Original Articles

Research of common smoking triggers and inhibitors
Mária Šmidová

Support for employment of homeless people in conditions of the Slovak Republic
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Communication with the family of an adolescent from the socio-educational perspective
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Social policy in the labour market of young people in Slovakia
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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 - 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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INTRODUCTION

Social work in contemporary society brings new perspectives of attention to a person. This lies in a holistic approach to an individual. From this point of view, to help someone in a specific situation it is necessary to consider all factors that can influence a specific problem (Klčovanská, 2005). The project was based on McEwen et al. (2006) research. Previous studies have highlighted that smoking cigarettes are very dangerous for health and have addictive properties. However, a high percentage of UK population are smokers. The aim of this study is to determine major attributes of smokers relating to smoking behavior from physiological, psychological and cognitive-behavioral perspectives. From the physiological point of view, developed dependence influences individuals to continue smoking despite negative consequences. In the present study, the Nicotine Dependence Test was used in order to determine the level of dependence on nicotine among the individuals. From a psychological perspective, Prochaska and Di Clemente (1992) developed the idea of an Addiction Stage of Change. These explains to what degree people are aware of their problem with smoking and whether they want to change their unhealthy behavior. This study will use the Readiness To Change Questionnaire (then URICA). It will refer to those who are either heavy smokers, who do not want to change into light smokers and those who are trying to cease from smoking. McEwen et al. (2006) had looked at the cognitive-behavioral state of smokers. They divided major triggers and inhibitors of smoking. Following their research, the present study used the amended Twenty Statement Test in order to determine the main triggers and inhibitors within the groups. Such an exhaustive analysis of smokers’ attributes can contribute to better understanding of smokers needs and could help forming adequate smoking cessation help and/or prevention.

HYPOTHESIS

Based on the issues mentioned above, the main hypothesis of the study is:

Stage of addiction, dependence, age, gender, status and occupation will be significant independent variables that condition the saliency of different types
of smoking triggers and inhibitors.

METHODS

120 young people between the age of 18 and 35 living in London participated at the study. Using the Readiness To Change Questionnaire (Rollnick, 1992) to measure stage of readiness to change, participants had been divided into the groups of heavy smokers, who did not want to change and light smokers, who were trying to cease from smoking. Nicotine dependence was measured by the Fagerstom Nicotine Dependence Test (Fagerstom et al, 1998). Amended Twenty Statement Test had been piloted for smoking triggers and inhibitors. Participants had to write in their own words what are their triggers and inhibitors of smoking. Afterwards, three psychology students summarized the triggers and inhibitors into 13 categories. These had been used for further analysis.

RESULTS

Pearson correlation analysis showed significant association of stage of change and nicotine dependence. Binominal analysis showed significant differences in the saliency of triggers and inhibitors of smoking.

Figure 1. The proportional sum of all triggers and inhibitors, mentioned by precontemplation group.
smoking between different types of smokers.

In overall, graph 1 and graph number 2 showed, pre-contemplation stage reported more triggers, whereas people in participation stage reported more inhibitors. Mentioned triggers categories were daily routine, relax time, high stress, coping strategy, social events, low stress and boredom. First three categories were significantly more salient in pre-contemplation stage and social events was more salient in the participation stage. Inhibitor’s categories included economic issues, health issue, vulnerable people, luck of time, relaxation time and prohibition. The presence of vulnerable people was the most salient inhibitor for both groups. Students considered their economic situation to be significant in their smoking habits.

**DISCUSSION**

The aim of the present study was to individuate triggers and inhibitors that were decisive to different groups of smokers.

Overall, 7 main categories of triggers had been found in both, the pre-contemplation and the participation group. These were “daily routine”, “relaxation time”, “coping strategy”, “low stress activities”, “social events”, “high stress activities” and “boredom”. Both stage groups included all of the triggers categories. These results would partially reject the first hypothesis. However, the percentage by which individual groups mentioned specific categories supported this hypothesis. The pre-contemplation group reported significantly more triggers than the participation group. This finding is consistent with previous research. For example, Cronk and Piasecky (2010) run a study about smoking patterns among university students and they had found that less cue control over smoking was found for daily than non-daily smokers. Looking more precisely at the categories, daily routine, relaxation time and coping strategy were significantly more salient in the pre-contemplation group than in the latter one. Therefore, the first hypothesis had been supported partially.

Considering the inhibitors section, the results opposed the trigger section. The participation group reported more inhibitors than the pre-contemplation group (Cronk and Piasecky, 2010). Even though both groups mentioned again all categories, the partici-
pation group showed significantly more saliency in “economic situation”, “vulnerable people” and “health issues”. Other inhibitors categories mentioned were: “lack of time”, “relaxation time” and “prohibition”.

The third and fourth part of hypothesis is relating to gender. Participants were divided equally in participation and precontemplation groups. Binomial tests showed no significant relationship between the genders in any category except health issues. The only differences had been found concerning health issues. Men were more prone to withdraw from the cigarette, when they were at risk with health. Summarising, these hypotheses had not been met. On the other hand, the results were consistent with previous studies about smoking habits. Generally, previous studies have show that men are more likely to use and misuse alcohol and other controlled drugs, but no tobacco (see Marlatt and VandenBos, 1997).

Therefore, it could be argued that gender differences focus predominantly on drug use/abuse with the exception of tobacco consumption.

Another part of the study looked for differences between statuses. People who were single reported more attention to health problems as the main inhibitors and to social events as the major triggers, while people who lived with somebody are more likely to cease smoking when vulnerable persons were present. Therefore, the general hypothesis had been met partially. From the dependence point of view, previous studies provide significant differences in tobacco use between married people and never married. In contrast to the findings of this study, married people used to smoke more than people who never had been married (Marlatt and VandenBos, 1997). However, this could be the result of the lifestyle and other characteristics of married people rather than a consequence of family status as such. More investigation is therefore needed to support or reject external validity of these results.

The last part of the hypothesis refers to participant occupation. There was no significant difference between the responses in triggers. However, intellectual workers were more prone to cease smoking in presence of vulnerable people or when health issues were raised. In contrast, manual workers as well as students were significantly more interested in the economic situation. Results from the Economic situation had been consistent with previous studies which support the hypothesis that students are significantly more likely to withdraw from smoking, when they have no stable income (Marlatt and VandenBos, 1997). Therefore, also the last pair of hypothesis had been partially met.

Overall, the results from this study gave evidence of the importance of paying attention to all aspects of human beings. Dependence on nicotine was associated with stages of addiction and different categories of triggers and inhibitors had been salient on specific groups of smokers. This results show the extreme importance to consider all aspects of human beings (Šmidová, 2005).

On the other hand, past evidence also looked on other possible factors that might be influencing smoking habits and smoking cessation. For instance, Kassel and Yates (2002) highlighted the importance of A coping repertoire and High-risk situations, Quitting self-efficacy and Motivation to quit. These factors had been found to be crucial in smoking behavior among individuals, too. Future research should also take into consideration this side of the research.

**CONCLUSION**

The hypothesis of the present study had been partially supported. All created groups reported each of the triggers and inhibitors categories. Significant differences between the groups had been found in respect of the saliency of these categories. In other words, different types of smokers considered some categories more significant from others. These results support the idea to consider individual characteristics as crucial in creation of smoking cessation programs.

**REFERENCES**


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SUPPORT FOR EMPLOYMENT OF HOMELESS PEOPLE IN CONDITIONS OF THE SLOVAK REPUBLIC

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Constantine the Philosopher University in Nitra, Faculty of Social Sciences and Health

Key words: employment; homeless people; labour market; measures for employment

Abstract

The article discusses the current situation of the homeless in Slovakia, particularly in the Nitra region. Account is taken of the potential growth in employment of homeless people, the willingness of employers to hire homeless people, the socio-economic situation of the homeless and of elderly unemployed people and their activities in the labor market. In conclusion, potential measures are offered in order to increase employment of the homeless in the form of support measures in the domain of working conditions, further training and support measures to promote employment in overcoming prejudice against homeless people.

INTRODUCTION

Employment of homeless people in Slovakia has been currently at a very low level, and therefore the process of rate growth of these people’s employment is a complex issue. This article presents aspects of the issue, describes steps that should be taken in order to start on a large scale the process of broader absorbing of workers amongst the homeless in the manufacturing process.

We believe that the strong limit of employment of homeless people is their non-acceptance by employers. Therefore, we decided to carry out a survey in the Nitra region, particularly in three shelters in Nitra, Levice and in Nové Zámky. The survey had been conducted from February to November 2012 on a sample of 301 respondents. The survey had the form of questionnaires designed for employers and the homeless, by which we wanted not to only highlight the problems encountered, but at the end of the article, to present measures that would be effective in addressing this issue. From the survey we have selected only some of the questions. As the majority of homeless people fall into the age category above 50 (Hradecká, Hradecký, 1996), we created more questions about their position in the labor market. We are interested in the advantages and disadvantages of work of the elderly homeless from the point of view of employers, using the experience and skills of homeless people, their educational level, the cooperation of enterprises with employment offices in employing the homeless and the suggestions for improving the employment situation of these people. The processed results are presented in the precentage evaluation.

From the data it is evident that employers are considerably dissatisfied with work of homeless people (81.4 % negative assessment). 11% of employers have mixed experience (both positive and negative) and no employer (0%) assigned clearly positive assessment for

<table>
<thead>
<tr>
<th>Satisfaction with work of homeless people</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>very satisfied</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>satisfied</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>neither satisfied nor dissatisfied</td>
<td>33</td>
<td>11.0</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>61</td>
<td>20.3</td>
</tr>
<tr>
<td>very dissatisfied</td>
<td>184</td>
<td>61.1</td>
</tr>
<tr>
<td>no response</td>
<td>23</td>
<td>7.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>301</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1. Satisfaction of employers with work of homeless people.
work of homeless people (very satisfied, satisfied).

We were interested in the fact which domains, features or activities are rejected by employers with regard to job offers for homeless people. The percentage representation of the responses is presented in Table 2.

As the table indicates, employers appreciate mainly steadfastness of workers, their tendency to remain in the given working position, good knowledge of the structures and functioning of the organization, reliability, loyalty and responsibility. Experience from the previous trainings is considered by most employers as clearly negative for the employment of the homeless.

In order to make the observation balanced and objective in terms of employment problems of homeless people older than 50, we investigated the disadvantages of their employment in comparison with employment of the homeless at younger age. The views of employers on the disadvantages of employment of elderly homeless people are presented in Table 3.

Employers identified the greatest disadvantage of elderly homeless people in comparison with work of younger homeless people to be the domain of adoption of the latest technology (45.8% clearly negative, 18.3% unclear assessment) and computer skills (38.9% clearly negative, 13% unclear statement).

It is considered disadvantageous to employ homeless people above the age of 50, as assigned by up to 48.5% of employers surveyed, due to frequent health problems, whereby each case must be individually assessed. Barták (2004) also inclines towards this view in his publication “Health condition of the homeless and its determinants”. In some observed indicators on the basis of responses the assumption of disadvantageous employment of elderly workers has proved to be unfounded. (For instance, in case of the assumption that elderly employees represent increased financial costs for an enterprise with regard to higher wages (31.6% unclear negative responses) or other higher costs (54.5% clear negative responses). According to the percentages derived from the responses in Table 3, we can conclude that most of employers consider employment of this group of people rather disad-

**Table 2. Reasons for non-employment of homeless people**

<table>
<thead>
<tr>
<th>Reasons for non-employment of homeless people</th>
<th>Absolutely not</th>
<th>Partly yes</th>
<th>Absolutely yes</th>
<th>No response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>have experience, training</td>
<td>56.5</td>
<td>33.6</td>
<td>2.0</td>
<td>7.9</td>
<td>100.0</td>
</tr>
<tr>
<td>are stable, remain in their working position</td>
<td>60.5</td>
<td>24.3</td>
<td>5.6</td>
<td>9.6</td>
<td>100.0</td>
</tr>
<tr>
<td>are reliable, loyal, responsible</td>
<td>49.5</td>
<td>40.5</td>
<td>2.3</td>
<td>7.7</td>
<td>100.0</td>
</tr>
<tr>
<td>are efficient, productive, they appreciate the work</td>
<td>46.2</td>
<td>40.9</td>
<td>4.0</td>
<td>8.9</td>
<td>100.0</td>
</tr>
<tr>
<td>are familiar with the structure and organization in the enterprise</td>
<td>55.1</td>
<td>27.2</td>
<td>8.3</td>
<td>9.4</td>
<td>100.0</td>
</tr>
<tr>
<td>rain young, new employees</td>
<td>49.2</td>
<td>30.6</td>
<td>9.6</td>
<td>10.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 3. Disadvantages of employment of elderly homeless people (in comparison with younger ones)**

<table>
<thead>
<tr>
<th>Disadvantages</th>
<th>Absolutely not</th>
<th>Partly yes</th>
<th>Absolutely yes</th>
<th>No response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>their working skills and abilities are backward</td>
<td>43.9</td>
<td>39.5</td>
<td>6.0</td>
<td>10.6</td>
<td>100.0</td>
</tr>
<tr>
<td>their expertise is backward</td>
<td>47.5</td>
<td>35.2</td>
<td>7.3</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>they do not acquire new skills quickly enough</td>
<td>56.8</td>
<td>18.6</td>
<td>14.0</td>
<td>10.6</td>
<td>100.0</td>
</tr>
<tr>
<td>they do not acquire new knowledge quickly enough</td>
<td>53.8</td>
<td>20.3</td>
<td>14.6</td>
<td>11.3</td>
<td>100.0</td>
</tr>
<tr>
<td>they are weaker in adopting new technologies</td>
<td>45.8</td>
<td>18.3</td>
<td>25.9</td>
<td>10.0</td>
<td>100.0</td>
</tr>
<tr>
<td>lower mastering of work with computer</td>
<td>38.9</td>
<td>37.9</td>
<td>13.0</td>
<td>10.2</td>
<td>100.0</td>
</tr>
<tr>
<td>have higher wages (salaries)</td>
<td>40.5</td>
<td>31.6</td>
<td>17.3</td>
<td>10.6</td>
<td>100.0</td>
</tr>
<tr>
<td>heir employment is related to other higher costs</td>
<td>54.5</td>
<td>30.6</td>
<td>4.0</td>
<td>10.9</td>
<td>100.0</td>
</tr>
<tr>
<td>tend to have more health problems</td>
<td>48.5</td>
<td>28.6</td>
<td>15.3</td>
<td>7.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>
vantageous in many respects (domain of computer skills, poor acquisition of expertise, higher costs, etc.)

The same is true in the areas of job skills comparison (39.5% of employers do not consider this domain poorer for elderly workers as compared to younger workers) and mainly in the domain of expertise, elderly employees are, according to 47.5% of respondents, definitely not backward in comparison with younger employees.

In the following question the employers (based on the situation in their company) were asked to identify the notably problematic group of homeless people. 53 employers gave an opinion on this question, which means 17.5% of all respondents. After a thorough analysis of the obtained opinions the most problematic groups can be considered:

- those who do not have sufficient qualifications, only elementary education (30.4%);
- those with weakened stamina or those who are often ill or have reduced capacity to work (20.8%);
- elderly homeless women (4.8%);
- elderly homeless men (1.6%);
- permanently unemployed homeless people (1.6%);
- unwilling / unable to adopt new technologies (1.6%).

It is necessary to point out the fact that 38.4% of employers emphasized that they do not consider elderly homeless people to be a problematic group.

The opportunity to freely express and formulate their own proposals to improve the employment situation of elderly homeless people (+50) was used by 23.9% of respondents (72 employers). We have obtained a mixture of various statements, findings and recommendations:

- majority, 25.3% mentioned the possibility to improve cooperation with employment offices in creating new job opportunities and favorable conditions for the employment of the elderly homeless. Based on the experience, employment offices have no special programs focused on the issue of employment of elderly homeless people;
- the second most common kind of recommendations are those which encourage employers to hire elderly homeless people by means of reductions in the tax burden – 16.1%;
- employers often propose to ensure anti-discrimination measures and its consistent control for employment – what should be taken into consideration are qualifications, knowledge and work ethics, not age – 13.8%;
- at the same time they mention the need for the implementation of activities that would promote the interest of elderly workers in training and adoption of new technological trends (it is reported that some of them have groundless fear of computers, etc.), which would increase their flexibility, - 11.5%;
- addressing such situation is very burdensome for employer – 9.2%, also 9.2% of employers recommend that early retirement is allowed again;
- other 9.2% of employers expressed the need for legislative changes towards greater freedom and flexibility in addressing working time, negotiation and extension or cancellation of employment, etc.;
- the smallest percentage (4.6%) represented the recommendations to use elderly workers to carry out public or seasonal works.

To make the unemployed person move active in the labor market and to look for a job intensively, he should have to a certain extent hope to find a job. Therefore the respondents were asked to evaluate their chances of finding suitable employment.

<table>
<thead>
<tr>
<th>Evaluation of chances of finding suitable employment</th>
<th>% resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>is convinced that he/she will manage to find suitable job</td>
<td>16.9</td>
</tr>
<tr>
<td>believes in failure rather than success</td>
<td>17.2</td>
</tr>
<tr>
<td>is not clearly convinced about neither success nor failure</td>
<td>20.7</td>
</tr>
<tr>
<td>probably will be more unsuccessful than successful</td>
<td>19.7</td>
</tr>
<tr>
<td>does not believe at all that he/she will find any job</td>
<td>25.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

When evaluating chances of finding suitable employment, pessimism is more prevalent, which is not a good starting point for activities of the unemployed in the current labor market. This corresponds with another observation that pessimism increas-
es with the low level of education. On the contrary, with the growth in the duration of unemployment – whether recent or accumulated over the last 5 years – the confidence of elderly job seeker declines.

