova's (2008) rating of the clients, parents and leaders of the institutes we say that the dramatherapeutic program with a group of the clients in the Daily stacionary for mental handicapped people in Most was successful. The highest rank and the best feedback was a request of going on with this program and being a part of the Daily stacionary's part of a program.

Using the dramatherapeutic techniques we recommend to the social and psychic workers who cooperate with mental handicapped people. They can help in social and personal self-progress of the clients.

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THE RELATIONSHIP OF THE AVERAGE MONTHLY WAGE IN SLOVAK REPUBLIC AND THE MINIMUM WAGE AND THEIRS DEVELOPMENT

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ABSTRACT

The ordinary life of Slovak Republic citizens is becoming more and more dependent on their ability to be successful on job market as an employee or businessperson, but also from the overall health condition of citizens, from the social - political situation in country, but also from the civilization context which is given mainly by development of science and technology. Faster than in any other period, the lifestyle changes of citizens occur, the changes are done mainly in the individual life strategies, dramatically the life quality is changed. On the life quality has the biggest influence the affluence of financial means for individuals and household. With this, there is the connection of the need to have employment, work for higher wage than the minimal and from the played salary normally pay the insurance fees and taxes. With regard to high rate of unemployment in Slovakia approximately 5 per cent of citizens works for minimal wage. It also starts to be certainty that minimal wage is not only played for work with regards of difficulties and sufficient professional training and education but also for the work which belongs to the more demanding. When comparing the minimal wage with the average wage in national economy it is visible that minimal wage is not high as 40 per cent from the amount of average monthly wage which has negative impact on life quality of employed citizens of Slovakia. It is right if in the country the amount of minimal wage defined? Would not it be convenient to establish the minimal wage according the regions and optimized it to average wage? It is totally necessary from the reason that the amount of minimal wage is not enough for employed citizens in the full range to cover basic life needs.

Key words: Minimal wage. Average wage. Nominal wage. Job market. Human resources politics. The life quality.

Introduction

Every year, since 2000 in Slovakia the new limit of minimal wage is established. The validity of the changes of minimal wage is starting yearly on October, 1. Appropriate government enforcement establishes minimal hourly and monthly wage. Minimal wage for every finished hour is established for employees whose agreed work week is 40 hours. The development of minimal wage in Slovakia is recording since 2000 continuing rise.

Conclusion

The average wages, minimal wages but also the costs of work in Slovakia are lower mainly

when comparing to the other EU countries. According the recommendations of EU the minimal wages should be at least 60 per cent of average nominal monthly wage of economics. Low level of wages means not only the lowering of the quality of citizens life's but also lowering of motivation to find a job, loosing of interest of getting higher qualification and leaving of young people with higher education abroad. The present day problem in the area of wages should getting along of market demands on the graduate students which has its part also by failing personal policy of employers.

The average and minimum wage in Slovakia

The minimum wage and its amount is relatively often mentioned topic of political and economic discussions. The politicians and also economists tend to go right and more often tend to express their opinions for the cancelation of classification of minimum wage or come with the different conceptions about ist restriction.

The main discussion runs on the level or ideology. On one side they are the proponents of free market and on the other side they are the inhabitants who require different forms of market regulations. The most sharp and the most uncompromising opinions are by the inhabitants who are in the biggest touch with minimum wage. On the one side, they are the employers, mainly those whose awards for their employees are very close to the minimum wage. On the other side, they are the employees in low wage levels, represented by the Union.

The legislative basis of minimum wages guarantees has as the aim to overcome the abusing of employees by employers, mainly from private and business sectors. Mainly, some economists reproach the existence of minimum wage because allegedly interfere into the freedom of free market. Finally, the practical outcome is that establishment of minimum wage keeps from the formation of new working positions which would be awarded lower in the natural work market. In particular, those are low qualified jobseekers which make those people unemployed for long period.
(find for example Bodnárová a kol., 2006)

Stated pros and cons are main measurement of the problem of the of minimum wage institution. With different authors we can meet also with others secondary arguments which are usually only for underlining their own viewpoint and do not have to be relevant. The development of the unemployment rate which can be in some relation with the minimum wage is under better of public opinions. The only thing that minimum wage does, nowadays, is that protects of establishment of low qualified working positions and so there is 63 per cent of jobseekers among the unemployed without the qualification.

It is necessary to point that relatively low share of employees percentage close to the minimum wage, has no testimony about the negative tendency of the employers to evaluate the work so close and it is mainly from two reasons:

1. Minimum wage claims under § 120, para. 4 of the Labour Code, which define the minimum wage rate for that level as a multiple of the hourly minimum wage in establishing a weekly working time of 40 hours or determining the amount of the minimum wage in euros per month if the employee is paid a monthly salary, set by special legislation, and of the minimum wages.
2. Most employers pay covers basic (guaranteed) part under the contract (which determines the lower limit of the minimum wage and the subsequent minimum wage claims) and soon motivational part that the employer shows "generosity" and encourages its employees to greater diligence, discipline and loyalty. The results of sample survey on wage structure in the Slovak Republic, base salary is about 66.9% in real wages. The rest are various allowances, bonuses, incentive payments, 13 salary,

14 salary, etc..

So the fact that the employee is not in the lowest wage ranges does not mean that does not work for minimum wage.

Economists say that the world desires and wishes of all people are unlimited and that offers of great products and services are limited. Supply is limited because we live in a world of limited resources. Anyone who has already entered the labour market and offer their work knows, that the work offered, has a value. And the evaluation of the work is primarily wages. And each of us hopes that his work is valued the best. So, every employee would have liked a high wage. It is by working "fair wage". This desire is confronted with the fact that the company can not pay any amount of payment. Vast majority of companies are doing business in markets and thus functions in terms of "hard budget constraint". This means that the firm must pay employees, pay the delivery of purchased goods and services, pay taxes and fees and in addition the company should remain part of the investments and pay no income on invested capital. Basically, the company in paying wages is limited demand for their products and services.

As the first issue of garnering the minimum wage in Slovakia Act. 90/1996 Coll., before the minimum wage law was determined by government regulation. In 2007, members of parliament approved the new Act. 663/2007 Coll. about minimum wage which governs the provision of a minimum wage worker in employment to ensure a minimum level of income of the employee for work they performed.

In Slovakia, since 2000, every year is set a new threshold for the minimum wage. The validity of changes of the minimum wage shall be established annually from October 1, as the product of the average wage in the economy of the previous year and the rate on which on the proposal of the Ministry of Labour, the social partners agree. Relevant government regulation sets the minimum monthly wage an hour. The minimum wage for every hour worked is intended for employees whose established weekly working period is 40 hours. Institute of the minimum wage is currently the only instrument which a State may directly influence the development of wages in determining its amount was not significantly enhance the role of social partners, government and institute negotiations.

The monthly minimum wage is determined by the overall economic and social situation in Slovakia for two calendar years preceding the calendar year in which it is proposed to establish the minimum wage, especially by the development of:

1. Consumer Prices
2. employment
3. average monthly wage in national economy,
4. living wages.

The official statistics of the EU statistical office Eurostat, shows that in January 2011 had the lowest minimum wage in the EU, Bulgaria € 119.64, Romania € 156.36, € 231.70, Lithuania € 231.70, Estonia € 278.02 and Latvia € 282.01. On the other hand, had the highest minimum wage Luxembourg € 1756.56 and the Netherlands 424.40 Euros.

Table no.1 **Overview of the minimum wage in the EU countries to April 1, 2012 calculated home currency to the euro**

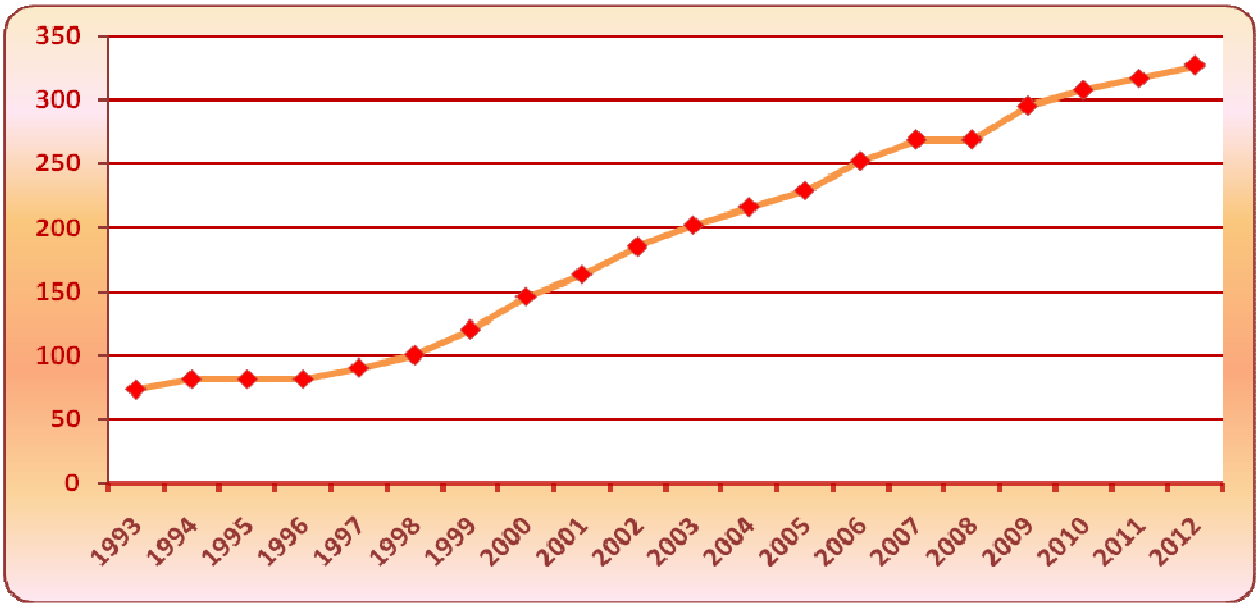
Number	State	Local currency	in Eur	Validity from
1	Luxembourg	euro	1 801	1.1.2011
2	Ireland	euro	1 499	1.7.2011
3	Belgium	euro	1 498	1.5.2011
4	Netherlands	euro	1 446	1.1.2012
5	Franca	euro	1 398	1.1.2012
6	Great Britain	1 053 GPS	1 268	1.10.2011
7	Germany	euro	1 262	1.11.2011
8	Austria	euro	1 000	1.1.2009
9	Cyprus	euro	909	1.4.2011
10	Slovenia	euro	748	1.3.2011
11	Malta	euro	685,00	1.1.2012
12	Spain	euro	641	1.1.2011
13	Greece	euro	585,78	1.3.2012
14	Portugal	euro	485,00	1.1.2011
15	Poland	1 500 PLN	365,85	1.1.2012
16	Slovak Republic	euro	327,20	1.1.2012
17	Czech Republic	8 000 CZK	323,75	1.1.2007
18	Hungary	92 000 HUF	318	1.1.2012
19	Turkey	701 TRY	302,15	1.1.2012
20	Romania	700 RON	160,91	1.1.2011
21	Bulgaria	290 BGN	148	1.4.2012
22	Russia	4 611 RUB	119,08	1.6.2011

Source: www.fedee.com/minwage.html

In Slovakia, the minimum wage is established by law and implementing ordinance. The amount is derived from the amount of the average wage of employees in the previous year, by a coefficient, whichis negotiated **by** representatives of employers associations, trade unions and government. Collective agreements concluded at sectoral level (higher- level collective

agreements) and at company level between representatives of employers and employees can negotiate higher minimum wage. The amount of the minimum wage from January 1, 2012 is € 327.20 per month for an employee paid a monthly salary and € 1.880 for each hour worked by employees.

Graph no. 1 **Development of a minimum wage in Slovakia from 1993 to 2012**



Source: Office of Labour, social affairs and family

Economic encyclopedia explains nominal wage as the amount of monetary units that labour force receives as the price of labour. Rising nominal wages does not necessarily mean that the workforce improved their social status, **in** this category **it** says **about the real wages**.

Minimum wage is the minimum amount of wages guaranteed by state and belong to the employee, regardless of his job title. Nominal wage is the amount paid to an employee for work done. The real wage is the amount of goods and services that can be purchased for a nominal salary.

Description **of** wages **development** in nominal terms is the easiest but real expression that takes into account **besides the** changes in wages **also the** changes in consumer prices, ie inflation. For an objective comparison is not only important to follow the **development** of real gross wages but the real net wages, ie wage adjusted by consumer prices and also reduced **of** the income tax and social payments and health insurance contributions.

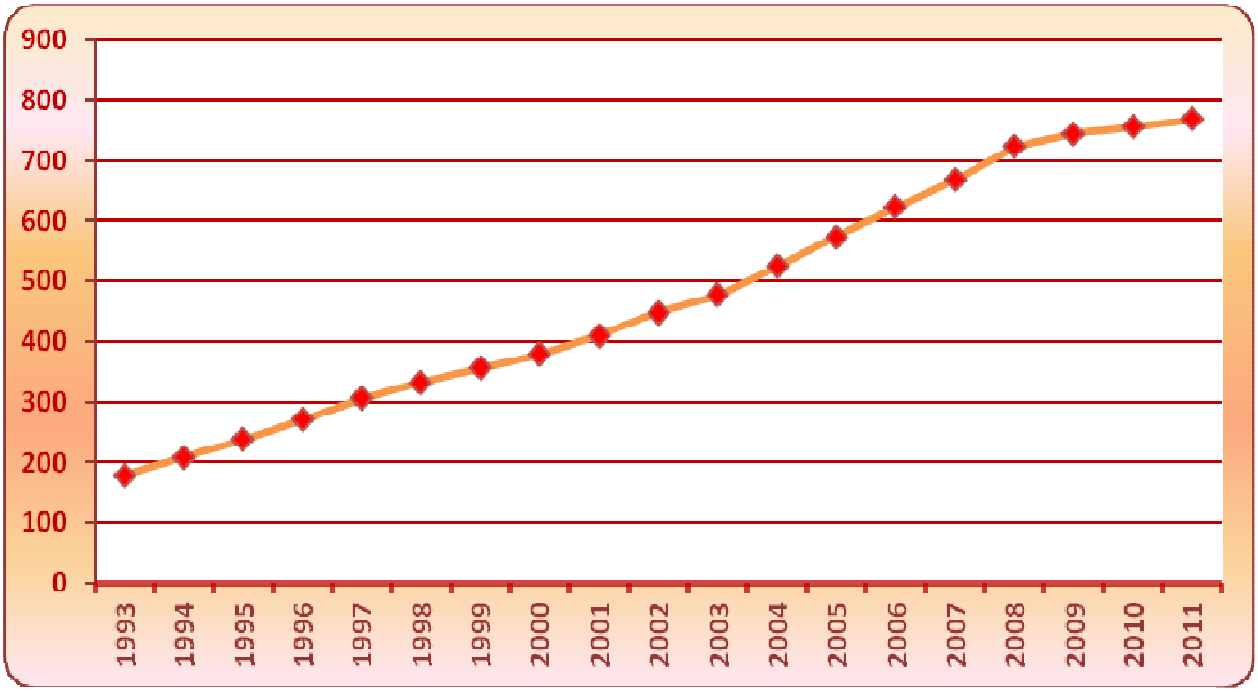
The amount of real wages depends on the amount of nominal wages and inflation. **The c**hange in real wages **is not** necessarily translated into changes of living standard of individuals and families.

Table no. 2: **The development of the minimum wage and average wage in Slovakia**

Year	Monthly groos minimal wage (MM)				Statistically found out average wage for given year (PM)		MM/ /PM
	Skk/month	€/month	Valid from	In accordance with regulation	Skk monthly	€ monthly	%
1991	2 000	66,39	1. 2. 1991	n. v. 99/1991 Zb.	3 770	125,14	53,05
1992	2 200	73,03	1. 1. 1992	n. v. 53/1992 Zb.	4 543	150,80	48,43
1993	2 450	81,33	1. 10. 1993	n. v. 248/1993 Z. z.	5 379	178,55	45,55
1994	2 450	81,33			6 294	208,92	38,93
1995	2 450	81,33			7 195	238,83	34,05
1996	2 700	89,62	1. 4. 1996	z. 90/1996 Z. z.	8 154	270,66	33,11
1997	2 700	89,62			9 226	306,25	29,27
1998	3 000	99,58	1. 1. 1998	z. 366/1997 Z. z.	10 003	332,04	29,99
1999	3 600	119,50	1. 4. 1999	z. 56/1999 Z. z.	10 728	356,10	33,56
2000	4 000	132,76	1. 1. 2000	z. 346/1999 Z. z.	11 430	379,41	34,99
	4 400	146,05	1. 10. 2000	n.v. 298/2000 Z. z.	11 430	379,41	38,49
2001	4 920	163,31	1. 10. 2001	n.v. 411/2001 Z. z.	12 365	410,44	39,78
2002	5 570	184,89	1. 10. 2002	n.v. 514/2002 Z. z.	13 511	448,48	41,23
2003	6 080	201,82	1. 10. 2003	n.v. 400/2003 Z. z.	14 365	476,83	42,33
2004	6 500	215,76	1. 10. 2004	n.v. 525/2004 Z. z.	15 825	525,29	41,07
2005	6 900	229,04	1. 10. 2005	n.v. 428/2005 Z. z.	17 274	573,39	39,94
2006	7 600	252,27	1. 10. 2006	n.v. 540 /2006 Z. z.	18 761	622,75	40,51
2007	8 100	268,87	1. 10. 2007	n. v. 450/2007 Z. z.	20 146	668,72	40,21
2008	8 100	268,87	1. 2. 2008	z. 663/2007 Z.z.	21 782	723,03	37,19
2009	(8 902)	295,50	1. 1. 2009	n.v. 422/2008 Z. z.	(22 429)	744,50	39,69
2010	(9 270)	307,70	1. 1. 2010	n.v. 441/2009 Z. z.	(22 788)	756,41	40,68
2011	(9 550)	317,00	1.1.2011	n.v. 408/2010 Z. z.	(23 167)	769,00	41,22
2012	(9 857)	327,20	1.1.2012	n.v. 343/2011 Z.z.			

z. = law
n. v. = government regulation

Graph no. 2 **The development of the average wage in Slovakia from 1991 to 2011**



Based on the survey, we concluded that two thirds of people have below-average wages. The average monthly wage for 2011 is € 769, the minimum wage in 2011 was € 317. The difference between the minimum wage and average wage was therefore 769 to 317 = € 452. The reasons why a relatively large majority of people have lower than average salaries are basically two.

1. The employees with the below-average wage push average wages down, workers with the above-average wage push upwards again. The opportunity to influence the minimum wage in direction to down is, however, significantly limited by the minimum wage. An employee may receive "only" € 452 less than the average wage. How much € above the average wage, the employee may receive is not set and one employee with wage higher than average salary to push average wages upwards more than the employee with minimum wage pushes downward, just to earn at least € 452 more than the average wage, ie 769 + 452 = 1 221 €. And what is his salary higher, the more it influences the overall average wage move upwards.

2. The number of employees receiving the minimum wage (currently it is about 5% of employees), is certainly less than the number of employees with salaries over € 1 221.The salary more than € 1221 receives a relatively large number of people – more than 10%, but rather it will be ten percent. The examples include senior managers, politicians, doctors, lawyers, judges, architects, artists and elite athletes, soldiers and police officers with higher ranks, university teachers etc., highly skilled workers (eg lathe men), some builders and the profession.

Why some professions earn more than others? The simple rule is valid: the less people are able or willing to perform a specific job, the salary is the higher. And vice versa.

Determination of the minimum wages is attached to the unskilled labour force (often is the case of people living in poverty) may be an obstacle to their employability, resulting in a significantly more difficult for unemployed to participate in moving out of the state of poverty by his own work. Therefore, the smallest salaries are entitled to shop assistants, receptionists, waiters. Because these professions may be performed by anyone who is physically and mentally well. On the other side there are doctors, lawyers, athletes, artists and so on, where the exceptionality is given for one thing by long time preparation for given job, but also great amount of talent but the most it is the combinations of the previous two. Above-average salaries are in professions that people would not otherwise be willing to perform, ie their lives or health are threatened, the employees bear a great deal of responsibility and so on.

Even the average monthly wage is an interesting figure, it is also important to know that it may be only a tool for examining the specific employment relationships. Indeed, only about 30% of employees in Slovakia gets a higher than average wages. The fact that the most people have below-average wages, is not specifics of Slovakia. This is completely normal throughout the world.

Conclusion

The average wage, minimum wage and labour costs are lower in Slovakia especially when compared to most EU countries. As recommended by the EU, the minimum wage should reach 60 per cent of the average monthly wage in the economy, which would currently means in terms of Slovakia € 461.40, while the minimum wage is € 327.20, so it is lower of about € 134.20 per month than as recommended. Low wage level means not only the reduction of the life quality of people but also the reduction of motivation for employment, reduction of interest of getting higher qualification and departure of young people with higher qualification abroad. In case of cancellation of the minimum wage, we could reasonably assume that in case of working positions that are situated in the low-level of wage of secondary working market would be possible to come to the decreasing of the wages. This decrease would obviously happen in higher range in regions with higher unemployment rate what could lead to increasing of emigrant pressures mainly in the of qualified young people.

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WORLD ECONOMIC CRISIS AND IST INFLUENCE ON UNEMPOYMENT IN SLOVAK REPUBLIC

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ABSTRACT

One of the accompanying features of market economy is also unemployment which follows us on each step. The healthy development of every economics should along the economic raise bring the acceptable rate of unemployment, respectively the natural degree of unemployment. When the rate of unemployment is increasing, the economics looses goods and services which could have been produced in the given period by unemployed while this loss of average productivity can be easily quantified. The part of that, what in given economics takes during the period of increased unemployment, is for example, the payment of unemployed benefits. Those on one hand create the conditions, so the person who lost the job is able to live a respectable life henceforth but on the other hand, these benefits markedly load treasury what can be the result of deepening of government deficit. Those economic losses in the period of increased unemployment are clear example of wasting financial and personal resources in modern economics.

Key words: Economic crisis. Unemployment. Rate of unemployment. Unemployment Benefit. Types of unemployment.

Introduction

The consequences of economic crisis have revealed themselves practically in full scale in all areas of real economics in year 2009. The economics in every country, not excluding Slovakia, has lost on its development what has been revealed in the restriction of the production which mainly appeared in lowering of numbers of working positions and following layoffs of employees. This negative development led to the worldwide recession and in many countries caused several serious macro economical imbalances. One of the imbalances is also the high rate of unemployment.

Conclusion

The solution of economic crisis is very difficult problem not only from economics but also from social aspect. There is not the procedure which can be flat valid for all the countries in the same degree. That is why the task of every government of every state without the difference of its political orientation, is to secure for the inhabitants of the country lowering the risks and impacts of world economic crisis. Not every country is in dispose of the equal economic potential, so also the solution of these problems is in every country individual and different in time.

The impacts of the economic crisis

Every day, in every area we meet with the term economic crisis, financial crisis – lack of financial means what are the consequences besides others also of the decreasing of the living standards of the group of the inhabitants. The exact definition is not provided by anyone even the phenomenon we call economic crisis is nothing more than moral poverty and everything else is just its consequence. The economic crisis brings many questions in imbalance of economics, increasing of prices of goods, increasing of unemployment, decreasing of purchasing power of inhabitants what results in increasing tensions and stresses in the society.

The economic crisis is understood as the reversal of economic cycle on culminating maxim of economic activity. The economic cycles are swings of economic activities which are repeated in regular intervals.

The types of economic cycles

The economic cycle can be characterised according different criteria. The swings of economics can have different intensity, also different length duration which has also the economic cycle itself.

The differentiation according the length duration of the cycle has three basic types (the division according the theory of J. Schumpeter (1883 – 1950).

3. Long cycles (so. Kondratiev´s, respectively Kuznets´) which are repeated in the range of 30 to 60 years and are connected with the creation and development of essentially new inventions and innovations (for example 1790 – 1813 steam engine, 1844 – 1874 building of the railways, 1855 – 1916 the beginnings of motoring and electricity). These long cycles are connected with such essential changes in production technologies which enabled the creating key sectors and sections of economics.

After each of these inventions follows rather longer period of development connected with using stimulus from those inventions. On these waves some of the middle long cycles are „carried“. After World War 2, those cycles are slowly being forgotten and even there was the question about their mere existence, but in present time when in the many parts of the world the symptoms of possible recession are appearing, many economists are reviving the theory of long cycles.

2) Short cycles (so. Kitchin´s) are sometimes tagged as the cycles in the stocks. They last for 3 – 5 years and nowadays is given a lot of attention to them. Their repetition is connected with the change of condition of finalised goods stock and intermediate product in most important key sectors of economics (as the consequence of discrepancy among the offer and demand). According the side market balance on which the errors occur and which cause diversion of the real product form the potential, those economic cycles are divided into those formed on the side of aggregate demand and on the side of aggregate offer.

The beginning of the economic crisis dates at the beginning of first half of year 2007. The USA is considered to be the author of the present day economic crisis. At the beginning nearly nobody recognized the possibility worldwide impact. The crisis of American mortgage institutions started in August 2007. The problems of financial institutions followed by insecurity on financial markets caused slowing down mainly American but also European economy. Mutual linking of countries, globalisation in the relationships, created domino effect. The efficiency of global economy decreased and will be decreasing until the crisis falls to the bottom.

The economic crisis in Slovakia has not shown itself until the end of 2008. The crisis has

touched in smaller or bigger degree all of the inhabitants of the society and began to influence their lives in more negative than positive ways. The demand for products began to decrease, the amount of the orders got smaller and there was nobody to produce for. The most of Slovak companies started with saving measures, as for example decreasing of salary, forced holiday taking of the employees, in the worse case layoffs of employees. After the loss of the employment there is small possibility to find a job again and find a job in given division improbable. The most endangered economically active group of inhabitants is the group of employees who have only low (basic) education and inhabitants who are over 50 years of age and those who only achieved high school education. The people feel uncertainty, shop prudently and try to save more. They postpone bigger investments for later. The result is decreasing of demand, mainly for goods of long-term usage.

Unemployment and its types

One of the most important consequences of economic crisis is increasing of unemployment. Many countries felt the increase of unemployment, not excluding Slovakia. The unemployment is the condition when the part of working forces is situated out of working process. The unemployed person is considered to be a person able to work who is not able to find a paid job. There exist some customary definitions of the term unemployment. Officially the unemployed is a person who:

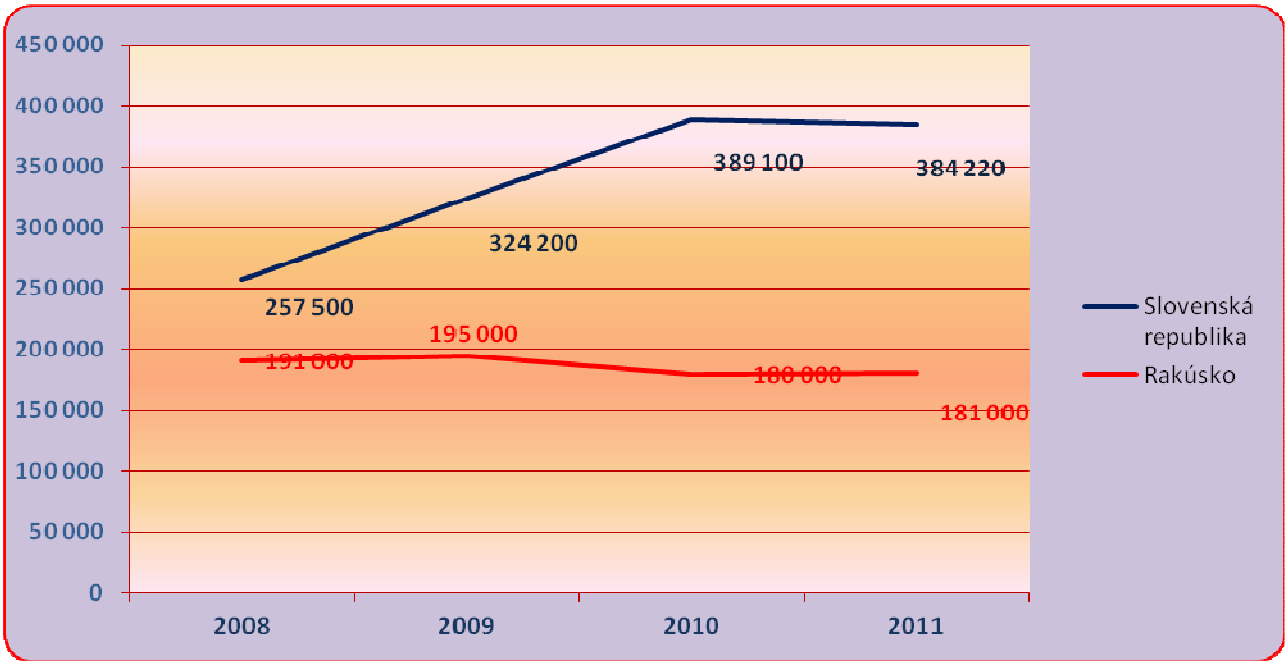
1. is older than 16 and does not study or work
2. actively seeks for job
3. is able and willing to start the job

And in the same time is registered in the Office of Labour.

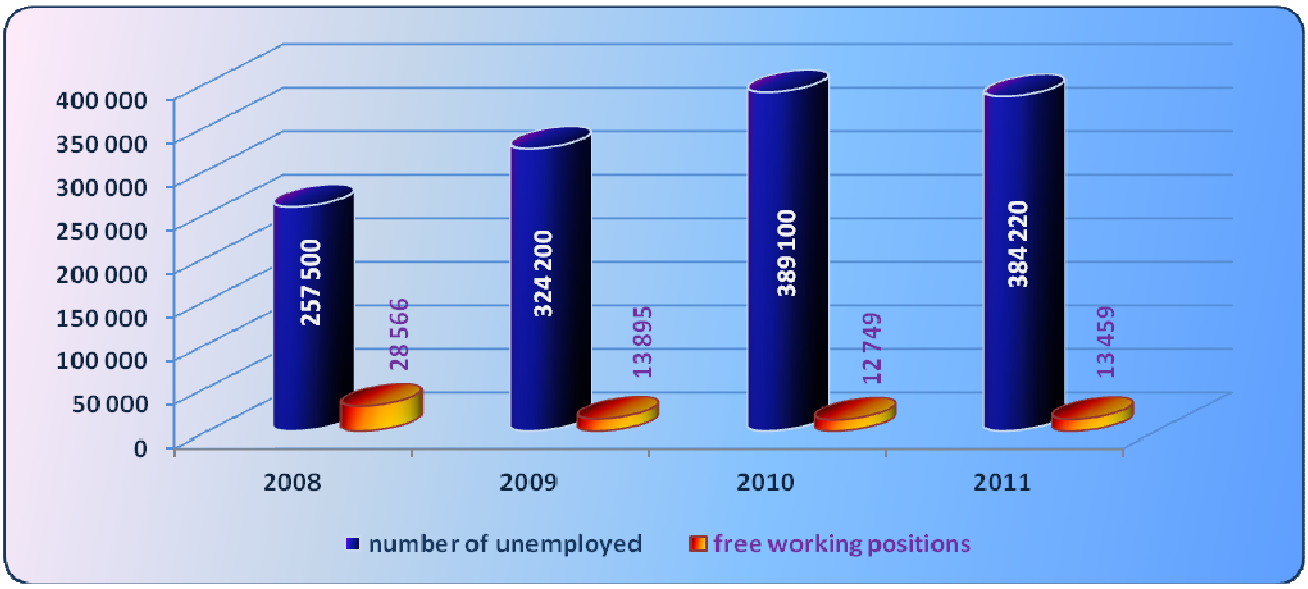
Table n. 1**The development of unemployment in Slovak Republic with the comparison to Austria in the period of 2008 – 2011**

Year	Slovak Republic		Austria	
	Number of unemployed	**Rate of unemployment**	**Number of unemployed**	**Rate of unemployment**
2008	257 500	9,60%	191 000	4,40%
2009	324 200	12,10%	195 000	4,60%
2010	389 100	14,40%	180 000	4,20%
2011	384 220	13,12%	181 000	4,20%

Graph n. 1 **The Development of number of unemployed people in Slovak Republic and Austria in the period 2008 – 2011**



Graph n. 2 **Overview of number of free working positions compared to number of unemployed in Slovak Republic in period 2008 – 2011**



Unemployment benefits in Slovak Republic

Slovak Republic

The condition for the entitlement of Unemployment benefit is

1. if the insured person was insured in last three years before classification into the records for unemployed seeking employment at least 2 years by the insurance in unemployment, t. j. 730 days or
2. the insured person who after the end of work contract was classified for some time into the records for unemployed seeking employment and if in last four years before the classification, if he was classified into the records for unemployed seeking employment in last four years

a) was insured in unemployment from the performance of employer in employment on the definite period or was voluntarily insured in unemployment at least two years, t. j. 730 day and

b) was not voluntarily insured in unemployment from the other performance of activity of employee or

3. if individual who after the end of performance of service in police or professional soldier was classified into the records for unemployed seeking employment, did not fulfil the condition for entitlement on retirement benefit and did not accomplished the period of employment for the entitlement for retirement benefit or did not accomplished the conditions of entitlement for disabled retirement benefit and in last three years before the classification into the records for unemployed seeking employment was insured in unemployment at least two year, t. j. 730 day.

The condition for entitlement of unemployment benefit is necessary to claim in the office of Social insurance company according to the place of permanent residence, in writing. The written application is being considered a decision about the classification into the records for unemployed seeking employment issued by particular Office of Labour, Social Affairs and Family.

The insured person is entitled to the unemployment benefit from the day of classification into the records for unemployed seeking employment.

From the September 1, 2010 the period of two years is established also for calculation of amount of unemployment benefit. Crucial period for detection is daily assessment base which shows the amount of benefit, it is counted from the day which is one day before the entitlement of unemployment benefit of insured person. The unemployment benefit is provided for the days and its amount is 50 per cent of daily assessment base.

The daily assessment base in second half of 2010 and first half of 2011 was at most in amount of 73, 4302 Eur. The maximal amount of the benefit in the month which has 31 days is thereafter 1138, 20 Eur and in month which has 30 days, it is 1 101, 50 Eur.

From the January 1, 2011 to December 31, 2011 the amount of daily assessment base was counted from the assessment base under the article 138 par. 5 in month which has 31 days, it is 10, 6149 Eur and in month which has 30 days it is 10, 9687 Eur.

The unemployment benefit is provided:

1) six months (if the entitlement on unemployment benefit under the fulfilment of condition of insurance in unemployment at least 730 days in least three years before classification into the records for unemployed seeking employment)
2) four months (if the entitlement under the fulfilment of condition of insurance in unemployment at least 730 days in last four years and during which he was entitled for parent benefit).

The insured person has no entitlement on paying the unemployment benefit for days during which he had the entitlement for sick leave benefit, dispensary, maternity leave benefit and during which he was entitled parent benefit.

The unemployment benefit entitlement terminates always:

- with the day of discarding form the records for unemployed seeking employment
- with the day of entitlement of retirement benefit, early retirement benefit or disabled benefit from the reason of decrease of ability performing employment of more than 70 per cent
- terminating supporting period of unemployment (six months or four months)
- with the day of death of individual
- a single application paying of 50 per cent of unemployment benefit from the remaining part of support period

The types of unemployment

1. The frictional unemployment – it is direct consequence of professional and working mobility of employees on the employment market. It occurs when the inhabitant during the change of employments comes to the short period of unemployment.
2. The structural unemployment – it is linked with restructuring of economics in given area. It occurs when released employees from the consequences of non-effective companies and institutions, from the consequences the decline whole areas and economics come to the position of unemployment.
3. The cyclical and seasonal unemployment – cyclical is the consequence of non using existing capacities from the reason of loss of demand. This type of unemployment is caused by lack of demand for goods or services which often comes from the total recession of economics at is connected with recession of economic cycles. The seasonal unemployment is regular cyclical unemployment which is connected to natural cycles.
4. The hidden unemployment – is the consequence of unemployed person not looking for the job and has not ambitions to be classified into the records for unemployed seeking employment in the Office of Labour. Generally this is the case of unemployed who lost their idea of finding a job.
5. The incomplete unemployment – it is one of the solution of massive unemployment. It is characterised by the fact that employees are forced to accept work for shorter time or work which is not in full range with their qualification, abilities, skills or knowledge.
6. The false unemployment – it is gained by the unemployed who are not looking for employment but want to use the unemployment benefit in full range, resp. Social benefits.
7. The absolute – in certain area of society there is the number of people seeking for employment higher than the number of free working positions
8. The technological – in the technological development the employment market develops in accordance on required professions.
9. The special types of unemployment – for example unemployment of students, women, regional or permanent.

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SOIL CONTAMINATED WITH PARASITIC GERMS AS A SOURCE OF PARASITIC ZOONOSES IN THE LOCALITIES WITH LOW HYGIENIC STANDARD – ROMA SETTLEMENTS

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ABSTRACT

In the selected areas with poor hygiene standards and lack of veterinary care for household animals, soil contamination as a potential source of zoonotic species of parasites has been studied. A total of 106 soil samples from five settlements in eastern Slovakia (Jarovnice, Sečovce, Zemplínska Teplica, Svinia, Košice - Lunik IX.) were examined. Developmental stages of endoparasites were detected up to 79.2% of the examined soil samples. The eggs of *Toxocara* spp. (61.3%), *Ascaris* spp. (58.5%), *Trichuris* spp. (50.9 %) and strongyloid eggs (21.7 %) occurred most frequently. Endoparasites were also detected in the dogs' feces up to 73.8 %. *Toxocara canis* (45.2 %), *Toxascaris leonina* (40.5 %) and *Trichuris vulpis* (19.0 %) were the most frequently detected.

Fecal contaminated environment and inadequate communal hygiene have resulted in a high degree of parasitic contamination which poses from a public health aspect a significant risk of infection of Roma population (especially children) in settlements.

Key words: Settlements with low hygienic standards. Environment. Helminthoses. Public helth. Roma children.

Introduction

Zoonoses are the diseases common both for animals and people. Parasitozoonoses (protozoonoses and helminthozoonoses) form a special category of zoonooses. The source of infection could be an animal, but also man in the body of which the agent of infection – parasite occurs and is able to multiply and spread. The agents of parasitozoonoses parasitise in people and animals with a various degree of pathogenesis.

The most frequent transmission of parasitic diseases is performed by a contact with infected animal (wandering animals, free-living and domestic animals), or secondarily by the environment contaminated with developmental stages (oocysts, sporocysts, larvae) of endoparasites (Papajová and Juriš, 2012). Through faeces of infected dogs and cats the germs of parasitozoonoses spread into the environment (cysts of intestinal parasitic protozoa – *Entamoeba histolytica, Giardia intestinalis, Toxoplasma gondii*, the eggs of tapeworms - *Dipylidium* sp., *Echinococcus* sp., parasitic nematodes). These germs are able to cause parasitic infections not only in specific hosts, but also in non-specific, e.g. in man. Regarding public health helminthozoonoses caused by *Toxocara* sp. and *Toxascaris* sp. in dogs and cats are very significant, especially due to their zoonotic character connected with the syndrome *larva migrans*.

One of the main sources of soil contamination with helminths are faeces of infected dogs or cats as well as humans. Soil-transmitted helminths (e.g. *Ascaris lumbricoides*,

Trichuris trichiura) are a group of parasitic nematode causing infection through contact with parasite invasive eggs or larvae and are the most frequent intestinal parasites in humans. Among them, *A. lumbricoides* is the largest and the most common helminth parasitizing in human intestine. Eggs of these nematodes require incubation in the soil before they become infective. Most often humans become infected by ingestion of infective form of geohelminths either from soil, raw fruit and vegetables, or dirty hands. It is known that defecation practices, hygiene standards, water supply standards and contamination of soil and water are the most influential factors on the prevalence of these parasitoses.

Eggs of helminths are the most resistant and are able to survive outdoors for months or years, therefore, contaminated environment constitutes a persisting health risk. Helminthoses are more prevalent in regions where people experience poor socioeconomic conditions. In Slovakia, this situation is well-known in the areas of the Roma population living in very poor conditions in settlements. Many of these settlements have the same characteristics - polluted environment, low standard of personal and communal hygiene, lack of sanitation, waste pits or landfills, and remaining over occupancy in a small area where residents share their household with pets. The number of Roma living in unbearable conditions in rural communities and devastated city zones is agglomerating and represents a potentially very serious social and economic problem.

The objective of present study was to determine parasitological contamination of soil collected in selected marginalized Roma settlements in Eastern Slovakia which can be a source of parasitic zoonoses. The occurence of helmintoses in population of Roma children in selected areas of eastern Slovakia (Košice, Michalovce, Prešov, Vranov nad Topľou, Sečovce) was also monitored.

Materials and methods

A total of 106 soil samples from 5 selected settlements of marginalized Roma population in Košice and Prešov regions (Jarovnice, Sečovce Zemplínska Teplica, Svinia, Košice - Luník IX.) were collected. Analysis of soil samples for the presence of parasitic agents was carried out according to Kazacos (1983).

A total of 42 faecal samples of dogs were collected and examined, without any further information on the animals as they have been allowed to move freely and defecate at any place. Excrements were collected at the same localities with low hygienic standards and at the same time as the soil samples. After collection, faecal samples were stored at 4°C and examined for the presence of propagative stages of helminths as soon as possible. The flotation method was carried out according to Jurášek, Dubinský et al. (1993) using Sheather's flotation solution.

Results and disscusion

According to the data of the Government representative for Romany issue in Slovakia at present there are about 691 Romany settlements, most of them are located in eastern Slovakia, in Košice and Prešov regions These are often located outside villages without needed basic infrastructure. According to more research in a lot of settlements, which are often build on non-toughened ground, there are not any drinking water sources, sewerage system, waste pits and rubbish dump, social equipment and disposal. A lot of people are concentrated in a small area. At present about 500,000 people live in such settlements whose health state is not satisfactory, and in comparison with majority inhabitants their lifespan is substantially lower. A low standard of living, communal and personal hygiene leads to ecologically risky life environment that is contaminated and devastated.

Our results showed a considerable infestation by helminth eggs in the examined soil samples. Out of 106 samples from five different settlements, 79.2 % were positive for the presence of helminth eggs. In the examined soil samples, 6 species of helminth eggs were detected, in particular, eggs of *Ascaris* spp., *Toxocara* spp., *Trichuris* spp., *Spirocerca lupi*, *Toxascaris leonina* and strongyloid eggs. The occurrence of helminth species is summarized in Table 1. The highest average density of helminth eggs was detected in samples from Jarovnice, where one of the largest Roma settlements in Slovakia is located. The lowest density was detected in soil samples from Košice - Luník IX.

If in the settlements is lack of basic hygiene habits among people, absence of bathrooms and children and aduIt may be stated that lack of basic hygiene habits among people, absence of bathrooms and children and adults defecate on the ground, faecal contamination of the environment and the risk of subsequent infection of humans and animals are high. The results flag that the main risk to public health are eggs of *Ascaris* spp., *Toxocara* spp. and *Trichuris* spp. As humans are the final hosts for *A. lumbricoides*, the presence of *Ascaris* spp. probably reflects the lack of public latrines and constitutes a marker of human faecal contamination. *Toxocara* spp. is responsible and capable of inducing disease (*larva migrans* syndromes) in humans who accidentally ingest infective stages (eggs or larvae). The presence of *Toxocara* spp. eggs in the soil samples thus represents an important public health problem due to its zoonotic transmission as well as *Trichuris* spp. eggs which might be either of animal or human origin.

Table 1 **Presence of helminth eggs in examined soil samples from selected areas with low hygienic standard**

Settlement	**Eggs (%)**					
	***Ascaris* spp.**	***Toxocara* spp.**	***Trichuris* spp.**	***Spirocerca lupi***	***Toxascaris leonina***	**Strongyloid**
Jarovnice	79.2	70.8	45.8	4.2	12.5	20.8
Sečovce	60.0	50.0	50.0	0	0	35.0
Zemplínska Teplica	59.4	78.1	68.8	18.8	0	31.3
Svinia	61.5	46.2	30.8	30.8	23.1	7.7
Košice – Luník IX.	23.5	41.2	41.2	11.8	11.8	0

Dogs excrements pose a source of contamination of the environment in settlements. Dogs living in marginalized Roma localities suffer from inadequate hygiene conditions, inappropriate food and lack of health care, therefore their living standards are comparable with homeless or stray dogs. Such dogs are at highest risk of parasitic infection what corresponds with several surveys. Out of 42 dog faecal samples from marginalized areas with low hygienic standards in Košice and Prešov regions, 73.8 % of them were positive for the presence of the propagative stages of endoparasites. In the examined samples, 5 species of intestinal endoparasites were detected - in particular eggs of *Toxocara canis,Toxascaris leonina*, *Trichuris vulpis*, *Capillaria* spp. and eggs of the family Ancylostomatidae. Generally, eggs of *Toxocara canis* (45.2 %), *Toxascaris leonina* (40.5 %) and eggs of the family Ancylostomatidae (44.5 %) were the most frequently detected. The occurrence of helminth species in dogs´ feces is summarized in Table 2.

Table 2**. Species of endoparasites in dogs' feces samples**

	Jarovnice	**Sečovce**	**Zemplínska Teplica**	**Svinia**	**Košice – Luník IX.**
	(%)	**(%)**	**(%)**	**(%)**	**(%)**
***Toxocara* spp.**	22.3	77.8	50.0	33.4	25.0
***Trichuris* spp.**	33.4	33.4	25.0	0,0	0.0
***Toxascaris* spp.**	44.5	44.5	25.0	83.4	40.0
***Capillaria* spp.**	11.2	0.0	0.0	0.0	0.0
Ancylostomatidae	44.5	0.0	0.0	0.0	0.0

Therefore, in Roma settlements there is a high risk of disease incidence that are connected with a low hygienic standard. Infectious diseases, including endo- and exoparasitoses (giardiosis, toxocarosis, ascariosis, enterobiosis) play a significant role there. Above all, the children population is endangered. Also the fact that almost half of the Roma population in Slovakia is younger than 18 years old is very important (Popper *et al.,* 2009; Rimárová, 2010). As children are the most vulnerable age group, we studied the prevalence of geohelminthoses just in this age group. A total of 470 stool samples of children hospitalized in the hospitals in Košice (Košice, Michalovce) and Prešov (Prešov, Vranov nad Topľou) region. The eggs of geohelminths *Ascaris lumbricoides* (17.9 %) and *Trichuris trichiura* (3.8 %) were detected. The results indicate the low standards of hygiene and children population is constantly exposed to infection in such an environment.

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THE STATUS OF MATERIAL POVERTY

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ABSTRACT

Slovak Republic after nearly twenty years separate existence belongs in the forefront in ensuring the needs of its citizens within the countries, which have been accepted for the members of the European Union in 2004. The number of people who are on the border of the subsistence minimum, which can be considered the poor as well as the number of people at risk of poverty is increasing every year, and their poverty deepens. The status of material poverty touches on numerous layers of the population in vulnerable groups, which include mainly pensioners, the unemployed, the employed citizens with income less than 340 € monthly for the performance of the work, citizens aged between 50-years, and employed people with sickness absence longer than one month.

A relatively large group of inhabitants of Slovakia are living in very bad material conditions which are the image of the actual life in the real material poverty. They are threatened by a group of people in social groups: seniors, unemployed, employed citizens with net income from work less than 340 € per month, with a length of sick leave of more than one month the employment inoperable. Reported net income of citizens in these groups do not provide sufficient coverage of expenditure on basic needs-food, housing and clothing. Slovakia in the rest of the world in the development of the real poverty of material copied, that is growing year on year and becomes more vigorous, poverty is still affected by the greater part of the Slovak and world population, despite the fact that wealth in the conditions of the Slovak economy and the world economy is growing year on year.

Key words: Vulnerable groups of citizens. Pensioners. The unemployed. Material poverty. Poverty.

Introduction

Slovak Republic after nearly twenty years separate existence belongs in the forefront in ensuring the needs of its citizens within the countries, which have been accepted for the members of the European Union in 2004. The number of people who are on the border of the subsistence minimum, which can be considered the poor as well as the number of people at risk of poverty is increasing every year, and their poverty deepens. The status of material poverty touches on numerous layers of the population in vulnerable groups, which include mainly pensioners, the unemployed, the employed citizens with income less than 340 € monthly for the performance of the work, citizens aged between 50-years, and employed people with sickness absence longer than one month.

Most of the retirees in the SR has granted a retirement pension of less than 340 € monthly. In the case of the award of the amount of the retirement pension is for those people on the reduction of their income compared with the income from dependent activities about almost half, if we compare them with the inhabitants of most of the countries of the European Union, in the pension age at retirement for these reductions of their income, on average, about one-

third. And it is necessary to add that the amount of the retirement pension in most countries of the EU compared with Slovak pensions is incomparably higher.
Very libellous is a condition in which the amount of the retirement pension awarded to the pensioner does not reach or the amount of the subsistence minimum in Slovakia. The number of these retirees moves to the end of 2011, almost at the level of 20 thousand. Below the level of subsistence are not only the beneficiaries of the retirement pension, but also people who are either prior to the award of a retirement pension, or are long-term unemployed without regular income and the amount of their income does not reach the level of the subsistence minimum. In the current period we have in Slovakia around 185 thousand inhabitants as beneficiaries of benefits in material need. Jointly assessed persons with benefits in material need of the beneficiaries are their family, what overall benefits in material need to mean almost 365 thousand citizens. This group includes also all seniors, whose retirement pension is the amount of the subsistence minimum and rely on his return to the granting of benefits in material need.

The living minimum and its height

Each year, from 1 July provides for the amount of the subsistence minimum for one natural person and the other jointly assessed persons. From the 1 July 2011 is the amount of the subsistence minimum for one individual in the amount of € 189.83 per month and an essential prerequisite for its return is the fact that their income does not reach the fixed amount of the subsistence minimum.
The State of poverty documents the statistics of The Social Insurance Office about the structure of the pension paid nowadays:

Table 1 the amount of paid pensions and the number of beneficiaries

The amount of the pension awarded in €	The number of beneficiaries of pensions
to 76,-	2 854
From 77,- to 185,-	16 215
From 186,- to 305,-	223 492
From 306,- to 350.-	201 615
From 351,- to 465,-	390 737
From 466,- to 545,-	61 306
From546,- to 565,-	6 797
From 566,- to 730,-	23 591
From 731,- to 755,-	1 418
From756,- to 1 000,-	5 530
Over1 000,-	1 260

Source: The Social Insurance Office

According to the survey, the average cost of living for the basic needs (food, clothing, housing) were monthly expenses for a single natural person in 2011 in the range 340 to 350 €. Income below this limit is insufficient for financing of basic living needs and the citizen is getting into the real poverty. Detected data are inadequate in comparison with the officially specified the amount of the subsistence minimum for a natural person, i.e. in the amount of € 189.83 per month.
Detected data demonstrates that nearly 445 thousand Slovak pensioners living in a state of material poverty caused by the recognised amount of retirement pension per month to 350,-€.

The status of unwanted developments in social security pension scheme shows the table No 2 on the proportion of income to average wage for years 2004-2011.

Table 2: The average level of income and the average wage in the National Economy

Year	The average amount of pension in €	The average wage Slovakia in the NE (€)	%
2004	234,-	525,-	44,5
2005	256.-	573,-	44,6
2006	273,-	623,-	43,8
2007	295,-	669,-	44,1
2008	313,-	723,-	43,3
2009	340,-	745,-	45,6
2010	350,-	745,-	47,0
2011	359,-	760,-	47,2

Source: The Social Insurance Office

Old-age pensions, their amount and beneficiaries in the Slovakia

Development of the ratio of the average income and average wages reached SR in the national economy of the Slovak Republic lags behind the average of the European Union. The amount of the retirement pension is awarded in Slovakia during the period considered the average monthly wage in the national economy only from 45.01%, while in the countries of the European Union it is SR 67%.

Changes in the pension system will be necessary in the short term. Slovakia and other countries of the European Union are facing now and also will in the coming years the increasingly significant demographic changes with a consequent negative impact on the pension scheme. Slovak Republic belongs to the countries where the demographic changes reflected most dramatically. In 2011, it was on one of the recipient of the retirement capita approximately 5.6 inhabitant of working age.

Development by the year 2025 assumes the change that this share will be reduced almost in half. This development will initiate the raising of the retirement age from the State and the change of the system of granting, payment and appraising of a pension. In comparison with other countries Slovakia is one of the few countries the age of retirement for men set out for the border less than 65 years.

The parameters of the demographic trends are adverse to the financial resources of The Social Insurance in the amount of pensions paid to the need for fundamental solutions in terms of the Slovak pension system and in Slovak environment compared with the average of the European Union.

The development of unemployment in the next group of the endangered population

In the next group of the endangered population threatened with poverty belongs to more than 41.5 thousand persons deprived on unemployment benefits. In the meaning of the legislation represents the average monthly unemployment benefit amount 289 € according to the data from January 2012 and the average of the year 2011, with benefits payable from social insurance to this area has been used, the total volume of 163,5 million (source: www.tasr.sk).

The evolution of unemployment compared with economic growth shows very negative tendencies. Beginning in 2012, the number of unemployed persons was a total of 370 thousand and the rate of unemployment amounts to 13.7%. Higher unemployment was

recognised in 2004 when only the number 435 thousand of unemployed persons and unemployment 16.6%. Economic growth measured indicator of the evolution of the gross domestic product in % with the exception of 2009 showed a positive relationship to the reduction of unemployment.

Table 3: Year increase in gross domestic product in%

Year	2004	2005	2006	2007	2008	2009	2010	2011
Increase in %	+ 5,2	+ 6,5	+ 8,5	+10,4	+ 6,4	-4,7	+ 4,0	+ 3,3

Source: Statistical Office of the Slovak Republic

Table 4: The evolution of unemployment rates for the years 2004-2012

Year	Unemployment rate in%	the number of unemployed persons in thousands
2004	16,6	435
2005	13,39	346
2006	11,82	302
2007	9,45	246
2008	8,06	210
2009	9,03	240
2010	12,89	345
2011	12,98	346
1/2012	13,69	370

Source: Statistical Office of the Slovak Republic

The evolution of unemployment shows the status of the number of persons living in poverty and in spite of the favourable developments in the economy of material, the growth of total wealth in the country and the growth performance of the economy (with the exception of the year 2009).

Employment working for minimum wage

The same negative development despite economic growth also shows the share of persons employed in connection with the amount of remuneration for work. According to the statistical findings has 38% of employed persons of the net salary for the work of less than 350 € per month. For other 2.9% of employed persons is the amount of the gross wages at the level set by the minimum wage, which in the year 2011 was determined in the amount of € 317,70 per month, while monthly net income is the amount of 280 €. According to the above statistics data documenting the other 840 thousand persons living in the real material poverty or living in poverty income zone endangering real material (source: Statistical Office of the Slovak Republic).
Another particularly endangered group are citizens who are employed and their monthly gross wage is below the level of the average wages in National economy and become inoperable for a period longer than one month. For illustration, the example of the employee, which is the average monthly wage of € 530,-. The inability of more than one month is a sickness insurance benefit paid in the amount of 55% from the basis, which in this case represents the amount of about 290,-€ monthly. Such amount of his monthly income is getting on the border of real material poverty. When is a citizen inoperable, has increased spending on health care

and for the purchase of medicinal products, as extended, it is not taken into account in the amount paid by the sickness insurance benefits.
At the World Economic Forum in Davos at the end of January 2012 the world's political leaders and the elite economists, sociologists and artists were talking about the end of capitalism, about the bad state of the world economy and vitality of his bad break, on the deteriorating conditions for the life of the population and on the possibilities and capabilities of capitalism change the world for the better. The participants gave for the truth held by the settler of the World Economic Forum Klaus Schwab in responding to the criticism that the capitalism and its leaders "have lost their moral compass". The global economy is getting into the downward spiral, this negative trend will in the next period support the social disruption and continued increase of world poverty, populism and protectionism (source: www.hnonline.sk).
Increasing social inequalities were one of the main themes throughout the discussions. An important conclusion from this is that all participating Economic Forum will unite in order to ensure better living conditions for all.
The citizens expect from the Government of the Slovak Republic, fulfilment of these conclusions of the World Economic Forum into practice and ensure a dignified life for all citizens of the Slovak Republic.

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BILDUNG UND SOZIALE VARHALTEN DER SCHULER

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ABSTRACT

Jeder Teilnehmer ist, dass Bildung im frühen Kindesalter beginnt, wenn das Kind beginnt, die Welt zu Sinnen kennen, erkennt Muster in ihrer Umgebung. Wir müssen die vielfältigen Aufgaben und Anforderungen der Gesellschaft erfüllen und spiegeln die Zeit, in der wir leben. Aufgewachsen an die Regeln des Verhaltens gegen nahestehende Personen zur Familie, Respekt für das Team, in der Schule lernen, die Aufgaben mit dem Schwerpunkt auf der Entwicklung, das Wissen, dass während des Lebens erworben wird.

Key words: Schule. Unterricht. Kooperatives Lernen.

Persönlichkeitsentwicklung ist weiterhin, dass ist sich bewusst von sich selbst, ihre Rollen, Aktivitäten, um das Ziel zu erreichen. Dann ist es nicht mehr völlig abhängig von der pädagogischen Behandlung von Eltern oder Lehrern in der Schule, sondern auch entwickeln und umzusetzen, ihre Fähigkeiten erworben und entwickelt Eigenschaften, Talenten. Für die menschliche Entwicklung, die Firma weiterhin gut, wenn es keinen Vermittler mit Wissen und Informationen und Hilfe einen Weg finden, separate Lernprobleme. Bildung einschließlich einer Reihe von Liebe, Respekt für den Mann sucht Bildung inculcating Gewohnheiten des Kindes, Bildung, Wege zur Arbeit, Bildung und die Rolle der Persönlichkeit Bildung beginnt in der Familie, in der Schule. Dies bestimmt die Orientierung, die in bestimmtem Umfang beeinflussen seine Entwicklung. Nurture guten Bautätigkeit für die Erziehung - Förderung - der Schüler, dem Kind und dem Thema Bildung - Lehrer, Familie. Während ein Lehrer sollten Schülern helfen, Probleme zu lösen, wenn das Board nicht kennt, etwas, oder Probleme, die seinem Alter kaum lösbar sind. Es ist nicht zu erheben es nur verbal, sondern in vielen Situationen mehr helfen, wenn es ein Beispiel für das Modell, das lehren und können neue Wege für den Umgang mit ihr ist.

Die Zeit ist in allen Bereichen des gesellschaftlichen Lebens voran, ist es notwendig, eine ausgeglichene Persönlichkeit, reife, Freiheit und Gerechtigkeit, sich aktiv in das Leben des sich dynamisch entwickelnden Kultur zu beteiligen.
Die aktuelle Periode ist schwerwiegende Probleme in zwischenmenschlichen Beziehungen, in Reden wider, fehlende Bereitschaft, anderen zu helfen und im allgemeinen Unwillen, sich mit geltenden Normen, Regeln einzuhalten. Beim Nachdenken über geeignete und ungeeignete Verhalten der Schüler in der Schule ist notwendig zu erkennen, dass es ein breites Spektrum von Symptomen, von geringfügigen Disziplinarverstöße zu sehr ernsten Sache. Bedarf für Lehrer von Schülern Verhalten in der Schule ist anders. Während ein Lehrer erfordert eine strenge Einhaltung der Standards der Schulordnung, Gehorsam, sonst ihre gute Beziehung zu den Schülern, die auf der Achtung für die Schüler und die gute Organisation der pädagogischen Aktivitäten schafft die Voraussetzungen für ihre angemessene Verhalten, Disziplin.
Disziplin ist die Aufrechterhaltung der Ordnung in die Arbeit, Aktivität, Verhalten etabliert angesehen. Disziplin ist durch Merkmale wie verbindliche, freiwillige, öffentliche

Bewusstsein, die Initiative aus, die Verantwortung, die in jeder menschlichen Tätigkeit reflektiert wird (Kol. Autoren, 1997).

Laut Wörterbuch Teacher (1995) Konzept der Disziplin wird als "absichtliche, präzise Leistung zu einer bestimmten sozialen Rolle definiert, die Aufgaben, die bestimmten Aktivitäten der Respekt vor der Autorität".

Teacher's Persönlichkeit ist ein wichtiger Faktor bei der Vermittlung der Auswirkungen auf das Verhalten der Schüler in der Schule, Werte und Normen, werden bevorzugt. Seine Rolle kann erfolgreich nur Lehrer in der Schule umgesetzt werden schuf die Voraussetzungen und nur dann, wenn Schüler seine Autorität zu akzeptieren, und wie das soziale Verhalten, die selbstbewusst und verantwortlich ist, sondern auch freundlich zu Studenten und andere Menschen. Lehrer zu schaffen, ihr Verhalten über einen bestimmten Verhalten in einer Vielzahl von Lehr-Situationen, die ein Modell für das Verhalten der Schüler geworden. Daher korrekte Anleitung für Lehrer von Schülern angemessenes Verhalten unangemessen und zu beseitigen, ist es notwendig, um den Schülern genügend Informationen über die Angemessenheit bzw. Unangemessenheit ihres Verhaltens. Dies erfordert die Lehrer zu Schüler wissen und können, um das Verhalten einzelner Schüler und Gruppen in verschiedenen Situationen zu identifizieren.
Die Steuerung Beziehung zu den Schülern und dem Rest der schulischen Umfeld bieten Normen, die die folgenden Funktionen:

- regelte die Beziehung zwischen Menschen und bringe sie in Ordnung, Koordinierung der Tätigkeit der Menschen und ihre Aktivitäten zu straffen, sicherzustellen, die Rechte des Einzelnen, Gewährleistung der Rechte der sozialen Dienste, so dass das Verhalten von Einzelpersonen und Gruppen vorherzusagen
zur Selbstkontrolle und Selbstregulierung führen, erhöhen das Gefühl von Sicherheit und Vertrauen.

Der Prozess des Lernens, um Disziplin und die Disziplin ist ein langer und schwieriger Prozess. Seine Komplexität liegt in Führung Verhalten, so dass die Schüler die Standards, erstellen Sie Ihre eigene Haltung zu ihnen und in der Lage sein, ihr Verhalten zu regeln, nach seinen eigenen Ansatz für die Evaluierung Standards kennen. Der Lehrer kann ein Student Guide muss lernen, die Regeln zu kennen und zu verstehen, erkennen sie, wollen sie aus, die Fähigkeit haben, durchzuführen. Der Lehrer muss das schulische Umfeld zu organisieren, das Klima im Klassenzimmer, so dass die Schüler im täglichen Kontakt mit den Normen für ihr Verhalten sind zu achten Disziplin sein. Der Erfolg der Lehrerbildung in der Disziplin ist, dass sie in der Lage, mit Druck von außen auf interne Veränderungen Zulassungsbedingungen für Studenten erfüllen ist, wenn die eigenen Standards geworden.

Die pädagogischen Methoden von Belohnungen und Strafen sind am häufigsten verwendeten Methoden, um das Verhalten der Schüler in der Schule führen. Nur der Lehrer abhängt, wie sie in pädagogisches Handeln nutzen. Die Strafen sind mehr auf die Persönlichkeit eines Schülers und ihren Wohnsitz in Zusammenhang mit ihrer moralischen Bewertung konzentriert. Rewards verstärken Gepflogenheiten und helfen bei der Erstellung eines neuen Verhaltens.

Als Reaktion auf die Äußerungen von undisziplinierten Verhalten Sanktionen sind die drei Funktionen zu erfüllen:

1. Vengeance - ist, dass das moralisch falsch handeln von einer verdienten Strafe folgt. Der Tod ist im Interesse der Gerechtigkeit, dass er gegen das Gesetz verstoßen,
2. Abschreckung - die Studenten wollen in der Zukunft zu ungebührliches Verhalten aus Furcht vor den Folgen zu vermeiden
3. Abhilfe - hilft Schülern auf die Unangemessenheit ihres Handelns zu verstehen und warum es notwendig ist, verhalten sich nicht anders zu korrigieren (Kyriacou, 1991).

Die meisten Einträge haben nur kurzfristige Wirkung. Der Tod als pädagogische

Methode, um Fehlverhalten zu beseitigen hat seine Vorteile und Nachteile. Sanktionen zu beseitigen einige der Manifestationen der undisziplinierte Verhalten, aber auch viele negative Auswirkungen auf Verhalten der Schüler und oft zunichte die Absichten von Lehrern und Bildung, zB.: Todesstrafe darf schlechtes Verhalten verstärken, wenn zunehmend Ansehen in den Augen der Mitschüler, Angst vor dem Tod wirft, gedemütigt, Gefühl Beschwerden, was die Unsicherheit erhöht, Ablehnung, Aggression Strafe Ursachen, Störungen der sozialen Beziehungen zwischen Schülern und Lehrern.