Another question concerned experience of elderly unemployed homeless people regarding ways of finding a job, - how to find job as soon as possible.

Table 5. Experience with finding job as soon as possible (in %)

<table>
<thead>
<tr>
<th>How he/she finds job as soon as possible</th>
<th>% resp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>through employment office</td>
<td>23.9</td>
</tr>
<tr>
<td>through a private employment agency</td>
<td>3.9</td>
</tr>
<tr>
<td>through recommendation of acquaintance</td>
<td>58.3</td>
</tr>
<tr>
<td>through the former family</td>
<td>27.6</td>
</tr>
<tr>
<td>other</td>
<td>6.7</td>
</tr>
<tr>
<td>no response</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td>121.6</td>
</tr>
</tbody>
</table>

Note: some respondents (about 20%) provided 2 ways

The experience of elderly unemployed people is that the most common way to find a job as early as possible is, for more than half of the respondents, is represented by the recommendation of an acquaintance at a prospective employer. It is characteristic and proves persistence of nepotism in our society that over one quarter of the respondents trust family and only over one fifth rely on employment offices that they will find a job as soon as possible. Here we also note the strong influence of education, when categories of elderly unemployed people with higher education trust acquaintances or private agencies, while in case of lower educational categories there is higher belief in finding job by means of employment offices and acquaintances. It also turns out that with the growth in the duration of unemployment there is decline in trust in the abilities of acquaintances to help finding a job, and, on the contrary, there is slight increase of trust in employment offices – e.g. in case of more than 4-year cumulative duration of employment.

Globally, it appears that only about 1/3 of elderly homeless people are serious about finding a job. These respondents visit an enterprise at least once a week in order to apply for a job. This is particularly their initiative. The largest proportion of elderly homeless people conduct visits of enterprises once a month, which is not sufficient. It has been shown that in order to find a job elderly homeless people most often visit enterprises on their own initiative. This is connected with the fact that their information resources are to a great extent their acquaintances, which requires separate subsequent involvement apart from the offers of employment offices.

Sending written applications to selected enterprises is much more the case of people with higher education, those working mentally. Similarly, publishing of adverts in newspapers and magazines or even radio is more the case of more educated and mentally working elderly homeless people who are unemployed.

From the regional point of view, initiative visits of the enterprises more often take place in the Nitra region (49.2% at least once a week) and less in Levice and Nové Zámky Counties (38.2% less than once a month or not at all).

Table 6. Activities for the purpose of finding employment (in % respon.)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Min. once a week</th>
<th>Min. once a month</th>
<th>Less often</th>
<th>Not at all</th>
<th>No response</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>visiting enterprises on the basis of EO instructions</td>
<td>24.1</td>
<td>35.8</td>
<td>24.6</td>
<td>12.3</td>
<td>3.1</td>
<td>100,0</td>
</tr>
<tr>
<td>visiting enterprises on their own initiative</td>
<td>34.5</td>
<td>37.9</td>
<td>17.7</td>
<td>9.0</td>
<td>0.8</td>
<td>100,0</td>
</tr>
<tr>
<td>publishing adverts in newspapers, magazines, radio</td>
<td>3.8</td>
<td>6.2</td>
<td>11.7</td>
<td>76.4</td>
<td>2.0</td>
<td>100,0</td>
</tr>
<tr>
<td>ending written applications to selected enterprises</td>
<td>12.6</td>
<td>24.8</td>
<td>23.3</td>
<td>37.4</td>
<td>1.8</td>
<td>100,0</td>
</tr>
<tr>
<td>other</td>
<td>3.1</td>
<td>3.6</td>
<td>1.6</td>
<td>37.4</td>
<td>54.2</td>
<td>100,0</td>
</tr>
</tbody>
</table>
Where do elderly homeless people see barriers to their success in the labor market in relation to the attitude of employers and activities of employment offices? We were also inspired by the scientific papers of the authors (Kotýnková, 2003; Pavelková, 2010).

1. 1. Personal experience of elderly unemployed homeless people strictly documents prejudice by employers against them, when in over half of the cases employers did not even consider their job applications (experience of lower educational groups of elderly homeless people are even worse). The reason for this non-consideration is higher age. Another experience concerns the persistence of the phenomenon of acquaintances, when the majority of respondents (about 54% of them) think that the reason of their rejection by an employer is their lack of acquaintanceship. The lack of knowledge is, according to elderly unemployed people (51%), just the third reason of rejection by an employer. However, it is characteristic that mainly more educated elderly people without employment admit the handicap concerning the lack of expertise, which creates an even greater barrier for less educated elderly people who are homeless.

2. 2. What elderly unemployed homeless people assess negatively about activities of employment offices is the lack of jobs offers, obtaining job offers from employers and low support for self-employment.

In the context of increasing employment of homeless people, we suggest the following measures concerning further training, overcoming prejudices of employers and measures in the domain of working conditions that resulted during the realization of the survey.

**Measures to support further training**

Based on the results obtained in our survey, we consider training and consulting as key tools for the development of human resources. These tools are crucial in increasing employment among homeless people. Measures should be implemented mainly in shelters where there is frequent presence of such clients in the form of incentive programs and consulting. The growth of qualification by means of the lifelong learning guarantees not only the acquisition of knowledge but also other necessary skills required by employers.

**Measures to encourage employers to overcome prejudice**

In the United Kingdom a specific campaign aimed at employers has been made with the intention to ensure that they do not hire according to age but they use standards „Code of Practice“ and „Age Diversity in Employment“. (Janebová, 2001, Fitzpatrick, – Kemp, – Klinker, 2004). In France communication and information campaigns are being realized, in Austria a campaign to educate and train skills of elderly people has been conducted. Although the survey performed in Slovakia calls attention to the persistence of employers’ prejudice against elderly people employment. Therefore, it will be important to pursue explanatory campaigns aimed at employers with the intention to improve the image of homeless people as a good and useful workforce.

**Measure in the domain of working conditions**

As the results of our survey have shown, it is required to adjust job for elderly homeless people in regard to their physical and mental capacities. In any case, it is necessary to invest, because as demographic data show, the workforce is aging and the working conditions need to be adjusted to it. Thus the significant measures will be represented by the subsidies for businessmen investing into adjustments of jobs mainly in the form of technical assistance and consulting and remission of possible financial sanctions.

**CONCLUSION**

In terms of support of employment aimed at a group of homeless people who live in shelters and to tackle the problem of unemployment, we consider it important to establish comprehensive assistance in this domain. In this article, we have presented a brief output of our survey concerning the support from the point of view of employers and homeless people themselves. We are aware of the fact that the employment these people means, for most employers, to undergo several considerable risks, but on the other hand, it is a group of people who can and want to be labor active, having job opportunities. These are the people whose fate was unfavorable but it is up to us, social workers, to fight for the establishment and the gradual introduction of a systematic approach to this target group. The measures that we propose should be present in all working areas. Homeless people are not only those with low level of knowledge but they are also people with completed secondary or university level of education.
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COMMUNICATION WITH THE FAMILY OF ADOLESCENT FROM THE SOCIO-EDUCATIONAL PERSPECTIVE

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Key words: communication; dialogue; adolescent; value; family

Abstract
Today more than ever before, the significance of personal contact through a communication process becomes the essence and also the approach that deserves attention. A school environment is now understood to be more than a storage area and a substitute for neglected parental educational activity. If we wanted to be precise, we could conveniently say that we daily meet parents and school advocates. The increase of negative trends which children and parents ascribe to this educational environment is intensifying. Because of low social status and their total value in Society which a person acting in the helping profession is valued the general value of the family relationship is implied. In addition, the educational venue deliberately provides for a Teacher, a School Psychologist, an Educational Consultant, a Social Educator or a Social Worker to be in contact with the family. We analyzed this trend in the school environment in which is located the field of study available to the Socio-Educational Worker and students in the Social Services field.

With the growing number of problem families, divorced families, single parent families, with mistreated, neglected or abused children, educating children or families which arise as a result of dysfunction is increasingly difficult. Therefore, for starters, we must urgently consider not only dealing with the causes, effects and beginnings of dysfunction, but especially with the possibilities of how to be closer to the family. Through communication, it can be helpful to open space for interaction dialogue between the parent and student and Social-Educational Worker. The process of dialogue will be ensured by creation of a bridge, a connection with the needs, attitudes and values of this small social unit.

INTRODUCTION
The theme of family is always very detailed and there are a number of opportunities for its reporting. It is difficult to find the only brief and exact definition which would catch the characteristics of the social phenomenon and the social system in the widest extent which is called family. Today, the most widely used form of family is monogamous family which means that it consists of a marital or partner of the couple and their children. Helus (2007, p. 149) predicts: “Despite the transformations it passes through, the problems with which it is confronted, as well as the failures it faces, the family remains a distinct two human partner-ship without which most contemporaries know life to be imagined. In particular, it is an important, although for many unmarried couples an intimate, interpersonal, reciprocal, stabilizer, the stronghold of a home. Its task is to implement its functionality concerning a particularly dysfunctional child. So you can find hard the environment that would correspond to the needs of children and adolescents, and established as effective primary conditions for the development of their personalities, including their educational success.”
Nowadays, we are witnesses of movements in the preferences of the values in the individual sphere of life, and in our opinion, it is shown as one of the most serious problems of social regulation of the quality of life. We truly pay attention that the contemporary family is not a fixed stabilizer of intimate, interpersonal empathy. Its value in the eyes of young people who live in various failing interpersonal relations in which the function on one or more levels is missing. It is a difficult task to bring back the value of communication, the sincere, open and emotional relationship in today’s family. Due to the known facts about the current hectic tempo of life, the communication set to these values is possible only through successful connection with the adolescents. The important role can be played by supporting profession versus adolescent. Success lies in drawing in the adolescent for dialogue a person’s willingness to admit responsibility for their actions and also in acceptance of another opinion. Through communication, we gain pieces of knowledge, opinions; we learn about the attitudes, values, way of life and life style. It regulates our actions and behavior, affects our aspirations, our performance and directs the overall perspective on our life and society. Internal lack of integration of family tends to be a hallmark of anti-social and delinquent behavior of youth. Families coming from such traumatic environments have reduced ability for overall social adaptability and the tendency towards unsocial manifestations of behavior. For this reason, the value of communication as a stabilization pillar of family values is recommended. When we establish social contact, isolation and loneliness is reduced because to have someone close fulfills a basic human need. There is not a vacuum for the development of pathological behavioral elements.

THE VALUE OF COMMUNICATION

We understand the value of communication as an interdisciplinary concept compiled from aspects of various scientific disciplines. Boroš (2001) understands this value as a specific feature of social and natural phenomena. And at the same time, its importance for human life is shown. Its significance lies in positive and negative meanings. Therefore, it is possible to talk about communication as a part of the value, especially in the work of a helping profession such as Educator, Social Worker or Psychologist primarily with a social group of adolescents. The model of complete absence of any relevant dialogue in the parent and child relationship appears in the school environment. It directs us to reflect on the need to highlight the imperative for social interaction between the Social Workers and the family. It is indisputable that there is the space for the communication process and if it is given the chance to act more efficiently with the adolescent. Cooperation with parents, effective communication and active listening are acting as motivation. Therefore, in this spirit, we also understand the importance on a motivational level.

When we are working with adolescents and their families, the meaning of the importance of the psychological value as the amount of psychic energy associated with the same mental element should not be forgotten. (Hall, et al.,1999, p.104) If someone considers aesthetic beauty of high value, he is surrounded with many valuable and beautiful things. If someone longs for power as his value he does the maximum activities for gaining power. It is an essential, unique aspect of humanity that we should be taken in the right direction. Communication with the family stands on the foundation of the use this energy. On this fact, a system of values can be built with teenagers. The choice of values is not dictated by the system of requirements, but by exemplifying the method model. The model has an unchangeable function. Parents often fail in this task. Business, emotional drought, changing values more and more gives truth to the fact of postponing responsibilities to the school environment.

Kačáni (2004) indicates that the most common causes of dissatisfaction with the environment of the pupil are:

- non-compliant atmosphere (insincerity of parents, incorrect punishments, favouring of sibling, egoism of parent);
- limiting the child’s personality (lack of finances, inappropriate intrusion into the private life, arbitrary handling of free time);
- disturbed family relations (known, classified, hypocritical family).

All these facts affect learning activity and have educational consequences. The value of communication is, in fact, classifying the just mentioned aspects. It vents accumulated and unprocessed feelings from them. Today, family is more than ever before, connected with relations and it is interactively influenced mutually by members of the family, and each member is its determinant. Parents, independently and also together, as well as children. It's a group of people with a common history, present reality and future expectation of interconnected transactional relationships. The child and the parent are mutually supported; the child sees the parent as a generally helpful protector;
parents partially determine the course of their child's life. The significance of the influence of communication is therefore necessary.

We understand the family as a system of relations in the meaning:

- of a closed family system - typically solid structures such as the relative points for order and change (nuclear family);
- an open family system – law and change arise from the interaction of relatively strong, but evolving family structures (incomplete family);
- random family system – all the structures are unstable (the dysfunctional family).

The process of integrating the child into a family environment in any way is a natural phenomenon of primary socialization, we mainly understand from the principle that the person is going to gain from this model throughout his entire life. Determination of the correct family diagnosis precedes the anamnestic survey for particular predispositions in a definite way of behavior. In various studies on the family, we understand the diagnosis of a family as the characteristic of family functions, relationships, communication, expectations, conflicts and ways of solving problems that are presented. The result is the proper involvement of professional support of social groups in terms of functionality. The diagnosis, which we start working with the family from, should include the following:

- current problems – why the family gets into the care of experts;
- the role and function of parents – we explore partnership relation, as well as the performance of the parental function. It is essential to clarify expectations and perceptions about their own functions and the functions of others members in the family, possible difficulties in adapting to the specific roles;
- family relationships – their dynamics, alliances and schisms, the role of scapegoat;
- process of communication – clarity, accuracy and forthrightness of their arguments, openness and simple communication, eventual disorder;
- conflicts and problem resolution - toleration, degree of solidarity in the family, which is exposed to conflicts, the avoidance of problems, the process of resolving them to the members of the family in an active way and should exit.

The evaluation of the family as a system of relations should begin in a non-authoritative partnership spirit. It is a process which is in the context of expectations. A professional should listen to the members of the family in an active way and should complete their attentiveness in their active listening. His function is the effort to empathize with the members of the family without projection. Simultaneously, the members of the family should not feel interrogated. The sooner the professional reaches a conclusion concerning what the main problem is in the family, the members of the family themselves should have the space to articulate their problems. The solution of the family problem in a given situation by the family itself is more beneficial than the solution of the family problem by the professional.

One of the primary interests of the adolescent is growing up in a functional family. The main way to solve the situation for an individual at risk is theoretically a healthy family environment. However, it continues focusing on deficits. It is checking for what legal duties are not fulfilled by parents; why they don't want to take care of children; or why they are unable to take care of them. The orientation for a parent-child emotional relationship is missing. And in doing so, it is necessary to consider the various specific causes of the problems. Every family has its own genesis, its own ontogenetic trace in which there are certain failures. Nevertheless, there are also the values and qualities.

How is there communication with the family of an adolescent? You need to concentrate on the value of the orientation of the individual formed under the influence of primary socialization. In fact, for individuals it is the regulator of behavior and options. According to Mátel (2010) key values utilized in terms of Social Services are:

a. the value of the services;
b. the value of justice;
c. the value of the dignity of a person;
d. the value of human relationships;
e. the value of the trust;
f. the value of competency.

In the guidelines of professional values we can find the formula for a successful communication with the broken family. The value of the service is associated with altruism and pro-sociability. Offering professional skills without expectation of financial gain is a supportive mechanism for adoption. The value of justice means to refuse any form of discrimination, violence, or social exclusion on the basis of nationality, ethnic identity, religion or a different lifestyle.
next value is the right to self-determination, to prepare the circumstances so that the person can freely decide. The value of human relationships will help support the person into the partnership. Visible preservation of ethical standards, principles and standards will benefit from trust in the relationship. Last but not least, knowing specific standards, ways, customs and lifestyle helps to accept the professional rather than as a unknown person. Success in communication with an adolescent, and later with his parents begins with your effort to discover his psychological resources to carry out the changes in his life which are important for him. The goal of the Social Worker is to create an environment in which there is a combination of supporting values, attitudes, personal qualities and communication skills. It is the intention that adolescent receives is own regulation of behavior.

COMMUNICATOR FROM THE PERSPECTIVE OF SOCIO-EDUCATIONAL

There are a lot of possibilities as to how to have a real dialogue with the family of the adolescent. Knowledge of behavioral patterns is an advantage, mainly to recognize his way of thinking so we can understand any other mental processes of both the individual and the whole group. The most common is an Educator, or other helping professional in the position of negotiator with basic communication skills including patience, perseverance, and a convincing art of listening, flexibility, courtesy (tact, politeness) and ambition. A prerequisite for the continuation of the relationship is to offer a sense of challenges for the dialogue. At the same time, negotiation includes guidelines for the proper procedures for solving the problem. Communication itself, consists of three main lines and the supporting aspects:

a. language, next to language and outside of the language speech;
b. emotional and the content page;
c. progress may be equal or asymmetrical.