Wenn wir den Prozess der Bildung zu verstehen als ein Prozess der Interaktion zwischen zwei oder mehr Einheiten, dann ein erheblicher Teil dieser Operation ist Durchsetzungsvermögen. Um in der Lage sein Durchsetzungsvermögen Verhalten in der Schule gelten, ist es zuerst notwendig, die Schüler Verständnis und Blick auf ihn zu ändern. Die neue Beziehung sollte eine Partnerschaft basiert auf gegenseitigem Vertrauen, Respekt und Einfühlungsvermögen. Die selbstbewussten Verhalten sollte vermieden werden, um Manipulationen zu verhindern oder Missbrauch der Leistungen der sozialen Rollen werden. Anwenden von Elementen der selbstbewussten Verhalten wird erreicht, daß das Individuum in aktive soziale Beziehung ist, arbeiten, offen, ehrlich, bereit, Hilfe und Unterstützung, sensibel, tolerant, respektvoll, durchführen können einen Kompromiss, um das Problem aus der Perspektive eines gemeinsamen Ziels zu lösen sind. Dies kann in den Prozess der Kommunikation durch Durchsetzungsvermögen verfolgt werden.

Selbstsicherheit ist die Linie zwischen Passivität und Aggression. Der Umgang mit Durchsetzungsvermögen, die Anwendung der Elemente des Verhaltens von passiven und negatives Verhalten zu beseitigen. Wie in der Passivität Verhalten wider. Die passive Person ist nicht klar zum Ausdruck ihrer Wünsche und Bedürfnisse. Es ist ungewiss, Fragen oder einfach nur ihre Entscheidungen zu rechtfertigen, nicht klar, in unseren eigenen Wünschen und Bedürfnissen. Gegenstück ist Aggression. Das Wesen der rücksichtslosen Durchsetzung zu Lasten der anderen. Der eine ist gewalttätig, arrogant - das Kind wird wie ein Tyrann gesehen. Solch ein Mensch von Zeit zu Zeit zu erreichen, Erfolg, vorbehalten ist, erlöst ihn umgebenden Verhältnisse, sein Image und negativistickým abgesehen von ihm zu widerstehen. Zu den Symptomen von sozialen gekennzeichnet, dh ein Verhalten, dass soziale Normen missachtet verankert Verhaltensstörungen genannt (Laca, 2011). Der Begriff umfasst sowohl und Variationen in dem Verhalten eines überschaubaren und geeignete pädagogische Praktiken sowohl stellen schwere Verhaltensprobleme haben, dass soziale besonderen pädagogischen Betreuung bedürfen. In verschiedenen Autoren finden Sie verschiedene Klassifizierung von Verhaltensstörungen, die zunehmend unter den Studenten präsentieren unsere Schulen sind. Waterman und Sulc (1964) zu Verhaltensstörungen Rang: - Schlechte Gewohnheiten (Essen und Trinken, Übernachten, motorische Handlungen, die persönliche Hygiene) und schlechte Angewohnheiten (soziale Beziehungen, emotionale Bereich, der den Bereich der Arbeit), Child Widerstand (reflektierte Sass, Gehorsamsverweigerung, Tränen, Wut, Schrei, Explosionen der Wut), (das Kind nicht auf äußere Reize zu reagieren oder reagieren überhaupt den Kopf, als er, teilweise Abschwächung erwartet), Ungehorsam, Trotz, ein gewisses Maß an Aggression - Handlungen in Bezug auf die regelmäßige Schulbehörden erkennen), Lie Lie (wegen der Warnung, Rache, Anreicherung langweiliges Leben, Angst vor dem Tod), Diebstahl (gelegentliche, geplanten oder zufälligen Erwerb von süchtig machenden Gegenstand, der nicht in Frage gestellt und eifrig bemüht, es haben), Weg von der Heimat und wanderte als eine Form der Flucht belastenden Situation eine Lösung (zu stoppen illegal und unangemessen, den erzieherischen Umfeld für einen kürzeren oder längeren), Escape-Verhalten zu den verschiedenen Unbequemlichkeiten der Schule wegen der schlechten Anpassung an die Schule zu vermeiden, die Schule zu arbeiten, Probleme in zwischenmenschlichen Beziehungen, Nachahmung, Zweckmäßigkeit mag), Aggression (eine Form des Verhaltens, es ist eine Bedrohung für Menschen, die eigenen

Leute, Natur, Immobilien); Verhaltensstörungen im sexuellen Bereich (zB Pädophilie, Inzest, Fetischismus, Narzißmus), Sucht (Drogenabhängigkeit ist eine körperliche und psychische Abhängigkeit von einer chemischen Substanz, welche physiologischen Prozesse und psychische Symptome betrifft); Delinquenz, Verhaltensstörungen, die mit jenen Bereichen, die durch das Gesetz geschützt sind - Strafprozessrecht, das heißt, Vergehen und Verbrechen (Verhalten verursacht nur Probleme - asocialita, Moral Hazard und verzerren Politik und Praxis - antisocialita stört).

Blasko (1996) argumentiert, dass Erfahrungen aus unseren Schulen zeigen, dass es ein paar Anregungen für die Entstehung von Spannungen zwischen Studenten und Schüler der Verantwortung - menschliche und nicht-konforme Strukturen ihre Aktivitäten, stellt sie die aktuellen bildungspolitischen Prozess in unseren Schulen. Wenn die Schule aktiv und zielgerichtet zu schaffen, ein solches Klima, die anhaltenden Spannungen reduzieren wird, spiegelt er das Verhalten der Studenten.

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MALARIA

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ABSTRACT

Malaria is an infectious protozoal disease affecting more than hundred countries over the world. It is responsible for about one million deaths a year and huge morbidity. Malaria with its impacts on individuals and whole society represents big challenge, which has again come to the fore and new significant effort has been made in the fight against the disease over last few years. The increased funding has resulted in better access to prevention tools and antimalarial therapy even if it is still not sufficient. Recently emerged hurdles involve especially resistance to artemisinin-based combination therapies (ACTs) as well as resistance to insecticides. New potentially effective substances against Plasmodium have been studied, but it represents only a starting point, and the way to new generation of antimalarial drugs is still very long. An ongoing phase 3 study of the efficacy, safety and immunogenicity of candidate malaria vaccine RTS,S/ASO1 has been conducted in 7 Africa countries. This vaccine provided protection against both clinical and severe malaria.

Malaria is an infectious disease caused by a parasite Plasmodium belonging to the phylum Protozoa and subphylum Apicomplexa. Nowadays there are known five species responsible for the disease in human – P. falciparum, P.vivax, P.malariae, P.ovale and P.knowlesi, but there has been reported also very few rare cases due to other species such as P.brasilianum, P.rhodiani, P.simium and others.[33] The majority of infections is caused by P.falciparum and it is the one responsible for most severe course of the disease and the highest mortality (85% in Africa).[4] The most geographically widespread is P. vivax, P. ovale is restricted to tropical Africa, New Guinea and Philippines, whereas P. knowlesi has been reported from South East Asian countries where it jumped from wild macaques.[33] Malaria is the fifth cause of death from infectious diseases worldwide and the second in Africa after HIV/AIDS.[34]

Malaria has played a major role in the history of mankind and it is one of the oldest known diseases. For centuries it prevented any economical development in different regions in the world.[33,34] There has been made a lot of effort to eliminate and finally eradicate malaria. Partly it was successful and malaria has been eliminated from the developed countries with temperate climate. An eradication campaign which started in 1950s failed because of the huge problems including the resistance of parasites to drugs, resistance of mosquitoes to insecticides and also administrative issues. Moreover, the eradication program never involved most of Africa, where malaria is the most common.[8] Besides the direct impact of the disease on individuals and communities, malaria continues to wreak havoc on economies and societies, particularly in the poorest parts of the world.[8,34] In the countries with high transmission, malaria can decrease gross domestic product (GDP) by as much as 1.3% which in the long term have resulted into significant differences between countries with and without malaria.[60] According World Malaria Report 2010, international funding for malaria

control has risen steeply which resulted for example to increased access to insecticide-treated nets in the past few years.[56]

Even if importance of the climate warming is debated,[4,49] links between climate and health policy must not be overlooked.[21]

EPIDEMIOLOGY AND THE BURDEN OF MALARIA

Measurement of malaria mortality is very important since international organizations are setting specific targets for control programmes, and it represents a big public health challenge which has met with various solutions.[4,45] According World Malaria Report 2010, the disease is prevalent in 108 tropical and semitropical countries with 35 countries in central Africa bearing approximately 98% of malaria deaths. Four countries alone accounts for cca 50% of deaths on the African continent (Nigeria, Democratic Republic of Congo, Uganda and Ethiopia).With considerable effort and success in malaria control which has been achieved due to increased funding, it has been reported that a total of 11 countries and one area in the WHO African Region showed a reduction of more than 50% in either confirmed malaria cases or malaria admissions and deaths. Moreover, in 2009 Morocco and Turkmenistan were certified as having eliminated malaria. However, in the same year, there was an evidence of an increased burden in 3 countries (Rwanda, Sao Tome and Principe, and Zambia).[56] Malaria threatens the lives of 3.3 billions people around the world.[27] It is estimated that the number of cases increased between 2000 and 2005 but then decreased to 225 million in 2009. The number of deaths according the WHO decreased from 985000 in 2000 to 781000 in 2009.[56] The highest mortality is in Sub-Saharan Africa where a child dies every 45 seconds from malaria.[27] However, data provided by WHO have been challenged.[13,44,45] Estimates outside of the Africa usually rely on governmental recorded deaths, but according a study made in India, 86% of deaths from malaria were not in any formal health-care facility, suggesting that deaths are predominantly unnoticed by the health-reporting system (the study used results of verbal autopsies).[13,45] Similar disparities could exist in other high populated countries which have unreliable access to health care.[45]

The main mechanism of transmission is via the bite of a female Anopheles spp mosquito mainly between dusk and dawn, but there are also other ways including congenitally-acquired disease, blood transfusion, sharing of contaminated needles and organ transplantation.[15] Malaria infection in pregnancy is believed to be responsible for up to a quarter of all cases of severe maternal anemia and for 10-20% of low birth weight of babies which may lead to additional 5-10% of neonatal and infant deaths.[4] The number of infectious female mosquito bites per person per year called the entomologic inoculation rate (EIR) is a term to indicate transmission intensity. In general, the higher the EIR, the greater the burden of malaria. In such regions the immunity is acquired and so most malaria infections in adult are asymptomatic. In areas where transmission is low, highly seasonal, or focal, immunity is not developed, and symptomatic disease occurs at all ages.[15,47]

PATHOPHYSIOLOGY AND CLINICAL MANIFESTATION

The clinical manifestations of malaria vary with geography, epidemiology, immunity, and age.[9] Even if malaria is known as a febrile illness, it is not at all a simple disease of fever and chills. Especially in endemic regions it rather presents with diverse, varied and often dramatic manifestations (mostly in case of P.falciparum infection) and it should be considered as a differential diagnosis for almost all clinical problems. The pathology and clinical manifestations are almost exclusively due to the asexual erythrocytic or blood stage of plasmodia. The characteristic picture of malaria with three stages (hot stage, cold stage and sweating stage) is not commonly seen.[28] Severe malaria is now known to be much more complicated than originally thought.[4] Cytoadherence causing small infarcts, capillary

leakage, and organ dysfunction results to many clinical findings including altered consciousness with or without seizures, respiratory distress or acute respiratory distress syndrome (ARDS), circulatory collapse, metabolic acidosis, renal failure, hemoglobinuria ("blackwater fever"), hepatic failure, coagulopathy with or without disseminated intravascular coagulation (DIC), severe anemia or massive intravascular hemolysis, and hypoglycemia.[9,54] At the greatest risk for severe disease are nonimmune individuals, immunocompromised patients (including asplenic individuals), children 6 to 36 months of age, and pregnant women.[9] The two most frequent presentations of severe malaria in African children are severe anemia and cerebral malaria.[4]

Cerebral malaria is an encephalopathy and it presents with impaired consciousness, delirium, and/or seizures. It can rapidly progress to coma and deaths, therefore its signs must be evaluated and managed promptly.[9] In a study of 19 560 Kenyan children with malaria, 48% of cases showed neurological involvement.[22] The major role in cerebral malaria plays probably sequestration but it is supposed to be more consistently the cause in adults than in children.[4] Mortality with the treatment is 15 to 20%; untreated cerebral malaria is almost universally fatal.[39]

Anemia in the setting of malaria occurs as a result of more factors including hemolysis of parasitized red cells, increased splenic sequestration and clearance of erythrocytes with diminished deformability, cytokine suppression of hematopoesis, shortened erythrocyte survival, repeated infections and ineffective treatments.[9] Anemia may pose special problems in pregnancy and in children and it can develop acutely especially in nonimmune individuals and in the area with unstable transmission.[9,28] The research about plasmodium knowlesi malaria in children which was conducted at Kudat District Hospital in Malaysia showed that anemia developed in all children with knowlesi infection, with the hemoglobin concentration in 1 patient (6%) falling to <7.0 g/dL. Anemia was more common in children than has been previously described in knowlesi infection in adults. Thrombocytopenia was found at admission in nearly all (94%) children with *P. knowlesi* malaria, in contrast to only half of the children with *P. falciparum* malaria. Although the cause is unclear, thrombocytopenia is also nearly universal in infected adults, which makes it a characteristic feature of *P. knowlesi* infection across all age groups.[5,11]

Tumor necrosis factor (TNF) except of ability to suppress hematopoesis (which also contributes to anemia) is associated with severity of the illness.[9] Polymorphism in TNF genes appear to influence the severity of P.falciparum infection, which was illustrated in a study of about 1000 Gambian children. The results showed, that different TNF allele are associated with either increased risk of cerebral malaria or development of severe anemia, suggesting that different genetic factors affect susceptibility to these two disease manifestations.[37] In children, central role in disease severity seems to play tissue hypoperfusion.[4] In the setting of treatment of severe malaria adults appear to be more vulnerable to fluid overload than children. However, there is a thin line between underhydration (and thus worsening renal impairment) and overhydration (and risking pulmonary and cerebral edema).[50]

DIAGNOSIS

Prompt and precise diagnosis is a crucial assumption of appropriate treatment of malaria. In endemic countries there are still many people overdiagnosed or conversely misdiagnosed. Overdiagnosis has become a significant and intense problem, especially since chloroquine was replaced by artemisinin combination therapies (ACTs) in the first-line treatment. Subsequent overprescription is now major issue as far as ACTs are more expensive drugs and moreover in relatively short supply.[4,14] Even if misdiagnosis occurs more frequently

in temperate and northern areas of the world, it is present also in endemic countries where it may contribute to a wicked cycle of increasing ill-health and deepening poverty.[2]

There are several diagnostic tools including clinical criteria, microscopy, rapid diagnostic tests, and molecular diagnostic techniques. Unfortunately, none of them meet criteria of an ideal diagnostic tool. Regarding the diagnosis based on clinical signs or symptoms, there are numerous studies demonstrating that it is frequently incorrect. However, history, physical exam and routine labs are always helpful, even if not satisfactory.[14] There are evidence that still many clinicians treat malaria according clinical symptoms, even if parasitological tests are negative, as they have low confidence in used tests. This leads to increased overall cost of treatment instead of expected cost-effective benefit of parasitological tests.[26]

Gold standard in diagnosis of malaria still represents light microscopy. It permits identification of infecting species as well as quantification of parasitemia, which allows monitoring the response to therapy.[14,30] However, there are studies stating that microscopy is an imperfect standard as far as it is too effortful, technically challenging, depending on trained microscopists, time consuming and additionally it is not 100% sensitive.[25,48] This lead to development of antigen-based rapid diagnostic tests (RDTs) over the last two decades. They are easy to use without necessity of any special training and in areas without well-equipped diagnostic facilities.[48] On the other hand, RDTs are susceptible to degradation if store in suboptimal conditions, and they have limitations in specificity, sensitivity, species identification and cost.[38] There is also an obvious failure to detect some parasites due to mutations of the HRP-2 gene and the possibility of false-positive results due to persistence of the antigen after elimination of the parasite, which moreover makes it unable to be used for monitoring therapeutic response.[14,38] In comparison with microscopy, HRP2-based dipsticks are better than standard microscopy in diagnosis P.falciparum malaria in endemic areas.[25] Therefore, in areas where infections are predominantly caused by P.falciparum, the use of an assay detecting P.falciparum may be clinically sufficient and cost-effective.[14] However, microscopy still remains highly important for the diagnosis of the mixed infections and parasite quantification.[25] When feasible, microscopy and RDTs should be used in parallel.[14]

PCR-based methods provide improved sensitivity and specificity.[38] One of the most important advantages is the ability to detect mixed-infections even if one species highly predominates over the other.[38,40] Precise spotting and identification of the Plasmodium species make the molecular techniques ideally for gathering epidemiological data which are important for malaria control programs.[40] PCR can be also performed on dried blood spot what makes it convenient for collection, storage and transport.[38] Furthermore, PCR-based pooling strategy allows the identification of asymptomatic submicroscopic infections which are known to be a major driver of malaria transmission.[10,38] Of course, these amplification methods have also their limitations. They require lengthy extraction, amplification and analysis protocols which limit their application outside the reference facilities and so eliminate the possibility of on-the-spot testing in common hospital settings.[48] However, there is a potential use of PCR in situations where is the necessity of screening large numbers of samples.[38] An alternative method for DNA amplification represents Loop-mediated isothermal amplification (LAMP) which can be performed with simplified and inexpensive sample processing.[48] It is able to detect very small amount of pathogen DNA and it requires minimal tissue sample.[48] There are also reduced false-positive results in comparison with nested PCR due to closed-tube nature of LAMP detection systems. Generally, according performed study, it offers rapid diagnosis with greater sensitivity than microscopy or RDTs.[48]

ANTIMALARIAL THERAPY

Antimalarial drugs are used for both – the prevention and treatment of malaria. Most of them target the erythrocytic stage of the infection which causes the symptoms of the illness.[3] They are generally divided into following groups: quinoline derivatives (chloroquine, amodiaquine, quinine, quinidine, mefloquine, primaquine, lumefantrine, halofantrine), antifolates (sulfonamides, pyrimethamine, proguanil, dapsone), antimicrobials (tetracycline, doxycycline, clindamycin) and artemisinin derivatives (artemether, arteether, dihydroartemisinin, artesunate).[3] Generally treatment of malaria depends on more factors. The most important are the species of malaria parasite, geographical localization and severity of the illness. Pregnancy is a limiting factor in the treatment of disease.[6]

Chloroquine is still the first choice for the treatment of the erythrocytic forms of all non-falciparum species. But similarly as with P.falciparum infection, since the early 1990s there has been recognized chloroquine-resistant P.vivax. In such case therapeutic options include mefloquine, atovaquone-proguanil or the combination of quinine plus tetracycline or doxycycline.[42] In the case of P.ovale and P. vivax infection, elimination of the dormant hypnozoites is needed to prevent the relapse. The drug of choice is primaquine, but first glucose-6-phosphate dehydrogenase (G6PD) deficiency must be excluded as far as it can cause hemolytic anemia. Contraindication for the use of primaquine is pregnancy and breastfeeding.[3]

The situation with P.falciparum infection is much more complicated. Widespread resistance to chloroquine and pyrimethamine-sulphadoxine (the fast-acting and inexpensive drugs) has led to decline them in use.[12] Therefore the treatment of falciparum malaria presently relies on a limited number of drugs.[20] Today, the last class of fully effective antimalarial drug is artemisinins. However, monotherapy with these agents has been associated with high rates of recrudescence. According to research made by Teuscher et al., it may be caused by the dormancy-recovery phenomenon, which may moreover facilitate the development of artemisinin resistance.[20,41] This study supports recommendations of the World Health Organization (WHO) to replace monotherapies for artemisinin-based combination therapies (ACTs), which is used nowadays as a first-line treatment throughout the world.[16,20] Together with mosquito-vector control it have reduced rates of malaria across endemic countries.[12] Unfortunately, recently are reporting news about reduced response to artemisinins. 50 years ago the chloroquine resistance arose in the western Cambodia, the exactly same place as artemisinin resistance has emerged now. The spread of this resistance is a global treat.[41] The crucial key for elimination of malaria on a long-term basis is to provide effective case management with prompt diagnosis and appropriate treatment. However, situation in Cambodia is that majority of people seek treatment in the private sectors where effective case management is not guaranteed. Moreover the drugs are often of substandard quality, dosage is not sufficient, and an informal sector does not always follow national treatment policies. All these factors lead to spreading of the parasite resistance against antimalarials. Monotherapy must be expeditiously removed from the cambodian market as far as people tend to buy the cheapest antimalarial available regardless of its efficacy.[16]

Since 1996 there have not been introduced any new antimalarial drugs into clinical practise.[17] Some reason for optimism is coming with recently made studies that tested plenty of new compounds for inhibitors of P.falciparum´s intraerythrocytic cycle. Gamo et al. described 13 533 compounds from approximately 2 million tested, confirmed to inhibit parasite growth.[19] Another study made by Guiguemde at al. screened and identified a number of novel compounds target the asexual blood-stage of P.falciparum.[52] Neither of these studies state to discover new antimalarial drugs, but they revealed new ´chemical space´ which

represents starting point for developing new generation of effective drugs for malaria treatment.[12]

MALARIA VACCINE

An effective vaccine is urgently needed for the reduction in the spread and burden of malaria. Vaccination has historically contributed to a reduction of many infectious diseases. Even if there has been made significant progress in the development of malaria vaccine during the last 20 years, still, there is no licensed, effective one introduced into clinical practice. Malaria as a protozoal disease is considerably more complex than bacterial or viral infections. The parasite has its own complex life cycle and complicated structure which represent a hurdle for vaccine development but at the same time it increases the number of potential targets for a vaccine.[32] Once inside the body, parasite is very good at evading the immune response and after entering the cells its proteins appearing on the surface varies so the immune response to parasite is frustratingly complex. However, it still remains unclear which of the responses actually help to get rid of the parasite.[58] The other hurdle beside the antigenic variation is that immunity to one stage of the parasite life is restricted just to that part of the life cycle.[51] Financial aspect plays also a crucial role. Recently there are far more potential malaria candidates than financial sources to investigate them in clinical trials.[36]

Different vaccines developed so far differ in their target stage of parasite cycle. The most promising one is GlaxoSmithKline Biologicals' RTS,S which is in Phase III clinical testing. It is the first malaria vaccine candidate to advance this far,[7] targeting pre-erytrocytic stage. The ideal vaccine for this stage should be able to induce high titers of antibodies against sporozoites and at the same time potent cytotoxic T-lymphocyte immunogenicity against the liver stage of parasite. This results to preventing the parasites entering the liver stage and killing the infected hepatocytes.[51] The basis for the RTS,S vaccine are 2 antigens – sequences of the P.falciparum circumsporozoite (CS) protein and S antigen derived from hepatitis B. RTS,S has been evaluated with two different adjuvant systems: AS01 and AS02.[43] The studies showed that RTS,S/AS01 formulation has better immunogenicity and efficacy. The safety profile was comparable between both formulations.[24,43,46] RTS,S/AS01 had been therefore chosen for Phase III and RTS,S/AS01$_E$ is its pediatric formulation which was integrated in the Expanded Program Of Immunization (EPI). The trial which evaluated safety and immunogenicity of this vaccine in EPI compared schedule of vaccination at 0,1,and 2 months and the schedule at 0,1 and 7 months. The obtained results are more favorable for the schedule at 0,1 and 2 months which have been selected for further assessment in the ongoing Phase III efficacy study.[46]

Blood-stage vaccines target parasite in its erytrocytic stage. Ideally it would prevent invasion of red blood cells by merozoites and so prevent the malaria disease.[4,51] The main effort is focused on antigens involved in erythrocyte invasion, as for example merozoite surface protein-1 (MSP-1).[4] However, vaccine development of this stage has also its hurdles. The first one is represented by existence of parallel pathways for invasion. Moreover, there are some antibodies to MSP-1 which are able to block the activity of malaria-protective antibodies.[51] Nevertheless, there are more blood-stage vaccine candidates currently undergoing clinical trials.

The other type of vaccine – sexual-stage vaccine could significantly contribute to malaria control. It is transmission-blocking vaccine that prevent mosquitoes from becoming infected when feed on vaccinated individuals. It inducts antibodies to gametocyte antigens that block fertilization in the mosquito. Thus, it provides indirect protection by reducing transmission of the disease and so it protects communities from infection.[4,23,51]

The global malaria vaccine community have outlined the goal to develop by 2025 a vaccine with more than 80% efficacy against clinical disease and with the protection lasting longer than four years. As stated in the Malaria Vaccine Technology Roadmap, the landmark is to develop and license a first-generation malaria vaccine with protective efficacy of more than 50% against severe disease and death which would last longer than one year.[35,36] The leading vaccine candidate of this global effort is still RTS,S vaccine, even if to achieve the 2025 goal more potent and efficacious vaccine is likely required.[35]

VECTOR CONTROL

Malaria remains the most important vector-born disease in public health.[55] Connection between disease and swamps was known already in ancient times and the attempts to avoid and later on to eradicate malaria have also long history. Great success was reached in Brazil, where due to Fred Soper´s effort malaria was eradicated from an area of about 18,000 square miles and that even before DDT use (Pyrethrum and Paris Green was used). In 1955 WHO launched The Global Malaria Eradication Program with emphasis on vector control with DDT residual spraying. The Program was accompanied by success and malaria was eradicated in countries with temperate climates and seasonal malaria transmission. However, in endemic countries the progress was negligible (despite the fact that some of the countries had at the beginning sharp reduction in the number of cases, but unfortunately it was followed by increase to substantial levels again) and by 1969 the global eradication policy was abandoned. From the early 1970s malaria situation has deteriorated and in the 1980s malaria control was neglected in many areas. In the early 1990s WHO started to develop a global strategy for malaria control together with all malarias' countries. It requires attention to both – disease management and transmission reduction via vector control which is the fundamental action in the process. In 1998 WHO launched a Global Roll Back Malaria Initiative but it is still far from being successful.[31,53]

Generally, control of malaria involves all the agents participating in the cycle of malaria – the host (man), the agent (plasmodia), the vector (anopheles mosquito) and also their environment.[53] Currently, there is a necessity to select those control measures, which are the most appropriate for local circumstances involving environment, infrastructure, behavior of the vector etc.[15,29] The most important and big hurdles represent resistance to insecticides, drug resistance and also compliance, as far as also common people can effectively contribute to control of the disease.[29]

Insecticides treated nets (ITNs) together with Indoor Residual Spraying (IRS) are considered to have almost general applicability while other measures may be used in particular circumstances.[53] Different vector control types requires careful consideration of synergies and antagonisms in the specific settings, as well as reconsideration of these combinations over time, as context may change and new needs emerge.[55]

The use of insecticide-impregnated materials, such as bed and curtains, showed improved survival and health in many studies.[1,15,57] Since the major malaria mosquitoes bite in the night, ITNs represent very effective physical barrier against them. Pyrethroid treatment of bed nets provides additional protection and represents chemical barrier which is effective even if the net is torn.[15] The issue of net re-treatment, which is difficult to sustain, may be overcome by using long lasting insecticidal nets (LLINs) as far as the price is not prohibitively increased by the specific treatment.[4,15,53] Despite the proven benefit and cost-effectiveness, the present coverage of ITNs in Africa remains inadequate.[1,4] The main reason is the full price of ITNs, which makes them unavailable for the most vulnerable groups.[4] Additionally, there has been already reported the failure of pyrethroid-based ITNs and insecticide resistance has been recorded by laboratory tests in many malaria vector

populations.[15,53] For example, in South Africa a switch back from pyrethroid to DDT was needed to restore malaria control.[53] Resistance management relies first of all on the proper resistance monitoring.[53] Promising way seems to be switching different insecticides and avoid not only single insecticides but as well single interventions.[53] Another crucial task is to identify new alternative insecticides targeting new sites.[53,59]

Indoor residual spraying (IRS) involves spraying insecticide on indoor residential walls and ceilings. Mosquito contact with such insecticide-treated surfaces is usually lethal.[15] However, the success of IRS depends on more requirements including endophilic and endophagic species of mosquito, permanent homesteads of people, willingness to accept and ability to organize the delivery of spraying. IRS should only be adopted if the necessary infrastructure exists and of course where local vectors are susceptible to the used insecticides. In comparison with ITNs, IRS requires from the beginning high coverage and quality of spraying in order to be effective (ITN can start with low population coverage, although rapid scale-up is desirable).[53]

Larval control may be effective under certain conditions and it is provide by chemical or biological control.[53,57] It can be attained through environmental management, large space coverage community participation and the proper selection of anti-larval measures (e.g. use of larvicidal agents, Guppy or Gambusia fish, bacteria, fungi, oiling).[29,53,57] Larval control can play a useful role in the urban areas, refugee camps and other epidemic-prone areas.[15] To be effective, very high proportion of the breeding sites should be treated.[53] Generally, according the studies, use of larval control techniques in Africa is inefficient because breeding sites are impermanent or too small.[15] However, there was done major reduction of Anopheles gambiae in Kenyan village by use of the bacterial toxin Bacillus thuringiensis israelensis (Bti) which is highly specific and targets very few other species.[15,18]

According WHO "the process of deciding about which mosquito control method is appropriate in a given situation should be guided by an analysis of the level of malaria endemicity and vector bionomics, the eco-epidemiological setting, the health management system and an estimate of the program sustainability."[53]

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THE RESPONSE OF PREGNANT WOMEN ATTENDING SERVICE ON HIV SCREEN: A CASE STUDY FROM MUKURU SLUM

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ABSTRACT

It is mandatory for every women going for Antenatal service to be screened for HIV/AIDS and given information on how to live be it positive or negative to prevent the spread of the virus to the baby, to the partner and also equally important self protection from the partner. The study intended to find out the pregnant women's response to HIV prevention through screening at the Antenatal clinic centres. The study design was a descriptive case study, a total of 263 women were sampled who were attending Mary Immaculate ANC services. The women were from within the environs of the clinic that it serving. The questionnaire was used together with testing after the informed decision has been made by the woman. The findings showed that, the most active age group who becoming mothers were between 20 – 24 years (47.9%) and 25 -29 years (24.7%). Most were married (78%), and majority (59.7%) had been tested before as personal precaution to HIV/AIDS prevention. But the most amazing thing is that, majority (83%) don't know the HIV status of their partners as only (16%) have been test together with their partners. And lastly the HIV results from the women took the test was 90.7% were negative and 8.7% were positive. Therefore, to win total war on HIV/AIDS, men should come out genuinely to take the HIV test together with their partners as a responsibility to all, not to use their wives HIV status to reflect their status. Women still have a duty to coerce their *partners to take HIV test as condition for the safety of one another including their children.*

Key words: HIV/AIDS. ANC. PMTCT. Partner. Infant. Marriage, and Screening.

Introduction

When the HIV/AIDS was pronounced in Kenya the year 1983, it was something that people never took it lightly in regard to one's life. The picture that was created brought about the issues of stigma for the victims, for example it was associated with immorality or prostitution and the kind of suffering one would pay.

But any country to win the war on HIV/AIDS, must rise to the occasion and identify avenues as an entry point for the prevention of the virus spread. All the population must be targeted thus both men and women, young and old, working and non working, atheist and religious. This study has highlighted the importance of creating HIV awareness testing to all. The study has also discussed in details the response of women and men testing for HIV/AIDS from different countries although responses are still low, but in Kenya the response is high. The methodology makes the third chapter which explains how the study was carried, the place, the target population, analysis and interpretation of the data. The presentation is done in graphs and tables.

Goal of the study

To find out the responses of pregnant women attending antenatal care service on HIV screening and the role they play in the prevention of the transmission of the HIV virus.

Specific objectives

To determine the response of pregnant women attending the ANC on HIV testing as a means of preventing the transmission to their infants.
To describe the statistics of HIV prevalence among pregnant women taking the HIV test at the Antenatal clinic.
To find out if couples in any kind of relationship are taking the HIV test together as a way of protecting one another.
To establish the level of HIV awareness after testing and self protection from their partners in their relationship.
Research question
Significance of the study How are the pregnant mothers responding to HIV testing as a means of preventing the transmission to their infants?
What could be the statistics of HIV prevalence among pregnant women taking the HIV test at the Antenatal clinic?
How are the couples responding to HIV/AIDS by testing together as a way of protecting one another?
How is the HIV awareness not playing any role in preventing the spread of the virus in existing relationship?
The study seek to provide valuable information to the people or organization involved in fight the spread of HIV virus from parents to their children by creating more awareness for both couples to see the need of testing together especially the policy makers and those in practice of prevention of mother to child transmission of HIV virus.. And the study also will provide the materials for other researchers and readers who will want to use the information.
Justification of the study
The purpose of this study is to determine and describe the impact of antenatal services on the prevention of HIV/AIDS to the infants during birth from their parents. The descriptive case-study was used as a design with view of strengthening the Antenatal services.
Literature
The importance of HIV testing among men and women is the responsibility of every one to do as a way of preventing the spread of HIV/AIDS in relationships and our families. With the availability and use of HIV testing and counselling services is a critical step towards ensuring access to services and interventions for prevention, treatment and care of HIV. The significance of testing and counseling present an opportunity to share information with clients and promote measures to reduce the risk of HIV infection and transmission.1
Therefore, accelerating HIV prevention programess can help with prevention of HIV infection in infants and young children (PMTCT) through:
Primary prevention of HIV transmission among men and women;
Family planning, counselling, and contraception;
Antiretroviral medicines for preventing HIV infection in infants;
Treatment, care and support for pregnant women living with HIV;
Infant feeding counselling and support.2
The PMTCT interventions" refers to the interventions focusing on the prevention of HIV transmission from mother to child. These interventions include:
HIV testing and counselling (including risk reduction messages);
ARV treatment and/ or prophylaxis;
Safe delivery practices;

[1] WHO, UNAIDS and UNICEF. Towards universal access: Scaling up priority HIV/AIDS intervention in the health sector. Progress report, 2010. (WHO, 20 Geneva, World Health Organization) p.14.
[2] WHO. Operations Manual for delivery of HIV prevention, care treatment at Primary Health centres in high prevalence; Resource- constrained settings. Edition 1 for field- testing. (WHO, 20 Geneva, World Health Organization). P. 15.

Counselling and support for safer infant feeding;
Provision of (or referral to treatment, care, prevention and support services for women infected with HIV, their infants and their families.
Without intervention, during pregnancy or labour about 20-25% of women with HIV will transmit the virus to their infants. Another 5 -20% of infants will become infected with HIV during breastfeeding. The antenatal care ANC setting is ideal for identifying the HIV status of pregnant women and providing prompt interventions for both HIV- positive and HIV Negative clients.3
The access to services for preventing mother to child transmission of HIV was expanded further in 2009. And an estimated 26% of all pregnant women in low and middle income countries received an HIV test in 2009, up from 21% in 2008. However, this figure is still low, largely due to inadequate coverage of HIV testing in countries like of East, South and South-East Asia (17%) where 55% of pregnant women live.4
The Adult HIV prevalence was estimated to be around 6.3% in 2009. Young women between the ages of 15 - 24 are more than twice as likely as young men to be living with HIV (4.1% as compared to 1.8%). And the levels of infection among individuals in unions are as high as 45% of married HIV positive persons have a partner who is HIV- Negative.
We see that in Kenya, the Antenatal care (ANC) utilization is high by 92%, though >75% of women access ANC after the 3 month (or after the point of optimal PMTCT regime initiation). Like in 2009, approximately 63% of pregnant women were tested for HIV. And the percentage of women attending at least 4 ANC visits during pregnancy in overall was 47%, Urban 60%, and rural 44%.5 Like in Busia district, the number of PMTCT visits rose from 53 percent in 2005 to 83 percent in 2008.6
All the pregnant women and their sexual partners should be encouraged to learn their HIV status. HIV testing of pregnant women should occur before delivery, however if it is not done efore delivery it may be offered during or as a routine standard of care immediately following delivery.7
The gender gap most likely reflects the existence of programs to test women during pregnancy in order to prevent the transmission of HIV from mother to child, and the absence of such programmes to reach men.
The data from countries where recent national population surveys have been conducted according to WHO, UNAIDS AND UNICEF progressive report 2010, shows that a median of 12 % of women and 7% of men report having had an HIV test in the 12 months preceding the surveys, while the median number of people who report having ever tested is 34% for women and 17% for men. As expected, there are considerable variations around these figures. For example, in some countries, such as Kenya, Sao Tome and Principe, and south Africa, as many as one quarter or more of women report having tested in the preceding 12 months, whereas comparable figures are much lower elsewhere. It is worth highlighting that, consistently, fewer men than women report having test.8
Many people do not know that they have HIV and do not access safer sex and treatment services. And those who happen to know their HIV status suffer from blame and violence

[3] WHO. Testing and counseling for prevention of mother – to – child transmission of HIV (TC for PMTCT); Reference Guide. (WHO, 20 Geneva, World Health Organization). P. 2 -11.
[4] WHO, UNAIDS and UNICEF. Towards universal access: Scaling up priority HIV/AIDS intervention in the health sector. Progress report, 2010. (WHO, 20 Geneva, World Health Organization) p.7.
[5] WHO. UNAIDS and UNICEF. Towards universal access: Scaling up priority HIV/AIDS intervention in the health sector. P. 83 -103.
[6] AMREF. *Giving life a hand;* AMREF Annual report 2008. P29.
[7] National AIDS and ATI Control Programme, Ministry of public Health and sanitation, Kenya: Guidelines for HIV Testing and counselling in Kenya. Nairobi: 2008. P. 24.
[8] Ibid.

upon disclosure of their HIV status, particularly women, who are often diagnosed first at antenatal clinics due to:
Cultural and gender norms that expect women to submit to men's sexual needs and control their own sexual behaviour,
Inequality between men women affecting decision making, choice and access to resources,
Women's ability to use sexuality to earn higher income than other available work may increase risk of infection.9
Therefore it is important to counsel couples on safer sex during pregnancy and lactation which is essential, particularly in couples who are discordant or likely to have relations outside the partnership.
The involvement of the fathers and families is the key to supporting PMTCT activities. HIV testing and counselling for couples in now routine in antenatal services in Rwanda, while in Zambia there is a special clinic with incentives for couple testing at the weekend. Counselling can help mothers to disclose their HIV status to their partners.10
Therefore it is very important to take the opportunity as the woman comes for the ANC services. This prevents the missed opportunities if testing occurs during labour rather than antenatal care.

Methodology

This chapter discusses the study design, target population, sampling procedure, data collection, and analysis and result interpretations.

3.1 Study design

Case study was used, because it was focusing on a single entity (pregnant women) in order to gain deeper insight into the case. This study is describing and explaining the HIV screening scenarios. This is because the sample under study is the same.

3.2 Population Sample

The study focused on pregnant women who were attending Mary immaculate antenatal clinic. Every woman who came was requested if she would like to take the HIV test as a routine screening to prevent the infant from getting infected with the HIV virus from the mother. A total of 263 women were sampled voluntary, although those who attended the ANC were 308 women.

3.3 Data collection

The data was collected using a questionnaire which was self administered. The data was collected for a period of 12 months that is January to December 2011. There were 5 questions that the women were required to respond to. The other tools used to gather the result were the test kids (determine, SD Biolin and Unigold) for screening HIV status.
The data collection was under the guiding principles of PMTCT thus voluntary, informed consent, confidentiality and post test support.

3.4 Data analysis

The data analysis was done by the use of SPSSS. The presentation was through the graphs and tables.

Results

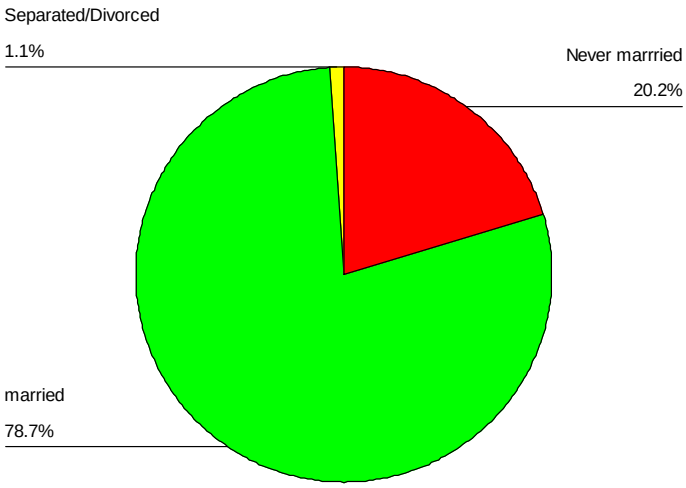
These findings from the study are answering five questions that wanted to address the importance of HIV testing and its prevention to their children/infants. The number of pregnant mothers who attended Antenatal clinic was 308. But those who accepted to take the HIV test or just counselling were 263. This means that 85% stepped in the testing room, for the HIV screening while 15 % never stepped in the counselling room.

[9] International HIV/AIDS Alliance. Integration on HIV and Sexual and Reproductive Health and Rights; Good practice Guide, 2010. P. 23 – 24. Also available on www.aidsalliance.org/Publicationsdetails.aspx?ld=451
[10] International HIV/AIDs Alliance. Integration on HIV and Sexual and Reproductive Health and Rights; Good Practice Guide 2010. P.57.

Table 1: Age of the mothers

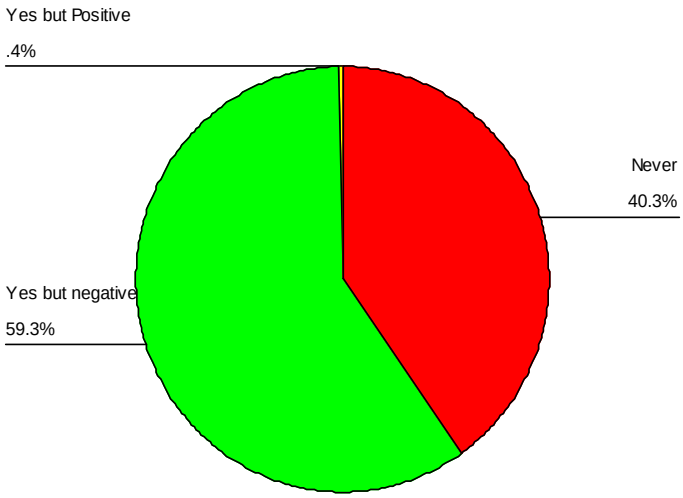
Age Intervals	Frequency	Percent	Cumulative Percent
15 – 19	35	13.3	13.3
20 – 24	126	47.9	61.2
25 – 29	65	24.7	85.9
30 – 34	28	10.6	96.6
35 Above	9	3.4	100.0
Total	263	100.0	

The age distributions of the women who attended the Mary Immaculate ANC services. The most age group of mothers were of age 20- 24 years (47.9%), followed by age 25- 29 years (24.7%), and ages 15-19 (13.3%), 30-34(10.6%) and above 35 years (3.4%) in that order.
Figure 1: Distribution by Marital status at ANC.



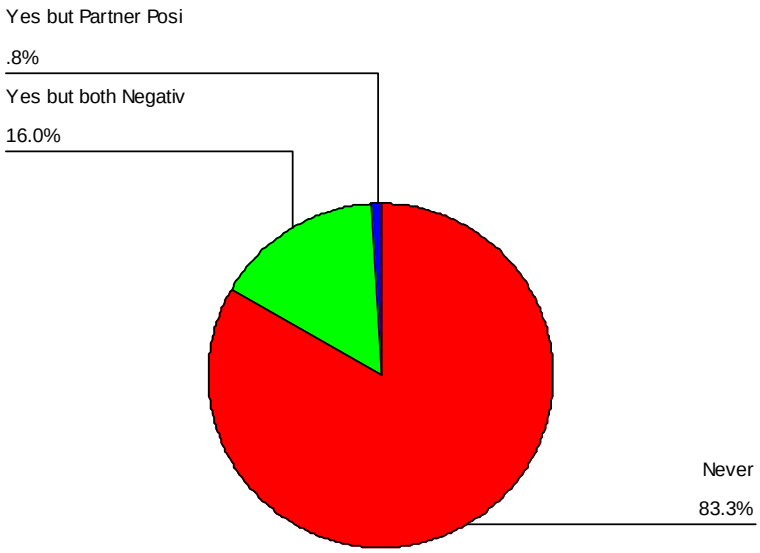
The Number of pregnant mother sampled, 78.7% were married, 20.2% not married and 1.1% were either separated or divorced.

Figure 2: HIV Screening Before.



From the figure, 60 % of the women who took the HIV tested and initially they had been tested in different settings just to know their HIV status for personal desire, 59.3% were negative, and 0.4% was positive. While 40.3% they had not taken HIV test.

Figure 3: Distribution of Couples testing.



The HIV testing was poor among the couples. From the figure, 83.3% have never been tested together as couple as the responsibility for all to protect one another in cases one is HIV positive. But only 16.8% have been tested together, thus 16.0% were negative, while 0.8% was positive.

Table 2: Total Number of people Tested for HIV at Mary Immaculate.

Gender	Number tested	Negative	Positive
Male	1397	1344	53
Female	1704	1586	118
Total	3101	2930	171

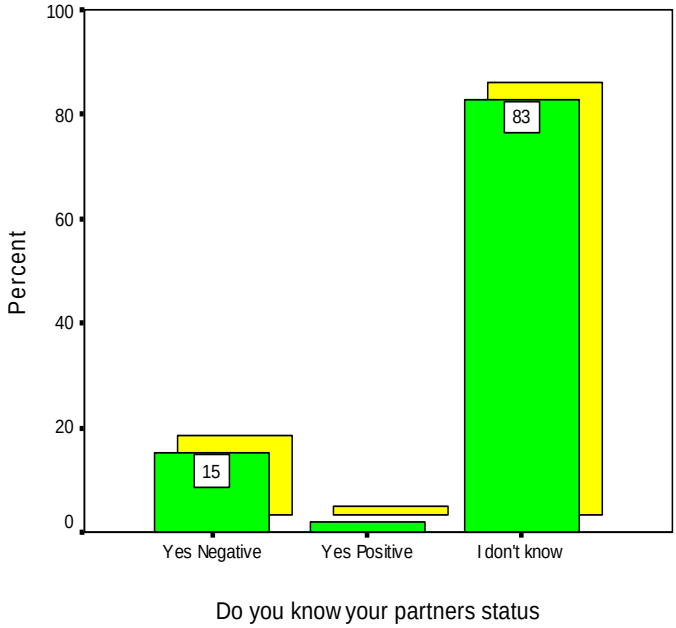
The number of people who volunteered to know their HIV status at Mary immaculate VCT was 3101. Male were 1397 and female were 1704. From the table women were more than men by 307.

Table 3: The HIV Test Result at Mary Immaculate ANC.

Variables	Frequency	Percent	Valid Percent	Cumulative Percent
Negative	239	90.9	90.9	90.9
Positive	23	8.7	8.7	99.6
Declined to be tested	1	.4	.4	100.0
Total	263	100.0	100.0	

The total number of women that were requested to take the HIV test was 308 women. But 263 of the women who took HIV test. 90.9% were negative, 8.7% were positive, and 0.4% declined to be tested.

Figure 4: HIV Awareness of their Partner.



It was amazing to find that most women don't know the HIV status of their partners. For example 83% can tell whether their partners are positive or negative. Only 15 % knows that their partners are negative and 2% knows their partners are HIV positive after taking the test together.

Discussion

The most reproductive age group is between 20 – 24 (47.9%) years. And most of them are starting as early as 15 year. By this age, most are already in marriage as early by 15 years i.e. 78.7% were married.

HIV testing has been implemented in various components like VCT, PITC, PMTCT and HBTC by the relevant ministries, but still there is a population that has never been reached. Only 60% of the women had been tested for HIV before, and 40% had not been tested and they came to know their status for the first time through ANC services. Meaning that still there is more people/population that is yet to take HIV test. Therefore the ANC is playing great role for creating HIV/AIDS awareness to those attending for the services by sending them to VCT centers for HIV screening.

Taking HIV test among the couples still remains the mirage among those who are married and dating. Most have not taken personal measures to either protect themselves, their partner and even their children from contracting the HIV virus. From figure 4.3 and 4.4 we see that 83 % of the women took the HIV test but, amazes is they have never been tested together with their partners. Furthermore the same staggering figure 83% of the women don't know the HIV status of their partners. We can't say that men don't take the test, they might have taken the HIV test somewhere else at their own time, but the number is still low as compared to women i.e. from the table 4.2, the men who took HIV test were 1397 and women were 1704. The question is, why separate testing among the partner/couples? This resistance could be due to the following reasons:

1. If it is known that he or she is positive, there is that fear of losing the partner through separation/ divorce. They will want to maintain the status quo.
2. The desire of having a child/family. This will make the partner who is HIV positive to keep his or her status secretly, without caring about infecting the other partner who might be HIV negative.
3. Some just do maliciously with intentional of infecting the other partner as a way of revenging especially in non steady relationship or just making financial gains.

Antenatal clinic has proved to be good entry for the HIV prevention as the majority of women are willing to know their HIV status and prevent their children's from contracting the virus. Africans communities value children, and without a child, one will be under pressure or it will create panic to both parents. And this will make the woman to have determination and interest at least to have a healthy child whom she would want to love and also to avoid shame form the rest of the family/neighbors. Like out of 263 who accepted for the HIV screening, 90.9% were negative, 8.7% were positive. Meaning more interventions have to be done starting with the parents then the health care professionals to save the infants from contracting the HIV virus from the 8.7% positive women through ARVs prophylactic treatment and breastfeeding information.

After testing, it should be high time for women to go and encourage their partners also to get tested together. This is because the cases of sero discordance is on the increase, and in situation of the discordance, the partner who is negative and not aware of the positive status of the partner if will continue to have unprotected sex, then automatically will also get infected or and in the same manner will pass the virus to the child during either pregnancy or breastfeeding.

Partners/ couples should conceptualize on the HIV/AIDS issues and what will be the possible ramifications for them and their children in future on the basis of ignorance and negligence

regard to social, economical, physical, and mental well being in general. Men still resist the idea of accompanying their partners for the ANC services. And some of the reasons could be:-

4. Most of the time men go to work to fend for the family, no time to accompany their spouses when it comes to going for ANC services,
5. The cultural issues i.e. a man is always above the woman. The wife can't propose for the HIV test, it will mean that she is suspecting the man, so this could bring chaos. Men in most cases believe that if his partner is negative, therefore it is a direct confirmation that he is also negative.
6. Men would want to judge their HIV status if the partner is breastfeeding the child. In situations where the wife is not breastfeeding, it will create tension and the man would want to know why? And if the wife is adamant not ready to disclose the problem, the man would force her to breastfeed. This situations also makes men to sneak in the VCT secretly to know the status.

Conclusion

HIV screening at the ANC has been received well as many women who are attending are responding to the call of knowing their HIV status as a way of protecting their children from contracting the virus. Although their husbands/ partners have not come out openly to take the HIV test as a duty of every parent would do to protect his/her child from any harm. In this case I mean protecting the child from contracting HIV virus. And war on HIV/AIDS can't be worn on testing women alone. If Nairobi as a city where people can access for health services easily at any time and yet still some people don't know their HIV/AIDS status. Then, this could reflect that the lager part of the country we could be having people still in darkness concerning transmission and prevention. Therefore, with cases of home delivery with no safe delivery practices in those communities, children will continue to get infected with the HIV virus.

Recommendations.

7. The Voluntary counselling and testing (VCT) centres needs to be strengthened in all the areas as slowly by slowly men are feeling the need of doing the test as a personal precaution. We should appreciate and welcome those new cases who are turning up for the first time to take the HIV test. VCT's are there to improve HIV situations.
8. The family values should be tough in early age, we don't have to wait up to the time of weddings, or time of traditional marriages. Even many elope and cohabit and end up missing completely the relevant information of caring for the health family.
9. Let's break the culture of living our wives to go alone for the ANC care, going together should not be seen as a western way of life. We have to embrace the some changes in our marriages.

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ADVANCES IN HIV/AIDS THERAPY, PREVENTION MEDICAL, SOCIAL AND ETHICAL EMERGENCY

Kmit I. and member of Tropicteam

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ABSTRACTS

Advances in HIV/AIDS therapy and its social, medical and ethical aspects are critically reviewed and analysed the members of Ugandan and Kenyan parts of SEUC Tropicteam.

Key words: HIV. AIDS.

AGE AND CD4 COUNT OF VERTICALLY HIV – INFECTED CHILDERN AT THE TIME OF DIAGNOSIS: WHAT ARE IN DEPENDENT PREDICTORS FOR BEING SYMPTOMATIC AND CD4 COUNTS DROP?

Yifru Berhan

Journal of Tropical Pediatrics, Vol. 57, No. 1, Feb 2011

A review of the literature has revealed that data on HIV-infected clinical presentations, age at the time of diagnosis and level of immunosuppression in resource-poor settings are very limited. A multicenter retrospective and cross-sectional method was used to analyze 1163 children <15 years of age. More than half of the children were >5 years of age (mean ± SD age 4.9 ± 3.2). About 54% of children were symptomatic. Tuberculosis and chronic dermatologic disorders were the commonest co-infections. The severity of immunosuppression was highest in preschool children (46.6%) and early adolescents (41.3%). After adjustment for sex, age, pattern of feeding and hemoglobin level, multinomial logistic regression showed that CD4 count 200–499, 500–999 and Tigray ethnicity were independently associated with being symptomatic. More than one-third of the children were in a state of severe immunosuppression and more than half were immunologically eligible for antiretroviral treatment.

Every year about 600 000 children acquire HIV infection worldwide, mainly through vertical route,>90% of them being in Sub-Saharan Africa. A prospective cohort study done in Rwanda concluded that in Africa, vertically HIV-1-infected children develop disease manifestations early in life. Worldwide some authors pointed out that children accounted for 20% of AIDS deaths, whereby rapid progression to disease was responsible for high mortality.

TIME FROM HUMAN IMMUNODEFICIENCY VIRUS SEROCONVERSION TO REACHING CD4+ CELL COUNT THRESHOLDS<200, <350, AND <500 SELLS/mm³: ASSESMENT OF NEED FOLLOWING CHANGES IN TREATMENT GUIDELINES

Sara Lodi

Clinical Infectious Diseases 2011, 53(8):817-825

Recent updates of human immunodeficiency virus (HIV) treatment guidelines have raised the CD4+ cell count thresholds for antiretroviral therapy initiation from 350 to 500 cells/mm^3 in the United States and from 200 to 350 cells/mm^3 in mid- and low-income countries. Robust data of time from HIV seroconversion to CD4+ cell counts of 200, 350, and 500 cells/mm^3 are lacking but are needed to inform health care planners of the likely impact and cost effectiveness of these and possible future changes in CD4+ cell count initiation threshold.
Using Concerted Action on Seroconversion to AIDS and Death in Europe data from individuals with well-estimated dates of HIV seroconversion, we fitted mixed models on the square root of CD4+ cell counts measured before combined antiretroviral therapy (cART) initiation. Restricting analyses to adults (age >16 years), we predicted time between seroconversion and CD4+ cell count <200, <350, and <500 cells/mm^3 as well as CD4+ cell count distribution and proportions reaching these thresholds at 1, 2, and 5 years after seroconversion.
Median (interquartile range [IQR]) follow-up for the 18495 eligible individuals from seroconversion while cART-free was 3.7 years (1.5, 7). Most of the subjects were male (78%), had a median age at seroconversion of 30 years (IQR, 25–37 years), and were infected through sex between men (55%). Estimated median times (95% confidence interval [CI]) from seroconversion to CD4+ cell count <500, <350, and <200 cells/mm^3 were 1.19 (95% CI, 1.12–1.26), 4.19 (95% CI, 4.09–4.28), and 7.93 (95% CI, 7.76–8.09) years, respectively. Almost half of infected individuals would require treatment within 1 year of seroconversion for guidelines recommending its initiation at 500 cells/mm^3, compared with 26% and 9% for guidelines recommending initiation at 350 and 200 cells/mm^3, respectively.

These data suggest substantial increases in the number of individuals who require treatment and call for early HIV testing.

Percentage of Subjects Reaching CD4+ Cell Count <200, <350, and <500 cells/mm^3 at 1, 2, and 5 Years After Seroconversion, Estimated from a Linear Mixed Model

CD4+ cell count, cells/mm^3	Estimated subjects reaching the threshold, % (95% confidence interval), by years after seroconversion		
	1	2	5
<200	8.8 (8.3–9.4)	12.2 (11.5–12.7)	32.3 (31.7–33.5)
<350	26.1 (25.8–27.4)	33.2 (32.4–34.3)	55.0 (54.3–56.1)
<500	48.0 (47.4–49.1)	55.9 (55.5–57.2)	72.7 (71.5–73.3)

ONCE-DAILY ANTIRETROVIRAL THERAPY AMONG TREATMENT-EXPERIENCED MUSLIM PATIENTS FASTING FOR THE MONTH OF RAMADAN

Ahmed M. Yakasi

Tropical Doctor, October 2011, Vol. 41

Many countries with a considerable burden of human immunodeficiency virus (HIV) infection in Africa and Asia also have a substantial Muslim population. Anti-retroviral therapy (ART) has led to reductions in HIV morbidity and mortality in those areas. However, for ART to remain durably effective its provision should be adapted to local and religious customary practices such as Ramadan fasting. The fasting is often observed by Muslims with HIV infection and ART might be compromised by sub-optimal adherence during fasting as it precludes the ingestion of oral substances during the daytime and is often associated with an alteration of meals/sleeping patterns. We studied once-daily compared to twice-daily dosed ritonovir boosted lopinavir with fixed-dose tenofovir-emtricitabine once-daily among 17 heavily treatment-experienced stable FT patients in Nigeria. No changes in adherence, diarrhoea, CD4 cell counts, viral load, haematocrit, kidney, liver and lipid tests were observed. Effectiveness, safety and tolerability appeared unaffected by the changes.

SIMULTANEOUS HAART IMPROVES SURVIVAL IN CHILDREN COINFECTED WITH HIV AND ATB

Tripti Pensi

Tropical Medicine and International Health, Vol. 17, No. 1, pp. 52-58, January 2012

This study assesses the outcome of current treatment guidelines and the effect of highly active antiretroviral therapy (HAART) on survival of HIV/TB-coinfected patients in a resource-limited setting.

Observational cohort study at the pediatric HIV Clinic, RML Hospital, Delhi. All HIV-infected patients who visited the clinic for the diagnosis of TB between 2002 and 2006 were observed until 31 March 2010. TB was diagnosed either at the time of enrolment or during follow-up visits. Clinical and epidemiological data were registered. We compared children who were given HAART with TB treatment at time of diagnosis [simultaneous therapy (ST)] and children who received delayed HAART. Survival was assessed by Kaplan–Meier method and Cox regression model.

Among the 298 children, 126 (42.2%) had TB, including 96 who received ST (76% of 126) and 30 who did not. There were no differences between the two groups except for a lower CD4 count in patients undergoing ST. ST was associated with improved survival [hazard ratio (HR), 0.35; 95% CI, 0.20–0.74; $P = 0.002$] and so were year of TB diagnosis and other AIDS-defining conditions. Multivariate analysis revealed that ST was a powerful predictor of survival (HR, 0.30; 95% CI, 0.14–0.68; $P = 0.003$). After adjusting for other prognostic variables such as age, gender, CD4 count at time of TB diagnosis, by Cox multivariate analysis, ST remained robustly associated with improved survival (HR, 0.32; 95% CI, 0.17–0.71; P = 0.001).

Starting HAART during tuberculosis therapy significantly improves survival and provides further impetus for the integration of TB and HIV services.

FACTORS IN FLUENCING ADHERENCE TO ANTIRETROVIRAL TREATMENT IN ASIAN DEVELOPING COUNTRIES: A SYSTEMATIC REVIEW

Sharada P. Wasti

Tropical Medicine and International Health, Vol. 17, No. 1, pp. 71-81, January 2012

To systematically review the literature of factors affecting adherence to Antiretroviral treatment (ART) in Asian developing countries.

Database searches in Medline/Ovid, Cochrane library, CINAHL, Scopus and PsychINFO for studies published between 1996 and December 2010. The reference lists of included papers were also checked, with citation searching on key papers.

A total of 437 studies were identified, and 18 articles met the inclusion criteria and were extracted and critically appraised, representing in 12 quantitative, four qualitative and two mixed-method studies. Twenty-two individual themes, including financial difficulties, side effects, access, stigma and discrimination, simply forgetting and being too busy, impeded adherence to ART, and 11 themes, including family support, self-efficacy and desire to live longer, facilitated adherence.

Adherence to ART varies between individuals and over time. We need to redress impeding factors while promoting factors that reinforce adherence through financial support, better accessible points for medicine refills, consulting doctors for help with side effects, social support and trusting relationships with care providers.

EARLY LOSS FOLLOW-UP OF RECENTLY DIAGNOSED HIV-INFECTED ADULTUS FROM ROUTINE PRE-ART CARE IN A RURAL DISTRICT HOSPITAL IN KENYA: A COHORT STUDY

Amin S. Hassan

Tropical Medicine and International Health, Vol. 17, No. 1, pp. 82-93, January 2012

To determine the rate and predictors of early loss to follow-up (LTFU) for recentlydiagnosed HIV-infected, antiretroviral therapy (ART)-ineligible adults in rural Kenya.Prospective cohort study. Clients registering for HIV care between July 2008 and August2009 were followed up for 6 months. Baseline data were used to assess predictors of pre-ART LTFU (notreturning for care within 2 months of a scheduled appointment), LTFU before the second visit and LTFUafter the second visit. Logistic regression was used to determine factors associated with LTFU before thesecond visit, while Cox regression was used to assess predictors of time to LTFU and LTFU after thesecond visit.Of 530 eligible clients, 178 (33.6%) were LTFU from pre-ART care (11.1⁄100 person-months). Of these, 96 (53.9%) were LTFU before the second visit. Distance (>5 km vs. <1 km:adjusted hazard ratio 2.6 [1.9–3.7], P < 0.01) and marital status (married vs. single: 0.5 [0.3–0.6],P < 0.01) independently predicted pre-ART LTFU. Distance and marital status were independentlyassociated with LTFU before the second visit, while distance, education status and seasonality showedweak evidence of predicting LTFU after the second visit. HIV disease severity did not predict pre-ARTLTFU. A third of recently diagnosed HIV-infected, ART-ineligible clients were LTFU within6 months of registration. Predictors of LTFU among ART-ineligible clients are different from thoseamong clients on ART. These findings warrant consideration of an enhanced pre-ART care packageaimed at improving retention and timely ART initiation.

PRIMARY PROPHYLAXIS OF CRYPTOCOCCAL WHIT FLUCONAZOLE IN HIV – POSITIVE UGANDEN ADULTS: A DOUBLE –BLIND, RANDOMISED, PLACEBO-CONTROLLED TRIAL

Rosalind Parkes-Ratanshi

Lancet Infect Dis 2011, 11: 933-41

Cryptococcal disease remains an important cause of morbidity and mortality in HIV-infected individuals in sub-Saharan Africa, despite the introduction of antiretroviral therapy. We studied fluconazole as primary prophylaxis against cryptococcal disease in patients awaiting or starting antiretroviral therapy in Uganda. Fluconazole was safe and effective as primary prophylaxis against cryptococcal disease, both before and during early antiretroviral treatment. Cryptococcal infection was less common than anticipated because of the rapid commencement of antiretroviral therapy and exclusion of those with positive CrAg. In patients with negative CrAg on screening, fluconazole prophylaxis can prevent cryptococcal disease while waiting for and in the early weeks of antiretroviral therapy, particularly in those with CD4 counts of less than 100 cells per μL.

INTERVENTION TO INCREASE ANTIRETROVIRAL ADHERENCE IN SUB-SAHARAN AFRICA: A SYSTEMATIC REVIEW OF EVALUATION STUDIES

Till Bärnighausen

The Lancet, Vol 11, December 2011

The success of potent antiretroviral treatment for HIV infection is primarily determined by adherence. We systematically review the evidence of effectiveness of interventions to increase adherence to antiretroviral treatment in sub-Saharan Africa. We identified 27 relevant reports from 26 studies of behavioural, cognitive, biological, structural, and combination interventions done between 2003 and 2010. Despite study diversity and limitations, evidence suggests that treatment supporters, directly observed therapy, mobile-phone text messages, diary cards, and food rations can effectively increase adherence in sub-Saharan Africa. However, some interventions are unlikely to have large or lasting effects, and others are effective only in specific settings. These findings emphasise the need for more research, particularly for randomised controlled trials, to examine the effect of context and specific features of intervention content on effectiveness. Future work should assess intervention targeting and selection of interventions based on behavioural theories relevant to sub-Saharan Africa.