The ability to reflect in its proceedings the following facts provides an opportunity to avoid either aggressive or passive forms of communication. Not even one created long-term willingness to communicate. Therefore, the negotiator should process standard assertive yet tactical methods of communication. The tactic of a negotiator is the ability to adapt. The negotiator knows how to show interest regarding the next point in communication and reciprocity is not a burden for him. Negotiation means to reconcile the opposition parties involved in brokering a new beginning in the relationship.

Another level in how to make a dialogue with a family is empathy and pro-sociability. Each party is able to empathize with the other, but like all human abilities, this ability is developed privately or individually. It can be practiced and developed. In specific situations to feel empathy with another person, it is essential to establish natural communication contact. The result of empathy then becomes very similar to the situation - becomes identical to mutuality with another man. (Bernát, et al., 2007) Simply said, cancel your own interpretation and range of attitudinal assessment. The most common factors influencing the barrier to effective dialogue is age, gender, culture, subculture and religion but especially too big an age difference between a helping person and teenager, possibly between parents and professionals. A man often does not understand a woman and reversely a woman often does not understand a man. Bipolarity is useful if you can establish communication with the other person, especially precisely where this dimension in communication was lacking, for example, in reliving gentleness, sensitivity, emotionality. It is indisputable that the religious beliefs, cultural maturity or membership of a particular subculture can help me put a brake on the one hand and communication with the family adolescent on the other. Perception and acceptance of differences is the key to the creation of a favorable therapeutic atmosphere for communication. The whole complex of requirements, therefore, directed to create empathy and pro-social feedback.

The third aim of the Social Worker is to assist the family to avoid stressful situations and conflicts stemming from them. Sheer stress is unavoidable, and certainly not in family co-habitation. We can only cope better with certain situations. Stress arises when our life goals do not already coincide with our needs. It is therefore important to eliminate interpersonal conflicts in communicating with an adult, as well as with an adolescent. Through communication the almost perfectly inner world and inner experience of the individual can be recognized, thus fulfilling a secondary need for stability and security and unconditional positive acceptance of the means to reduce stress from feeling of controlling and evaluation. Communication is thus deprived of masks, dissembling, agonizing over whether to trivialize the consequences of the undesirable procedure. An internal map of the soul is so stripped of troublesome experiences and ready for the registration of a new understanding of the facts, a new perspective on the matter is created.
A communicator, in relation to the family, can be an Educator, a Social Worker, or a Psychologist or he is also an informant and an adviser for where to seek help. And there is the fourth condition for the success of communications with a small social group. The family must have a certainty about the correctness of information. The counseling “To deal with the current problems in the life of a personality, consider how a specific professional activity implies a process of utilizing existing resources and how to aid possibilities “. (Oláh, Schavel, 2006, p. 82)

Communication in the context of family counseling through professional help to a family, based on the specific interaction between experts and members of the family, which allows to:

- the clients the best orientation in their situation;
- optimization in the function of the family system;
- optimization for the life of each individual, to be able to effectively deal with the challenges that life brings, to manage challenging situations, crisis and conflicts. (Prevendárová, 2001, p. 16)

This also includes the passing on of information as a form of aid, training some of the skills and competences, as well as the promotion of, respectively, joining the family on its life’s journey at each stage, which are especially burdensome, for example, after the birth of a disabled child, in case of divorce, a death, etc. In regards to the services provided in the short-term, specialized institutions, where the family has a team of professionals available. Aid can take the form of a short series of arranged meetings. Some of these services consist of defending the interests and rights of the family in relation to other members, particularly in a socially disadvantaged environment. Openness to possible changes, the ability to accept feedback, new vision, constant readiness, willingness to look for ways to make things better, effort, willingness to take responsibility after the improvement, and many other aspects are possible to achieve with communication, which starts perhaps at school, or as well in another area of interaction between a professional and an adolescent.

**CONCLUSION**

What is the importance of successful communication with family of an adolescent? We communicate to exchange and obtain information and knowledge. Also, for the fulfillment of the tasks set by us or someone else, we persuade and draw the other party to our side in no small degree to know themselves and others. Success lies in the communicator’s ability to capture the attention of the addressee to whom is given our information. But even before, it is good if a Social Worker realizes that it is better to look for the good in the human being and not the negative. Internal motivation is mutually successful to the dialogue, in fact, it creates a channel of communication. Communication in a stable system, such as family, class, or peer group follows rules declared by the majority which are recognized by the majority without prejudice to these rules. Even in the dialogue, standing up face to face to conformism is bold, but on the other hand brings reward. Through communication, we are trying to shape an adolescent not only as a biological being, but above all as a social one - a being who understands human relationships, relevant human attitudes and tries to know his limitations. That is the purpose of the initial communication contact with adolescents. That is the beginning of the interaction knowledge of the behavior of the family – the child.

Effective and at the same time beneficial communication is focused on the family, person, not on the actual problem. The belief in personal change, a non-directive approach based on preference for the benefit of another, understanding emotionality gives conditions suitable for an effective dialogue. Social Workers frequently see communication problems in the unsolved problems of the family and, even see the criticism in their own ranks. It is necessary to admit that the fault may also occur in a professional, for example, on the basis of the effect of a selective vision. Low parent activity in communication with a Social Worker or high involvement, where parent is seeking anything to apologize to a child at any price is a barrier, which unquestionably the value of communication interaction decreases. Therefore, Social Work must integrate on this level before it can rely on the contribution of communication.

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INTRODUCTION

Proper adjustment of the social labor market is one of the most important measures to combat the unemployment crisis, especially as it concerns young people. Government measures are designed to encourage employers to create new jobs and hire young people. Signs of the global financial and economic crisis result in a situation where the state is forced to search for all available instruments of economic policy and its components, employment and labor market policy, to stop the devastating impact of the economic crisis in all areas of economic and social life.

To reduce unemployment using Active and Passive measures. Active and Passive differ by the extent of intervention. Active measures are intended to help people remain in the labor market. They are aimed at unemployed and employed at-risk groups. Passive measures are of two kinds. One is the unemployment benefits as social assistance in order to maintain a certain standard of living. The second measure is early retirement because of the situation on the labor market, but includes a certain group of employees from the labor market. Active measures to combat unemployment are considered effective.

ACTIVE LABOUR MARKET MEASURES FOR YOUNG PEOPLE

For entering into employment, it is important that young people know and recognize the opportunities offered by government organizations in the active employment policies such as job, job clubs, Counseling Centers. Employment programs are understood as a set of measures in the organization, production and social field aimed at addressing social problems associated with structural changes in the macro and microeconomics, changes in production programs of economic operators and the problems caused by rationalization measures. The economic policy is to ensure a balance in the labor market that is, supply and demand for labor.

Measures that can be taken from the highest levels of the state, should be largely systemic in nature, to monitor an opportune economic climate in order to mitigate negative social impacts resulting from these changes. The processing of these programs should be based on:

- Macroeconomic analysis of employment structure problem situations;
- The effectiveness of macroeconomic analysis of employment in certain sectors of international comparisons;
- Analysis of the future needs of workers...
under national economic sectors, industries, skill intensity. (Stanek, 2002)

"Employment programs can be understood as a set of measures in the organization, production and social fields aimed at addressing social problems associated with structural changes in the macro- and microeconomics, changes in production programs of operators or problems caused by rationalization measures. Measures that can be taken from the peak level of the state, should be largely systemic in nature, to monitor opportune economic climate mitigating negative social impacts resulting from these changes." (Halušková, Derevjaníková, 2012, p. 93).

The applicable Law no. 5/2004 Coll. Employment Services, as amended, these contributions are directly linked to the unemployed youth:

- Contribution to education and training for the labor market;
- Contribution to the self-employed;
- Contribution to the incorporation of disadvantaged job seekers;
- Allowance for employing a disadvantaged job seekers;
- Contribution to graduate practice;
- Contribution to promote the employment of graduates of the labor market;
- Allowance for activation by small community services for the community;
- Allowance for activation through volunteer service;
- Allowance for commuting to work;
- For moving work;
- Allowance for transportation to work.

The current economic situation requires immediate and effective solutions to help maintain employment in existing jobs and creation of new jobs, especially in the promotion of employability and employment of job seekers with an emphasis on disadvantaged job seekers including the graduates middle and high schools. (Halušková, Derevjaníková, 2012).

The Office of Labor, Social Affairs and Family and an active employment policy cannot solve the real problem of unemployment in the Slovak Republic. It can only relieve significant regional disposition and social situation of the most vulnerable groups of the population. Options of Active policies with high levels of unemployment, however, are severely limited due to pressure on the use of resources on Passive labor market policy. The core of the solution must be measures using instruments of key sub-economic policies. (Martináčová, 2005).

To address unemployment may also help temporary employment agency that provides temporary staff protection with respect to the terms and conditions of employment. It is mandatory to ensure the privacy of the employee. The agency is required to allow an employee access to training or to gain professional skills, even before his graduation to increase his employability. Permit to operate a temporary employment agency may be issued by the Office of Labor, Social Affairs and Family may extend the authorization for a maximum period of five years at the request of the agency.

As a rule, most unemployed are turning to the Office of Labor Social Affairs and Family, with the hope that this will solve their problem with employment. Of course, the job search can help the office work, but given how high the unemployment rate in Slovakia it is rather better to look for a job alone.

**PASSIVE LABOR MARKET MEASURES**

We have an Active policy of labor and we also have a Passive labor market policy, which is a summary of the program to maintain income unemployed. Understand that unemployment benefits, the disbursement of which are available to every entitled registered unemployed after fulfilling the conditions laid down by law on social insurance. A Passive policy is not as effective as an Active policy, but it is necessary as a temporary solution for the prevention of social distress.

Passive labor market policy is a temporary replacement income security for the unemployed through Unemployment Insurance. Jobseekers - graduate school, secondary vocational schools or vocational schools are not entitled to unemployment benefits - entitlement to unemployment arises only in the event that the last four years of the work position paid Unemployment Insurance for a minimum of 3 years. Material need benefits and contributions to them can graduate to apply for the appropriate Office of Labor, Social Affairs and Family, Department assistance in material need and state social benefits in place of residence. Eligible persons are entitled to receive family allowances for children to graduate only to 31.8. in the year in which he graduated until reaching a maximum of 25 years of life. For job seekers - graduate - is the only state paid Health Insurance. (ÚPSVaR, 2011).

Unemployment benefits serve as a temporary replacement income after job loss. Eligible people have half a year. The condition is that they had been previously employed and paid Social Insurance Un-
employment Insurance (at least three years out of the last four). The amount of the benefit depends directly on the preceding base, The highest benefit is 50 percent of the tax base.

The purpose of the Passive Employment Policy is to compensate the unemployed for a transitional period, and to some extent the loss of income from work to enable them to find a career that is in line with their economic needs and aspirations of the economy. It contributes to ensuring the welfare of those who have become temporarily unemployed through the benefits and unemployment benefits. (Krebs, 2007).

At work of Buchtová and col. (2002), the labor market is considered as one of the interrelated segments of the market economy. According to the author that the labor market is influenced by factors similar to other markets, but has a number of special features that arise from the unique nature of the labor production factor.

Work with youth should strengthen young people to know their identifiable competence and provide them the tools to recognize with a clear structure and content that corresponds with that of the labor market. Young people need to ensure equal space by allowing them to participate in public debates and existing communication channels relating to employment and social policy.

**INTERNSHIPS AND GRADUATE PRACTICE**

Increasing the employment of young people, there are very successful measures to ensure work experiences such as internships, work experience and training through graduate practice.

Internship is open to students of second and third level colleges and perspective graduates who before continuing their career wish to gain experience. Applicants for internship are expected to have motivation and interest in what is happening in the European Union, the ability to work independently and also be beneficial. They should be creative, imaginative and flexible people with an overview of the policies of the European Union, who are able to set their own priorities. Applicants must be fluent in English and another official language of the European Union. Extracurricular activities and experience of working in the NGO sector or abroad are taken into account.

Every year, The European Commission offers two five-month internships, enabling young University graduates to gain direct experience working in European Institutions. The training period includes work experience in one of the Departments of the Commission, by lectures and by visits to other Institutions of the European Union. The training periods begin on 1 March and 1 October each year. This scheme is open to University graduates and civil servants from EU member countries and a limited number of non-EU applicants. Qualification requires a thorough knowledge of one of the languages of the European Union and a satisfactory level of another language (other languages are an advantage). (European Commission 2012).

To find a job after schooling is not always easy even though the young candidate has a lot of information, but lacks practical skills. A majority of employers require some practice. Some solution to this problem is to Graduate Practice.

The Act no. 5/2004 of Employment Services § 51 discusses the contribution of the graduate experience. Graduate Practice, for the purposes of this Act, is the acquisition of professional skills and practical experience with the employer, which correspond to the achieved level of Graduate School education. It corresponds to the educational attainment of a candidate to obtain or enhance professional skills and practical experience of a job. That will expand the possibilities of Applicants under 26 years of age in their application to work in the market. Graduate Practice is carried out under a written agreement entered into by graduation practice among Graduate Schools registered as jobseekers for a particular period and office, and under a written agreement entered into between the Authority and the employer.

The economic crisis has brought about a reduction of vacancies suitable for graduates, but, on the other hand, the rationalization in companies has seen interest from graduates and employers of Graduate Practice. Within this tool, Active Labor market policy must take into account that the employer does not replace permanent labor graduation practice and also that the graduates were from the well paid Graduate Practice Brigade. (Blahutiaková, 2009)

The state of unemployed graduates reflects the Active instrument of labor market and graduates who aim to maintain the level of knowledge acquired in school and develop practical knowledge and skills in practice. It is a tool that after completion of graduate school supports the work carried out, or profession for which it was prepared. The postgraduate experience also highlighted the fact that the organization to which he was posted to do graduate practice, demonstrated a continuing interest in graduate and postgraduate practice after being hired as a permanent employee. An important factor to graduate is to contact the potential employer as well as be given the
opportunity to demonstrate their ability to self-motivated, and this creates graduate practice. (Hangon, 2010).

"Young people are trained to study at the theoretical level throughout the course of their working lives. After successful studies, candidates have ideas about their future employment status and participation in the labor market on the basis of their previous practical experience, which is often minimal. Professional skilled candidates may be proficient, but are often unsuccessful in finding work."(Gurský 2012, p. 84).

Alarmingly high unemployment rates among young people in Europe requires immediate action by the Member States. One of the priorities will be to ensure a smooth transition of young people from school to work. Two studies by the European Commission on Apprenticeships and Internships in all Member States of the European Union suggest ways to improve the ability of these training programs to respond to the needs of the labor market, increasing their potential to adapt to the needs of business and offer more guarantees in terms of quality and career opportunities for young people.

**EDUCATION AND JOBS FOR YOUNG PEOPLE**

Quality education and training are needed to improve employment of young people, as well as action to reduce the unemployment rate by simplifying the transition from school to work and reduce labor market segmentation. The incidence of long-term unemployment among young people is a result of early school leavers, the isolation of the education and training of the current labor market and the lack of key skills among graduates of secondary schools and Universities, which employers require.

A positive characteristic of the labor market for young people is that they have a diploma degree. The issue of education in the labor market has a direct proportional relationship. So accordingly, the better and more extensive the higher education degree, the greater the increase in the student’s chances in the labor market.

The right to education is based on the fundamental right to life. One of the basic characteristics of life is adaptation. The ability to learn also includes the ability to adapt, along with the ability to transform work and life environments. Through education and training that support all the current social, political, economic and cultural relations constitute the role of the State to act. (Mlynarčík, 2012).

Good educational policy must balance the interests of individuals and interests of Society. Interests of the company and a good educational policy must be harmonized. The company is interested in supporting education for leading experts, but also has an interest in training disabled people socially or otherwise. Education policy could potentially reduce unemployment and could help people to escape from their handicaps. (Matoušek, Matula, 2011).

"Qualifications, retraining and competency are the basic concepts of education and directly related to the labor market and education. Professional qualification is a degree of readiness, a summary of skills, knowledge, skills and habits that allow you to perform certain work at a higher level. Requirements for the method and level of training, knowledge and range of skills and habits that determine performance of certain activities and functions provide qualification catalogs."(Tokárová, et al., 2003, p. 195).

The school is the basis of adaptation to the new generation and social relationship, although in this respect, its dominance has declined. Socialization must be an organized educational process with the intent to bring the younger generation all the major opportunities to understand what will be expected from them; to present what is required to respond to rapid changes in society. It is important that young people are not subject to a whole series of traps but have greater responsibility for their negotiation, etc. (Kraus, 2008).

The company puts a lot of attention on school requirements. School children should not only be qualified for future work, but also to be educated to their civic duties in collaboration with the family. Schools are agents for qualifications, and retraining and education to universally acceptable standards of content for people who cannot find employment in the labor market. (Matoušek, Matula, 2011).

Basic training and qualifications are provided by Vocational Schools, higher professional qualifications provided by Universities. The qualifications of the next level are provided by Educational Institutes, Government Departments and enterprises, educational companies and Associations, Academy of Education and other institutions in the system of lifelong learning. (Tokárová, et al. 2003).

Vocational education is defined as 'dual' initial training, which combines with training in the workplace (time spent acquiring practical work experience in the workplace) with education in school (time spent obtaining theoretical/practical work experience in a school or training center). Successful completion leads to a state recognized Certificate of Completion.
of Initial Training usually involves a contractual relationship between the employer and the apprentice. Experience shows that in countries where such programs exist, apprentices, young people have a better chance of a smooth transition from school to work. These dual education systems exist in several Member States of the European Union (most common in Austria, Germany and Denmark, but also in The Netherlands, France and Slovenia).

Unemployment is also an increasing problem with Roma youth, which explains Rosinský (2011) to a negative perception of the majority of Roma to some extent contribute losing their formal education, which I followed as a result of their inability to enter the labor market and remain so in the social network State. It is this fact, generalized to all Roma, where disadvantage and ethnicity of those individuals who have overcome barriers and stereotypes in the labor market is more or less successfully applied. Almost everyone (amateur or professional) sees the cause of failure in the socialization of Roma (the majority view) because of inadequate training.

What are Roma children’s chances for educational attainment? The answer is very easy and legally simple: that they have the same chance as any other citizen. At first glance, this is the correct answer because after all we live in a country where the principle of national identity it is (apparently) preferred. Such is the view on education of Roma children. But it is very simplistic and particularly in the perception of a “starting line” which is shifted forward in favor of the majority of children. Leave aside this shift which can be determined by the socially disadvantaging environment, an important factor disadvantaging access to the educational system is ethnicity.

CONCLUSION

The current concept of Slovak social policy emphasizes the provision of such services to clients, enabling them to be stronger and more effective, especially, to work toward their integration into the workforce and other aspects of society. Special attention will be given to those groups of young people who already have the objective or subjective problems with the application of the labor market. Social workers in this issue should be important partners to clients, but also their parents. The position and role of the social worker is now being extended to the use of specific experience in consulting, coordination and awareness of the changes and the new opportunities that are available in Active Labor market policy. The policy for the young unemployed is considered as a policy that is designed to develop and improve the living conditions of youth participation and involvement in the political, social and cultural aspects. “The company employs social workers trained to a professional level, including higher education, is often practical skills. However, even encyclopedic knowledge cannot ensure the quality of the social worker. “(Buďová, Dancák 2011, p. 6). Wisdom and discretion supporting the social worker gets to the formation of long practice, as well as other helping professions.

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NOSOCOMIAL INFECTIONS REMAIN THE RELEVANT ISSUE

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Key words: nosocomial infections; prevention; sensitive individual; direct transmission, indirect transmission

Abstract

Nosocomial infections, despite advances in medicine and health, remain even at the start of the 21st century the current problem. Their incidence is increasing worldwide and affects all fields of medicine. In addition to many medical aspects, there exist also economic aspects, which press to seek more effective methods of prevention and prophylaxis of these diseases. To nosocomial disease is in developed countries paid increasingly more attention in current medicine. This issue has taken us so much that we've decided to focus at this subject in our article, namely to describe their history, development of prevention against their occurrence, their characteristics, sorting of nosocomial diseases, informing about the most common infectious agents and present prevention of nosocomial diseases.

“Life is possible only in relationship” Piaget

Concentrating on a larger number of diseased patients in a single-hospital complex has many advantages, but also, the risk of disease transmission from patient to patient, which results in spread of many infectious diseases. We call these nosocomial infections, and they include both outpatient and inpatient healthcare and nursing care. (Šrámová, 1995, p.14)

Hospital infection is an important indicator of provided health and nursing care. In addition to new medical, moral and ethical issues those hospital infections also represent enormous additional financial costs. This is mainly because of extended periods of hospitalization, expensive anti-infectional hospitalization and its costs, extending of sick leaves and not least also the costs of “compensation” for the damage to the health. Contemporary patients are more informed about their rights and thus nosocomial infections sometimes “end up” in the court where the patient seeks compensations for personal injury, sick leave and other factors.

Complications in relation to health care are currently becoming publicly available information and an increase of legal awareness of social services will, in the future, cause many legal problems for healthcare facilities. (Ganobčíková, 2008, p.70)

NOSOCOMIAL INFECTIONS

The term nosocomial infection is derived from the Greek words “nosos” meaning disease and “komein” meaning to care and is defined in relation to hospitalization in healthcare facilities. At the present time the preferred term is becoming “hospital infection”. They include infection-communicable diseases of external or internal origin which originated during the patient’s stay in a healthcare facility, or when symptoms devel-
op after release. It represents mainly infections, which a patient did not suffer from before he was hospitalized in a healthcare facility (Kozierová, 1995, p.462).

**HISTORY OF NOSOCOMIAL INFECTIONS**

The history of hospital - and nosocomial infections is in fact the history of health care facilities and is therefore influenced by major medical breakthroughs that are still changing diagnostic and therapeutic procedures.

Initial information about help to diseased patients and about placing them into facilities in order to cure them (which were very distant from our current definition of hospital) can be found in ancient times. There existed empirical healing associated with the ancient Chinese medicine. In India, during the second half of the first millennium before Christ, there were based hospitals where care was provided for the sick. In Greece, medicine was influenced by religion and in sixth century B.C. also by philosophy. Hippocrates formulated the humanitarian principles of medical ethics. The peak of an ancient medicine was represented by Romans who built hospitals called “valetudinaria”. Medieval medicine was connected with Arabic Medicine, whose main representative was a scholar, which is in Europe known under the name of Avicenna. Arab Medicine in Europe tried to establish the principles of hygiene. It was confronted with the poverty, ignorance and bad hygiene of Medieval feudal society. In Medieval Europe, hospitals called “hospitium” were established for the poor and for pilgrims, but they were not hospitalized there. In the 16th century, facilities were built whose purpose was “qualified” caring for diseased.

Fundamentals of inflectional medicine of were associated with the name of physician Girolamo Fra- castoro, who in the first half of the 16th century on the basis of empirical monitoring of infectious diseases expressed the hypothesis assumption that infectious diseases are caused by small particles called “contagiosis”.

All these things have taken place 300 years before the development of Microbiology as independent scientific discipline. Bacteria were first brought into the medicine by Leeuwenhoek.

Pasteur scientifically explained the pathogenic role of certain microbes by diagnostics of infectious diseases and by scientific explanation of asepsis and antisepsis. In 1876, Louis Pasteur introduced autoclave sterilization which justifies the role of moist heat under pressure to inactivate spores. Louis Pas- teur, who was educated as a chemist, produced a huge amount of work for the prevention of transmission of infectious agents between patients and environment.

Doctor Ignac F. Semmelweis, Austrian of Hungarian origin, is credited with the discovery of the origin of puerperal fever - he found that the disease is transmitted through the hands of doctors and medical students. In 1847, he introduced first major precautions in the combat with hospital infections. He required not only washing of hands, but also disinfecting them in chlorinated water. He achieved in his department the reduction of mother mortality from 35% to zero. He was the pioneer in obstetrics hygiene. He belongs among the elite of 19th century.

Joseph Lister, a Scottish surgeon, assumed that agents causing operating infections in wounds are present in the air of operating rooms; therefore he pioneered the spraying of solution of Lysol into the air of operating rooms. He demonstrated the transmission of infectious agents by dust particles in the air. In 1867, Lister published in a medical journal article about antisepsis. His method of antisepsis was successful. (Šrámová, 1995, p. 9-13)

**CHARACTERISTICS OF NOSOCOMIAL INFECTIONS**

/difference between nosocomial and community - acquired infection/

The definition, according to the CDC (Centers for Disease Control) is: Nosocomial infections are infections that arise in health care facilities and are associated with persons residing in an outpatient or inpatient health care facility for diagnostic, therapeutic or epidemiological reasons that were not present before admission, and the patient was not before the admission in the incubation period of the infection. When the incubation period is not known as nosocomial infections are considered those that arise after more than 48-72 hours from the admission to healthcare facility. Infection that is present at the time of arrival, and the patient was not before the admission, and the patient was not before the admission in the incubation period of the infection. When the incubation period is not known as nosocomial infections are considered those that arise after more than 48-72 hours from the admission to healthcare facility. Infection that is present at the time of arrival may be considered nosocomial only if it is epidemiologically associated with previous hospitalization. All other infections are considered as infections acquired in the community - “community acquired”. In addition to defining of nosocomial infections CDC (Centers for Disease Control) has also the accurate diagnostic criteria for various types of infections. Using the same criteria and methods of searching allows the comparison of data about incidence of nosocomial infections. (Mađar, 2004, p. 3-4)

Nosocomial infections seriously complicate the course of the original disease, prolong hospitaliza-
Nosocomial infections remain the relevant issue

tion and thereby increase financial cost of treatment. These infections caused in recent years increased interest because they are considered as diseases, which are difficult to prevent, difficult to treat and are more resistant to treatment than commonly acquired infections.

Occurrence of these infections is involved by the presence of certain microorganisms in hospital environment, weakening the body by disease and diagnostic and therapeutic interventions to the body (for example, surgery, catheterization, invasive methods, etc.). The most common causative bacteria are Escherichia coli, Klebsiella, Staphylococcus aureus, Proteus or Pseudomonas aeruginosa.

The basic prerequisite for reducing of incidence of nosocomial infections is accurate accounting and analysis. Accomplishing of this basic requirement needs application of new methodology in hospitals. Operating models (such as the National Nosocomial Infections Surveillance System Hospitals in the U.S.) shows that the essential prerequisite for improving of the detection ratio of nosocomial infections is uniformity of definitions, diagnostic criteria as well as active surveillance methodology.

CLASSIFICATION OF HOSPITAL INFECTIONS

Classification of nosocomial infections can be made according to non-specific or specific occurrences, according to the origin to exogenous and endogenous and according to the clinical symptoms.

Non-specific nosocomial infections are infections that generally reflect the epidemiological situation in the catchment area of the health facility, or an indicator of hygiene standards of the medical facility. They commonly exist outside medical facility to which they are transmitted (eg influenza, salmonella, etc.). They affect groups of susceptible individuals. Their treatment is not usually problematic because the etiological agents of microbial strains are usually sensitive to antibiotics. An important preventive measure is a personal and epidemic history when patient is received and information on the current epidemiological situation and compliance with anti-epidemic in the hospital. (Šrámová, 1995, p.14-15)

Specific nosocomial infections occur in a hospital environment in relation to diagnostic or therapeutic procedures. These infections may be somewhat specific to a particular type of health care facility (urology, neonatal, neurological, orthopedic or other departments). These infections have specific epidemiology, prevention and treatment. Their presence affect level of asepsis, sterilization and disinfection, level of compliance with anti-epidemic precautions and level of facility operation. Crucial is violation of the integrity of skin or mucous membranes, which may occur in connection with invasive surgery. They spread mostly by inoculation or implantation of an infectious agent. Less common is respiratory or alimentary spread. Agents of nosocomial infections are tied to medical facilities. In etiology, applied agents are conditioned pathogenically and non-pathogenically in the general community. Resistance and also multi resistance are typical characteristics of hospital microbial strains. The occurrence of a given type is affected by the level of asepsis, disinfection, sterilization and level of compliance with the principles of anti-epidemic regime, equipment and education of personnel. (Šrámová, 1995, p.15)

DIVISION ACCORDING TO THE SOURCE FROM WHICH COME THE ORIGINATOR OF NOSOCOMIAL INFECTION

Endogenous nosocomial infections are caused by the patient's own flora or by bringing of an infectious agent from a primarily or secondarily colonized organ or from a mucosal surface into the surrounding tissue or into another organ (eg intestinal microbes into the abdominal cavity during instrumental interventions from colonized space to another system, into the wound, into the bloodstream, into the serous cavities or by the manifestation of infection after weakening of an organism by curative, prophylactic or other intervention). An etiologic agent is also micro flora already present in the body which is generally non-pathogenic. These infections do not have incubation period. Determination of exogenous or endogenous source of nosocomial infection is very difficult.

Exogenous nosocomial infections occur by bringing of agent into the body of a susceptible individual from the external environment such as surfaces, air or other source. (Šrámková, 1995, p. 15-16)

As nosocomial infections are, according to the prevailing clinical symptoms, considered also infections that start because of their incubation period after release of a patient from a medical facility to home care or after his transfer to another medical facility.

Nosocomial infections from the point of view of epidemiology, prevention and treatment are divided according to the predominant clinical manifestations to respiratory infections, urinary tract infections, infections of the surgical intervention (wound), infections of the bloodstream (sepsis), infection of
skin and mucous membranes, gastrointestinal tract infections and others. The process of spreading of nosocomial infections is conditioned by the presence of disease agent, source of infection, way of transmission and sensitivity of individuals.

The source of nosocomial infections in hospital are medical staff (doctors, nurses, nursing staff), employees of other professions (maintenance workers, repairmen and others), visitors to the medical facility, rodents that can contaminate food, but also the general environment.

**Transmission of agent:**

Transmission of agents of nosocomial infections can be direct or indirect. It is understood as the transmission of infectious agents from the source of infection - contaminated air, fecal-oral way or inoculation of contaminated tools to susceptible host. A portal for entry of infectious agents can be damaged skin, mucous membranes of respiratory or digestive tract, conjunctiva, urogenital tract and other.

Direct transmission occurs during contact such as droplets when sneezing, coughing or talking, alimentary route, touching, kissing, sexual intercourse, contact via the hands of health professionals and others.

Indirect transmission is characterized by the absence of a source of infection in the transmission of infectious agents to susceptible organisms. The possibility of this transfer depends on the ability of an organism to survive long enough outside the body of the host and the existence of a suitable means by which the transfer is made to a susceptible individual. Indirect transmission is mediated by contaminated objects or therapeutic and diagnostic devices, drugs and biological products, linens, air, in the form of droplets or dust, food, water, biological vectors such as flies, mosquitoes or ants. (Šrámová, 1995, p.17 -19).

A perceptive individual is one who lacks any kind of immunity or resistance to certain pathogenic agents, which would prevent infection after exposure to agents. The susceptibility or resistance to infectious agents of a patient is determined by many factors. After exposure to a particular infectious agent an infection does not always occur (for example due to lack of infectious dose, unusual gateway or host-specific immunity). The infection may not show disease symptoms or manifest symptoms that can run under partial spectrum distinguishing symptoms. (Šrámová, 1995, p.20)

Agents of nosocomial infections are mainly carriers of pathogenic microorganisms such as bacteria, rickettsia and chlamydia, but it can also be fungi, viruses or protozoa. They are expelled from the body of a sick person via secretions and excretions. They include: blood, pus, mucus, sputum, saliva, cerebrospinal fluid, gastric fluid, bile, urine, stool, vaginal secretions or conjunctival secretions. Crucial is a violation of integrity of a surface of the point of entry. Specific nosocomial infections occur because of the violation of epithelial during invasive procedures. (Šrámová, 1995, p.22)

**The etiology of nosocomial infections:**

- **obligate pathogenic microorganisms** - their properties allow them to penetrate defensive barriers of a macro-organism, multiply in it and cause functional and morphological changes that will manifest as a disorder;
- **conditional pathogens** - their ability to invade the body is negligible and therefore cause disease only in people with reduced immunity or after penetration into sterile tissues and cavities or after entering into macro-organism in large quantities;
- **opportunistic organisms** - are essentially non-pathogenic, but can cause disease in extreme conditions, as for example radiation sickness or long-term administration of antibiotics;
- **saprophytes** - can cause benign gastroenteritis, septic processes or panophthalmitis.

The exact boundaries between different groups of micro-organisms do not exist (Bohuš, 1992, p. 409)

**The most common infectious agents:**

**Staphylococcus aureus:** furuncle, cellulitis, abscesses, wound infections, sepsis, osteomyelitis, en erocolitis, mastitis.

**Staphylococcus epidermidis:** infections of vascular prostheses, artificial heart valves, endocarditis and rarely urinary tract infections.

**Streptococcus pyogenes:** tonsillitis, erysipelas, puerperal infection, burns, infections, phlegmon, sepsis.

**Streptococcus agalactiae:** urinary tract infection, gangrene, sepsis and neonatal meningitis.

**Streptococcus pneumoniae:** sinusitis, ititis, acute and chronic bronchitis, pneumonia, peritonitis, empyema, sepsis.

**Streptococcus viridans:** dental granulomas, endocarditis, pus, sepsis.
Nosocomial infections remain the relevant issue

Streptococcus faecalis (Enterococcus): urinary tract infections, gallbladder, endocarditis, peritonitis, sepsis.

Escherichia coli: urinary and intestinal infections, peritonitis, wound infection, sepsis.

Enterobacter spp.: urinary and intestinal infections, wound infections, peritonitis, sepsis.

Klebsiella spp.: pneumonia and meninges

Salmonella spp.: osteomyelitis, periostitis, septic metastatic processes.

Proteus mirabilis, Proteus vulgaris, Morganella morganii, Providencia retgeri: urinary infections, gallbladder, endocarditis, peritonitis, sepsis.

Escherichia coli: urinary and intestinal infections, peritonitis, wound infection, sepsis.

Enterobacter spp.: urinary and intestinal infections, wound infections, peritonitis, sepsis.

Klebsiella spp.: pneumonia and meninges

Salmonella spp.: osteomyelitis, periostitis, septic metastatic processes.

Proteus mirabilis, Proteus vulgaris, Morganella morganii, Providencia retgeri: urinary infections, gallbladder, endocarditis, peritonitis, sepsis.

Acinetobacter spp.: wound infections, urinary infections, CNS.

Peptococcus: wound infections, sepsis, abscess.

Peptostreptococcus: brain and lung abscesses, phlegmon and anaerobic myonecrosis, female genital infections, intra-abdominal infections, sepsis.

Bacteroides spp.: lung abscess, appendicitis, biliary tract infections, periodontal, female genital sepsis.

Clostridium tetani, Clostridium difficile (toxin): tetanus, wound infection, pseudomembranous enterocolitis.

Clostridium perfringens type A: clostridial myonecrosis, epifascial gas phlegmon, necrosis of the walls of internal organs, gall bladder, uterus, puerperal sepsis.

Clostridium Novyi, septicum, histolyticum and other clostridia: clostridial myonecrosis (mixed etiology).

Clostridium botulinum: clostridial myonecrosis.