PRE-EXPOSURE PROPHYLAXIS AND ANTIRETROVIRAL RESISTANCE: HIV PREVENTION AT A COST?

Christopher B. Hurt

CID 2011, 53(12): 1265-70

Pre-exposure prophylaxis (PrEP), the use of antiretrovirals (ARVs) by human immunodeficiency virus (HIV)–uninfected individuals to prevent acquisition of the virus during high-risk sexual encounters, enjoyed its first 2 major successes with the Centre for the AIDS Programme of Research in South Africa (CAPRISA) 004 and the Pre-Exposure Prophylaxis Initiative (iPrEx). These successes were buoyed by additional positive results from the TDF2 and Partners PrEP trials. Although no seroconverters in either arm of CAPRISA developed resistance to tenofovir, 2 participants in iPrEx with undetected, seronegative acute HIV infection were randomized to receive daily oral tenofovir-emtricitabine and resistance to emtricitabine was later discovered in both men. A similar case in the TDF2 study resulted in resistance to both ARVs. These cases prompted us to examine existing literature on the nature of resistance mutations elicited by ARVs used for PrEP. Here, we discuss the impact of signature mutations selected by PrEP, how rapidly these emerge with daily ARV exposure, and the individual-level and public health consequences of ARV resistance.

Which mutations are selected by the components of pre-exposure prophylaxis?

Emtricitabine
Signature mutations for emtricitabine occur at codon 184. Singlenucleotide alterations mediate amino acid changes from methionine to isoleucine (M1841) or valine (M184V), resulting in extremely high-level resistance to both emtricitabine and its congener, lamivudine.

Tenofovir Disoproxil Fumarate

Mutations at 2 specific codons of reverse transcriptase impact the efficacy of tenofovir: K65R and K70E/G.

How rapidly do emtricitabine-and tenofovir-associated resistance mutations develop?

Although the primary mutations selected by emtricitabine and tenofovir are mediated by single-nucleotide changes, we know from a variety of monotherapy and dual-therapy data that emtricitabine and lamivudine select for M184V much more rapidly than tenofovir does for either K65R or K70E/G. Data from animal models provide further insight into the consequences of incompletely suppressive single-or dual-agent regimens given for extended periods.

What do pre-exposure prophylaxis failures tell us about the evolution of antiretroviral resistance?

Nonadherence seems to be the main reason for the PrEP failures observed in CAPRISA and iPeEx. Quite simply, one must actually use the ARVs for them to prevent infection. Although i tis reasonable to assume that the same is true for TDF2 and Partners PrEP, the reason for the lack of any efficacy of daily tenofovir-emtricitabine among heterosexual women in the FEM-PrEP study, which was halted in early 2011, remain unclear.

What are the consequences of pre-exposure prophylaxis failure, in terms of antiretroviral resistance?

The consequences of PrEP failure can be viewed at both individual and population levels. Consider a hypotethical PrEP recipient with modest adherence who becomes HIV-infected during a high-risk sexual encounter.

How should these resistance data quide our management of pre-exposure prophylaxis as we move forward?

What iPrEx, CAPRISA, Partners PrEP, and TDF2 have demonstrated is not the effectivenes of PrEP but rather its efficacy within structured clinical trials settings. Oral contraceptives offer a useful analogy: with perfect daily use, 3 out of 1,000 women will become pregnant, whereas under typical usage conditions 90 out of 1000 actually become pregnant.
Mutations that impact the efficacy of first-line ARVs can develop in as little as 2 weeks of daily PrEP administered to HIV-infected persons, wheter the infection was undetected at baseline or acquired while receiving PrEP.
PeREP holds promise as a tool for prevention, but it may not be the best option for every person at risk for acquiring HIV. As evaluations of PrEP continue, a principal goal must be to determine a profile of patients who are most likely to benefit from the intervention- and most likely to comply with a regimented care plan incorporating both administration of PeEP and frequent HIV testing.

IMMUNOLOGIC CRITERIA ARE POOR PREDICTORS OF VIROLOGIC OUTCOME: IMPLICATIONS FOR HIV TREATMENT MONITORING IN RESOURCE-LIMITED SETTING

Holly E. Rawizza

CID 2011, 53(12): 1283-90

Viral load (VL) quantification is considered essential for determining antiretroviral treatment (ART) success in resource-rich countries. However, it is not widely available in resource-limited settings where the burden of human immunodeficiency virus infection is greatest. In the absence of VL monitoring, switches to second-line ART are based on World Health Organization (WHO) clinical or immunologic failure criteria.

We assessed the performance of CD4 cell criteria to predict virologic outcomes in a large ART program in Nigeria. Laboratory monitoring consists of CD4 cell count and VL at baseline, then every 6 months. Failure was defined as 2 consecutive VLs >1000 copies/mL after at least 6 months of ART. Virologic outcomes were compared with the 3 WHO-defined immunologic failure criteria.

A total of 9690 patients were included in the analysis (median follow-up, 33.2 months). The sensitivity of CD4 cell criteria to detect viral failure was 58%, specificity was 75%, and the positive-predictive value was 39%. For patients with both virologic and immunologic failure, VL criteria identified failure significantly earlier than CD4 cell criteria (median, 10.4 vs 15.6 months; P< .0001).

Because of the low sensitivity of immunologic criteria, a substantial number of failures are missed, potentially resulting in accumulation of resistance mutations. In addition, specificity and predictive values are low, which may result in large numbers of unnecessary ART switches. Monitoring solely by immunologic criteria may result in increased costs because of excess switches to more expensive ART and development of drug-resistant virus.

MORTALITY TRENDS IN THE US PERINATAL AIDS COLLABORATIVE TRANSMISSION STUDY (1986-2004)

Bill G. Kapogiannis

CID 2011, 53(10): 1024-1034

Among 364 HIV-infected children, 56% were female and 69% black non-Hispanic. Of 98 deaths, 79 (81%) and 61 (62%) occurred in children ≤3 and ≤2 years old, respectively. The median age at death increased significantly across the eras (*P*< .0001). The average annual mortality rates were 18 (95% confidence interval [CI], 11.6–26.8), 6.9 (95% CI, 5.4–8.8), and 0.8 (95% CI, 0.4–1.5) events per 100 person-years for the no/monotherapy, mono-/dual-therapy and HAART eras, respectively. The corresponding 6-year survival rates for children born in these eras were 57%, 76%, and 91%, respectively (*P*< .0001). Among children who received HAART in the first 6 months of age, the probability of 6-year survival was 94%. Ten-year survival rates for HAART and non-HAART recipients were 94% and 45% (*P*< .05).

HAART-associated reductions in mortality remained significant after adjustment for confounders (hazard ratio, 0.3; 95% CI, .08–.76). Opportunistic infections (OIs) caused 31.8%, 16.9%, and 9.1% of deaths across the respective eras (P = .051).
A significant decrease in annual mortality and a prolongation in survival were seen in this US perinatal cohort of HIV-infected children. Temporal decreases in OI-associated mortality resulted in relative proportional increases of non–OI-associated deaths.

HIGHLY ACTIVE ANTIRETROVIRAL TREATMENT AND CHILDREN

Sharon Nachman

CID 2011, 53(10): 1035-1036

These criteria are different in the developing world, where treatment quidelines for children are based on World health Organization clinical and immunologic criteria. These include starting HAART for all children aged<2 years, starting HAART for children aged 2-5 years with<25% CD4 cells, and starting HAART for children aged>5 years whose CD4 cell count decreases to <350 cells.

HIGHLIGHTS FROM THE SIXTH INTERNATIONAL AIDS SOCIETY MEETING

Peter Hayward

The Lancet, Vol. 11, September 2011

Treatment is prevention

In the run to this years conference several high-profile trial results provided encouraging data for the use of antiretroviral therapy as pre-exposure prophylaxis to prevent (PrEP) HIV infection. And presentation of the data from these trials at the conference made real the prospect of using ARVs as prevention. In May the international HIV prevention Trials Network (HPTN)052 study was stopped early when early initiation of combination antiretroviral therapy for HIV infected partners was shown to reduce transmission of HIV to uninfected partners by 96% compared with late initiation. Inthe week leading up to the conference, the Partners PrEP study among serodiscordant couples in Kenya and Uganda, was also stopped early when interim analyses showed that giving tenofovir or tenofovir plus emtricitabine to the HIV negative partner reduced HIV risk by more than 62% compared with placebo.

Neglected disease

IThe drugs for neglected Disease Initiative (DNDi) announced at the conference the launch of a drug development programe for paediatric HIV. Of 2,5 million children younger than 15 years with HIV, 2,3 million live in sub-Saharan Africa, and despite the effectiveness of prevention of mother to child transmission (PMTCT) 1000 children are infected with HIV and 700 die from AIDS-related complications every day. A third of children infected with HIV at birth will die within 1 year and a half will die within 2 years. DNDi said that because „transmission in young children has largely been eliminated in high income countries... little market incentive exists for pharmaceutical companies to develop antiretroviral drugs adapted for children". Mark Lallemant, the head of DNDis HIV programe, said that mothers not diagnosed or not receiving adequate treatment continue to pass the virus onto their children.

Towards an HIV cure

Amid the excitement of the findings of the recent prevention trials, the lasting legacy of the conference may well be the Rome statement for an HIV Cure. The three main objectives of the strategy are to recognise the importance of developing a cure to permanently suppress HIV replication, to stimulate international multidisciplinary research collaborations, and to encourage other stakeholders, organisations, and governments to support cure research. The full strategy will be presented at the 2012 International AIDS Conference in Washington, DC, USA.

Circumision for all

As part of largescale HIV prevention efforts, Rwanda aims to medically circumcise 2 million men, half of the male population, by June, 2013. With Global Fund support, all district hospitals have received lits to provide the service free of charge. The HIV prevention package also includes promotion of condom use and counselling.

EFFICACY AND SAFETY OF AN EXTENDED NEVIRAPINE REGIMEN IN INFANT CHILDREN OF BREASTFEEDING MOTHERS WITH – 1 INFECTION FOR PREVENTION OF POSTNATAL HIV – 1 TRANSMISSION (HPTN 046): A RANDOMISED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

Hoosen M. Coovadia

Lancet 2012, 379: 221-28

Nevirapine given once-daily for the first 6, 14, or 28 weeks of life to infants exposed to HIV-1 via breastfeeding reduces transmission through this route compared with single-dose nevirapine at birth or neonatally. We aimed to assess incremental safety and efficacy of extension of such prophylaxis to 6 months.In our phase 3, randomised, double-blind, placebo-controlled HPTN 046 trial, we assessed the incremental benefit of extension of once-daily infant nevirapine from age 6 weeks to 6 months. We enrolled breastfeeding infants born to mothers with HIV-1 in four African countries within 7 days of birth. Following receipt of

nevirapine from birth to 6 weeks, infants without HIV infection were randomly allocated (by use of a computer-generated permuted block algorithm with random block sizes and stratified by site and maternal antiretroviral treatment status) to receive extended nevirapine prophylaxis or placebo until 6 months or until breastfeeding cessation, whichever came first. The primary efficacy endpoint was HIV-1 infection in infants at 6 months and safety endpoints were adverse reactions in both groups. We used Kaplan-Meier analyses to compare differences in the primary outcome between groups. This study is registered with ClinicalTrials.gov, number NCT00074412. Between June 19, 2008, and March 12, 2010, we randomly allocated 1527 infants (762 nevirapine and 765 placebo); five of whom had HIV-1 infection at randomisation and were excluded from the primary analyses. In Kaplan-Meier analysis, 1·1% (95% CI 0·3-1·8) of infants who received extended nevirapine developed HIV-1 between 6 weeks and 6 months compared with 2·4% (1·3-3·6) of controls (difference 1·3%, 95% CI 0-2·6), equating to a 54% reduction in transmission (p=0·049). However, mortality (1·2% for nevirapine vs 1·1% for placebo; p=0·81) and combined HIV infection and mortality rates (2·3%vs 3·2%; p=0·27) did not dffer between groups at 6 months. 125 (16%) of 758 infants given extended nevirapine and 116 (15%) of 761 controls had serious adverse events, but frequency of adverse events, serious adverse events, and deaths did not differ significantly between treatment groups.

VERY LATE INITIATION OF HAART IMPAIRS TREATMENT RESPONSE AT 48 AND 96 WEEKS: RESULTS FROM META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS

José A. Pérez-Molina

J Antimicrob Chemother 2012, 67: 312-321

Initiation of highly active antiretroviral therapy (HAART) with low CD4 lymphocyte counts is associated with AIDS-related and non-AIDS-related events and increased mortality. However, no clear association has been found with an increased rate of treatment failure.
We conducted a meta-analysis including randomized clinical trials of currently recommended HAART in naive patients to evaluate treatment response in very late starters (VLSs). Studies with information on response in at least one of the two strata (≤ 50 versus >50 CD4 cells/mm(3) and/or ≤ 200 versus >200 CD4 cells/mm(3)) and follow-up of at least 48 weeks were analysed. A pooled odds ratio of the effect of starting HAART with ≤ 50 versus >50 or ≤ 200 versus >200 CD4 cells/mm(3) for each arm by fitting a random-effect logistic regression model was computed. Sources of heterogeneity [sex, age, year of study initiation, nucleos(-t)ide pair and third drug] were investigated.
We included 25 treatment arms from 13 randomized clinical trials. Being a VLS consistently impairs treatment outcomes at 48 and 96 weeks. Only hepatitis C virus (HCV)/hepatitis B virus (HBV) coinfection was associated with a reduced impact of late initiation of HAART; at 48 weeks for 50 and 200 cells/mm(3) thresholds (P = 0.013 and P = 0.032, respectively). None of the remaining sources of heterogeneity explored was significantly associated with the impact of being a VLS.

We found that initiation of antiretroviral therapy with very low CD4 lymphocyte counts is consistently associated with poorer outcomes of HAART. This effect could be modulated by HBV/HCV coinfection, but not by the individual components of the HAART regimen.

UPTAKE OF COMBINATION ANTIRETROVIRAL THERAPY AND HIV DISEASE PROGRESSION ACCORDING TO GEOGRAPHICAL ORIGIN IN SEROCONVERTERS IN EUROPE, CANADA AND AUSTRALIA

Inma Jarrin

Clinical Infectious Diseases 2012, 54(1): 11-8

We examined differences by geographical origin (GO) in time from HIV seroconversion (SC) to AIDS, death, and initiation of antiretroviral therapy (cART).
Data from HIV seroconverter cohorts in Europe, Australia and Canada (CASCADE) was used; GO was classified as: western countries (WE), North Africa and Middle East (NAME), sub–Saharan Africa (SSA), Latin America (LA), and Asia (ASIA). Differences by GO were assessed using Cox models. Administrative censoring date was 30 June 2008.
Of 16 941 seroconverters, 15 548 were from WE, 158 NAME, 762 SSA, 349 LA, and 124 ASIA. We found no differences by GO in risks of AIDS (P = .99) and death (P = .12), although seroconverters from NAME (adjusted hazard ratio [aHR]: 0.57; 95% CI: 0.33–.94) and SSA (aHR: 0.74; 95% CI: 0.50–1.10) appeared to have lower mortality than WE. Chances of initiating cART differed by GO (P < .001): seroconverters from SSA were more likely to initiate cART than WE (aHR: 1.48; 95% CI: 1.26–1.74), but not after adjustment for CD4 at SC (aHR: 1.11; 95% CI: 0.88–1.40).
In settings with universal access to healthcare, GO does not play a major role in HIV disease progression.

INCIDENCE OF HIV – 1 DRUG RESISTANCE AMONG ANTIRETROVIRAL TREATMENT-NAIVE INDIVIDUALS STARTING MODERN THERAPY COMBINATIONS

Viktor von Wyl

Clinical Infectious Diseases 2012, 54(1): 131-40

Estimates of drug resistance incidence to modern first-line combination antiretroviral therapies against human immunodeficiency virus (HIV) type 1 are complicated by limited availability of genotypic drug resistance tests (GRTs) and uncertain timing of resistance emergence.

The inclusion of TDF instead of AZT and ATZ/r was correlated with lower rates of resistance emergence, most likely because of improved tolerability and pharmacokinetics resulting from a once-daily dosage.

ONCE DAILY DOLUTEGRAVIR (S/GSK1349572) IN COMBINATION THERAPY IN ANTIRETROVIRAL-NAIVE ADULTS WITH HIV: PLANNED INTERIM 48 WEEK RESULTS FROM SPRING – 1 A DOSE-RANGING RANDOMISED, PHASE 2B TRIAL

Jan van Lunzen

Lancet Infect Dis 2012, 12: 111-18

Dolutegravir was effective when given once daily without a pharmacokinetic booster and was well tolerated at all assessed doses. Our findings support the assessment of once daily 50 mg dolutegravir in phase 3 trials.

Trends in virological and clinical outcomes in individuals with HIV-1 infection and virological failure of drugs from three antiretroviral drug classes: a cohort study

Lancet Infect Dis 2012, 12: 119-27

A substantial improvement in viral load suppression and accompanying decrease in the rates of AIDS in people after extensive failure to drugs from the three original antiretroviral classes during 2000-09 was probably mainly driven by availability of newer drugs with better tolerability and ease of use and small cross-resistance profiles, suggesting the public health benefit of the introduction of new drugs.

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MALARIA – MOST IMPORTANT TROPICAL PARASITIC DISEASE WITH SEVERE SOCIAL AND ECONOMICAL CONSEQUENCES

V. Krcmery, I. Kmit and members of Tropicteam

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ABSTACTS

Malaria is are of major killers worlwide and is responsible for 2 million deaths. Members of Tropicteam critically reviewed new article in field of malaria and discuseed.

Key words: Malaria. Consequences. Morality.

MONITORING OF DRUG RESISTANCE AFTER INTERMITTENT PREVENTIVE TREATMENT FOR INFANTS AND CHILDERN (IPTI/C) IN SENEGAL

Magatte Ndiaye

The American Journal of Tropical Medicine and Hygiene, Vol. 85, No. 6, Dec. 2011

In conclusion, the present study indicates that using SP for IPTi does not select resistant parasiteswhen follow up is performed long term. Base on WHO recommendation, SP can still be use as IPTi in Senegal because of the very low frequency of Pfdhps haplotype SGEAA (<5%).

ANTIMALARIAL EFFICACY OF PIPERAWUINE-BASED ANTIMALARIAL COMBINATION THERAPIES: FACTS AND UNCERTAINTIES

Nicola Gargano

Tropical Medicine and International Health, Vol. 16, No. 12, pp. 1466-1473, December 2011

Piperaquine is a bisquinoline antimalarial drug extensively used as monotherapy in China in the 1980s and subsequently included as one of the components of the artemisinin-based combination therapies (ACTs) in the 1990s. Among them, dihydroartemisinin-piperaquine

(DHA-PQP) represents a new and extremely promising fixed combination. Several clinical trials have repeatedly shown that DHA-PQP is a safe and highly efficacious therapy against uncomplicated Plasmodium falciparum and the asexual stages of Plasmodium vivax malaria. Studies conducted with this drug have reported cure rates consistently above 95%, with the only exception being a study carried out in Papua New Guinea which reported a high rate of treatment failures. Although it has been hypothesized that such treatment failures could be related to cross-resistance mechanisms between piperaquine and other quinolines or to a reduced susceptibility of parasites to artemisinin derivatives, a critical review of the studies published so far seems to exclude both of these possibilities. Overall, there is now sufficient evidence on the safety and efficacy of the DHA-PQP therapy. Accordingly, the use of this ACT for the treatment of P. falciparum malaria has been recently approved in the EU via a centralized procedure by the European Medicines Agency. Moreover, it is now recommended globally by the World Health Organization as an option for the first-line treatment of uncomplicated malaria.

EFFICACY AND SAFETY ZINC SUPPLEMANTATION FOR ADULTS, CHILDREN AND PREGNANT WOMWN WITH HIV INFECTION: SYSTEMATIC REVIEW

Linan Zeng

Tropical Medicine and International Health, Vol. 16, No. 12, pp. 1474-1482, December 2011

To determine the efficacy and safety of zinc supplementary in children, adults and pregnant women with HIV infection. Methods We conducted a comprehensive search in Medline, Embase, the Cochrane Library, CBM, VIP and CNKI. Only randomized controlled trials conducted subsequent to the introduction of zinc supplementation were included in this systematic review. Two reviewers assessed and extracted data for analysis. Results Six trials with a total of 1009 participants were included. The findings in this review suggested a benefit of zinc supplementation in reducing opportunistic infection for both adults and children with HIV infection. In terms of increase in zinc level and CD4 counts, however, only adults with HIV infection benefited. For other outcomes, such as viral load, mortality, mother-to-child transmission of HIV and foetal outcomes, zinc supplementation conferred no benefit over placebo. No adverse event related to zinc supplementation was found in all the included trials. Conclusion Based on the current evidence, zinc supplementation seems to be beneficial in adult patients with HIV infection in some aspects. More research is needed in children and pregnant women. The influence of zinc dose, duration and usage of antiretroviral medicine also requires further investigation.

IS THERE A ROLE FOR RIFAMPICIN, OFLOXACIN AND MINOCYCLINE (ROM) THERAPY IN THE TREATMENT OF LEPROSY? SYSTEMATIC REVIEW AND META-ANALYSIS

Maninder S. Setia

Tropical Medicine and International Health, Vol. 16, No. 12, pp. 1541-1551, December 2011

Single-dose ROM therapy was less effective than multidrug therapy in paucibacillary patients. However, there are insufficient data to come to a valid conclusion on the efficacy of multidose ROM therapy in multibacillary leprosy, and additional studies with ROM therapy in multibacillary leprosy are needed. Furthermore, multiple doses may be considered as another alternative even for paucibacillary patients, and randomised controlled trials of this therapy may be useful to understand its contribution in the treatment and control of leprosy.

MALARIA MORBIDITY AND PYRETHROID RESISTANCE AFTER THE INTRODUCTION OF INSECTICIDE-TREATED BEDNETS AND ARTEMISININ – BASWD COMBINATION THERAPIES: A LONGITUDIAL STUDY

Jean-Francois Trape

Lancet Infect Dis 2011, 11: 925-32

Substantial reductions in malaria have been reported in several African countries after distribution of insecticide-treated bednets and the use of artemisinin-based combination therapies (ACTs). Our aim was to assess the effect of these policies on malaria morbidity, mosquito populations, and asymptomatic infections in a west African rural population.
Increasing pyrethroid resistance of *A gambiae* and increasing susceptibility of older children and adults, probably due to decreasing immunity, caused the rebound and age shift of malaria morbidity. Strategies to address the problem of insecticide resistance and to mitigate its effects must be urgently defined and implemented.

QUANTIFICATION OF THE BURDEN AND CONSEQUENCES OF PREGNANCY-ASSOCIATED MALARIA IN THE DEMOCRATIC REPUBLIC OF THE CONGO

Steve M. Taylor

The Journal of Infectious Diseases 2011, 204: 1762-71

Overall, 31.2% (95% confidence interval [CI], 29.2-33.1) of WOCBA were parasitemic, which was significantly more common in pregnant (37.2% [31.0-43.5]) than nonpregnant women (30.4% [CI, 28.4-32.5], prevalence ratio [PR] 1.22 [1.02-1.47]). Plasmodium falciparum was highest among pregnant women (36.6% vs 28.8%, PR 1.27 [1.05-1.53]). By

contrast, P malariae was less common in pregnant (0.6%) compared with nonpregnant women (2.7%, PR 0.23 [0.09-0.56]). Extrapolation of the prevalence estimate to the population at risk of malaria in DRC suggests 1.015 million births are affected by P falciparum infection annually, and that adherence to preventive measures could prevent up to 549 000 episodes of pregnancy-associated malaria and 47 000 low-birth-weight births.
Pregnancy-associated malaria and its consequences are highly prevalent in the DRC. Increasing the uptake of malaria preventive measures represents a significant opportunity to improve birth outcomes and neonatal health.

EFFICACY AND SAFETY OF ARTEMETHER-LUMEFANTRINE IN THE OF ACUTE, UNCOMPLICATED PLASMODIUM FALCIPARUM MALARIA: A POOLED ANALYSIS

Michael Makanga

Am. J. Trop. Med. Hyg., 85(5), 2011, pp. 793-804

Randomized trials have confirmed the efficacy and safety of artemether-lumefantrine (AL) for treatment of uncomplicated Plasmodium falciparum malaria. Data from seven studies supported by Novartis (1996-2007), including 647 adults (> 16 years of age, 83.3% completed the study) and 1,332 children (≤ 16 years of age, 89.3% completed the study) with microscopically confirmed uncomplicated P. falciparum malaria and treated with the recommended regimen of AL, were pooled. The 28-day polymerase chain reaction-corrected parasitologic cure rate (primary efficacy endpoint) was 97.1% (495 of 510) in adults and 97.3% (792 of 814) in children (evaluable population). Gametocytemia prevalence after day was 4.2% (23 of 554) in adults and 0.9% (8 of 846) in children. No noteworthy safety signals were observed. Serious adverse events occurred in 1.4% of the adults and 1.3% of the children. This study is the largest data set to date assessing AL therapy for treatment of acute uncomplicated P. falciparum malaria. Artemether-lumefantrine showed high cure rates and rapid resolution of parasitemia, fever, and gametocytemia in adults and children, and showed an excellent safety and tolerability profile.

REVIEW: MALARIA CHEMOPROPHYLAXIS FOR TRAVELERS TO LATIN AMERICA

Laura C. Steinhardt

Am. J. Trop. Med. Hyg., 85(5), 2011, pp. 1015-1024

Because of recent declining malaria transmission in Latin America, some authorities have recommended against chemoprophylaxis for most travelers to this region. However, the predominant parasite species in Latin America, *Plasmodium vivax,* can form hypnozoites

sequestered in the liver, causing malaria relapses. Additionally, new evidence shows the potential severity of vivax infections, warranting continued consideration of prophylaxis for travel to Latin America. Individualized travel risk assessments are recommended and should consider travel locations, type, length, and season, as well as probability of itinerary changes. Travel recommendations might include no precautions, mosquito avoidance only, or mosquito avoidance and chemoprophylaxis. There are a range of good options for chemoprophylaxis in Latin America, including atovaquone-proguanil, doxycycline, mefloquine, and—in selected areas—chloroquine. Primaquine should be strongly considered for nonpregnant, G6PD-nondeficient patients traveling to vivax-endemic areas of Latin America, and it has the added benefit of being the only drug to protect against malaria relapses.

THE INCREASE OF IMPORTED MALARIA ACQUIRED IN HAITI AMONG US TRAVELERS IN 2010

Aarti Agaewal

Am. J. Trop. Med. Hyg., 86(1), 2012, pp.9-10

From 2004 to 2009, the number of malaria cases reported in Haiti increased nearly fivefold. The effect of the 2010 earthquake and its aftermath on malaria transmission in Haiti is not known. Imported malaria cases in the United States acquired in Haiti tripled from 2009 to 2010, likely reflecting both the increased number of travelers arriving from Haiti and the increased risk of acquiring malaria infection in Haiti. The demographics of travelers and the proportion of severe cases are similar to those statistics reported in previous years. Non-adherence to malaria chemoprophylaxis remains a nearly universal modifiable risk factor among these cases.

MALARIA SURVEY IN POST-EARTHQUAKE HAITI - 2010

David Townes

Am. J. Trop. Med. Hyg., 86(1), 2012, pp.29-31

Haiti's Ministry of Public Health and Population collaborated with global partners to enhance malaria surveillance in two disaster-affected areas within 3 months of the January 2010 earthquake. Data were collected between March 4 and April 9, 2010 by mobile medical teams. Malaria rapid diagnostic tests (RDTs) were used for case confirmation. A convenience sample of 1,629 consecutive suspected malaria patients was included. Of these patients, 1,564 (96%) patients had malaria RDTs performed, and 317 (20.3%) patients were positive. Of the 317 case-patients with a positive RDT, 278 (87.7%) received chloroquine, 8 (2.5%) received quinine, and 31 (9.8%) had no antimalarial treatment recorded. Our experience shows that mobile medical teams trained in the use of malaria RDTs had a high rate of testing suspected malaria cases and that the majority of patients with positive RDTs received appropriate

antimalarial treatment. Malaria RDTs were useful in the post-disaster setting where logistical and technical constraints limited the use of microscopy.

MALARIA TREATMENT AND PROPHYLAXIS IN ENDEMIC AND NONENDEMIC COUNTRIES: EVIDENCE ON STRATEGIS AND THEIR -EFFECTIVENESS

Michéle van Vugt

Future Microbiol (2011)6(12), 1485-1500

Artemisinin combination treatment is currently the preferred treatment strategy to combat malaria. However, the drug costs are considerably higher than for previously used therapies. This review discusses the cost-effectiveness of current malaria treatment and prophylaxis in endemic and nonendemic countries. For endemic countries, a systematic search for economic evaluations (i.e., cost-effectiveness, cost-utility and cost-benefit analyses) was conducted, looking at the use of Artemisinin combination treatments in children, pregnant women and other adults. In total, 24 studies were identified investigating the cost-effectiveness of malaria treatments with the focus on uncomplicated malaria, severe or prereferral treatment, all in combination with adequate diagnosis, and malaria prevention by intermittent preventive treatment, respectively. In areas with both Plasmodium falciparum and Plasmodium vivax transmission, artemether-lumefantrine and dihydroartemisinin-piperaquine, respectively, are currently the most cost-effective treatment options. Treatment of severe malaria with artesunate is more cost effective compared with treatment with quinine. For patients that live more than 6 h away from an appropriate healthcare facility, prereferral treatment proved to be more cost-effective compared with no prereferral intervention. Cost-effectiveness of intermittent preventive treatment in pregnant women (IPTp) was dependent an clinical attendance. IPT in infants with sulphadoxine-pyrimethamine (SP) is cost effective in sites with high malaria transmission. IPT in children with artesunate (AS + SP), amodiaquine (AQ) + SPQ or SP alone is a cost effective and safe intervention for reducing the burden of malaria in children in areas with markedly seasonal malaria transmission. Although there is a need for it, little is known about the cost-effectiveness of current approaches to malaria therapy in nonendemic countries and the cost-effectiveness of antimalarial chemoprophylaxis.

A recent study was conducted in a high-transmission area of SSA to examine the cost-effectiveness of rectal artesunate given together with an antibiotic with the intention of improving health outcomes for both malaria and non-malarial illnesses, in a period of 5 years.

IPT: pregnant women

A study conducted in Uganda compared the cost-effectiveness of IPT pat healthcare centers and IPTp by community-based delivery. Delivery system were higher, due to the costs of training and the purchase of bicycles for the community based resource person. The ICER of cost per DALY averted was US $1068,- which is considered cost effective.

IPT: infants

In sites where IPTi had a significant effect on reducing malaria, it proved to be cost effective in all the sites, ranging from US $2.90 (Ifakara, Tanzania with SP) to US $39.63 (Korogwe, Tanzania with mefloquine) per DALY averted, which is considered to be cost effective. However, in low-transmission sites, the intervention was not cost effective.

PYRONARIDINE – ARTESUNATE COMBINATION THERAPY FOR THE TREATMENT OF MALARIA

Florian Kurth

Curr Opin Infect Dis 24, 564-569

Pyronaridine-artesunate - currently under evaluation by the European Medicines Agency - may become a preferred choice as first-line therapy in malaria endemic regions based on its low cost, long shelf-life, simplified once-daily dosing regimen, proven efficacy against falciparum and vivax malaria, and the parallel clinical development of a paediatric drug formulation.

LACK OF DECLINE IN CHILDHOOD MALARIA, MALAWI, 2001-2010

Arantxa Roca-Feltrer

Emerging Infectious Diseases, Vol. 18, No. 2, February 2012

In some areas of Africa, health facility data have indicated declines in malaria that might have resulted from increasingly effective control programs. Most such reports have been from countries where malaria transmission is highly seasonal or of modest intensity. In Malawi, perennial malaria transmission is intense, and malaria control measures have been scaled up during the past decade. We examined health facility data for children seen as outpatients and parasitemia-positive children hospitalized with cerebral malaria in a large national hospital. The proportion of *Plasmodium falciparum*–positive slides among febrile children at the hospital declined early in the decade, but no further reductions were observed after 2005. The number of admissions for cerebral malaria did not differ significantly by year. Continued surveillance for malaria is needed to evaluate the effects of the increased malaria control efforts.