Actinomyces israelii: actinomycosis (cervicofacial, thoracic, abdominal or pelvic).

Candida albicans: candidiasis of the oral mucosa, gastrointestinal tract, skin, vagina, bronchi, lungs, sepsis from catheters and debilitated individuals.


CONCLUSION

“The best care for the patient can certainly be provided in hospital. But it is not possible to provide a sufficiently rigorous criticism of a hospital when the infection is transmitted to other patients than those who came to the hospital with this disease.”


Clean environment, staff training, compliance with antisepsis and asepsis, barrier nursing techniques with the focus on hand disinfection, use of disposable materials and the like are just some examples of measures that can effectively eliminate the transmission of infection from an exogenous source.

Harder to influence is the source of endogens, which occur mainly in immuno-suppressed patients. Measures which can affect an endogenous source are effective treatment of the original disease, therapeutic approaches to support of immunity, antibiotic prophylaxis of surgical wound infections and the like. Treatment of nosocomial infections has its own specifics, which result mainly from original disease, immune status of patient, presence of artificial materials, knowledge of nosocomial pathogen resistance to antibiotics and the like.

Preventive measures include the whole range of rules which aim at the reduction of the number of risk factors for infection and to prevent transmission of infection from its source to a susceptible patient. We believe that it is necessary to streamline the daily education of health professionals in the rigorous technique of washing and disinfection of their hands, including nail care where in case of ladies as doctors and nurses are forbidden so called “Gel nails”, jewelry during the work shift and maintenance of hygienic-epidemiological system in the workplace. We see great importance in promoting leadership skills and further training, to be open to new knowledge and promote new, efficient and effective things in practice.

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INTRODUCTION

We can observe several mission paradigm shifts in the history of missionary engagement. The last paradigm, which Bosch calls 'Ecumenical' (we could give it an adjective ‘postmodern’ as well), has a strong contextual feature. There are several model (paradigm) approaches regarding mission contextual theories depending on different authors (Kraft, Schreiter, Bevans, Hesselgrave, van Engen, Luzbetak etc.). Today, in conditions of a globalizing and urbanizing world, it seems a new shift of mission paradigm should be considered. Compared with the contextual paradigm, the new one should exercise a more flexible and pluralistic approach regarding culture and social issues.

There is a theological debate among Missiologist whether Evangelization is a proper form for a contemporary mission. Some Missiologist mean that Evangelization is gone over – it is an old fashioned missionary form, which is not appropriate anymore in mission praxis. They see Evangelization as some kind of violent process, which forces people to undertake Christian ideology and in final consequences, it means manipulation with people breaking their freedom. Evangelization according to these Missiologist is a triumphal way of missionary engagement, something which reminds us of a colonial era of mission. On the other hand, there is a group of Missiologist who have a different meaning for Evangelization. According to them, Evangelization is an offering process. It means sharing the Gospel and its values with people, not against their freedom but with a respect of their conscience and cultural and spiritual backgrounds. Regarding a context, Evangelization is perceived in a wider sense with employing more of a witness aspect. It involves 'basic human needs' issue as well, since the center of this approach is the dignity of the human being and human life.

MISSIOLOGY CONTENTS

Missiology is a systematic thinking about
missionary work of the Church. It includes these main parts:

- **Foundations:**
  - Biblical
  - Theological
  - Anthropological
- Missionary Work History,
- Methodology of Missionary work,
- Strategy and Organization of Missionary work,
- Missionary Spirituality.

Considering anthropological, theological and biblical foundations of Missiology, we can say that aims of missionary work are the following: fullness of people's life, promotion of human life and culture, new world, new relationships, salvation of people, Kingdom of God.

**GLOBAL/PLURALISTIC MODEL OF MISSIONARY WORK**

If we examine the relationship between the Gospel and native/local culture throughout history, according to American anthropologist and Missiologist of Slovak origin, Luis Luzbetak, we can distinguish between the following models of missionary work:

- **Ethnocentric:** Missionaries abase the local culture and try to adapt it to European culture, usually using forced means. In this model missionaries become similar to cultural oppressors (paternalistic model - lack of confidence toward the local culture; triumphalistic model – Europeanization). This Ethnocentric approach brings about violent Evangelization that means Evangelization becomes something rather not acceptable for native communities.
- **Accommodational:** Missionaries recognize good features in domestic culture, a new missionary method appeared among Jesuits missionaries – the Method of Accommodation (16th – 18th century); but still paternalistic approach (lack of confidence, quantitative Christianization). The Ethnocentric Model and the Accommodational Model are outdated, not in use anymore.
- **Contextual/inculturational:** the second half of the 20th century introduces the term ‘Contextualization,’ which means merging of human life context with the Gospel values into a new life. In the sixties of 20th century, the term ‘Inculturation appears as a name of a new mission method which is a both-side process: interaction between Gospel and Missionaries on one hand, and local culture and domestic people on the other hand. Inculturation means mutual enrichment between Missionaries and local people: giving and receiving, receiving and giving which is carried out in dialogical form².

There is a hypothesis that a new missionary model should be considered for contemporary missionary activities. We can call this model as a Global/pluralistic one³.

- **Global/pluralistic model:** “global” means that missionary praxis is influenced by consequences of globalization; “pluralistic” means that the inculturational approach in some situations or locations may not be as relevant today as 20 years ago (for example: mixed culture society in megapolises, slum population etc). In some places, especially in slum areas, first of all we are facing a basic human needs approach in the missionary praxis. Than we can ask: What is the place of Evangelization in today’s world? What is its meaning for contemporary missionary projects which are affected by pressure of globalization? Is it enough to identify Evangelization only through its social dimension without considering its spiritual dimension? However, we can recognize some challenges the globalization brings up in missionary work today: intercultural/inter-religious dialog, mass people migration, subcultures (especially in megapolises), environmental questions, bioethical problems (human life protection), destruction of families, etc.

If there is time to consider changes in the missionary model, what features would a new model have?

**FORMS (DIMENSIONS) OF MISSIONARY WORK**

Making summary, we can distinguish the following six basic forms of missionary work⁴:

1. **Be with people:** living with people in everyday life, in their conditions.

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2 Roest Crollius, A. A.: Inculturation.
2. Dialogue: inter-religious and intercultural dialogue,
3. Evangelization: there are many forms of evangelization (testimony of life, proclamation, catechesis, liturgy, personal contact, mass-media and art work, etc.),
4. Ecumenical movement: struggle for unity among Christian denominations,
5. Small communities: founding of small fellow communities, group and community missionary work,
6. Diakonia: human liberation and promotion engagement (all projects targeting social, educational, economical and health needs of people).

Obviously, these forms are intersected, so there are not exact border lines between them. In a different point of view, we can consider these forms as dimensions of missionary work.

CHALLENGES AND PERSPECTIVES OF MISSIONARY WORK IN SOME DEVELOPING REGIONS

I will briefly introduce some challenges which are relevant in contemporary missionary work in those regions which are connected with the missionary activities of the Missiology Department at the St Elizabeth University.

Africa

Questions: poverty, malnutrition, access to health care, HIV-AIDS, migration, local conflicts (economic, tribal, religious), corruption

Temptation: instrumentalization of poverty (exchanging social services for dedicating one’s faith to the religion of a giver), growing dependence of a receiver

Challenges: education, grassroot projects, community development, spiritual development

Hope: human potential

Asia

Questions: cultural, political and religious conflicts, corruption

Temptation: Westernization

Challenges: cultural diversity, to be with people, dialogue, enculturation

Hope: cultural and human potential

Russia

Questions: society transformation, drug addiction epidemics, HIV-AIDS, family destruction, corruption

Temptation: Catholization

Challenges: ecumenical dialogue, social development, spiritual development, family support

Hope: educational potential

RESEARCH QUESTIONS

Missiology Department of the St Elizabeth University is carrying out research focused on the influence of globalization on the strategies of missionary work. The research questions are as follows:

1. Are we ready to accept a new missionary model or paradigm shift from Contextual/ incultural one to a Global/pluralistic one? What are the features of this missionary model? What is a place of enculturation in today’s missionary praxis? Do we need enculturation in a global world at all?
2. Is it important to target the spiritual dimension in the human development projects besides economical, educational, health care and social dimensions of development? What is the relationship between spiritual and social development?
3. Is a proper place of Evangelization in contemporary missionary projects? (Evangelization – sharing the gospel with people)
4. Do we need Evangelization today? What about an approach focused on basic human needs which is related to Evangelization (for example in slum areas)?

CONCLUSION

Nowadays, after two thousand years of missionary efforts by the Church, the question of human/social development versus Evangelization arises. This question is generally actual, particularly in developing countries. What is the relationship between human/social development and Evangelization in 21st century? The missionary praxis brings awareness of a reality that human development should go hand in hand with Evangelization. Those are two main dimensions
of missionary work today, which complement each other. However, we can find some tension between them. Summarizing several recent church documents regarding both human development and Evangelization we can say that:

- human development is an integral part of Evangelization;
- human development must be holistic – targeting all dimensions of humanity;
- human development as an integral part of Evangelization must be centered on the dignity of the human being, human freedom and human rights.

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PREVENTION OF SOCIAL PATHOLOGY AS OPTIMIZATION OF THE BIO-
PSYCHO-SOCIO-CULTURO-SPIRITUAL REGULATION OF BEHAVIOR

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Key words: integration of personality; prevention of social pathology; regulation of behavior

Abstract

The concept of prevention of social pathology - as the optimization of the bio-psycho-socio-cultural-spiritual regulation of behavior - is based upon other studies of Prof. Damian Kováč, who understands the human being not only as a bio-psycho-social creature, but rather as a bio-psycho-socio-cultural-spiritual being, while the integration of personality is not simply a pure predisposition, but it is the result of self-formation by cultivation. This is most effectively realized through mental regulation by means of system regulators such as wisdom, pro-socialization, tolerance, moderation, responsibility, humbleness, conscientiousness, and meaningfulness of life. If this multi-sector intervention (and prevention) is to be reasonably effective toward social-pathological factors, it cannot ignore this five-factor conditionality.

INTRODUCTION

In this paper we want to highlight a few rather theoretical problems, which may subsequently have (and usually also have) a significant impact advancing what could be called, with a little generosity, the society-wide system of the prevention of social pathology.

The first principal question which for many years has lied on the table of experts dealing with this issue of problems, is whether the concept of social pathology can form a base outcome of the society-wide prevention system.

We believe that it can; however, it will be necessary to search for and to find in its content fulfillment that would not only fit in the participating specializations and disciplines, but that could also form practical outcomes for drafting the society-wide interdisciplinary preventive strategies of the most serious social-pathological phenomena. The existing definitions are either too broad (general), or too narrow. The example of general understanding can be Freiová (1991) - she considers social pathology to be the term that covers unhealthy, abnormal, generally undesirable social phenomena, i.e. socially dangerous, negatively sanctioned forms of deviant behavior, but mainly for the study of the causes of their origination and existence. An example of the narrowed understanding can be the Ondrejkovič’s definition that defines social pathology as “a comprehensive term to denote the sick, abnormal, generally undesirable social phenomena.” The standard forms of deviant behavior belong here, too, as well as the study of the causes of their origination and existence” (Ondrejkovič, 2001, In: B. Kraus and J. Hroncová, 2007, p. 9). For a possible inspiration, we offer our own concept (Matula, 2000), according to which social pathology is a boundary for the scientific discipline that examines the social and psychological mechanisms of the origination and development of social-pathological phenomena. This also applies the results of its explorations for optimization of the regulation of surviving and the behavior of individuals who, with their behavior, conformed to the indicators of these phenomena. In the case of an erected methodological concept, we must then go back and use as a basis the traditional biopsychosocial approach, in which Kováč (1985) defined personality as the diversely differentiated dialectic unity of internal (biological) de-
terminations (predispositions and possibilities of human individualities) and external (social) actions (the conditions of life and influences of society), which are ultimately formed by mental discipline - that is, by self-formation.

Please note that as far back as 1985, D. Kováč (1985) labeled the issue of personality formation of central scientific interest and a crucial problem in the whole “process of knowing the human being”. The complex research of the human being, as the above-mentioned author had already initiated in the late 1980’s, unfortunately did not continue after 1989 because other problems became more prominent including the reorganization of scientific research activities in Slovakia.

The Table 1. gives an overview of possible problems in basic research of the human being as personality because it seems to be activating at the beginning of the 21st century. (Kováč, D., 1996)

The second reason is the fact that we consider the idea of the complex research of the human being to be very significant also in relation to the issue of understanding of social-pathological behavior that we deal with in this study. (We also must note that the author himself does not consider the above list to be complete and he expects that it will be continuously updated.)

<table>
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<th>Table 1. Main problems of the system research of human being</th>
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<td>the idea of the development of permanently sustainable life</td>
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<td>B. Biological determinants of development</td>
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<td>C. Lifelong health</td>
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<td>D. Optimal development of children</td>
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<td>E. Steering of the behavior of the young in society</td>
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<td>F. Intellect and creative activity</td>
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<td>G. Performance in stress</td>
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<td>H. Interaction of man with new technologies and information</td>
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<td>I. Personality in family, at work, and in leisure time</td>
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<td>J. The interconnection of people in regions with the world</td>
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In other studies (see Figure 1.) D. Kováč (2001) goes beyond the borders of bio-psycho-social approach when he states that the human being is not just a bio-psycho-social creature, but also a bio-psycho-socio-cultural-spiritual being, while the integration of personality is not just a pure determination but also rather the result of self-formation by cultivation. This is most effectively realized through mental regulation by means of system regulators, which are - wisdom, pro-socialness, tolerance, moderation, responsibility, humbleness, conscientiousness, and meaningfulness of life.

We must ask the question whether, in our conditions, the realization of the prevention of social pathology in the bio-psycho-socio-cultural-spiritual interdisciplinary interconnections of all the involved science disciplines and practical specializations is real?

We do not have the courage to answer this, but we believe that we are not alone in wishing that it were so. To achieve this (not unrealistic) goal, the following will be mostly necessary:

- To create gradually the conditions for the unprecedented cooperation not only of all the disci-

**Figure 1.** The Kováč’s concept of human being
plines, but - what is worse (feasible) - for all professionals working in this field. However, such cooperation assumes a prior – a clear definition of the insights and the autonomies of professionals from the area of Medicine, Pedagogy, Social Work, Psychology, or Psychotherapy. We believe that the currently ongoing International Scientific Conference, too, will move the search for common insights and autonomous specifics of professions from the area of “helping professions” a step further.

- To avoid attempts to monopolize the content of the unambiguously interdisciplinary matter (such as prevention of social pathology undoubtedly is) on the part of several scientific disciplines or professional activities.

- To discuss, at least in the medium-term, openly and without prejudices also the disappointing level, status and problems of the legislation of biological, social and psychological components of complex care for the young generation. Legislative regulations do not respect the excessively necessary tying up of activities of preventive institutions at work with this at-risk part of the population.

- If the multi-disciplinary intervention (and also prevention) is to be adequately effective toward the social-pathological factors, it cannot then ignore this five-factor conditionality.

CONCLUSION

Let us wish ourselves that the vision of the interdisciplinary prevention of social pathology would become reality as soon as possible and that its outcome would be the concept of prevention of social pathology as the optimization of bio-psycho-socio-cultural-spiritual regulation of behavior.

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MISSIONARY WORK IN FAMILIES ACCORDING TO THE 10 COMMANDMENTS

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INTRODUCTION

The development of a person should not forget the phenomenon of the Ten Commandments, the collection of guidelines constitute our own special European culture. In countries, where modern civilization received the basics in their process of Christianizing, the Ten Commandments became the common foundation of life, its moral code. A long time ago, life according to its moral norms, had become the measure of persuasiveness and authenticity of Christianity as it was. Exactly, according to words from the letter by St Jacob who reminded us that the belief without deed is dead (cf. Jac. 2, 17). Of course, this refers not only to all Baptized, but relates even more to those, who according to the social or political status they perform, have to make decisions about core values, such as defense of human life from conception to natural death; family established on the marriage between a man and a woman; freedom in the raising of their children; supporting the public good in all its forms. These values are not to be discussed“ (Benedict XVI., 2007, no. 83). Christianity is therefore alive, always actualized. walking the ideal of the Ten Commandments. It is the path paved by acts of love toward God and toward neighbors, and hence, by little daily things and attentiveness towards those, who need help. It is a whole-life mission, occupation. Continuous self-education and training are essential parts of it. Christians should think and distinguish between what is Christian and what is not, to see why he cannot adapt to the spirit of the time. He is invited to give witness to his belief and morality toward differently thinking neighbors and fellow citizens; about his difference from others; and reasons for his morality, to, by his acts, demonstrate the law, written in the heart of each person. After all, “Always new, difficult searching for the right implementation of the order of human things is the task for each generation. It is never an easily fulfilled task. Each generation must, therefore, bring its contribution to show the persuasive engagement of freedom and goodness“ (Benedict XVI., 2008, no. 25).

TEN COMMANDMENTS AND THEIR MAIN EDUCATIONAL MISSION

In the Presence of God, in Judaism and Christianity, Decalogue is introduced as the highest of of all laws. It is a minimal catalogue of the basic premises for saving the freedom given by God. This accrues, aside from other things, also, that Jehovah is not a cult God as for example, a golden calf. God, not created by humans has an intention for all people which requires them, to honor him not only in some moments, during assigned times, but educates them, to all their lives, hold faith in Him. That means that besides the external demonstration of religion there has to come with the internal act and moral life. Because, in that one and same list of Ten Commandments, the Commandments are given for the Faith, the same as for the ethical actions. Both of them are required by God. God, opening himself, is recognized in religion as God with ethical requirements. Decalogue, as Pope John Paul II. wrote, is “The promise and a sign of the new act, by which The Law can be newly and definitely pulled into the human heart and will thereby replace The Law of Sin, which had defaced this heart. Then, he will be given the new heart, because new spirit will be living there (cf. Ez 36, 24-28)” (John Paul II. 2001, no. 12). God, of The New testament, who appeared through Jesus Christ, is calling man to understand The Decalogue, as a Gift of Grace which is given exclusively for his goodness, to keep his personal dignity secure and lead him to real happiness (John Paul II., 1995, no. 52). The preservation of The Decalogue by young people, the group being primarily educated also in our context, is a matter of course, in The New Testament – Jesus’s Mother, Mary (Luke 1, 26-38), John the Baptist (Mt 3, 1-12), was a rich young man, who desired to reach Eternal Life (Mk 10, 17-22). Apostles,

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Disciples, who had followed Christ, according to His norm, had modeled themselves, their thoughts, as well as their actions, and in those ways, also influenced their neighborhood. They were the evidence of their religion, which they believed to bring happiness, human fulfillment and grace for everybody. Their mission was therefore, inseparably connected with their life testimony, with self-education and education of neighbors.

THE FIRST RESPONSIBLE FOR FORMING PERSONALITY OF YOUNG MAN

Norms of The Decalogue set the rules of relationship to God and also to neighbors. The embracing of the Fourth Commandment – “Honor your father and mother, to live long on Earth, which was given to you by The Lord, your God!” (Ex 20, 12), means among others, also the reasoning and reminding of the responsibility of parents for their children. One of these responsibilities is upbringing. It is a satisfaction of virtuousness, of justness, to give everyone that which belongs to Him. Namely, with the emphasis on freedom which is the necessary presumption of an authentic action. (Kondrla, 2001, p. 33). The raising by parents belongs to children as a prevention against everything negative which can attack them in the near or distant future. According to Balvin, the raising, nowadays, has to be realized among myriad factors, also in the Spirit of Humanism. (cf. Balvin, 2008, p. 8). God’s Ten Commandments, which also had been adopted in Christianity, is a Law, having the intention to make a co-living valuable for people, to lead people through their relationships to the Author of Law and Humanity. The first educators are parents. These woman and men, who on the day of their act of marriage, established an inseparable partnership and have an opportunity to create an everyday participation “in the family life in moments of joy and also in difficulties” (John Paul II., Trnava 1993, no. 37) by that educational method, which will lead them and their children, to an active, conscious and successful adaptation into a wider circle of Society. Spouses, educating themselves, their partners and children, as they do not live in isolation, but as a part of a social community, influence their surroundings positively or negatively. Blaščíková, (2011, p. 19) suggests that “the real aspect of the religious experience, as well as life itself, is becoming a community and relationship”. Also, because of this intention, it is important, how spouses will educate each other and how will they consequently guide their children. Children should have parents who will provide them a stable family environment; who understand what real love their children need to feel - a connection with a greater love toward themselves and toward others. According to the Catechism of the Catholic Church “parents are the first responsible for educating their children” (Catechism of the Catholic Church, 1999, no. 2223); that allows them to lead their children to true human values; to respect of life from the beginning to natural end; to expand beyond worldly service; and, to self-sacrifice. Further, the Chapter of the Catechism about the Fourth Commandment, reminds parents to lead their children to fondness, forgiving, regard, adherence, self-renunciation, healthy inference and self-control. Christian parents need to teach their children to subordinate materialism and natural dimensions to internal and spiritual dimensions, to be aware of danger and immorality, which endanger human society. They have to educate them to Faith, the right usage of their own minds and their own freedom. Parents have to take care of their children’s spiritual as well as material needs. They also have responsibility within their means, to choose those schools which that will help them best in their task as Christian Educators (cf. Catechism of the Catholic Church, 1999). When we think of the population of Slovakia, and specifically, the situation of the Romany, that group of people who often have a problem with integration into the mainstream of Society, it is essential through missionary work, to instill in Romany parents responsibility for their children by accepting the requirements of Slovak Society, especially paying attention to their education and appropriate socialization. Selická, (2009, p. 239) in this connection, demands the necessity of constant education “eventually gaining education for qualifications in new professions. The majority of Society must realize that family education must be a priority, keeping the principle of subsidiarity, and, to not even think about collegial education of children. Culture, influenced by the Ten Commandments should have other alternatives, corresponding with respecting human dignity and with the main purposes of each person, the earthly, as well as the eternal. The trust, helping hand, Christian love, but also conscientiousness and reliability – should be the common attributes of all interpersonal relationships – in particular, along with other Christian values which can significantly help, also, by educating each person who lives in specific sectors.
SUMMARY

The phenomenon of The Decalogue should not be omitted in the education of any person in the 21st century. A life according to the standards of The Decalogue became a measure of the persuasiveness and authenticity of Christianity itself, a long time ago. This is exactly what St. James points out in his letter saying that faith without works is dead (cf. Jas 2, 17). When we talk about a specific environment where the Ten Commandments can find their place, we refer to various cultural and social dispositions of people which influences their moral conduct.

THE FIRST RESPONSIBLE FOR FORMING A YOUNG MAN´S PERSONALITY

The standards of The Decalogue define the rules for one´s relationship with God and neighbor. Ramification of the Fourth Commandment of The Decalogue – “Honor your father and your mother, so that you may live long in the land the Lord your God is giving you!,” (Ex 20, 12) means, among other aspects, the awareness and remembering of parental duties toward their children. Education is one of these obligations. It is the fulfillment of a just virtue to give everyone the education they deserve. Children are entitled to education from their parents as well as protection against everything diminishing they may encounter in the near or distant future. According to Balvín, at the present time, education also has to be carried out in the spirit of humanism (cf. Balvín, 2008, p. 8).

The first educators of children are their parents. It is their duty to choose such educational methods as which will guide themselves and their children to active, conscious and successful integration into the wider Society. When we think, in the context of Slovakia, of the situation of the Roma people, a group of people often having troubles to integrate into the mainstream Society, it is necessary to teach Roma parents to accept responsibility for their children by supporting the requirements of the broad Slovak Society, especially in terms of their education and proper socialization. This mainstream Society has to understand that a priori, it should trust family education while preserving the principle of subsidiarity and not even consider compulsory boarding education of children. Any culture influenced by The Decalogue should have other alternatives corresponding to respect for human dignity and with the main goal being respect for every human being, either an earthly or an eschatological one. Trust, offered helping hand, Christian love, consistency and responsibility – these should be common denominators in all interpersonal relationships – particular as well as universal relationships. These values can significantly help to educate people in a specific environment.

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SOCIAL, ETHICAL PUBLIC HEALTH AND NURSING ASPECTS OF AIDS - MALARIA - TB RELATED MORTALITY AND MALNUTRITION IN ADULTS AND CHILDREN UNDER FIVE WORLDWIDE


St. Elizabeth Univ Health Related PhD Programs Bratislava, Research Program Weissenfels, FRG, Slovakia EU

Key words: HIV TB and malaria related mortality

Abstract

Social Ethical, Economic and Public Health aspects of HIV AIDS, Malaria and TB is critically reviewed by members of panel of the SEU PhD Program during their annual meetings. Solely HIV is responsible for 4.5, TB for 1.9, Malaria 1.2, diarrhea 1.0 but pneumonia for 6.2 million deaths worldwide, therefore up to 15-17 million deaths are due to ID associated mainly with malnutrition. Critically selected papers from peer reviewed sources are analyzed with their impact to outcome related research within their PhD and research program.

TUBERCULOSIS AND THERISKOFOPPORTUNISTIC INFECTIONS AND CANCERS IN HIV-INFECTED PATIENTS STARTING ART IN SOUTHERN AFRICA

Lukas Fenner


To investigate the incidence of selected opportunistic infections (OIs) and cancers and the role of a history of Tuberculosis (TB) as a risk factor for developing these conditions in HIV-infected patients starting anti-retroviral treatment (ART) in Southern Africa.

Five ART program from Zimbabwe, Zambia and South Africa participated. Outcomes were extra-pulmonary cryptococcal disease (CM), pneumonia due to Pneumocystis jirovecii (PCP), Kaposi’s sarcoma and Non-Hodgkin lymphoma. A history of TB was defined as a TB diagnosis before or at the start of ART. We used Cox models adjusted for age, sex, CD4 cell count at ART start and treatment site, presenting results as adjusted hazard ratios (aHR) with 95% confidence intervals (CI).

We analysed data from 175 212 patients enrolled between 2000 and 2010 and identified 702 patients with incident CM (including 205 with a TB history) and 487 with incident PCP (including 179 with a TB history). The incidence per 100 person-years over the first year of ART was 0.48 (95% CI 0.44-0.52) for CM, 0.35 (95% CI 0.32-0.38) for PCP, 0.31 (95% CI 0.29-0.35) for Kaposi’s sarcoma and 0.02 (95% CI 0.01-0.03) for Non-Hodgkin lymphoma. A history of TB was associated with cryptococcal disease (aHR 1.28, 95% CI 1.05-1.55) and Pneumocystis jirovecii pneumonia (aHR 1.61, 95% CI 1.27-2.04), but not with Non-Hodgkin lymphoma (aHR 1.09, 95% CI 0.45-2.65) or Kaposi’s sarcoma (aHR 1.02, 95% CI 0.81-1.27).

Our study suggests that there may be interac-
tions between different OIs in HIV-infected patients.

**SHORT-COURSE ANTIRETROVIRAL THERAPY IN PRIMARY HIV INFECTION**


Short-course antiretroviral therapy (ART) in primary human immunodeficiency virus (HIV) infection may delay disease progression but has not been adequately evaluated.

We randomly assigned adults with primary HIV infection to ART for 48 weeks, ART for 12 weeks, or no ART (standard of care), with treatment initiated within 6 months after sero-conversion. The primary end point was a CD4+ count of less than 350 cells per cubic millimeter or long-term ART initiation.

A total of 366 participants (60% men) underwent randomization to 48-week ART (123 participants), 12-week ART (120), or standard care (123), with an average follow-up of 4.2 years. The primary end point was reached in 50% of the 48-week ART group, as compared with 61% in each of the 12-week ART and standard-care groups. The average hazard ratio was 0.63 (95% confidence interval [CI], 0.45 to 0.90; P=0.01) for 48-week ART as compared with standard care and was 0.93 (95% CI, 0.67 to 1.29; P=0.67) for 12-week ART as compared with standard care. The proportion of participants who had a CD4+ count of less than 350 cells per cubic millimeter was 28% in the 48-week ART group, 40% in the 12-week group, and 40% in the standard-care group. Corresponding values for long-term ART initiation were 22%, 21%, and 22%. The median time to the primary end point was 65 weeks (95% CI, 17 to 114) longer with 48-week ART than with standard care. Post hoc analysis identified a trend toward a greater interval between ART initiation and the primary end point the closer that ART was initiated to estimated seroconversion (P=0.09), and 48-week ART conferred a reduction in the HIV RNA level of 0.44 log(10) copies per milliliter (95% CI, 0.25 to 0.64) 36 weeks after the completion of short-course therapy. There were no significant between-group differences in the incidence of the acquired immunodeficiency syndrome, death, or serious adverse events.

A 48-week course of ART in patients with primary HIV infection delayed disease progression, although not significantly longer than the duration of the treatment. There was no evidence of adverse effects of ART interruption on the clinical outcome.

**ENHANCED CD4+ T-CELL RECOVERY WITH EARLIER HIV-1 ANTIRETROVIRAL THERAPY**

Tuan Le


The relationship between the timing of the initiation of antiretroviral therapy (ART) after infection with human immunodeficiency virus type 1 (HIV-1) and the recovery of CD4+ T-cell counts is unknown. In a prospective, observational cohort of persons with acute or early HIV-1 infection, we determined the trajectory of CD4+ counts over a 48-month period in partially overlapping study sets: study set 1 included 384 participants during the time window in which they were not receiving ART and study set 2 included 213 participants who received ART soon after study entry or sometime thereafter and had a suppressed plasma HIV viral load. We investigated the likelihood and rate of CD4+ T-cell recovery to 900 or more cells per cubic millimeter within 48 months while the participants were receiving viral-load–suppressive ART.

Among the participants who were not receiving ART, CD4+ counts increased spontaneously, soon after HIV-1 infection, from the level at study entry (median, 495 cells per cubic millimeter; inter-quartile range, 383 to 622), reached a peak value (median, 763 cells per cubic millimeter; inter-quartile range, 573 to 987) within approximately 4 months after the estimated date of infection, and declined progressively thereafter. Recovery of CD4+ counts to 900 or more cells per cubic millimeter was seen in approximately 64% of the participants who initiated ART earlier (≤4 months after the estimated date of HIV infection) as compared with approximately 34% of participants who initiated ART later (>4 months) (P<0.001). After adjustment for whether ART was initiated when the CD4+ count was 500 or more cells per cubic millimeter or less than 500 cells per cubic millimeter and the plasma HIV RNA level at the time of initiation of ART, the likelihood that the count would increase to 900 or more cells per cubic millimeter was lower by 65% (odds ratio, 0.35), and the rate of recovery was slower by 56% (rate ratio, 0.44), if ART was initiated later rather than earlier. There was no association between the plasma HIV RNA level at the time of initiation of ART and CD4+ T-cell recovery.

A transient, spontaneous restoration of CD4+ T-cell counts occurs in the 4-month time window after HIV-1 infection. Initiation of ART during this period is associated with an enhanced likelihood of recovery of CD4+ counts.
ANTIRETROVIRAL THERAPY IN EARLY HIV INFECTION

Bruce D. Walker


Antiretroviral therapy (ART) has transformed the course of human immunodeficiency virus (HIV) infection. More than two dozen HIV drugs are now available in resource-rich environments, and newer combination regimens have ever-increasing efficacy and decreasing toxicity. As a result, life expectancy and quality of life are close to normal for HIV-infected persons with access to these medications.

DYNAMICS OF NASOPHARYNGEAL BACTERIAL COLONIZATION IN HIV-EXPOSED YOUNG INFANTS IN TANZANIA

Kinabo G.D.


To estimate the prevalence of nasopharyngeal bacterial colonization (NPBC) patterns in young Tanzanian HIV-exposed infants and to analyze the influence of maternal NPBC and of the infant’s HIV status on the NPBC pattern.

Longitudinal cohort study of neonates born to HIV-infected mothers visiting Kilimanjaro Christian Medical Centre, Tanzania, between 2005 and 2009. Demographic and clinical data and nasopharyngeal bacterial cultures were obtained at the age of 6 weeks, 3 and 6 months, and at one time point, a paired mother-infant nasopharyngeal swab was taken.

Four hundred and twenty-two swabs were taken from 338 eligible infants. At 6 weeks of age, colonization rates were 66% for Staphylococcus aureus, 56% for Streptococcus pneumoniae, 50% for Moraxella catarrhalis and 14% for Haemophilus influenzae. Colonization with S. aureus diminished over time and was more common in HIV-infected infants. S. pneumoniae and H. influenzae colonisation rose over time and was more prevalent in HIV-uninfected children.

Co-colonization of S. pneumoniae with H. influenzae or M. catarrhalis was mostly noticed in HIV-infected infants. S. pneumoniae and M. catarrhalis colonisation of the mother was a risk factor for colonization in HIV-uninfected infants, while maternal S. aureus colonization was a risk factor for colonization in HIV-infected infants. Among the 104 S. pneumoniae isolates, 19F was most prevalent, and 57 (55%) displayed capsular serotypes represented in the 13-valent pneumococcal conjugate vaccine.

NPBC was common in Tanzanian HIV-exposed infants. The significant prevalence of pneumococcal vaccine serotypes colonizing this pediatric population justifies the use of the 13-valent pneumococcal vaccine to reduce the burden of pneumococcal invasive disease.

LONG-TERM CLINICAL AND IMMUNOLOGIC OUTCOMES OF HIV-INFECTED WOMEN WITH AND WITHOUT PREVIOUS EXPOSURE TO NEVIRAPINE

Peter K. MUDIOPE


To determine and compare the clinical and immunologic outcomes for HIV-infected women initiated on antiretroviral therapy (ART), with and without previous exposure to single-dose nevirapine in the MTCT-Plus programme - Kampala, Uganda, from 2003 to 2011.

Retrospective comparison of prospectively collected programmatic data of clinical and immunologic treatment outcomes among HIV-infected Ugandan women, with and without prior exposure to sdNVP, who received NNRTI-based ART for a median follow-up of 6 years.

Of the 408 women in the program, 289 (70.8%) were started on ART, of whom 205 (70.9%) had prior exposure to sdNVP. Clinical, immunologic and combined (clinical and or immunologic) treatment failure occurred in 29 (10.0%), 132 (45.7%) and 142 (49.1%) women, respectively. There was no significant difference in the distribution of time to immunologic failure for women by exposure to sdNVP (log-rank P = 0.98). In Cox proportional hazard modeling, exposure to sdNVP was not associated with immunologic failure [adjusted hazard ratio (HR) = 0.89, 95% confidence interval (CI): 0.61-1.30]. CD4 count >100 cells/mm(3) at initiation was associated with reduced incidence of immunologic failure in adjusted analyses (HR = 0.32, 95% CI: 0.22-0.48).

HIV-infected Ugandan women initiated on an NVP-based ART regimen had similar immunologic treatment outcomes irrespective of previous NVP exposure. CD4 cell count prior to initiating HAART was a key prognostic factor for successful long-term immunologic treatment outcomes. In poor settings, reg-
ular follow-up of patients on HAART with adequate counseling to promote adherence and safe disclosure may promote low clinical failure rates.