PLASMODIUM FALCIPARUM IN ASYMPTOMATIC IMMIGRANTS FROM SUB-SAHARAN AFRICA, SPAIN

Begona Monge-Maillo

Emerging Infectious Diseases, Vol. 18, No. 2, february 2012

To the Editor: A range of infectious diseases have been described in asymptomatic immigrants (*1*), which may justify the implementation of screening after obtaining consent. In particular, asymptomatic malaria caused by *Plasmodium falciparum* parasitemia among recently arrived immigrants may be a major public health problem outside malaria-endemic areas because these patients may be involved in autochthonous transmission cycles and may

act as reservoirs capable of reintroducing malaria into areas where it had been previously eradicated.

VECTOR CONTROL A CORNERSTONE IN THE MALARIA ELIMINATION CAMPAIGN

Karunamoorthi K.

Clin Microbial Infect 2011, 17: 1608 – 1616

Over many decades, malaria elimination has been considered to be one of the most ambitious goals of the international community. Vector control is a cornerstone in malaria control, owing to the lack of reliable vaccines, the emergence of drug resistance, and unaffordable potent antimalarials. In the recent past, a few countries have achieved malaria elimination by employing existing front-line vector control interventions and active case management. However, many challenges lie ahead on the long road to meaningful accomplishment, and the following issues must therefore be adequately addressed in malaria-prone settings in order to achieve our target of 100% worldwide malaria elimination and eventual eradication: (i) consistent administration of integrated vector management; (ii) identification of innovative user and environment-friendly alternative technologies and delivery systems; (iii) exploration and development of novel and powerful contextual community-based interventions; and (iv) improvement of the efficiency and efficacy of existing interventions and their combinations, such as vector control, diagnosis, treatment, vaccines, biological control of vectors, environmental management, and surveillance. I strongly believe that we are moving in the right direction, along with partnership-wide support, towards the enviable milestone of malaria elimination by employing vector control as a potential tool.

A SIMPLIFIED INTRAVENOUS ARTESUNATE REGIMEN FOR SEVERE MALARIA

Peter Gottfried Kremsner

The Journal of Infectious Diseases 2012, 205: 312-9

We compared a conventional empirically derived regimen with a simplified regimen for parenteral artesunate in severe malaria.

This was a randomized, double-blind, placebo-controlled comparison to assess the noninferiority of a simplified 3-dose regimen (given at 0, 24, and 48 hours) compared with the conventional 5-dose regimen of intravenous artesunate (given at 0, 12, 24, 48, and 72 hours) in African children with Plasmodium falciparum malaria with a prespecified delta of 0.2. The total dose of artesunate in each group was 12 mg/kg. The primary end point was the proportion of children clearing ≥ 99% of their admission parasitemia at 24 hours. Safety data, secondary efficacy end points, and pharmacokinetics were also analyzed.

In 171 children (per protocol), 78% of the recipients (95% confidence interval [CI], 69%-87%) in the 3-dose group achieved ≥ 99% parasite clearance 24 hours after the start of treatment, compared with 85% (95% CI, 77%-93%) of those receiving the conventional regimen (treatment difference, -7.2%; 95% CI, -18.9% to 4.4%). Dihydroartemisinin was cleared slightly more slowly in those children receiving the higher 3-dose regimen (7.4 vs 8.8 L/h for a 13-kg child; P 5 .008).
Pharmacodynamic analysis suggests that 3 doses of artesunate were not inferior to 5 doses for the treatment of severe malaria in children.

HOW DO WE BEST DIAGNOSE MALARIA IN AFRICA?

Philip J. Rosenthal

Am. J. Trop. Med. Hyg. 86(2), 2012, 192-193

For many decades, the cornerstone of malaria management in Africa was to treat all febrile children with chloroquine. With high-level resistance to chloroquine and improved means of malaria diagnosis, recommendations for the management of malaria in Africa have changed in two important ways in the last few years. First, recommended therapy for uncomplicated falciparum malaria has moved to highly effective artemisinin-based combination therapies.1 Second, it is now recommended that the treatment of malaria be confined to parasitologically confirmed cases. This recommendation requires the availability of reliable diagnostic tests. The gold standard test for the diagnosis of malaria is microscopy. Evaluation of Giemsa-stained thick smears, when performed by expert microscopists, provides accurate diagnosis of malaria, although assuring expert slide preparation and reading can be difficult.2 Indeed, microscopy is often unavailable, especially in rural settings. In this regard, the advent of rapid diagnostic tests (RDTs) for malaria is an important advance.

MALARIA IN PREGNANCY IN THE ASIA-PACIFIC REGION

Marcus Rijken

Lancet Infect Dis 2012, 12: 75-88

Most pregnant women at risk of for infection with Plasmodium vivax live in the Asia-Pacific region. However, malaria in pregnancy is not recognised as a priority by many governments, policy makers, and donors in this region. Robust data for the true burden of malaria throughout pregnancy are scarce. Nevertheless, when women have little immunity, each infection is potentially fatal to the mother, fetus, or both. WHO recommendations for the control of malaria in pregnancy are largely based on the situation in Africa, but strategies in the Asia-Pacific region are complicated by heterogeneous transmission settings, coexistence of multidrug-resistant Plasmodium falciparum and Plasmodium vivax parasites, and different vectors. Most knowledge of the epidemiology, effect, treatment, and prevention of malaria in pregnancy in the Asia-Pacific region comes from India, Papua New Guinea, and Thailand. Improved estimates of the morbidity and mortality of malaria in pregnancy are urgently

needed. When malaria in pregnancy cannot be prevented, accurate diagnosis and prompt treatment are needed to avert dangerous symptomatic disease and to reduce effects on fetuses.

GLOBAL MALARIA MORTALITY BETWEEN 1980 AND 2010: SYSTEMATIC ANALYSIS

Christopher J. L. Murray

Lancet 2012, 379: 413-31

During the past decade, renewed global and national efforts to combat malaria have led to ambitious goals. We aimed to provide an accurate assessment of the levels and time trends in malaria mortality to aid assessment of progress towards these goals and the focusing of future efforts.

We systematically collected all available data for malaria mortality for the period 1980—2010, correcting for misclassification bias. We developed a range of predictive models, including ensemble models, to estimate malaria mortality with uncertainty by age, sex, country, and year. We used key predictors of malaria mortality such as Plasmodium falciparum parasite prevalence, first-line antimalarial drug resistance, and vector control. We used out-of-sample predictive validity to select the final model.

Global malaria deaths increased from 995 000 (95% uncertainty interval 711 000—1 412 000) in 1980 to a peak of 1 817 000 (1 430 000—2 366 000) in 2004, decreasing to 1 238 000 (929 000—1 685 000) in 2010. In Africa, malaria deaths increased from 493 000 (290 000—747 000) in 1980 to 1 613 000 (1 243 000—2 145 000) in 2004, decreasing by about 30% to 1 133 000 (848 000—1 591 000) in 2010. Outside of Africa, malaria deaths have steadily decreased from 502 000 (322 000—833 000) in 1980 to 104 000 (45 000—191 000) in 2010. We estimated more deaths in individuals aged 5 years or older than has been estimated in previous studies: 435 000 (307 000—658 000) deaths in Africa and 89 000 (33 000—177 000) deaths outside of Africa in 2010.

Our findings show that the malaria mortality burden is larger than previously estimated, especially in adults. There has been a rapid decrease in malaria mortality in Africa because of the scaling up of control activities supported by international donors. Donor support, however, needs to be increased if malaria elimination and eradication and broader health and development goals are to be met.

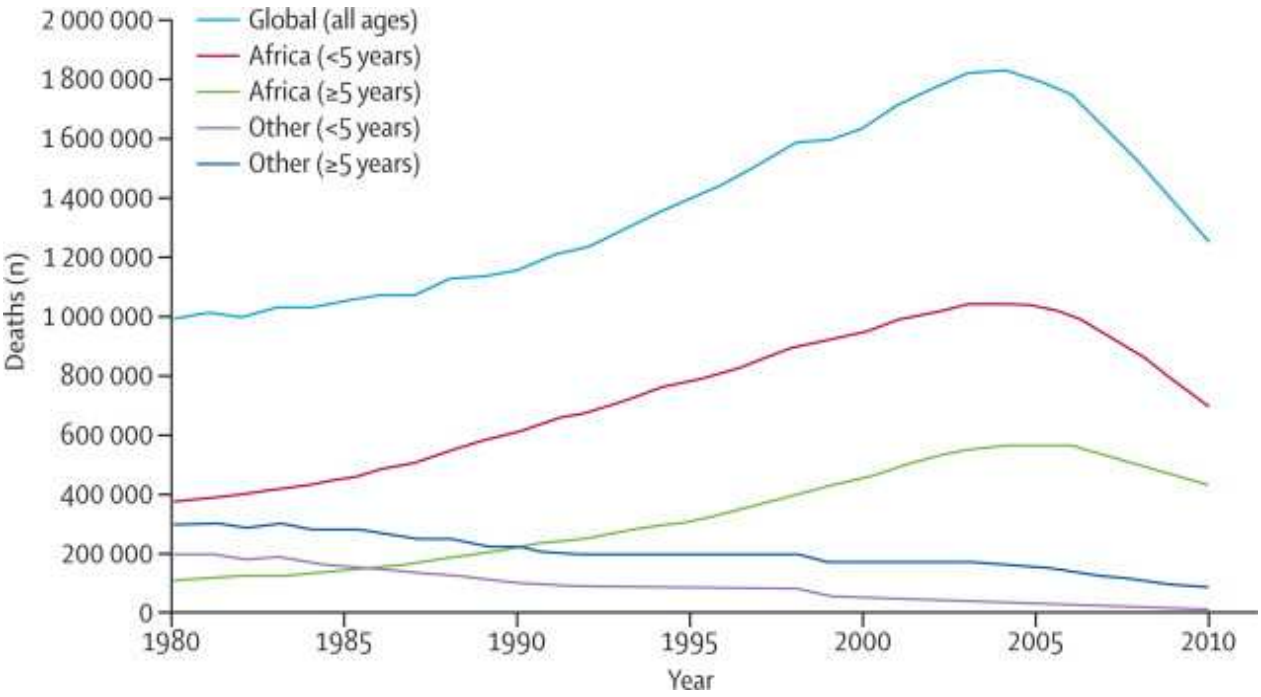


Figure 2. Trends in globalmalaria deaths by age and geographical region, 1980 to 2010

	Number of deaths (95% uncertainty interval)				Cumulative probability of malaria death (per 1000 population)			
	1980	1990	2000	2010	1980	1990	2000	2010
Cambodia	6970 (2163–17 564)	6888 (2100–17 760)	2536 (736–6982)	301 (35–903)	28·8	17·9	7·7	1
Ethiopia	15 268 (4802–44 586)	35 585 (12 441–74 774)	46 918 (20 277–83 088)	22 165 (10 132–40 255)	11·6	19·2	19·4	9·1
Haiti	767 (305–1673)	488 (185–934)	290 (138–545)	94 (27–219)	4·0	2·1	1·2	0·4
Honduras	19 (8–39)	6 (3–12)	3 (1–6)	1 (0–2)	0·1	<0·1	<0·1	<0·1
India	85 283 (31 797–190 815)	47 077 (17 384–105 034)	24 026 (8272–50 319)	4826 (781–14 437)	4·0	1·9	0·9	0·2
Kenya	5915 (2183–13 930)	15 372 (7733–28 107)	21 129 (11 909–31 093)	12 399 (5886–21 708)	8·5	17·0	19·8	8·9
Kyrgyzstan	6 (0–31)	1 (0–6)	0 (0–1)	0 (0–0)	0·2	<0·1	<0·1	<0·1
Uganda	11 271 (3869–25 952)	19 943 (9228–36 545)	39 411 (19 457–62 684)	23 126 (9818–42 642)	22·2	27·5	38·8	17·1

Table 2: Country-specifi c malaria mortality estimates for children younger than 5 years

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NEW TRENDS IN INFECTIUS DISEASES – LEGAL, SOCIAL AND HEALTH CARE CONSEQUENCEE

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ABSTRACT

News in both tropic and nontropic infectious diseases were abstrached and discussed by tropicteam in 2011-2012 and critically reviewed board members.

Key words: Infectious disease. Consequencee.

RISK AND CAUSES OF PAEDIATRIC HOSPITAL-ACQUIRED BACTERAEMIA IN KILIFI DISTRICAL HOSPITAL, KENYA: A PROSPECTIVE COHORT STUDY

Alexander M. Aiken

Lancet 2011, 378: 2021-27

In sub-Saharan Africa, community-acquired bacteraemia is an important cause of illness and death in children. Our aim was to establish the magnitude and causes of hospital-acquired (nosocomial) bacteraemia in African children.

We reviewed prospectively collected surveillance data of 33 188 admissions to Kilifi District Hospital, Kenya, between April 16, 2002, and Sept 30, 2009. We defined bacteraemia as nosocomial if it occurred 48 h or more after admission. We estimated the per-admission risk, daily rate, effect on mortality, and microbial cause of nosocomial bacteraemia and analysed risk factors by multivariable Cox regression. The effect on morbidity was measured as the increase in hospital stay by comparison with time-matched patients without bacteraemia.

Our findings show that although nosocomial bacteraemia is rare, it has serious effects on morbidity and mortality, and the microbiological causes are distinct from those of community-acquired bacteraemia. Nosocomial infections are largely unrecognised or undocumented as a health risk in low-income countries, but they are likely to become public

health priorities as awareness of their occurrence increases and as other prominent childhood diseases are progressively controlled.

CANDIDA SPP. WITH ACQUIRED ECHINOCANDIN RESISTANCE, FRANCE, 2004-2010

Eric Dannaoui

Emerging Infectious Diseases, Vol. 18, No. 1, January 2012

Echinocandins are effective in patients with invasive candidiasis and recommended as first-line therapy, especially for patients with severe sepsis or those previously exposed to azoles or infected with Candida glabrata. Fewer than 50 persons infected with echinocandin-resistant species that are usually susceptible, such as C. albicans, C. glabrata, C. tropicalis, and C. krusei, have been described in limited series or case reports. All species were found in patients preexposed to echinocandins. The major mechanism of resistance is related to mutations in FKS genes coding for [beta]-1,3-glucan-synthase, with almost 20 known FKS mutations. We describe the characteristics of infections from caspofungin-resistant Candida spp. isolates belonging to usually susceptible species recorded in France (2004-2010) and analyze their FKS mutations and effect on echinocandin susceptibility.

Novel Prion protein in BSE-affected Cattle, Switzerland

Emerging Infectious Diseases, Vol. 18, No. 1, January 2012

Bovine spongiform encephalopathy (BSE) is a feed-borne prion disease that affects mainly cattle but also other ruminants, felids, and humans. Currently, 3 types of BSE have been distinguished by Western immunoblot on the basis of the signature of the proteinase K–resistant fragment of the pathologic prion protein (PrP^{res}): the classic type of BSE (C-BSE) and 2 so-called atypical types of BSE with higher or lower molecular masses of PrP^{res} (H-BSE and L-BSE, respectively).Nonetheless, our findings raise the possibility that these cattle were affected by a prion disease not previously encountered and distinct from the known types of BSE. To confirm this possibility and to assess a potential effect on disease control and public health, in vivo transmission studies using transgenic mouse models and cattle are ongoing. Until results of these studies are available, molecular diagnostic techniques should be used so that such cases are not missed.

THE EMERGENCE OF PAN-RESISTANT GRAM-NEGATIVE PATHOGENES MERIST A RAPID GLOBAL POLITICAL RESPONSE

Timothy R. Walsh

JAC, 2012 October, 67: 1-3

Recent media coverage of New Delhi metallo-β-lactamase (NDM-1) put antibiotic resistance back on the political map if only for the wrong reasons, mainly the reaction to the naming of NDM-1 and the incorrect assumption that medical tourism was being deliberately targeted. However, work on NDM-1 has most certainly highlighted the rapid dissemination of new antibiotic resistance mechanisms via economic globalization. The example of NDM-1 has also magnified the desperate need for a publicly funded global antibiotic surveillance system rather than just national or regional systems. Furthermore, there is a pressing need to establish a global task force to enforce international transparency and accountability on antibiotic stewardship and the implementation of measures to curb antibiotic resistance. An international antibiotic stewardship index should be established that is related to each country's gross domestic product (GDP) and assesses how much of their GDP is committed to publically funded health initiatives aimed at controlling antibiotic resistance.

ETHICAL DILEMMAS IN ANTIBIOTIC TREATMENT

Leonard Leibovici

JAC, 2012 October, 67: 12-16

Patients with moderate to severe infections are given less than maximum empirical antibiotic treatment in order to reduce the rise in resistance. This practice involves two ethical dilemmas: whether the danger to a present patient should be increased (even if by a small degree) to benefit future, unidentified patients; and whether this should be done without the consent of the patient, disregarding the patient's autonomy. We argue that future patients have a right to come to no harm. Future patients being unidentified, practitioners of medicine have a duty to protect their rights and weigh them against the rights of the present patient. A decision on the collective (guidelines, decision support systems) is a convenient way to do that. Using a temporal discount rate to show that the life of present patients has pre-eminence, to some degree, over future patients does not solve the immediacy of the plight facing a present, identified patient with a very severe infection. We think there are good grounds to take into less account considerations of future resistance for such a patient, or in a formal analysis, to make the ratio of benefits to the present versus future patients dependent on the severity of disease of the present patient. None of these solve the problem of patients' autonomy. We see no other way but to argue that the right of future patients to come to less harm outweighs the right of the present patient to share in decisions on antibiotic treatment.

CONTINUOUS VERSUS INTERMITTENT INFUSION OF VANCOMYCIN FOR THE TREATMENT OF GRAM-POSITIVE INFECTION: SYSTEMATIC REVIEW AND META-ANALYSIS

Maria Adriana Cataldo

JAC, 2012 October, 67: 17-24

To summarize available evidence on the effect of continuous infusion (CoI) of vancomycin compared with intermittent infusion (InI) in adult patients with Gram-positive infections.
Our meta-analysis suggests that administration of vancomycin for the treatment of Gram-positive infections by CoI is associated with a significantly lower risk of nephrotoxicity when compared with InI of the drug. RCTs are needed to define the impact on mortality rate and on the pharmacodynamic activity in terms of AUC/MIC ratio.

PREDICOTORS OF MORTALITY IN PATIENTS WITH BLOODSTREAM INFECTIONS CAUSED BY KPC-PRODUCING KLEBSIELLA PNEUMONIAE AND IMPACT OF APPROPRIATE ANTIMICROBIAL TREATMENT

Zarkotou O.

Clinical Microbiology and Infection 2011, 17

Bloodstream infections (BSIs) caused by Klebsiella pneumoniae carbapenemases (KPC)-producing *K. pneumoniae* (KPC-KP) are associated with high mortality rates. We investigated outcomes, risk factors for mortality and impact of appropriate antimicrobial treatment in patients with BSIs caused by molecularly confirmed KPC-KP. All consecutive patients with KPC-KP BSIs between May 2008 and May 2010 were included in the study and followed-up until their discharge or death. Potential risk factors for infection mortality were examined by a case-control study. Case-patients were those who died from the BSI and control-patients those who survived. Appropriate antimicrobial therapy was defined as treatment with *in vitro* active antimicrobials for at least 48 h. A total of 53 patients were identified. Overall mortality was 52.8% and infection mortality was 34%. Appropriate antimicrobial therapy was administered to 35 patients; mortality due to infection occurred in 20%. All 20 patients that received combination schemes had favourable infection outcome; in contrast, seven of 15 patients given appropriate monotherapy died (p 0.001). In univariate analysis, risk factors for mortality were age (p <0.001), APACHE II score at admission and infection onset (p <0.001) and severe sepsis (p <0.001), while appropriate antimicrobial treatment (p 0.003), combinations of active antimicrobials (p 0.001), catheter-related bacteraemia (p 0.04), prior surgery (p 0.014) and other therapeutic interventions (p 0.015) were significantly associated with survival. Independent predictors of mortality were age, APACHE II score at infection onset and inappropriate antimicrobial treatment. Among them, appropriate treatment is the only modifiable independent predictor of infection outcome.

RAPID ACQUISITION OF DECREASED CARBAPENEM SUSCEPTIBILITY IN A STRAIN OF KLEBSIELLA PNEUMONIAE ARISING DURING MEROPENEM THERAPY

Findlay J.

Clin Microbiol Infect 2012, 18: 140-146

A strain of *Klebsiella pneumoniae* (K1) was isolated from a catheterized patient with a urinary tract infection. The patient was subsequently treated with meropenem, after which *K. pneumoniae* (K2) was once again isolated from the patient's urine. We concluded that the carbapenem-resistant phenotype observed from this patient was attributable to a combination of CTX-M-15 β-lactamase, up-regulated efflux and altered outer membrane permeability, and that K2 arose from K1 as a direct result of meropenem therapy.

CHARACTERSATION OF THE ESCHERICHIA COLI STRAIN ASSOCIATED WITH AN OUTBREAK OF HAEMOLYTIC URAEMIC SYNDROME IN GERMANY, 2011: A MICROBIOLOGICAL STUDY

Martina Bielaszewska

Lancet Infect Dis 2011, 11: 671-76

In an ongoing outbreak of haemolytic uraemic syndrome and bloody diarrhoea caused by a virulent *Escherichia coli* strain O104:H4 in Germany (with some cases elsewhere in Europe and North America), 810 cases of the syndrome and 39 deaths have occurred since the beginning of May, 2011. We analysed virulence profiles and relevant phenotypes of outbreak isolates recovered in our laboratory.
Augmented adherence of the strain to intestinal epithelium might facilitate systemic absorption of Shiga toxin and could explain the high progression to haemolytic uraemic syndrome. This outbreak demonstrates that blended virulence profiles in enteric pathogens, introduced into susceptible populations, can have extreme consequences for infected people.

EFFECTIVENESS OF INTERVENTIONS TO IMPROVE SCREENING FOR SYPHILIS A SYSTEMATIC REVIEW AND META-ANALYSIS

Sarah Hawkes

Lancet Infect Dis 2011, 11: 684-91

About 2·1 million pregnant women have active syphilis every year. Without screening and treatment, 69% of these women will have an adverse outcome of pregnancy. The objectives of this study were to review the literature systematically to determine the effectiveness of screening interventions to prevent congenital syphilis and other adverse pregnancy outcomes.

Interventions to improve the coverage and effect of screening programmes for antenatal syphilis could reduce the syphilis-attributable incidence of stillbirth and perinatal death by 50%. The resources required to roll out antenatal screening programmes would be a worthwhile investment for reduction of adverse pregnancy outcomes and improvement of neonatal and child survival.

NON-PRESCRIPTION ANTIMICROBIAL USE WORLDWIDE: A SYSTEMATIC REVIEW

Daniel J. Morgan

Lancet Infect Dis 2011, 11: 692-701

In much of the world antimicrobial drugs are sold without prescription or oversight by health-care professionals. The scale and effect of this practice is unknown. We systematically reviewed published works about non-prescription antimicrobials from 1970—2009, identifying 117 relevant articles. 35 community surveys from five continents showed that non-prescription use occurred worldwide and accounted for 19—100% of antimicrobial use outside of northern Europe and North America. Safety issues associated with non-prescription use included adverse drug reactions and masking of underlying infectious processes. Non-prescription use was common for non-bacterial disease, and antituberculosis drugs were available in many areas. Antimicrobial-resistant bacteria are common in communities with frequent non-prescription use. In a few settings, control efforts that included regulation decreased antimicrobial use and resistance. Non-prescription antimicrobial and antituberculosis use is common outside of North America and northern Europe and must be accounted for in public health efforts to reduce antimicrobial resistance.

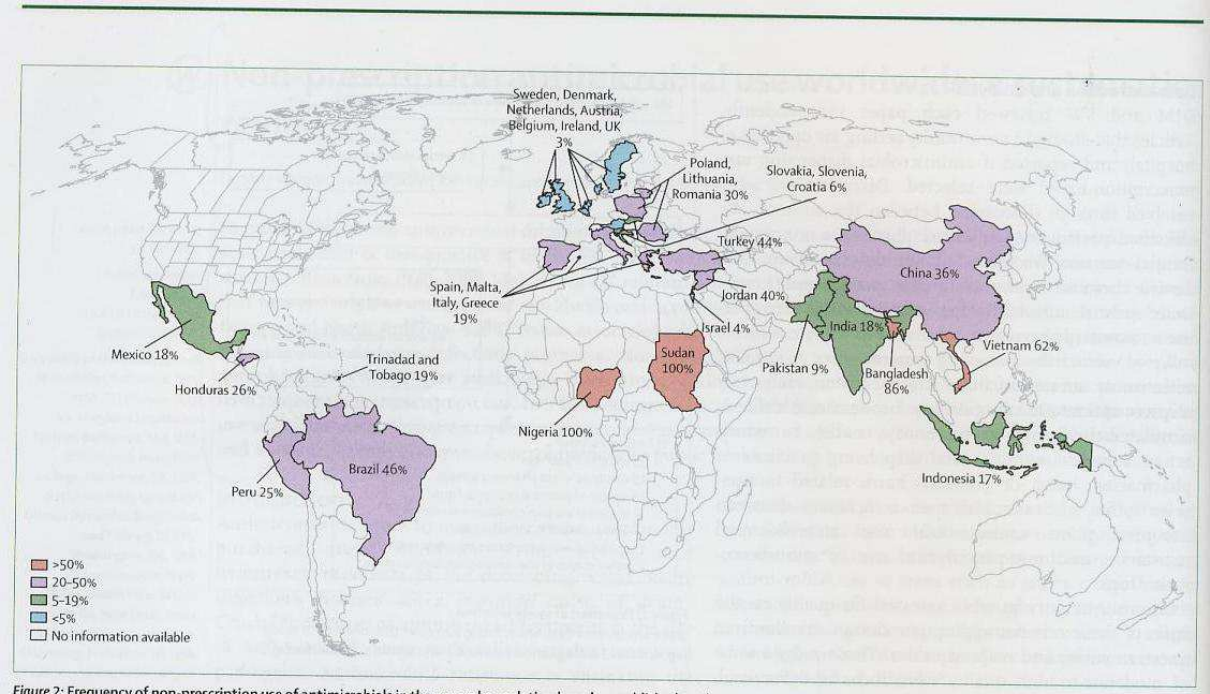


Figure 2: **Frequency of non-prescription use of antimicrobials in the general population based on published works**
In small areas, countries with similar frequency of non-prescription antimicrobial use have been grouped.

MYCOBACTERIUM ULCERANS INFECTION (BURULI ULCER) ON THE FACE: A COMPARATIVE ANALYSIS OF 13 CLINICALLY SUSPECTED CASES FROM THE DEMOCRATIC REPUBLIC OF CONGO

Delphin M. Phanzu

Am. J. Trop. Med. Hyg., 85(6), 2011, pp. 1100-1105

We report our experience in managing 13 consecutive clinically suspected cases of Buruli ulcer on the face treated at the hospital of the Institut Médical Evangélique at Kimpese, Democratic Republic of Congo diagnosed during 2003–2007. During specific antibiotherapy, facial edema diminished, thus minimizing the subsequent extent of surgery and severe disfigurations. The following complications were observed: 1) lagophthalmos from scarring in four patients and associated ectropion in three of them; 2) blindness in one eye in one patient; 3) disfiguring exposure of teeth and gums resulting from excision of the left labial commissure that affected speech, drinking, and eating in one patient; and 4) dissemination of *Mycobacterium ulcerans* infection in three patients. Our study highlights the importance of this clinical presentation of Buruli ulcer, and the need for health workers in disease-endemic areas to be aware of the special challenges management of Buruli ulcer on the face presents.

HELP-SEEKING FOR PRE-ULCER AND ULCER CONDITIONS OF MYCOBACTERIUM ULCERANS DISEASE (BURULI ULCER) IN GHANA

Mercy M. Ackumey

Am. J. Trop. Med. Hyg., 85(6), 2011, pp. 1106-1113

This study examined sociocultural features of help-seeking for Buruli ulcer–affected persons with pre-ulcers and ulcers in a disease-endemic area in Ghana. A sample of 181 respondents were purposively selected. Fisher's exact test was used to compare help-seeking variables for pre-ulcers and ulcers. Qualitative phenomenologic analysis of narratives clarified the meaning and content of selected quantitative help-seeking variables. For pre-ulcers, herbal dressings were used to expose necrotic tissues and subsequently applied as dressings for ulcers. Analgesics and left-over antibiotics were used to ease pain and reduce inflammation. Choices for outside-help were influenced by the perceived effectiveness of the treatment, the closeness of the provider to residences, and family and friends. Health education is required to emphasize the risk of self-medication with antibiotics and the importance of medical treatment for pre-ulcers, and to caution against the use of herbs to expose necrotic tissues, which could lead to co-infections.

EXAMINING THE USE OF ORAL REHYDRATION SALTS AND OTHER PRAL REHYDRATION THERAPY FOR CHILDHOOD DIARRHEA IN KENYA

Lauren S. Blum

Am. J. Trop. Med. Hyg., 85(6), 2011, pp. 1126-1133

Reductions in the use of oral rehydration therapy (ORT) in sub-Saharan Africa highlight the need to examine caregiver perceptions of ORT during diarrheal episodes. Qualitative research involving group discussions with childcare providers and in-depth interviews with 45 caregivers of children < 5 years of age who had experienced diarrhea was conducted in one rural and urban site in Kenya during July-December 2007. Diarrhea was considered a dangerous condition that can kill young children. Caregivers preferred to treat diarrhea with Western drugs believed to be more effective in stopping diarrhea than ORT. Inconsistent recommendations from health workers regarding use of oral rehydration solution (ORS) caused confusion about when ORS is appropriate and whether it requires a medical prescription. In the rural community, causal explanations about diarrhea, beliefs in herbal remedies, cost, and distance to health facilities presented additional barriers to ORS use. Health communication is needed to clarify the function of ORT in preventing dehydration.

Infectious disease surveillance update

Cholera in Haiti

The world's largest cholera epidemic passed the 1 year mark in late October, 2011. Almost half a million people in Haiti – 5% of the country's population – have been infected so far. As of Sept 25 there had been 457 582 cases of Vibrio cholerae infection since the outbreak began, with 6477 deaths reported – more than the total number in the rest of the world combined in 2010, and widely considered to be an underestimate. Medical aid organisations médecins Sans Frontiéres and Partners in Health are planning to start using the recently approved oral cholera vaccine Shanchol (Shantha Biotechnic, hyderabad, India) to help slow the epidemic.

New drugs active against Gram-negative bacilli

Helen gross (poster 177) reported results from a long-running antibiotic stewardship programe in which the relation between antibiotic use and resistance was studied at the Wesley Medical Center (Hattiesburg, MS, USA) from 1993 to 2009. Direct correlation was noted between susceptibility and use. In 2003, only 66% of Pseudomonas aeruginosa isolates were susceptible to gentamicin, but by 2009, susceptibility had increased to 92%. The P aeruginosa susceptibility to ceftazidime had risen from 68% in 2003, to 90% in 2009. In 1995, only 63% of escherichia coli isolates were susceptible to ampicillin plus sulbactam compared with 83% in 2007. Susceptibility of Klebsiella pneumoniae to ampicillin plus sulbactam also improved with decreased use of the treatment. In 1994, only 75% of K pneumoniae were susceptible to ampicillin plus sulbactam, but this had increased to 97% by 2007.

Hepatitis E vaccine

China has approved a new hepatitis E virus (HEV) vaccine, which was shown to be efficacious in a trial published in The Lancet in 2010. The incidence of hepatitis E has increased substantially in China in recent years, making HEV the most common cause of hepatitis in adults. The Government plans to vaccinate vulnerable groups and export the vaccine to other nations.

Alliance against cholera

The presidents of Haiti and the Domonican Republic joined representatives of UNICEF, the US Centers for Disease Control and Prevention, and the Pan American Health Organization on Jan 12, to call for investment in water and sanitation. An estimated US$ billion will be needed to end the cholera epidemic in the region since the earthquake in 2010.

Researchers in Mumbai have identified 12 patients with a virulent strain of tuberculosis that seems to be resistant to all known treatments. The cases of so-called totally drug-resistant tuberculosis (TDR-TB) have been detected in the city in the past 3 months. Worldwide, the only other episodes of TDR-TB reported were in Iran in 2009 and Italy in 2007.

DIPHTHERIA IN THE POSTEPIDEMIC PERIOD, EUROPE, 2000-2009

Karen S. Wagner

Emerging Infectious Doseases, Vol. 18, No. 2, February 2012

Diphtheria incidence has decreased in Europe since its resurgence in the 1990s, but circulation continues in some countries in eastern Europe, and sporadic cases have been reported elsewhere. Surveillance data from Diphtheria Surveillance Network countries and the World Health Organization European Region for 2000–2009 were analyzed. Latvia reported the highest annual incidence in Europe each year, but the Russian Federation and Ukraine accounted for 83% of all cases. Over the past 10 years, diphtheria incidence has decreased by >95% across the region. Although most deaths occurred in disease-endemic countries, case-fatality rates were highest in countries to which diphtheria is not endemic, where unfamiliarity can lead to delays in diagnosis and treatment. In western Europe, toxigenic *Corynebacterium ulcerans* has increasingly been identified as the etiologic agent. Reduction in diphtheria incidence over the past 10 years is encouraging, but maintaining high vaccination coverage is essential to prevent indigenous *C. ulcerans* and reemergence of *C. diphtheriae* infections.

IMMUNOMODULATORY EFFECTS OF MACROLIDES DURING COMMUNITY-ACQUIRED PNEUMONIA: A LITERATURE REVIEW

Alexandra Kovaleva

JAC 2012, 67,: 530-540

Macrolides are known to possess immunomodulatory properties, next to their antimicrobial effects. These immunomodulatory activities have been proven beneficial in chronic pulmonary inflammatory diseases. Whether macrolides also exert favourable immunomodulatory effects during acute inflammation, and therefore can act as adjuvant therapy in community-acquired pneumonia (CAP), is less clear. We aimed to give an overview of the existing evidence from in vitro and in vivo studies on the immunomodulatory effects of macrolides during CAP. A comprehensive search in the PubMed/MEDLINE and Embase databases was performed. Two investigators independently examined the eligible literature. Studies that dealt with the effects of macrolides on the immune response, in terms of cytokine secretion and the number or function of inflammatory and structural cells during acute inflammation, were included. A total of 27 studies were included, of which 15 were in vitro studies, 9 in vivo, 2 both in vivo and in vitro, and 1 was in human subjects. Although the methods and experimental model systems used in these studies are very heterogeneous, macrolides in general tempered inflammation caused by viable and non-viable bacteria or their products. Cytokine secretion decreased, as did inflammatory and structural cell activation and histological inflammatory signs. Not all data, however, are consistent and sometimes pro-inflammatory effects were found. To conclude, the available literature suggests that macrolides can temper the inflammatory response during CAP, independent of their antimicrobial activity. However, because the studies differ in their methodology, no definite conclusions can be drawn.

A COMPARISON OF TELBIVUDIME AND ENTECAVIR FOR CHRONIC HEPATITIS B IN REAL-WORLD CLINICAL PRACITICE

Ming-Chao Tsai

JAC 2012, 67,: 696-699

In real-world clinical practice, telbivudine resulted in higher rates of HBeAg seroconversion and drug resistance at week 48 compared with entecavir. A combination with baseline ALT plus 24 week HBV DNA levels led to the lowest rates of resistance in HBeAg-positive telbivudine-naive patients and had the highest probability of HBeAg seroconversion in both entecavir- and telbivudine-naive patients.

TIMING OF SUSCEPTIBILITY- BASED ANTIFUNGAL DRUG ADMINISTRATION IN PATIENTS WITH CANDIDA BLOODSTREAM INFECTION: CORRELATION WITH OUTCOMES

Shellee A. Grim

JAC 2012, 67,: 707-714

Patients ≥16 years of age with first episodes of candidaemia during 2001–09 were included. Clinical data were collected retrospectively, including time to appropriate antifungal therapy and patient survival.

Results The study population included 446 patients [243 (54%) female, mean age 53 years] with candidaemia, 380 (85%) of whom had antifungal susceptibility data. *Candida albicans* was the most common pathogen (221, 50%) followed by *Candida glabrata* (99, 22%), *Candida parapsilosis* (59, 13%), *Candida tropicalis* (48, 11%) and *Candida krusei* (6, 1%). Appropriate antifungal therapy consisted of fluconazole (177, 40%), an echinocandin (125, 28%), amphotericin B (41, 9%) and voriconazole (6, 1%); 97 (22%) failed to receive appropriate antifungal therapy. The 30 day mortality was 34% (151/446) and there was no clear relationship between time from positive culture to receipt of appropriate antifungal therapy and 30 day survival. On multivariable Cox regression, increased APACHE II score [hazard ratio (HR) 1.11, 95% CI 1.09–1.13, P <0.001], cirrhosis (HR 2.15, 95% CI 1.48–3.13, P<0.001) and HIV infection (HR 2.03, 95% CI 1.11–3.72, P=0.02) were independent predictors of mortality. A secondary analysis requiring patients in the early treatment group to have received ≥24 h of effective antifungal therapy did show a significant mortality benefit to receiving antifungal treatment within 72 h of a positive blood culture being drawn (30 day mortality for early treatment: 27% versus 40%, P= 0.004; HR for mortality with delayed treatment on multivariable analysis: 1.41, 95% CI 1.01–1.98, P=0.045).

Candida bloodstream infection is associated with high mortality, despite timely receipt of appropriate antifungal therapy.

INFLUENCE OF TEICOPLANIN MICs ON TREATMENT OUTCOMES AMONG PATIENTS WITH TEICOPLANIN-TREATED METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS BACTERAEMIA: A HOSPITAL-BASED RETROSPECITIVE STUDY

Hong-Jyun Chang

JAC 2012, 67,: 7736-741

Of the 101 patients enrolled, 56 had a lower teicoplanin MIC (≤1.5 mg/L) for MRSA and 45 had a higher MIC (>1.5 mg/L) for MRSA. A lower teicoplanin MIC was associated with a favourable outcome [37 (66.1%) versus 13 (28.9%); $P<0.001$] and a lower rate of bloodstream infection-related mortality [15 (26.8%) versus 22 (48.9%); $P=0.022$]. Patients with chronic obstructive pulmonary disease, bacteraemic pneumonia or higher Pittsburgh bacteraemia score had an unfavourable outcome ($P=0.028$, 0.022 and <0.001, respectively). Multivariate analysis showed that teicoplanin MIC >1.5 mg/L, higher Pittsburgh bacteraemia score and bacteraemic pneumonia were independent risk factors for unfavourable outcome.

A higher teicoplanin MIC value (>1.5 mg/L) may predict an unfavourable outcome and higher mortality rate among teicoplanin-treated MRSA bacteraemic patients.

ESCHERICHIA COLI 0104:H4 INFECTIONS AND INTERNATIONAL TRAVEL

David C. Alexander

EID, Vol. 18, No. 3, March 2012

We analyzed travel-associated clinical isolates ofEscherichia coli O104:H4, including 1 from the 2011German outbreak and 1 from a patient who returned fromthe Philippines in 2010, by genome sequencing and opticamapping. Despite extensive genomic similarity betweenthese strains, key differences included the distribution oftoxin and antimicrobial drug–resistance determinants.

GROUP B STREPTOCOCCAL DISEASE IN INFANTS AGED YOUNGER THAN 3 MONTHS: SYSTEMATIC REVIEW AND METY-ANALYSIS

Karen M. Edmond

Lancet 2012, 379, 547-56

Mean incidence of group B streptococcus in infants aged 0-89 days was 0·53 per 1000 livebirths (95% CI 0·44-0·62) and the mean case fatality ratio was 9·6% (95% CI 7·5-11·8). Incidence of early-onset group B streptococcus (0·43 per 1000 livebirths [95% CI 0·37-0·49]) and case fatality (12·1%, [6·2-18·3]) were two-times higher than late-onset disease. Serotype III (48·9%) was the most frequently identified serotype in all regions with available data followed by serotypes Ia (22·9%), Ib (7·0%), II (6·2%), and V (9·1%). Studies that reported use of any intrapartum antibiotic prophylaxis were associated with lower incidence of early-onset group B streptococcus (0·23 per 1000 livebirths [95% CI 0·13-0·59]) than studies in which patients did not use prophylaxis (0·75 per 1000 livebirths [0·58-0·89]).
More high-quality studies are needed to accurately estimate the global burden of group B streptococcus, especially in low-income countries. A conjugate vaccine incorporating five serotypes (Ia, Ib, II, III, V) could prevent most global group B streptococcal disease.

ANTIMICROBIAL SUSCEPTIBILITY OF ESCHERICHIA COLI FROM COMMUNITY-ACQUIRED URINARY TRACT INFECTIONS IN EUROPE: THE ECO SENS STUDY REVISITED

Gunnar Kahlmeter

IJAA 2012, 39, 45-51

This study determined the antimicrobial susceptibility of *Escherichia coli* causing community-acquired, acute, uncomplicated, non-recurrent urinary tract infection in unselected women aged 18–65 years and compared the results with those obtained 8 years earlier in the first ECO·SENS study (1999–2000). During 2007–2008, urine samples were taken from 1697 women in Austria, Greece, Portugal, Sweden and the UK. The countries were chosen to represent areas of Europe indicated to have more (Greece and Portugal) or less (UK, Austria and Sweden) problems with resistance. Antimicrobial susceptibility testing of 903 *E. coli* isolates (150–200 isolates per country) to 14 antimicrobials was performed by disk diffusion using European Committee on Antimicrobial Susceptibility Testing (EUCAST) breakpoints. In *E. coli*, resistance to mecillinam, cefadroxil (representing oral cephalosporins), nitrofurantoin, fosfomycin trometamol, gentamicin and the third-generation cephalosporins cefotaxime and ceftazidime was <2%, with the following exceptions: gentamicin in Portugal (2.8%); fosfomycin in Greece (2.9%); and cephalosporins in Austria (2.7–4.1%). Resistance levels were higher for amoxicillin/clavulanic acid (2.0–8.9%) and ciprofloxacin (0.5–7.6%) and much higher to ampicillin (21.2–34.0%), sulfamethoxazole (21.2–31.3%), trimethoprim (14.9–19.1%) and trimethoprim/sulfamethoxazole (14.4–18.2%). Resistance to quinolones and trimethoprim increased between the ECO·SENS I (1999–2000) and ECO·SENS II (2007–2008): nalidixic acid 4.3% to 10.2%; ciprofloxacin 1.1% to 3.9%; and trimethoprim 13.3% to

16.7%. In the previous study, no isolates with extended-spectrum β-lactamase were found; however, in the present study 11 isolates were identified as having either CTX-M or AmpC.

CONTEMPORARY UNCONVENTIONAL CLINICAL USE OF CO-TRIMOXAZOLE

Goldberg E.

CMI, 2011,18, 8-17

In the late 1960s, the combination of trimethoprim and sulphamethoxazole (co-trimoxazole) was introduced into clinical practice and used to treat many infectious diseases, such as urinary tract infections, respiratory infections, sexually transmitted diseases, Gram-negative sepsis, enteric infections and typhoid fever. Subsequently, co-trimoxazole was reported to be effective against numerous bacterial, fungal and protozoal pathogens, including *Nocardia*, *Listeria monocytogenes*, *Brucella*, *Stenotrophomonas maltophilia*, *Burkholderia*, *Coxiella burnetii*, *Tropheryma whipplei*, atypical mycobacteria, and *Pneumocystis jirovecii*. Among protozoal infections, in addition to toxoplasmosis, co-trimoxazole has been used to treat susceptible *Plasmodium falciparum*, *Cyclospora* and *Isospora* infections. Several retrospective and prospective studies have demonstrated good clinical outcome with co-trimoxazole in treating invasive methicillin-resistant *Staphylococcus aureus* infections. We summarize herein the accumulated evidence in the literature on the new, 'unconventional' clinical use of co-trimoxazole during the last three decades. In the era of widespread antibiotic resistance and shortage of new antibiotic options, large-scale, well-designed studies are needed to explore the tremendous potential concealed in this well-established drug.

COMPARISON OF ANNUAL VERSUS TWICE-YEARLY MASS AZITHROMYCIN TREATMENT FOR HYPERENDEMIC TRACHOMA IN ETHIOPIA: A CLUSTER-RANDOMISED TRIAL

Teshome Gebre

Lancet 2012, 379: 143-51

In trachoma control programmes, azithromycin is distributed to treat the strains of chlamydia that cause ocular disease. We aimed to compare the effect of annual versus twice-yearly distribution of azithromycin on infection with these strains.

After 42 months of treatment, the prevalence of ocular infection with chlamydia was similar in the groups treated annually and twice yearly. However, elimination of infection might have been more rapid in the groups of villages that received treatment twice yearly.

CROWD AND ENVIRONMENTAL MANAGMENT DURING MASS GATHERINGS

Anders Johansson

Lancet 2012, 379: 150-56

Crowds are a feature of large cities, occurring not only at mass gatherings but also at routine events such as the journey to work. To address extreme crowding, various computer models for crowd movement have been developed in the past decade, and we review these and show how they can be used to identify health and safety issues. State-of-the-art models that simulate the spread of epidemics operate on a population level, but the collection of fine-scale data might enable the development of models for epidemics that operate on a microscopic scale, similar to models for crowd movement. We provide an example of such simulations, showing how an individual-based crowd model can mirror aggregate susceptible—infected—recovered models that have been the main models for epidemics so far.

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NEWS IN TUBERCULOSIS AND LEPROSY-DISEASES CAUSING SOCIAL MARGILISATION

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ABSTRACT

Tuberculosis and leprosy are major tropical diseases with social consequences – marginalisation – are critically reviewed and discussed by the tropicteam members from 6 countries in 2011-2012.

Keywords: Tuberculosis. Leprosy. Margilisation.

FIGTING RESISTANT TUBERCULOSIS WITH OLD COMPOUNDS: THE CARBAPENEMPARADIGM

Mainardi J. L.

ClinicalMicrobiology and Infection, 2011, 10

Despiteintensiveefforts to improvetuberculosis (TB) careand control, theglobalburden of TB isfallingonlyslowly, andtheevolution of drugresistanceremainsuncertain. Accordingto the WHO, theestimatedincidence in 2009 was 9.4 millionnew cases. In recentyears, TB treatment has becomemore complicatedbecause of theemergence of multidrug-resistant (MDR) TB, i.e. TB caused by strainsresistant to iso-niazid and rifampin. In 2009, anestimated 250 000 patientshad MDR TB, representing 3.3% of new TB cases and up to28% in certaincountries of theformer Soviet Union. In2008, thenumber of deathscaused by MDR TB wasestimated to be 150 000. The emergence of extensivelydrug-resistant (XDR) TB, defined by resistance to isoniazid andrifampincombinedwithadditionalresistance to afluoroquinolone and atleast 1 s lineinjectable agent (amika-cin, kanamycin, orcapreomycin), has beenassociatedwithincreasing mortality (65–100%), asefficienttherapyisnotavailable. By July 2010, 58 countries had reportedatleastonecase of XDR TB.

Thesealarmingdatahighlighttheurgent needfor new anti-TBdrugs. Exceptforfluroquinol-ones, no novelanti-TBantibiotic has beenintroduced in thelast 45 years. (1-9)

MULTIDRUG-RESISTANT TUBERCULOSIS NOT DUE TO NENCOMPLIANCEBUT TO BETWEEN-PATIENT PHARMOCOKINETIC VARIABILITY

Shashikant Srivastava

The Journal of Infectious Diseases 2011, 204: 1951-9

Itisbelievedthatnonadherenceistheproximatecause of multidrug-resistanttuberculosis (MDR-tuberculosis) emergence. The level of nonadherenceassociatedwithemergence of MDR-tuberculosisisunknown. Performance of a randomizedcontrolled trial in whichsomepatients are randomized to nonadherencewouldbeunethical; therefore, other study designsshouldbeutilized.

Therapyfailurewasonlyencounteredatextents of nonadherence ≥60%. Surprisingly, isoniazid- and rifampin-resistantpopulationsdidnotachieve ≥1% proportion in any experiment and didnotachieve a higherproportionwithnonadherence. However, clinical trial simulationsdemonstratedthatapproximately 1% of tuberculosispatientswithperfectadherencewouldstilldevelopMDR-tuberculosisdue to pharmacokinetic variability alone.

Thesedata, based on a preclinical model, demonstratethatnonadherencealoneisnot a sufficientconditionforMDR-tuberculosisemergence.

SUSCEPTIBILITY OF MYCOBACTERIUMTUBERCULOSIS TO SULFAMETHOXAZOLE, TRIMETHOPRIM AND THEIRCOMBINATION OVER A 12 YEARPERIOD IN TAIWAN

Tsi-ShuHuang

JAC 2012, 67,: 633-637

Sulfamethoxazoleinhibitedthegrowth of clinicalisolates of M. tuberculosisatachievableconcentrations in plasmaafter oral administration. Susceptibility to sulfamethoxazoleremainedconstant over a 12 yearperiod. Trimethoprimwasinactiveagainst M. tuberculosis and trimethoprim/sulfamethoxazoleprovided no additionalactivity. Althoughthecurrent and prior studiesdemonstratethatsulfamethoxazoleis active against M. tuberculosisthesearchneeds to continuefor more active, lipid-solublesulphonamidesthat are betterabsorbedintotissues and haveimprovedtherapeuticefficacy.

TUBERCULOSISPREVALENCEATAUTOPSY: A STUDY NORTH INDIA

RajpalSinghPunia

TropicalDoctor 2012, 42: 46-47

Tuberculosis (TB) isanimportantcause of morbidity and mortality. This study attempts to determinetheprevalence of TB in autopsies. Of 768 autopsies, 39 caseswerediagnosedas TB. Thesewereretrieved and re-examined. Itwasnotedthat in a significantnumber of patientswith TB wasonlyrevealedafterautopsy. This has importantimplicationsastheymaywellhavebeen a source of transmission to thegeneralpublic and health-careproviders.

INCREASING ACCESS TO THE MDR-TB SURVEILLANCE PROGRAME THROUGH A COLLABORATIVE MODEL IN WESTERN KENYA

Paul H. Park

TM IH, Vol. 17, No. 3, pp.374-379

Onsitetrainingconsisted of theinclusioncriteriaforre-treatmentpatients - thehigh-prioritygroupfor DST. Additionally, infrastructuralsupportestablished a stablesupplychain. Anexisting transport systemwasadapted to deliversputumspecimens. Taskshiftingcreatedanaccession and trackingsystem of specimens. Duringthe 24 monthspost-implementation, thenumber of re-treatmentspecimensfromthecatchmentareaincreasedfrom 9.1 to 23.5 specimens per month. In comparingannualdata pre- and post-implementation, theproportion of re-treatmentcasesreceiving DST increasedfrom 24.7% (n = 403) to 32.5% (n = 574) (P < 0.001), and thenumber of multidrug-resistant (MDR) TB casesincreasedfrom 5 to 10 cases. Conclusion The delivery model significantlyincreasedtheproportion of re-treatmentcasesreceiving DST. Barriers to accessingthenational MDR-TB surveillanceprogrammecanbeovercomethroughanoperational model based on pragmaticuse of existingservicesfrommultiplepartners.

SURGICALTREATMENT OF DRUG-RESISTANTTUBERCULOSIS

Russel R. Kempker

LancetInfectDis 2012, 12: 157-66

The globalemergence and spread of multidrug-resistant (MDR) and extensivelydrug-resistant (XDR) tuberculosis has led to there-examination of surgeryas a possibleadjunctivetreatment. Wepresentthecase of a 26-year-old HIV-seronegativepatientwith XDR

pulmonarytuberculosisrefractory to medicaltherapy. Surgicalresection of thepatient'ssolitarycavitarylesionwas done asadjunctivetreatment, and a successfuloutcomewith a combination of surgery and drugtherapywasachieved. Wereviewthehistory of surgicaltherapyfortuberculosis and reports of its role in treatment of MDR and XDR tuberculosis. 26 caseseries and cohortstudieswereincluded, and togethershowedthatsurgicalresectionisbeneficial in thetreatment of drug-resistanttuberculosis. However, theresultsmightnotbeapplicable in allsettingsbecauseinvestigationswereobservational and typicallyincludedpatientswithless severe disease, and allsurgerieswere done atspecialisedthoracic-surgerycentres. Welldesignedstudies are needed to establishtheefficacy of surgery in treatment of drug-resistanttuberculosis.

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SOCIAL IMPACT OF TROPICAL DISEASES –SUMMARY FROM SEUC TROPICTEAM (REVIEW)

Inocent Nkouwa and J. Suvada, I. Kmit and members of Tropicteam

St. Elizabeth Tropicteam, St. Charles Lwanga programe Buikwe Uganda

ABSTRACT

Tropical diseases have had huge burden within last 30 years: every year, 2 million patients died on TB, 1,5 million on Malaria, 4,2 million on HIV and 8,5 million on pneumonia – 90% in tropical reactions: data on social impact are critically reviewed.

Key words: Tropical diseases. Epidemiology. Social impact.

WHICH CLINICAL SIGNES PREDICT SEVERE ILLNESS IN CHILDREN LESS THAN 2 MONTHS OF AGE IN RESOURCE POOR COUNTRIES?

Journal of Tropical Pediatrics, Vol. 57, No. 1, Feb 2011

Infants, especially those in the first week of life, are a vulnerable population accounting for nearly half of deaths in children under 5. Careful and systematic assessment of clinical signs helps to guide appropriate management and referral. The evidence demonstrates that individual clinical signs often have high specificity but low sensitivities. An algorithm of signs and symptoms achieves acceptable levels of sensitivity and specificity.

The algorithm could encompass infants from 0 to 59 days together providing jaundice was included for those infants in the first week of life. Clinical features should include; difficulty feeding, movement only when stimulated, temperature <35.5°C or ≥37.5°C, respiratory rate ≥60/min, severe chest indrawing and history of convulsions. While these clinical signs are useful in identifying a subset of infants at high risk of death in the studies reviewed, their validation in other settings is needed.

In Africa, approximately 80% of childhood deaths occur at home before a child has had any contact with a health facility, so education on identifying sick infants needs to go beyond the health care community. Parents and carers need to be correctly informed as they play a key role in improving the health status of their children.

PREVENTIVE CHEMOTHERAPY IN HUMAN HELMINTHIASIS: THEORETICAL AND ASPECTS

Gabrielli A. F.

Tropical Medicine and Hygiene, Vol. 105, No. 12, Dec 2011

Preventive chemotherapy (PC), the large-scale distribution of anthelminthic drugs to population groups at risk, is the core intervention recommended by the WHO for reducing morbidity and transmission of the four main helminth infections, namely lymphatic filariasis, onchocerciasis, schistosomiasis and soil-transmitted helminthiasis. The strategy is widely implemented worldwide but its general theoretical foundations have not been described so far in a comprehensive and cohesive manner. Starting from the information available on the biological and epidemiological characteristics of helminth infections, as well as from the experience generated by disease control and elimination interventions across the world, we extrapolate the fundamentals and synthesise the principles that regulate PC and justify its implementation as a sound and essential public health intervention. The outline of the theoretical aspects of PC contributes to a thorough understanding of the different facets of this strategy and helps comprehend opportunities and limits of control and elimination interventions directed against helminth infections.
Lymphatic filariasis and onchocerciasis Schistosomiasis and soil-transmitted helminthiasis Clonorchiasis and opisthorchiasis Taeniasis/cysticercosis

CLINICAL CHARACTERISTICS, TREATMENT AND OUTCOME OF CHILDHOOD BURKITT' S LYMPHOMA AT THE UGANDA CANCER INSTITUTE

Jackson Orem

Tropical Medicine and Hygiene, Vol. 105, No. 12, Dec 2011

Burkitt's lymphoma (BL) is a major cause of death among Ugandan children. We studied clinical characteristics and outcomes of childhood BL over time at the Uganda Cancer Institute (UCI). A total of 1217 children (766 boys, 451 girls, mean age 6.69 years) diagnosed with BL between 1985 and 2005 were included. There were no significant changes in the proportion of boys and girls diagnosed, or in mean age at diagnosis. Facial tumor (n = 945, 77.65%) and abdominal disease (n = 842, 69.19%) were the most common presentations. The proportion of children presenting with hepatic mass, malignant pleocytosis, and advanced-stage (stage C and D) BL increased during the study period ($P < 0.01$). A total of 1085 children out of 1206 (89.97%) received at least one cycle of chemotherapy, and 832 of 1099 (75.71%) demonstrated objective response (i.e. complete or partial remission). The most

common symptoms at BL diagnosis were fever (*n* = 621, 51.03%), anemia (*n* = 593, 48.73%), and weight loss (*n* = 588, 48.32%). Significant increases in the proportion of children with fever, and significant changes in the proportion of children with anemia, night sweats and severe infection were observed. HIV positivity was 3.87%, but no substantial differences in the proportion of HIV-positive children were observed. Mortality was not significantly different over time: it was similar in boys and girls, higher in older children (compared with younger ones), in those with advanced-stage BL, and HIV-positive children, but lower in children with facial tumors compared with other tumor presentations, and among those who received chemotherapy.

THE CHALLENGES OF MANAGING SEVERE DEHYDRATING DIARRHOEA IN A RESOURCE-LIMITED SETTING

Lloyd L. Bwanaisa

International Health 3 (2011) 147-153

Diarrhoea remains one of the most common causes of childhood deaths worldwide despite the widespread use of oral rehydration solution (ORS). The vast majority of the nearly 2 million diarrhoeal deaths occurring annually in children under five years of age are in south Asia and sub-Saharan Africa. Signs of critical illness in severely dehydrated children are poorly recognised, and although considerable efforts have gone into establishing the management of diarrhoeal disease in general, there is surprisingly little understanding of the aetiology, metabolic processes and risk factors for the very high mortality associated with severe dehydrating diarrhoea (SDD). We suggest that in many resource-poor settings, the degree of fluid requirement as well as the prevalence of electrolyte disturbances are seriously under-recognised and may be contributing significantly to mortality. The heterogeneity of children with SDD renders the generic ‘one size fits all’ approach to fluid and electrolyte management in these critically ill children inadequate. In this review we will highlight SDD as an important target for research in resource-limited settings, and emphasise the need to re-evaluate the efficacy of prevailing intravenous fluid protocols in well conducted multi-centre interventional trials.

Figure 1. Global distribution of under-five deaths by cause (2000–2003). Malnutrition accounts for 50% of these deaths: redrawn using UNICEF data.

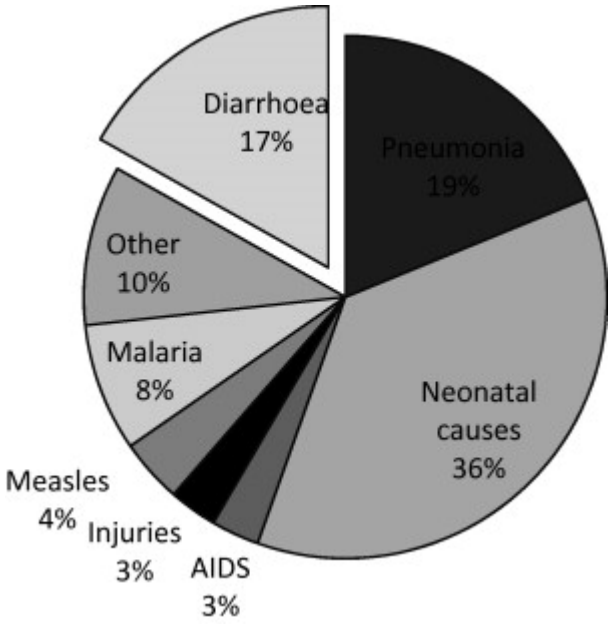


Table 1. Paediatric fluids typically available at hospitals in Africa along with the delivered quantities of electrolytes when the fluids are administered at recommended rates of infusion in various situations (all but ReSoMal and reduced osmolarity oral rehydration solution [ORS] are for intravenous use).

	Na (mmol)	K (mmol)	Ca (mmol)	Chloride (mmol)	Lactate (mmol)	Dextrose (gm)
Requirements (approximate) for normal infants[33] (per kg/day)	2–4	1.5–2.5	0.5–3	n/a	n/a	n/a
Requirements for malnourished children[32] (per kg/day)	1	4	2	n/a	n/a	n/a
Electolyte provisions by various fluids						
Half strength Darrow's (per litre bag)	60.5	17.5	0	51.5	26.5	50
D+ (per kg/day)	6.1	1.8	0	5.2	2.7	5
D- (per kg/day)	6.1	1.8	0	5.2	2.7	5
DM (per kg/day)	0.9	0.3	0	0.8	0.4	0.8
Ringer's lactate (per litre bag)	130.7	5.4	1.8	111.5	28.2	0
D+ (per kg/day)	13.1	0.6	0.2	11.2	2.8	0
D- (per kg/day)	13.1	0.6	0.2	11.2	2.8	0
DM (per kg/day)	2	0.1	0.03	1.7	0.4	0
Normal saline (per litre bag)	154	0	0	154	0	0
D+ (per kg/day)	15.4	0	0	15.4	0	0
D- (per kg/day)	15.4	0	0	15.4	0	0
DM (per kg/day)	2.3	0	0	2.3	0	0
5% Dextrose (per litre bag)	0	0	0	0	0	50
D+ (per kg/day)	0	0	0	0	0	5
D- (per kg/day)	0	0	0	0	0	5
DM (per kg/day)	0	0	0	0	0	0.8
ReSoMal (per litre)	45	40	0	70	7 (citrate)	22.5
D+ (per kg/day)	4.5	4	0	7	0.7	2.3
D- (per kg/day)	4.5	4	0	7	0.7	2.3
DM (per kg/day)	4.5	4	0	7	0.7	2.3
Reduced osmolarity ORS (per litre)	75	20	0	65	10 (citrate)	13.5
D+ (per kg/day)	7.5	2	0	6.5	1	1.4
D- (per kg/day)	7.5	2	0	6.5	1	1.4
DM (per kg/day)	7.5	2	0	6.5	1	1.4

D+: amount of electrolyte given to child with diarrhoea (per kg per day) assuming a patient weight of 10 kg and a fluid deficit of 100 ml/kg.D-: amount of electrolyte given to child without diarrhoea (per kg per day) assuming a patient weight of 10 kg and a fluid requirement of 100 ml/kg.DM: amount of electrolyte given to child with diarrhoea and malnutrition (per kg per day) assuming a patient weight of 10 kg and a fluid requirement of either 100 ml/kg orally or 15 ml/kg intravenously.

A QUALITATIVE STUDY ON STIGMA AND COPING STRATEGIS OS PATIENTS WITH PODOCONIOSIS IN WOLAITA ZONA, SOUTHERM ETHIOPIA

Abebayehu Tora

International Health 3 (2011) 147-153

Podoconiosis (endemic non-filarial elephantiasis) is a neglected tropical disease that causes affected individuals intense social stigma. Although some studies have investigated community-based stigma against podoconiosis, none has yet attempted to assess coping strategies used by patients to counter stigma. This study aimed to describe and categorize the coping strategies employed by podoconiosis patients against stigma. From January–March 2010 data were gathered through in-depth interviews with 44 patients, six focus group discussions (with a total of 42 participants) and two key informant interviews. The coping strategies employed by patients to deal with stigma could be categorized into three areas: active, avoidant and through changing the relational meaning. Of these coping strategies, avoidant coping is the most negative since it encourages isolation and pushes those employing it towards more risky decisions. Many podoconiosis patients are forced to use this strategy through lack of control due to extreme poverty. Intervention programs must therefore create circumstances in which patients are empowered to actively cope with stigma and play a role in stigma reduction.

Podoconiosis is one of the most neglected tropical diseases, causing long term morbidity in affected populations.[1] It is common among poor farmers with persistent barefoot contact with irritant red clay soil rich in silicate particles. Areas of high prevalence of podoconiosis have been documented in tropical Africa, Central America and north India.

RISK FOR RABIES IMPORTALION FROM NORTH AFRICA

Philippe Gautret

Emerging Infectious Diseases, Vol. 17, No. 12, Dec 2011

A retrospective study conducted in France indicated that a large proportion of patients injured by potentially rabid animals while in North Africa did not seek pretravel advice, and some had not received proper rabies postexposure prophylaxis while in North Africa. As a result, imported human rabies cases are still being reported, and the need for postexposure prophylaxis after exposure in North Africa is not declining. Tourists are generally unaware of the danger of importing potentially rabid animals and of the rules governing the movement of pets. In France, for example, rabid dogs have frequently been imported from Morocco to France through Spain. This situation imposes heavy social and economic costs and impedes rabies control in Europe. Rabies surveillance and control should therefore be reinforced in North Africa, and travelers to North Africa should receive appropriate information about rabies risk and prevention.