**TBC**

**CLOFAZIMINE IN THE TREATMENT OF MULTIDRUG-RESISTANT TUBERCULOSIS**

XU H. B.

CMI 2012, 18: 1104-1110

Clofazimine has shown activity against Mycobacterium tuberculosis, including multidrug-resistant strains in vitro and in animal studies. However, clinical experience with clofazimine in multidrug-resistant tuberculosis (MDR-TB) is scarce. We reported our clinical experience with 39 MDR-TB patients treated with combination regimens that included clofazimine. From January 2008 to March 2011, 39 patients received clofazimine for the treatment of MDR-TB in Shanghai Pulmonary Hospital. Patients had isolates resistant to a median of six drugs (range, 2-11 drugs). Of the 39 cases, 36 had cavitary changes noted on initial chest radiograph or chest computed tomography, and positive sputum-smear microscopy results at the time of MDR-TB diagnosis. At data censure, 15 of the 39 patients had successful therapy, with at least five consistently negative cultures documented for the final 12 months of treatment. Eleven continued to receive treatment. There were no deaths. Thirteen patients had a poor outcome, including four defaults and nine treatment failures. Culture conversion occurred in 22 cases at a median of 12 weeks. Side-effects occurred in 34 patients, mainly including skin discolouration, ichthyosis and gastrointestinal adverse events. No patients reported significant toxicity likely to be attributable to clofazimine therapy. Adverse events were managed by combinations of dose adjustment and symptom management. In our experience, clofazimine was well tolerated and may have efficacy in the treatment of MDR-TB.

**MALARIA**

**A PROSPECTIVE COMPARATIVE STUDY OF KNOWLESI, FALCIPARUM AND VIVAX MALARIA IN SABAH, MALAYSIA: HIGH PROPORTION WITH SEVERE DISEASE FROM PLASMODIUM KNOWLESI AND PLASMODIUM VIVAX BUT NO MORTALITY WITH EARLY REFERRAL AND ARTESUNATE THERAPY**

Bridget E. Barber

CID 2013, 56(3): 383-97

Plasmodium knowlesi commonly causes severe malaria in Malaysian Borneo, with high case-fatality rates reported. We compared risk, spectrum, and outcome of severe disease from P. knowlesi, Plasmodium falciparum, and Plasmodium vivax and outcomes following introduction of protocols for early referral and intravenous artesunate for all severe malaria.

From September 2010 to October 2011 we prospectively assessed non-pregnant patients aged ≥12 years admitted to Queen Elizabeth Hospital (QEH), Sabah, with polymerase chain reaction-confirmed Plasmodium mono-infection. Standardized referral and pre-referral intravenous artesunate were instituted at district hospitals.

Severe malaria occurred in 38 of 130 (29%) patients with P. knowlesi, 13 of 122 (11%) with P. falciparum, and 7 of 43 (16%) with P. vivax. The commonest severity criteria in knowlesi malaria included parasitemia >100 000/µL (n = 18), jaundice (n = 20), respiratory distress (n = 14), hypotension (n = 13), and acute kidney injury (n = 9). On multivariate analysis, P. knowlesi was associated with a 2.96-fold (95% confidence interval, 1.19-7.38-fold) greater risk of severity than P. falciparum (P = .020); only parasitemia and schizontemia >10% independently predicted knowlesi severity. Risk of severe knowlesi malaria increased 11-fold with parasitemia >20 000/µL, and 28-fold with parasitemia >100 000/µL. Nearly all (92%) knowlesi malaria patients received oral artemisinin therapy; 36 of 38 (95%) and 39 of 92 (42%) with severe and nonsevere disease, respectively, also received ≥1 dose of intravenous artesunate. No deaths occurred from any species.

Plasmodium knowlesi is the commonest cause of severe malaria at QEH, with parasitemia the major risk factor for severity. Early referral and treatment with artesunate was highly effective for severe malaria from all species and associated with zero mortality.

**A PHASE 3 TRIAL OF RTS,S/AS01 MALARIA VACCINE IN AFRICAN INFANTS**


The candidate malaria vaccine RTS,S/AS01 reduced episodes of both clinical and severe malaria in children 5 to 17 months of age by approximately 50% in an ongoing phase 3 trial. We studied infants 6
to 12 weeks of age recruited for the same trial.

We administered RTS,S/AS01 or a comparator vaccine to 6537 infants who were 6 to 12 weeks of age at the time of the first vaccination in conjunction with Expanded Program on Immunization (EPI) vaccines in a three-dose monthly schedule. Vaccine efficacy against the first or only episode of clinical malaria during the 12 months after vaccination, a co-primary end point, was analyzed with the use of Cox regression. Vaccine efficacy against all malaria episodes, vaccine efficacy against severe malaria, safety, and immunogenicity were also assessed.

The incidence of the first or only episode of clinical malaria in the intention-to-treat population during the 14 months after the first dose of vaccine was 0.31 per person-year in the RTS,S/AS01 group and 0.40 per person-year in the control group, for a vaccine efficacy of 30.1% (95% confidence interval [CI], 23.6 to 36.1). Vaccine efficacy in the per-protocol population was 31.3% (97.5% CI, 23.6 to 38.3). Vaccine efficacy against severe malaria was 26.0% (95% CI, −7.4 to 48.6) in the intention-to-treat population and 36.6% (95% CI, 4.6 to 57.7) in the per-protocol population. Serious adverse events occurred with a similar frequency in the two study groups. One month after administration of the third dose of RTS,S/AS01, 99.7% of children were positive for anti-circumsporozoite antibodies, with a geometric mean titer of 209 EU per milliliter (95% CI, 197 to 222).

The RTS,S/AS01 vaccine co-administered with EPI vaccines provided modest protection against both clinical and severe malaria in young infants.

References

MATERNAL AND NEONATAL MORTALITY IN DEVELOPING COUNTRIES AND PUBLIC HEALTH / SOCIOECONOMIC IMPACT OF CIVILISATION DISEASES

St. Elizabeth PhD programe Bratislava, Slovakia EU

Key words: maternal and neonatal mortality

Abstract

Socioeconomic impact and social work challenges of maternal and neonatal mortality and its relation to civilisation disorders is critically reviewed by SEU tropic team and PhD programme members and extensively discussed in conjunction to worldwide published data in peer reviewed periodicals in social, economic and health sciences.

ACHIEVING THE MILLENNIUM DEVELOPMENT GOAL OF REDUCING MATERNAL MORTALITY IN RURAL AFRICA: AN EXPERIENCE FROM BURUNDI

Tayler-Smith K.
Tropical Medicine and International Health, Vol. 18, No. 2, pp.: 166-174, Febr. 2013

To estimate the reduction in maternal mortality associated with the emergency obstetric care provided by Médecins Sans Frontières (MSF) and to compare this to the fifth Millennium Development Goal of reducing maternal mortality.

The impact of MSF’s intervention was approximated by estimating how many deaths were averted among women transferred to and treated at MSF’s emergency obstetric care facility in Kabezi, Burundi, with a severe acute maternal morbidity. Using this estimate, the resulting theoretical maternal mortality ratio in Kabezi was calculated and compared to the Millennium Development Goal for Burundi.

In 2011, 1385 women from Kabezi were transferred to the MSF facility, of whom 55% had a severe acute maternal morbidity. We estimated that the MSF intervention averted 74% (range 55-99%) of maternal deaths in Kabezi district, equating to a district maternal mortality rate of 208 (range 8-360) deaths/100 000 live births. This lies very near to the 2015 MDG 5 target for Burundi (285 deaths/100 000 live births).

Provision of quality emergency obstetric care combined with a functional patient transfer system can be associated with a rapid and substantial reduction in maternal mortality, and may thus be a possible way to achieve Millennium Development Goal 5 in rural Africa.

THE EMERGENCE OF CLINICAL RESISTANCE TO TIGECYCLINE

Yan Sun

Tigecycline (TIG) exhibits broad-spectrum activity against many Gram-positive and Gram-negative pathogens. However, clinical re-
Resistance has emerged recently and has been detected following treatment with TIG. This observation suggests that long-term monotherapy may carry a high risk for TIG resistance. TIG resistance is observed most frequently in Acinetobacter baumannii and Enterobacteriaceae, especially in multidrug-resistant strains. Resistance-nodulation-cell division (RND)-type transporters and other efflux pumps may be factors for decreased sensitivity to TIG. Therefore, TIG should be cautiously used in the clinic, and efflux-mediated resistance should be closely monitored in order to prolong the lifespan of this useful antibiotic.

**IMPROVING LINEZOLID USE DECREASES THE INCIDENCE OF RESISTANCE AMONG GRAM-POSITIVE MICROORGANISMS**

Elena Ramírez


Surveillance studies have shown the emergence of infections with linezolid-resistant bacteria. The relationship between appropriate linezolid use and the spread of linezolid resistance among Gram-positive microorganisms in a single tertiary referral centre was evaluated. In an initial observational study, a prospective prescription-indication study was conducted on intensive care areas and haematology, neurosurgery, vascular surgery and nephrology wards during 2009. An intervention through follow-up feedback on audit results from May-June 2010 was then conducted. From July-December 2010, a second drug-use study of linezolid was conducted, with the same objectives and methodology. To assess the antimicrobial pressure of linezolid, an ecological study was conducted from 2006-2010 in the same hospital wards. Indications for linezolid in the initial study were considered suitable in 38.5% of cases, whilst in the second study the rate was 51.2% (33% increase). Linezolid consumption fell by 57% in the second half of 2010. A significant correlation was found between its inadequate use (DDD/1000 patient-days) and the incidence of linezolid-resistant strains/1000 patient-days (r=0.93; P=6.9e-024); 85% of the variability in the incidence of linezolid resistance was predicted by its inadequate use. Its partial correlations were significant for Enterococcus faecium (r=0.407; P=0.049), Staphylococcus epidermidis (r=0.874; P=2.3e-008) and Staphylococcus haemolyticus (r=0.406; P=0.049) but not Staphylococcus aureus (r=0.051; P=0.704). A relationship was found between appropriate linezolid use and the incidence of linezolid-resistant strains of E. faecium, S. epidermidis and S. haemolyticus.

**PERSISTENCE AND ANTIVIRAL RESISTANCE OF VARICELLA ZOSTER VIRUS IN HEMATOLOGICAL PATIENTS**

Martha T. van der Beek

CID 2013, 56(3): 335-43

Varicella zoster virus (VZV) infections are a relevant cause of morbidity and mortality in hematological patients and especially in hematopoietic stem cell transplant (HSCT) recipients. The present study aimed to investigate the prevalence and clinical significance of viral persistence and antiviral resistance by systematically analyzing all episodes of VZV diagnosed in our laboratory in pediatric and adult hematological patients between 2007 and 2010.

Patient charts were reviewed to document patient and disease characteristics. VZV loads were determined in all available clinical samples from the day of diagnosis and thereafter. Persistent VZV infection was defined as a VZV infection that lasted at least 7 days. Analysis of resistance was performed in all patients with persistent VZV infection by sequence analysis of viral thymidine kinase and DNA polymerase genes.

In total, 89 episodes occurred in 87 patients, of whom 65 were recipients of an allogeneic HSCT. Follow-up samples were available in 54 episodes. Persistent VZV was demonstrated in 32 of these episodes (59%). Complications occurred in 16 of the persistent episodes (50%) vs 2 of 22 nonpersistent episodes (9%). Mutations possibly associated with resistance were found in 27% of patients with persistent VZV, including patients with treatment-unresponsive dermatomal zoster that progressed to severe retinal or cerebral infection.

In hematological patients, VZV-related complications occur frequently, especially in persistent infections. Antiviral resistance is a relevant factor in persistent infections and needs to be investigated in various affected body sites, especially when clinical suspicion of treatment failure arises.

**ASSOCIATION BETWEEN COLISTIN DOSE AND MICROBIOLOGIC OUTCOMES IN PATIENTS WITH MULTIDRUG-RESISTANT GRAM-NEGATIVE BACTEREMIA**

Giulia Vicari
Colistin is increasingly used for the treatment of multidrug-resistant gram-negative infections. However, colistin dosing varies greatly and the optimal regimen is unknown. The purpose of this study was to determine if colistin dosing correlates with patient outcomes.

This retrospective study included patients with gram-negative bacteremia treated with intravenous colistin for at least 72 hours. The primary objective was to determine if colistin dose (mg of colistin base activity/kg/day) independently predicts day-7 microbiological success. Secondary objectives included evaluation for an association between colistin dose and 7-day mortality, 28-day mortality, and the development of acute kidney insufficiency (AKI).

Seventy-six patients were included in the analysis, with 52 patients (68%) achieving 7-day microbiological success. The median colistin dose was significantly higher in patients who achieved microbiological success (2.9 vs 1.5 mg/kg/day; P = .011). After adjusting for baseline severity of illness and concomitant tigecycline use, higher colistin dose independently correlated with microbiological success (adjusted odds ratio per 1 mg/kg/day = 1.74; 95% confidence interval, 1.11-2.71; P = .015). The median colistin dose was also significantly higher among survivors at day 7 (2.7 vs 1.5 mg/kg/day; P = .007). However, no difference was observed in colistin dose when comparing survivors and nonsurvivors at day 28. A significantly higher colistin dose was given to patients who developed AKI during therapy (3.8 vs 1.6 mg/kg/day; P < .001).

Higher colistin dose independently predicted microbiological success, which may partially explain the similar association with 7-day mortality. However, higher colistin doses may also precipitate worsening renal function.

**RABIES VACCINATIONS: ARE ABBREVIATED INTRADERMAL SCHEDULES THE FUTURE?**

Wieten R. W.

CID 2013, 56(3): 414-9

Rabies is a deadly disease, and current preexposure vaccination schedules are lengthy and expensive. We identified nine studies investigating abbreviated schedules. Although initial responses were lower, accelerated adequate immune responses were elicited after booster vaccinations. Lower-dose (and therefore cheaper) vaccination schedules may constitute a valid alternative to current vaccination schedules.

**DACLATASVIR FOR PREVIOUSLY UNTREATED CHRONIC HEPATITIS C GENOTYPE-1 INFECTION: A RANDOMISED, PARALLEL-GROUP, DOUBLE-BLIND, PLACEBO-CONTROLLED, DOSE-FINDING, PHASE 2A TRIAL**

Stanislas Pol

Lancet Infect Dis 2012, 12: 671-77

Several direct-acting antivirals for chronic hepatitis C virus (HCV) infection are available, but they are limited by tolerability and dosing schedules. Once-daily daclatasvir, a potent NS5A replication complex inhibitor, was generally well tolerated in phase 1 studies. We assessed daclatasvir in combination with pegylated interferon (peginterferon) and ribavirin for chronic HCV.

In this double-blind, parallel-group, dose-finding, phase 2a study, treatment-naive patients with HCV genotype-1 infection (without cirrhosis) from 14 centres in the USA and France were randomly assigned (1:1:1:1) to receive peginterferon alfa-2a (180 μg per week) and ribavirin (1000-1200 mg daily) plus placebo or 3 mg, 10 mg, or 60 mg of daclatasvir taken once daily, for 48 weeks. The primary efficacy endpoint was undetectable HCV RNA at 4 weeks and 12 weeks after start of treatment (extended rapid virological response, eRVR). Analysis was of all participants who received one dose of study drug. We used descriptive analyses to compare results. This study is registered with ClinicalTrials.gov, number NCT00874770.

48 patients were randomly assigned (12 per group); all received at least one dose of study drug. 15 patients discontinued treatment before week 48. Five of 12 patients (42%, 80% CI 22-64%) who received 3 mg daclatasvir achieved eRVR, compared with ten of 12 (83%, 61-96%) who received 10 mg daclatasvir, nine of 12 (75%, 53-90%) who received 60 mg daclatasvir, and one of 12 (8%, 1-29%) who received placebo. Adverse events and discontinuations as a result of adverse events occurred with similar frequency across groups.

Daclatasvir seems to be a potent NS5A replication complex inhibitor that increases the antiviral potency of peginterferon and ribavirin. Our findings support the further development of regimens containing 60 mg daclatasvir for the treatment of chronic genotype-1 HCV infection.
ESTIMATED GLOBAL MORTALITY ASSOCIATED WITH THE FIRST 12 MONTHS OF 2009 PANDEMIC INFLUENZA A H1N1 VIRUS CIRCULATION: A MODELING STUDY

Fatimah S. Dawood

Lancet Infect Dis 2012, 12: 687-95

18 500 laboratory-confirmed deaths caused by the 2009 pandemic influenza A H1N1 were reported worldwide for the period April, 2009, to August, 2010. This number is likely to be only a fraction of the true number of the deaths associated with 2009 pandemic influenza A H1N1. We aimed to estimate the global number of deaths during the first 12 months of virus circulation in each country.

We calculated crude respiratory mortality rates associated with the 2009 pandemic influenza A H1N1 strain by age (0—17 years, 18—64 years, and >64 years) using the cumulative (12 months) virus-associated symptomatic attack rates from 12 countries and symptomatic case fatality ratios (sCFR) from five high-income countries. To adjust crude mortality rates for differences between countries in risk of death from influenza, we developed a respiratory mortality multiplier equal to the ratio of the median lower respiratory tract infection mortality rate in each WHO region mortality stratum to the median in countries with very low mortality. We calculated cardiovascular disease mortality rates associated with 2009 pandemic influenza A H1N1 infection with the ratio of excess deaths from cardiovascular and respiratory diseases during the pandemic in five countries and multiplied these values by the crude respiratory disease mortality rate associated with the virus. Respiratory and cardiovascular mortality rates associated with 2009 pandemic influenza A H1N1 were multiplied by age to calculate the number of associated deaths.