Table 1. Reported rabies cases in humans and animals, North Africa, 2000–2009*

Country	Annual no. human deaths/100,000 population	Annual no. rabies PEP in humans/100,000 population	No. rabies cases in animals (years)
Algeria	0.06†	2.2†	2,206 (2000–2008), 754 (2009)
Egypt	0.1‡	1.9§	5 (2000, 2006, and 2007)¶
Morocco	0.07†	1.6†	3,600 (2000–2008, including 343 in 2007)
Sudan	0.04†	0.4‡	101 (2000–2007, including 38 in 2007)
Tunisia	0.02†	3.3†	1,253 (2000–2007, including 102 in 2007)

*PEP, postexposure prophylaxis. Data sources include World Health Organization RabNet database (www.who.int/globalatlas/default.asp) and RABMEDCONTROL (www.rabmedcontrol.org) (*5,9–12*).
†Calculated for 2000–2007.
‡Calculated for 2007.
§Calculated for 2000.
¶No data available for other years.

THE CHALLENGES OF MANAGING SEVERE DEHYDRATING DIARRHOEA IN A RESOURCE-LIMITED SETTING

Lloyd L. Bwanaisa

Emerging Infectious Diseases, Vol. 17, No. 12, Dec 2011

A retrospective study conducted in France indicated that a large proportion of patients injured by potentially rabid animals while in North Africa did not seek pretravel advice, and some had not received proper rabies postexposure prophylaxis while in North Africa. As a result, imported human rabies cases are still being reported, and the need for postexposure prophylaxis after exposure in North Africa is not declining. Tourists are generally unaware of the danger of importing potentially rabid animals and of the rules governing the movement of pets. In France, for example, rabid dogs have frequently been imported from Morocco to France through Spain. This situation imposes heavy social and economic costs and impedes rabies control in Europe. Rabies surveillance and control should therefore be reinforced in North Africa, and travelers to North Africa should receive appropriate information about rabies risk and prevention.

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§Calculated for 2000.
¶No data available for other years.

WORLDWIDE OCCURENCE AND IMPACT OF HUMAN TRICHINELLOSIS, 1986-2009

Darwin K. Murrell

Emerging Infectious Diseases, Vol. 17, No. 12, Dec 2011

To assess the global incidence and clinical effects of human trichinellosis, we analyzed outbreak report data for 1986–2009. Searches of 6 international databases yielded 494 reports. After applying strict criteria for relevance and reliability, we selected 261 reports for data extraction. From 1986 through 2009, there were 65,818 cases and 42 deaths reported from 41 countries. The World Health Organization European Region accounted for 87% of cases; 50% of those occurred in Romania, mainly during 1990–1999. Incidence in the region ranged from 1.1 to 8.5 cases per 100,000 population. Trichinellosis affected primarily adults (median age 33.1 years) and about equally affected men (51%) and women. Major clinical effects, according to 5,377 well-described cases, were myalgia, diarrhea, fever, facialedema, and headaches. Pork was the major source of infection; wild game sources were also frequently reported. These data will be valuable for estimating the illness worldwide.

SPIDER BITE

Geoffrey K. Isbister

Lancet 2011, 378: 2039-47

Spiders are a source of intrigue and fear, and several myths exist about their medical effects. Many people believe that bites from various spider species cause necrotic ulceration, despite evidence that most suspected cases of necrotic arachnidism are caused by something other than a spider bite. Latrodectism and loxoscelism are the most important clinical syndromes resulting from spider bite. Latrodectism results from bites by widow spiders (Latrodectus spp) and causes local, regional, or generalised pain associated with non-specific symptoms and autonomic effects. Loxoscelism is caused by Loxosceles spp, and the cutaneous form manifests as pain and erythema that can develop into a necrotic ulcer. Systemic loxoscelism is characterised by intravascular haemolysis and renal failure on occasion. Other important spiders include the Australian funnel-web spider (Atrax spp and Hadronyche spp) and the armed spider (Phoneutria spp) from Brazil. Antivenoms are an important treatment for spider envenomation but have been less successful than have those for snake envenomation, with concerns about their effectiveness for both latrodectism and loxoscelism.

Antivenoms are a major therapeutic intervention for envenomation syndromes, and antivenoms exist for many spider groups. However, antivenoms have been less successful in the treatment of arachnidism than have those for snake or scorpion envenomation. The use of antivenoms is based on clinical experience, which has led to discrepancies in the proportion of patients treated. For example, in Brazil, antivenom is rarely used to treat Phoneutria envenomation despite substantial and distressing effects but i sused widely to treat Loxosceles envenomation, although i tis theoretically unlikely to be effective.

Medically important spider bite and clinical syndromes

Latrodectism results from bites by widow spiders (Latrodectus spp), which have a worldwide distribution and continue to migrate between continents. There are 30 recognised species present throughout the Americas, Africa, Europe, asia and Australasia. Latrodectus spp are medium-size spiders and generally shiny black in colour with ventral red hourglass markongs. However, the body colour and markings vary greatly, sucha s the red back of Latrodectus hasselti and the male spiders are much smaller than female spiders. Most medically important bites are from the larger female spiders, but bites by male spiders have been reported in Australia.

	Latrodectus hasselti	*Latrodectus mactans*	*Latrodectus curacaviensis*	*Latrodectus indistinctis*	*Latrodectus geometricus*	*Latrodectus mactans*	*Latrodectus tredecimguttatus*
Number of bites	68	163	77	30	15	89	56
Study design	Pr, PIC	R, ED	R	R	R	R	Pr, ED
Positive identification	100%	72%	75%	20%	67%	..	..
Pain							
Local pain*	100%	38%	56%	67%	93%	91%	90%
Radiating pain to limb	38%	18%	41%	57%	7%	..	..
Abdominal pain	9%	17%	17%	67%	27%	53%	35%
Chest pain, constriction	6%	4%	10%	30%	0%	..	14%
Back pain	..	56%	..	47%	7%	..	45%
Diaphoresis	34%	22%	28%	70%	..	70%	55%
Systemic effects							
Nausea	24%	11%	..	17%	0%	..	12%
Vomiting	4%	11%	5%	17%	0%	..	..
Headache	10%	9%	8%	21%	0%	..	12%
Abdominal rigidity	..	..	..	70%	7%	45%	..
Hypertension	1%	29%	4%	..	0%	17%	..
Agitation, irritation	..	..	14%	50%	13%	44%	..

Pr=prospective study. R=retrospective study. ED=emergency department study. PIC=Poison centre study. *In most studies, local pain seems to refer to persistent or severe pain only, rather than any discomfort of the bite (initial or persistent), which differs from the prospective study in Australia.[29]

Table: **Summary of clinical effects of widow spider bites from different regions of the world**[29,31-35]

Steatoda spp

Spiders of the Steatoda genus belong to the same family as Latrodectus spp (Theridiidae, comb-footed spiders) and have a very similar shape but are uniformly dark brown to black. Phylogenic work has shown that they are closely related to Latrodectus, which is consistent with reported effects of bites from these spiders. Steatoda spp exist in most parts of the world.

Loxosceles spp

Loxoscelism results from bites by spiders from the genus loxosceles (family Sicariidae), generally known as recluse, fiddle-back, or brown spiders. There are more than 100 species distributed worlwide, but most live in South America where loxoscelism is a major health issue.

INFECTIOUS DISEASES SEEN IN A PRIMARY CARE CLINIC IN LEOGANE, HAITI

Ami Neuberger

Am. J. Trop. Med. Hyg., 86(1), 2012, pp.11-15

All diseases diagnosed in a primary healthcare clinic situated in Leogane, Haiti, were recorded prospectively during a 7-month period. Among the patients in this cohort, 2,821 of 6,631 (42.6%) presented with an infectious disease. The three most common syndromes among the patients presenting with infections were respiratory tract infections (33.5%), suspected sexually transmitted diseases—mostly among females with recurrent disease (18.1%)—and skin and soft tissue infections, including multiple cases of tinea capitis (12.8%). Of the 255 patients presenting with undifferentiated fever, 76 (29.8%) were diagnosed with falciparum malaria. Other vector-borne diseases included 13 cases of filariasis and 6 cases of dengue fever. Human immunodeficiency virus infection was diagnosed in 19 patients. Four cases of mumps were detected among unimmunized children. A large proportion of these infections are preventable. Concerted efforts should be made to create large-scale preventive medicine programs for various infectious diseases.

A CLUSTER OF DENGUE CASES IN AMERICAN MISSIONARIES RETURNING FROM HAITI, 2010

Tyler M. Sharp

Am. J. Trop. Med. Hyg., 86(1), 2012, pp.16-22

Dengue is an acute febrile illness caused by four mosquito-borne dengue viruses (DENV-1 to -4) that are endemic throughout the tropics. After returning from a 1-week missionary trip to Haiti in October of 2010, 5 of 28 (18%) travelers were hospitalized for dengue-like illness. All travelers were invited to submit serum specimens and complete questionnaires on pre-travel preparations, mosquito avoidance practices, and activities during travel. DENV infection was confirmed in seven (25%) travelers, including all travelers that were hospitalized. Viral sequencing revealed closest homology to a 2007 DENV-1 isolate from the Dominican Republic. Although most (88%) travelers had a pre-travel healthcare visit, only one-quarter knew that dengue is a risk in Haiti, and one-quarter regularly used insect repellent. This report confirms recent DENV transmission in Haiti. Travelers to DENV-endemic areas should receive dengue education during pre-travel health consultations, follow mosquito avoidance recommendations, and seek medical care for febrile illness during or after travel.

CHARACTERISTICS AND SPECTRUM OF DISEASE AMONG III RETURNED TREVELERS FROM PRE – AND POST-EARHQUAKE HAITI: THE GEO SENTINEL EXPERIENCE

Douglas H. Esposito

Am. J. Trop. Med. Hyg., 86(1), 2012, pp.23-28

To describe patient characteristics and disease spectrum among foreign visitors to Haiti before and after the 2010 earthquake, we used GeoSentinel Global Surveillance Network data and compared 1 year post-earthquake versus 3 years pre-earthquake. Post-earthquake travelers were younger, predominantly from the United States, more frequently international assistance workers, and more often medically counseled before their trip than pre-earthquake travelers. Work-related stress and upper respiratory tract infections were more frequent post-earthquake; acute diarrhea, dengue, and *Plasmodium falciparum* malaria were important contributors of morbidity both pre- and post-earthquake. These data highlight the importance of providing destination- and disaster-specific pre-travel counseling and post-travel evaluation and medical management to persons traveling to or returning from a disaster location, and evaluations should include attention to the psychological wellbeing of these travelers. For travel to Haiti, focus should be on mosquito-borne illnesses (dengue and *P. falciparum* malaria) and travelers' diarrhea.

SAREAN SECTION UNDER LOCAL ANAESTHESIA: BACK TOBASICS

Genesh Shinde

Tropical Doctor 2012, 42: 38-40

Caesarean section under local anaesthesia (CSLA) was performed on a patient with a diagnosis of gravida 2 para 1 living 1, with eight months amenorrhea and uncontrolled, refractory, complicated eclampsia with intrauterine fetal demise and a previous lower segment Caesarean section. As she was at very high risk (ASA Grade III) for main stream anaesthesia, i.e. general/regional, lidocaine (0.5%) was used. CSLA should not be seen as a primitive/retrograde step. Instead, it should be considered to be a life-saving procedure, especially for women in rural India. Anaesthetists are not dispensable but with them on standby one can avoid mainstream anaesthesia complications in high-risk patients.

SULFADOXINE-PYRIMETHAMINE RESISTANCE AND INTERMITTENT PREVENTIVE TREATMENT DURING PREGNANCY: A RETROSPECTIVE A ANALYSIS OF BIRTH WEIGHT DATA IN THE DEMOCRATIC REPUBLIC OF CONGO (DRC)

Joris L. Likwela

TM IH, Vol. 17, No. 3, pp.322-329

IPT-SP remains an effective strategy in Kisangani and Mikalayi where the therapeutic failure to SP in children with clinical malaria was 21.7% and 1.6%, respectively, while IPTp-SP effect seems lower in Rutshuru where the therapeutic failure to SP was 60.6%. The threshold value of SP resistance at which IPTp-SP fails to have a significant impact on birth weight and LBW is unknown. Considering that no alternative is currently available, additional studies on the efficacy of IPTp-SP in the areas of high SP resistance such as Rutshuru are needed so that the threshold at which this intervention fails to provide any benefit is determined with some precision.

INFECTIOUS ETIOLOGIES OF ACUTE FEBRILE ILLNESS AMONG PATIENTS SEEKING HEALTH CARE IN SOUTH-CENTRAL CAMBODIA

Matthew R. Kasper

Am. J. Trop. Med. Hyg. 86(2), 2012, pp. 246-253

The agents of human febrile illness can vary by region and country suggesting that diagnosis, treatment, and control programs need to be based on a methodical evaluation of area-specific etiologies. From December 2006 to December 2009, 9,997 individuals presenting with acute febrile illness at nine health care clinics in south-central Cambodia were enrolled in a study to elucidate the etiologies. Upon enrollment, respiratory specimens, whole blood, and serum were collected. Testing was performed for viral, bacterial, and parasitic pathogens. Etiologies were identified in 38.0% of patients. Influenza was the most frequent pathogen, followed by dengue, malaria, and bacterial pathogens isolated from blood culture. In addition, 3.5% of enrolled patients were infected with more than one pathogen. Our data provide the first systematic assessment of the etiologies of acute febrile illness in south-central Cambodia. Data from syndromic-based surveillance studies can help guide public health responses in developing nations.

New drugs active against Gram-negative bacilli

Helen Boucher (Tufts Medical Center, Boston, abstr LB-27) reviewed literature, clinical trial registries, and interviews with pharmaceutical leaders to identify new antimicrobial therapies for drug-resistant Gram-negative bacilli. She identified nine drugs in various stages of clinical development, including one ß lactamase inhibitor in a phase 3 trial, CXA-201, and six compounds (an aminoglycoside, two ß lactamase inhibitor a tRNA synthetase inhibitor a peptide mimetic and a fluorocycline) in phase 2 studies of acute bacterial skin and skin-structure infections, complicated urinary tract infections, or complicated intra-abdominal

infections. Two agents-a siderophore monosulfactam and a ß lactamase inhibitor-are currently in phase 1 or preclinical development.

Reduction in the use of antibiotics

Derik Gross (poster 177) reported resilts from a long-running antibiotic stewardship programe in which the relation between antibiotic use and resistance was studied at the Wesley medical Center (Hattiesburg, MS, USA) from 1993 to 2009. Direct correlation was noted between susceptibility and use. In 2003, only 66% of Pseudomonas aeruginosa isolates were susceptible to gentamicin, but by 2009, susceptibility had increased to 92%. The P aeruginosa susceptibility to ceftazidime had risen from 68% in 2003, to 90% in 2009. In 1995, only 63% of Escherichia coli isolates were susceptible to ampicillin plus sulbactam compared with 83% in 2007. Susceptibility of Klebsiella pneumoniae to ampicillin plus sulbactam also improved with decreased use of the treatment. In 1994, only 75% of K pneumoniae were susceptible to ampicillin plus sulbactam, but this had increased to 97% by 2007.

GUIDELINES FOR THE DIAFNOSIS AND ANTIBIOTIC TREATMENT OF ENDOCARDITIS AIN ADULTS: A REPORT OF THE WORKINF PARTY OF THE BRITISH SOCIETY FOR ANTIMICROBAIL CHEMOTHERAPY

***Kate Gould F*.**

J Antimicrob Chemother 2012, 67,: 269-289

The BSAC guidelines on treatment of infectious endocarditis (IE) were last published in 2004. The guidelines presented here have been updated and extended to reflect developments in diagnostics, new trial data and the availability of new antibiotics. The aim of these guidelines, which cover both native valve and prosthetic valve endocarditis, is to standardize the initial investigation and treatment of IE. An extensive review of the literature using a number of different search criteria has been carried out and cited publications used to support any changes we have made to the existing guidelines. Publications referring to *in vitro* or animal models have only been cited if appropriate clinical data are not available. Randomized, controlled trials suitable for the development of evidenced-based guidelines in this area are still lacking and therefore a consensus approach has again been adopted for most recommendations; however, we have attempted to grade the evidence, where possible. The guidelines have also been extended by the inclusion of sections on clinical diagnosis, echocardiography and surgery.

FOSFOMYCIN: AN OLD-NEW ANTIBIOTIC

Raz R.

CMI 2011, 18, 4-7

Fosfomycin is a broad-spectrum antibiotic discovered in Spain in 1969. It has bactericidal activity against a wide range of bacteria, including gram-negative micro-organisms and some gram-positive bacteria, such as staphylococci. Initially fosfomycin was administered parenterally and only to patients with severe infections. Today it is often dispensed as fosfomycin–trometamol, an oral formula recommended in the treatment of urinary tract infections. Fosfomycin–trometamol in a single dose is indicated for the treatment of women with uncomplicated urinary tract infections.

COLISTIN: NEW LESSENS ON AN OLD ANTIBIOTIC

Yahav D.

CMI 2011, 18, 18-29

Colistin has been re-introduced into clinical practice for the treatment of carbapenem-resistant Gram-negative bacteria. Studies in the last decade attempted to reconstruct the path that present-day medications undergo prior to clinical use. In this review, we summarize the results of recent clinical studies. Colistin was associated with lower mortality than no effective treatment and higher unadjusted mortality than β-lactams in non-randomized clinical studies. However, it was administered to sicker patients with carabapenem-resistant bacteria. Overall, nephrotoxicity rates were not higher with colistin in these studies, and colistin-induced nephrotoxicity is reversible in most patients. The emergence of colistin resistance has been described in high-use settings. Synergy with carbapenem, rifampin and other antibiotics has been reported *in vitro*. Randomized controlled trials are ongoing or in planning to assess this and other aspects of colistin use in clinical practice.

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COMPLEX SOCIAL HELP TO INDIVIDUALS WHO EXPERIENCED DOMESTIC VIOLENCE PROVIDED BY RESIDENTIAL FACILITIES SLOVAK REPUBLIC

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ABSTRACT

The article is a basic outline of important principles and standards within complex social help to individuals who experienced domestic violence provided by social service residential facilities in Slovak republic. It emphasizes the priority of ensuring protection and safety of endangered individuals, the importance of the social work with families, selected principles of the specialized social counseling and the social help focused on solving the socio-economic consequences of violence. Last but not least, the active cooperation of the facility with other helping professions and institutions is important for the client in order to make the social work holistic and complex.

Key words

Domestic violence. Complex help. Social counseling. Residential facilities.

Introduction

Secure women´s shelters are regarded as the basic social help standards in case of domestic violence. With the respect to international context we can speak about shelters, refuges, intervention centers, women´s refuges, crisis centers and some more (Mátel, 2009a). Nowadays in Slovakia, there are mainly crisis centers (Article 62 Act No. 305/2005 Coll.) and emergency housings (Article 29 Act No. 448/2008 Coll.). With regard to endangered people of the older age or people with a serious physical handicap, shelters could be centers for the elderly or social service institutions (Article 38 Act No. 448/2008 Coll.), in case of children usually children´s homes serve as shelters (Article 49 Act No. 305/2005 Coll.).

Residential care is an important element within the system of a complex care aimed at all victims of domestic violence. It is highly important to keep in mind that this type of care should be applied only in extreme situations – when other forms of social services are not applicable, respectively they would not lead to health protection and to integrity protection of an individual who is exposed to any type of violence. There is a general tendency in many countries to let the children grow and live in their natural environment. Thus, all issues related to housing should be the responsibility of the person who shows the signs of aggression. The legal presumption that supports this solution in Slovak Republic is an Amendment of Police Act No. 491/2008 Coll. claiming that „eviction“ of a violent person – can be executed by police (as a part of their legal competence) for 48 hours. Despite legitimate comments related to the length of eviction time (for instance in Austria or Czech republic the duration is minimum 10 days) and due to an inconsistent application of this „possibility“ by members of the police force, we perceive this issue as an important systemic change within the help strategy. By now the person who was exposed to domestic violence was under enormous pressure. If she wanted to escape from a violent relationship she had to leave her home that subsequently led to social and economic losses.

Despite several systemic changes, there are still groups of people (individuals, but also mothers with children) who experienced domestic violence and for whom staying in some type of residential institution is a temporary solution. In aforementioned cases such groups of people become users of social services and it is important to provide them a complex social help. Optimal solution would be to develop institutions that are well - prepared to work with this type of target clients. Not just these institutions but also residential institutions of social services, in which people who have experienced domestic violence found a shelter, should offer a complex care.

The submitted article provides an outline of several principles of a complex care, though we are fully aware that it does not cover all relevant areas. Providing social services is nowadays influenced also by philosophical orientation of a particular social services provider. For instance feminist - oriented organizations consider as a quality standard exclusively "the women´s homes" that can be found in Austria or Germany. Their philosophical background lies in emphasis on gender based violence against women. The houses are established by non-government organizations and exclusively managed by women (Appelt – Kaselitz 2002). Men are not allowed to enter them. Based on this regulation some of these houses refuse to provide accommodation to boys - sons of their women clients from certain age. Their philosophical roots differ from faith (Christian) based social services providers. There are some general principles of a complex social work with domestic violence victims that can be identified (Mátel, Roman, L. - Štepanovská, 2011). We will introduce some of them:

- Priority of protection and safety of endangered people;
- 24 hour service – possibility to admit endangered people in crises any time of the day;
- free of charge services, respectively low payment in cases of restricted financial incomes of the client;
- strict respect for the client´s right to self-determination;
- confidentiality in the counseling relationship;
- social work with a family, including active participation of a biological, respectively broader family surrounding of the client;
- providing help to clients´ children;
- providing not just basic, but also specialized social counseling;
- interprofessional and multi-agency approach, which means active cooperation with all relevant helping institutions;
- providing a psychological counseling;
- providing a legal counseling;
- help and support in the phase of becoming independent, including the process of job seeking, searching for financial resources and place to live;
- precise case documentation.

Ensuring the protection and safety

People who experienced domestic violence usually face the risks that coincidence of such acts will repeat and increase over time. One of the main priorities of social workers in these cases is to ensure protection and safety of an endangered person, or more endangered people (for instance a mother with a child, or more children). Due to the diagnostic process it is highly important to identify the extent to which are those people jeopardized and to define all relevant risk factors. Residential institutions should meet the basic standards of safety. Respect for and maintaining confidentiality related to the place of a temporary stay should be strictly kept. This requirement is valid also for women - clients of residential institutions. As it

was revealed - they are usually "those" who disclose their temporary place of living to a violent person. Such requirement is an integral part (as an obligation) of house rules, respectively of other written document. Among other safety arrangements we can mention safety equipment, guard duty or a lodge, and face-to -face communication only when another person is present. Keeping the address confidential can be guaranteed only in institutions that primary work with this target group. Based on report, in 2006, there were just 6 institutions with a confidential address that provided help to domestic violence victims. The rest of them did not meet this standard (Holubová, 2006).

In cases the institution offers an outpatient counseling, assessing the danger and creating a safety plan is an integral part of a counseling process. This plan should stem from the current situation of an endangered person and should be regularly re-evaluated.

Social work with families

As Levická (2007, s. 81) states, most of the social work clients are members of a particular family and together with other family members must cope with daily hassles. Itt means that if we work with one family member, we must do it with the respect to a family context. In cases of domestic violence this relates mostly to women with children. Based on the research of Mátel (2009a) that was conducted in several institutions of social services in western part of Slovakia, between 2002 and 2009 almost 82% of women staying in institutions of social services had at least one child with them. Together 115 women diagnosed with domestic violence and 184 children were staying in these institutions. 28% of women with children declared, that their children were facing physical or sexual abuse, in the rest of the cases we presume that children were indirect victims of violence. Unfortunately, helping strategy in residential institutions for adult people is rarely oriented specifically on their clients 'children, respectively families. Based on the data from the final report called "Monitoring of organizations providing support to victims of domestic violence", psychological counseling for women victims' children was offered only in 18 institutions (out of 85) of social services or crisis centers (Holubová, 2006). Taking care of women clients' children reported only 11 institutions. Apart from multidisciplinary cooperation with a psychologist and a special education teacher, we propose having a person (full time) whose job content would be directed towards children´s needs (free- time activities, taking care of children) or in general towards mothers with children.

Due to domestic violence, social work with families is frequently ignored, since quite frequently a family is the core of suffering. The fact that a woman has experienced domestic violence in marriage or a partnership does not mean that her home cannot be a shelter for her. Parents, siblings, relatives or friends can help a woman who is endangered by domestic violence. They form something like a "natural circle" around her, though they cannot offer a place to live for her and she uses services of a residential center, they can offer something else, especially emotional support, material and financial help. Though this type of help is not professional, it is highly important for an endangered woman; moreover this type of help can be described as inevitable. Therefore the social workers should not forget about active cooperation with a client´s family members. Within the diagnostic process it is necessary to identify those members from the family, who are willing to cooperate so they can be actively involved in the process of complex help. When talking with a woman client about this possibility, questions like these could be helpful: *Did you ask for help your relatives? If yes, whom exactly? How did they help you and which were the areas they could not help in? Did you search for help among your friends? How did they help? Could you assess positive and negative helping experience in both cases: when helping people were your family members or*

relatives, and were helping people were your friends? (Mátel, 2009a, s. 121). Biological family plays an important role in the process of clients' social inclusion. Therefore social workers should at least know about the importance of a social context and about the role of close relatives and subsequently recommend them to the woman client. More suitable would be to contact them and actively involve them into counseling and into social inclusion of their relative. This can be done only in case we obtain consent from the woman client. According to Act No. 448/2008 Coll. providers of social services are obliged to cooperate with families when creating appropriate conditions necessary for a woman-client´s comeback into her natural environment (Article 7d). On the other hand there is a danger that some relatives would react differently (show improper reactions) in case of domestic violence and thus increase the level of traumatization. We will mention some of typical improper reactions: ignoring, trying to persuade others that a woman is mentally ill, or a liar. The worst reactions of all is expressing support to a violator instead of to a victim, and blaming the victim, not a violator. Due to the possibility of having such individuals within a family, it is highly necessary in early stages to isolate the victim from this person/these people. Since our priority is to stop violence, it is not appropriate to include a violent member of the family into intervention without helping him realize and admit his violent behavior and without his resolution to quit abusive behavior that can be done only with assistance of professionals. That´s why there is no work with violators in residential centers.

Specialized social services – social counseling

Woman, respectively other adult person who has experienced domestic violence needs support required for restoring inner strength and finding inner peace and balance. „If the counselor really wants to help the victim of domestic violence, she should know and be aware of all important signs that indicate this phenomenon; and at the same time she should respect victim´s inner life, though she might not understand it, or cannot identify with it," – emphasizes Bednářová (2006). The counselor should not insist on a client. The boundaries the client set must be respected without any questioning. All authors of the article share the same opinion that counseling women who experienced domestic violence should be a client centered counseling, stemming from Carl Roger´s approach (Mátel, 2009b).

Indicating to violence is one of basic steps in the process of its remedy and a healing phase. Talking about everything the woman-client wants to in the course of counseling process enables her to create a clear picture of her situation and to see her situation from another perspective. There are several recommended rules that should be kept when conducting a counseling interview with a client who experienced domestic violence (Čirtková – Vitoušová a kol., 2007; Mátel, 2009b):

- The counselor should introduce himself/herself and to describe briefly her/his specialization;
- sensitive and patient approach – do not hurry, do not interrupt, the woman–client needs time to formulate her sentences, she might feel ashamed;
- empathetic approach – trying to enter private perceptual world of a woman-client;
- confirm emotions- let the client cry and let it all out, ensure her that she has a right to cry, comfort her in such situation – "it is a common reaction to uncommon situation";
- express interest – verbally or nonverbally (eye contact, facial expression, gesticulation, body position), encourage the client to talk, ask questions, paraphrase what was already said, summarize, the woman-client should feel genuine interest;
- express trust to everything the client said – sometimes it is almost unbelievable what the woman-client is saying, sometimes her situation is even worse than it appears, the woman-client should feel acceptance and safety;

- appraise client´s courage to seek help and her willingness to change her situation, point to her strengths;
- designate domestic violence and impossibility to accept it – ensure the client that a violator is the only person responsible for violence; and that she did not cause it though the violator claims the opposite;
- ensure the woman - client that the situation can be solved (she might think nobody and nothing can help her);
- counselor should balance between guiding and acceptance; she should set some fixed points and clear structure in communication and she should direct her client;
- counselor should not offer advice (non-direct approach) – encourage and help the client find her own way, offer help, but never make her come to a solution quickly;
- respect the client´s decision – though the counselor might not agree with it (the client refuses to leave the violator..);
- honesty – counselor should be open and true when informing the woman-client about complexity of her situation, and she should never withhold important information or promise what cannot be do done;
- develop the dialogue – so that the counselor knows what is happening inside of her client, it is useful to ask about it;
- questions must be asked clearly and in the way the client understand them – it is not good to ask a lot of questions at the same time;
- identify the extent of danger – especially if the violator is addicted to any substances, or he threatens to kill the woman-client, attacks children and many other forms of increased danger;
- direct the woman-client towards future ;
- propose small steps leading to a change (not the general change at once).

An integral element of the social and legal counseling is a system of basic legal information on a valid legislative in Slovak Republic that can be used in cases of domestic violence, for instance:

- information on filling the criminal complaint;
- possibilities to ask police for assistance connected with a violator eviction;
- statute of Civil justice system/law with the respect to tenancy by the entirety and interim measures;
- possibilities of financial reparations;
- assistance of a social worker in particular situations – when exercising for one´s´ own rights, social workers might assist in the process of filling out divorce forms, or when following issues are being negotiated: to entrust a child to personal custody or to determine the payment of maintenance and some others.

Empowerment and help oriented to resolution of social – economic consequences of violence

In the aforementioned study of Mátel (2009b) the research sample consisted of 115 women who experienced violence and were temporarily placed to institutions of social services, they identified 80% women as economically non-active. There were two groups that they perceive as distinctive: women on maternity leave and unemployed women. The biggest group consisted of women on maternity leave that means women whose income represented parental financial support and children´s allowance (child benefit). In this case that was 44 women (38%). Behind this category unemployed women followed (38 women, 33%), the next group (23 women, 20%) consisted of employed – economically active women. Their employment

was negatively affected by the fact they escaped from abusive relationship and left their homes. Reinforcement of women and their empowerment are regarded as highly important principles of complex help within residential institutions for domestic violence victims. Counseling should lead to independent decision making and to increase self-confidence of clients. The role of a social worker or a social counselor should be oriented on support in the process of becoming independent that includes systematic help in searching for different types of resources (financial, material and others), in job searching and acquiring or establishing a new home. The counselor cannot make decisions in the name of her client, she should not tell her woman client what to do and what decision she should make, instead she should enable and empower her client to discover her own solutions.

Active cooperation with other helping professions and helping institutions

Since domestic violence must be perceived as a complex phenomenon, temporary stay in residential institution cannot guarantee security of people who experienced domestic violence. It is needed to communicate and cooperate with other helping institutions and professionals. The ideal state would be if these people could create a multidisciplinary team. Each profession and each institution could represent an important element within a system of complex help only in case they are firmly intertwined (Mátel, Schavel, 2011, p. 240). As relevant institutions and professionals we consider employees of Local Labor Offices, Social Affairs and Family, Municipal Offices and Authorities, but also employees of NGOs who actively help victims of domestic violence, police workers (state and municipal), psychiatrists and psychologists, priests. When the clients are children we should not omit educators, or teachers. Holistic approach is a core of an active cooperation among the aforementioned institutions. Holistic approach is an integrative approach that takes into consideration all aspects of person´s being: physical, mental, emotional, spiritual and social as well (Mátel – Oláh – Schavel, 2011, p. 98). Complex system of help seems to be more appropriate for endangered people since it has a potential to remove unnecessary traumatization caused by repeating and re-experiencing of painful moments.

Conclusion

In the context of help aimed at individuals who experienced domestic violence, residential centers of social services and Institutions of social and legal help for children create an important element of a complex help. In the article we introduced some basic principles related to help in these institutions from the perspective of holistic and systematic approach toward this target group. These principles should be present in all activities and should reflect the quality of provided services. The submitted article does not cover the whole area of issues related to domestic violence but the authors would like to give rise to professional discussions.

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