We estimate that globally there were 201 200 respiratory deaths (range 105 700—395 600) with an additional 83 300 cardiovascular deaths (46 000—179 900) associated with 2009 pandemic influenza A H1N1. 80% of the respiratory and cardiovascular deaths were in people younger than 65 years and 51% occurred in southeast Asia and Africa.

Our estimate of respiratory and cardiovascular mortality associated with the 2009 pandemic influenza A H1N1 was 15 times higher than reported laboratory-confirmed deaths. Although no estimates of sCFRs were available from Africa and southeast Asia, a disproportionate number of estimated pandemic deaths might have occurred in these regions. Therefore, efforts to prevent influenza need to effectively target these regions in future pandemics.

LEADING INFECTIOUS DISEASES PROBLEMS IN TURKEY

Erdem H.

CMI 2012, 18: 1056-1067

Turkey has significant geographical and socio-economic differences throughout a vast area of the country. These characteristics affect the epidemiology of infectious diseases, some of which are rarely seen in western Europe. However, effectively implemented control measures have resulted in decreased rates of many community-acquired infections, including tuberculosis and malaria, that were major health problems only a few decades ago. There are high rates of antimicrobial resistance in various nosocomial isolates of Gram-positive and Gram-negative bacteria. A recently implemented, nationwide, electronic resistance surveillance system in hospitals is expected to produce reliable data, and possibly will help to develop an effective strategy to decrease antimicrobial resistance in bacteria that currently plague many tertiary-care hospitals in the country. This article summarizes the most frequently encountered community-acquired infections, and gives an overview of current antimicrobial resistance in both outpatient and hospital settings in Turkey.

INFECTIOUS DISEASES IN THE ARABIAN PENINSULA AND EGYPT

Shibl A.

CMI 2012, 18: 1068-1080

Infectious diseases are important causes of morbidity and mortality globally. Epidemiologically, differences in the patterns of infectious diseases and antimicrobial resistance exist across diverse geographical regions. In this review on infectious diseases in the Arabian Peninsula and Egypt, the epidemiology of tuberculosis, malaria and human immunodeficiency virus (HIV) infections will be addressed. The challenges of the hepatitis C epidemic in Egypt and the epidemiology of this infection across the region will be reviewed. In recent years, we have seen dengue endemicity become established, with major outbreaks in parts of the region. Emerging data also indicate that, across the region, there is an increasing burden.
of antibiotic resistance, with endemicity in healthcare settings and dissemination into the community. New challenges include the emergence of the Alkhurma haemorrhagic fever virus in Saudi Arabia. The annual Hajj pilgrimage in Saudi Arabia serves as a model for the control of infectious disease in mass gatherings. As most of these countries constantly experience a uniquely dynamic population influx in the form of expatriate workers, tourists, or pilgrims, concerted regional and international collaboration to address these public health concerns in a region that lies at the crossroads for the global spread of infectious pathogens is imperative.

CULTURE-INDEPENDENT REAL-TIME PCR REVEALS EXTENSIVE POLYMICROBIAL INFECTIONS IN HOSPITALIZED DIARRHOEA CASES IN KOLKATA, INDIA

Sinha A.

CMI 2013, 19: 173-180

Culture-independent identification of diarrhoeal aetiological agents was performed using DNA harvested from diarrhoeal stool specimens with SYBR-Green-based real-time PCR targeting Vibrio cholerae, Vibrio parahaemolyticus, Campylobacter spp., Shigella spp. and three different pathotypes of diarrhoeagenic Escherichia coli. Conventional culture-dependent methods detected bacterial enteropathogens in 68 of 122 diarrhoeal stool specimens. Of 68 specimens, 59 (86.8%) had a single pathogen and the remaining nine (13.2%) had polymicrobial infections with multiple pathogens. Re-analysis of the 68 specimens by culture-independent real-time PCR methods showed that 25 (36.8%) specimens contained single pathogen and 43 (63.2%) specimens contained mixed infections with multiple pathogens. The prevalence of such high levels of polymicrobial infections would not have been detected without using real-time PCR. Culture-dependent analysis assigned 54 of the 122 selected archived specimens as ‘no known aetiology’. However, re-analysis of these samples by real-time PCR showed the presence of single or multiple pathogens among 34 (63%) of these specimens. Estimation of relative pathogen load by real-time PCR in the stool specimens indicated that the inability of conventional culture-dependent methods to detect the pathogens was related to lower colony-forming units of the pathogen, as reflected by lower C(t) values. Detection of high levels of polymicrobial infection by real-time PCR indicates that in the settings like Kolkata and its surroundings, where cholera and other enteric diseases are endemic, the concept of one pathogen one disease might need to be re-evaluated.

COMMUNITY-ACQUIRED PNEUMONIA IN IMMUNOCOMPROMISED OLDER PATIENTS: INCIDENCE, CAUSATIVE ORGANISMS AND OUTCOME

Sousa D.

CMI 2013, 19: 187-192

The number of elderly patients in the community with immunosuppressive conditions has increased progressively over recent decades. We sought to determine the incidence, causative organisms and outcome of community-acquired pneumonia (CAP) occurring in immunocompromised older patients. We prospectively compared cases of CAP in immunocompromised and non-immunocompromised patients admitted to five public hospitals in three Spanish regions. Of 320 cases studied, 115 (36%) occurred in immunocompromised patients, including: solid or haematological malignancy (97), corticosteroids or other immunosuppressive drugs (44), solid organ or stem cell transplant (five), and other conditions (eight). The etiology was established in 44% of immunocompromised patients vs. 32% of non-immunocompromised patients (p 0.03). Streptococcus pneumoniae was the most common causative organism in both groups (29% vs. 21%; p 0.08), followed by Legionella pneumophila (3% vs. 6%; p 0.01). Gram-negative bacilli were more frequent among immunocompromised patients (5% vs. 0.5%; p <0.01), particularly Pseudomonas aeruginosa (3% vs. 0%; p 0.04). Nocardiosis was only observed in immunocompromised patients (two cases). Bacteremia occurred similarly in the two groups. No significant differences were found with respect to ICU admission (8%, in both groups) or the length of stay (12.5 vs. 10.4 days). The early (<48 h) (3.5 vs. 0.5%; p 0.04) and overall case-fatality rates (12% vs. 3%; p <0.01) were higher in immunocompromised patients. In conclusion, a substantial number of older patients hospitalized for CAP are immunocompromised. Although relatively uncommon, CAP due to gram-negative bacilli, including P. aeruginosa, is more frequent among these patients. CAP occurring in immunocompromised patients causes significant morbidity and mortality.

CARDIOVASCULAR BENEFITS AND DIABETES RISKS OF STATIN THERAPY IN PRIMARY
PREVENTION: AN ANALYSIS FROM THE JUPITER TRIAL

Paul M. Ridker

Lancet 2012, 380: 565-71

In the JUPITER primary prevention trial, the cardiovascular and mortality benefits of statin therapy exceed the diabetes hazard, including in participants at high risk of developing diabetes.

PLASMA HDL CHOLESTEROL AND RISK OF MYOCARDIAL INFARCTION: A MENDELIAN RANDOMISATION STUDY

Benjamin F. Voight

Lancet 2012, 380: 572-80

Some genetic mechanisms that raise plasma HDL cholesterol do not seem to lower risk of myocardial infarction. These data challenge the concept that raising of plasma HDL cholesterol will uniformly translate into reductions in risk of myocardial infarction.

THE EFFECTS OF LOWERING LDL CHOLESTEROL WITH STATIN THERAPY IN PEOPLE AT LOW RISK OF VASCULAR DISEASE: META-ANALYSIS OF INDIVIDUAL DATA FROM 27 RANDOMISED TRIALS


In individuals with 5-year risk of major vascular events lower than 10%, each 1 mmol/L reduction in LDL cholesterol produced an absolute reduction in major vascular events of about 11 per 1000 over 5 years. This benefit greatly exceeds any known hazards of statin therapy. Under present guidelines, such individuals would not typically be regarded as suitable for LDL-lowering statin therapy. The present report suggests, therefore, that these guidelines might need to be reconsidered.

HYPERTENSION IN DEVELOPING COUNTRIES

Mohsen Ibrahim M.

Lancet 2012, 380: 611-19

Data from different national and regional surveys show that hypertension is common in developing countries, particularly in urban areas, and that rates of awareness, treatment, and control are low. Several hypertension risk factors seem to be more common in developing countries than in developed regions. Findings from serial surveys show an increasing prevalence of hypertension in developing countries, possibly caused by urbanisation, ageing of population, changes to dietary habits, and social stress. High illiteracy rates, poor access to health facilities, bad dietary habits, poverty, and high costs of drugs contribute to poor blood pressure control. The health system in many developing countries is inadequate because of low funds, poor infrastructure, and inexperience. Priority is given to acute disorders, child and maternal health care, and control of communicable diseases. Governments, together with medical societies and non-governmental organisations, should support and promote preventive programmes aiming to increase public awareness, educate physicians, and reduce salt intake. Regulations for the food industry and the production and availability of generic drugs should be reinforced.

Hypertension is mainly related to environmental and lifestyle factors rather than to genetically defined racial differences. Substantial differences in the prevalence of hypertension between people of African and European origin are greatly reduced after adjustment for socio-economic status.

Genetic factors seem to play an important part in salt sensitivity, which is common in black people.
Table 1. Prevalence of hypertension in developing countries

<table>
<thead>
<tr>
<th>Countries</th>
<th>Countries (survey year)</th>
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</thead>
<tbody>
<tr>
<td>very low (&lt;10%)</td>
<td>Bangladesh (rural); Cameroon (rural); Ethiopia (rural); India (rural); Iran (rural); Nigeria (rural); Sudan</td>
</tr>
<tr>
<td>low (&lt;20%)</td>
<td>Cameroon (urban); Congo (urban); Democratic Republic of the Congo; Eritrea; Ethiopia; north India (rural); Iran; Liberia; Nepal; Nigeria (urban)</td>
</tr>
<tr>
<td>intermediate (20–30%)</td>
<td>China; Costa Rica; Cuba; Egypt; Ethiopia (urban); Ghana; Jamaica; Pakistan; Senegal; South Africa; Thailand; The Gambia; Turkey; Uganda (rural); Vietnam</td>
</tr>
<tr>
<td>high (&gt;30%)</td>
<td>Algeria; Brazil; Chile; Ecuador; Ghana (urban); north India (urban); Mexico; Mozambique; Tanzania; Zimbabwe</td>
</tr>
<tr>
<td>very high (&gt;40%)</td>
<td>Burkina Faso; Paraguay; Seychelles; Venezuela</td>
</tr>
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Figure 1. Prevalence of hypertension in developing countries with national surveysData are from references
Single gene mutations promote salt retention through a defect in renal sodium handling. Many more common variants associated with blood pressure remain to be discovered.

In many but not all societies, dark skin colour is associated with high blood pressure. Burt and colleagues reported that the prevalence of high blood pressure is two times greater in black people than in white people. However, Mosley and colleagues documented a non-linear relation between skin pigmentation (measured by reflectance spectrophotometry) and blood pressure in Egyptian women. Nubian Egyptians, who live in south Egypt and are of a different ethnic origin and have darker skin than do non-Nubian people, had blood pressure similar to their non-Nubian counterparts. The Egyptian Nubian population has physical characteristics similar to those of other black Africans. This finding provides strong evidence that high blood pressure does not inevitably occur in black-skinned populations residing in a multi-ethnic society. Keil and colleagues reported no association between skin colour and the incidence of hypertension after controlling for education or other measures of social class. Skin colour is associated with environmental factors known to affect blood pressure, such as body mass, sodium–potassium excretion ratio, poverty, education, and access to health services.

**Diet and excess salt intake**

The controversy surrounding the effect of salt intake on blood pressure has been inflamed by the publication of important and contradictory studies. Irrespective of this controversy, influential and prestigious regulating organisations, such as the European Union and the US Institute of Medicine, chose to aim to reduce salt intake.

The strength of evidence for salt intake as a factor in blood pressure is much greater than that of other lifestyle factors. Several studies have shown that migration from isolated low-salt societies to an urban environment with an increased salt intake is associated with a rise in blood pressure. Extent of salt consumption and the main sources of salt intake are difficult to measure accurately and vary widely in the developing countries where measurements were possible. Brown and colleagues reviewed the urinary sodium excretion rate in several countries. The lowest

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**Figure 2. Differences in prevalence between urban and rural regions**

- China: Urban 25.4, Rural 22.8
- Eritrea: Urban 16.5, Rural 14.5
- West Africa: Urban 24.5, Rural 24.5
- Ghana*: Urban 50, Rural 37
- South Africa: Urban 25, Rural 10.5
- South Ethiopia: Urban 10.1, Rural 9.7
- Egypt: Urban 31, Rural 19.9

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mean urinary sodium excretion rates were reported in Ghana and in urban and rural Cameroon. The highest mean excretion rates were reported in north China. In Turkey, daily salt intake was about 18 g per person according to the SALTURK study, and in an urban south Indian population, mean daily salt intake was 8.5 g per person, which was correlated with risk of hypertension. Blood pressure response to changes in sodium intake (salt sensitivity) is affected by genetic factors, age, body mass, associated disease, and ethnic factors. In the Chinese population, variations in blood pressure response to salt intake are affected almost equally by genetic and environmental factors.

Food sources of sodium vary between developed and developing countries. In European and North American diets, an estimated 75% of sodium intake comes from processed and restaurant-prepared foods. In Asian countries and many African countries, the salt added in cooking and present in sauces and seasonings represents the main source of sodium in the diet. In the Chinese Health and Nutrition Survey (2002), 72% of sodium was from salt added during cooking and 8% from soy sauce. Bread can be an important source of salt in diet. In Turkey, average daily bread consumption is 400 g per person, which accounts for 7.28 g/day of salt intake. In some settings, bread is produced on an industrial scale, so control of salt content is possible. However, in most African cities bread comes from many small producers, making successful control measures much more difficult to implement.

The association between high fructose intake and systolic blood pressure is graded. Sugar consumption has risen substantially in Middle Eastern developing countries, to an average of 30–40 kg/year per person.

Between 1970 and the end of 1990s, nutrition in many developing countries changed radically. Changes in the composition of diet followed the introduction of food processing and the fast-food industry. Diets have become richer in calories, salt, sugar, and fat, which has increased the prevalence of obesity, metabolic syndrome, and hypertension in many developing countries.

**Urbanisation and socioeconomic status**

Urbanisation is strongly correlated with an increase in hypertension prevalence, and migration from rural to urban areas is associated with increased blood pressure. South Africans who have spent most of their life in urban areas are more likely to be hypertensive than are those from rural areas. Mass migration from rural to urban and peri-urban areas probably accounts for the high prevalence of hypertension in black Africans living in urban areas. Urbanisation affects food consumption patterns, with increased consumption of fats, oils, and animal-based foodstuff. This diet change can increase bodyweight, which is an independent risk factor for the development of hypertension. In Cameroon, migration to urban areas is associated with high body-mass index, fasting blood sugar, and blood pressure. Body-mass index—a powerful predictor of hypertension—is also strongly associated with urbanisation and might result from dietary changes, reduced physical activity in addition to increased psychological stress, and interruption of traditional family links.

**Panel:** Underlying factors that increase or are associated with high blood pressure

**Non-modifiable factors**

- Age
- Genetic predisposition
- Family history
- Susceptible ethnic origin
- Dark skin colour
- Low birthweight

**Modifiable factors (environmental or lifestyle)**

- Overweight and obesity
- Excess visceral (abdominal) fat
- Excess salt intake
- Low potassium intake
- Unhealthy diet, particularly excess calories, fats, and fructose
- Excess alcohol
- Sedentary occupation
- Reduced physical activity
- Psychological stress
- Urban living
- Smoking
- Vitamin D deficiency
- Low folic-acid intake

**Other factors**

- Dyslipidaemia
- Increased triglycerides
- Hyperuricaemia
- High gross national product per head
- Increased arterial stiffness
- Systemic proinflammatory state
• Undernutrition in childhood
• Sleep deprivation
• Prescription drugs (eg, non-steroidal anti-inflammatory drugs)
• Long-term exposure to noise

CONTROVERSIES IN TREATMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Klaus F. rabe

Lancet 2011, 378: 1038-47

Chronic obstructive pulmonary disease (COPD) is a chronic disorder with substantial morbidity and major effects attributable to the high morbidity and mortality rates. Despite an increasing evidence base, some important controversies in COPD management still exist. The classic way to define COPD has been based on spirometric criteria, but more relevant diagnostic methods are needed that can be used to describe COPD severity and comorbidity. Initiation of interventions earlier in the natural history of the disease to slow disease progression is debatable, there are many controversies about the role of inhaled corticosteroids in the management of COPD, and long-term antibiotics for prevention of exacerbation have had a resurgence in interest. Novel therapeutic drugs are urgently needed for optimum management of the acute COPD exacerbation. COPD is a complex disease and consists of several clinically relevant phenotypes that in future will guide its management.

EFFECT OF MATERNAL OBESITY ON NEONATAL DEATH IN SUB-SAHARAN AFRICA: MULTIVARIABLE ANALYSIS OF 27 NATIONAL DATASETS

Jenny A. Creswell

Lancet 2011, 378: 1325-30

Rates of obesity are increasing worldwide, including in sub-Saharan Africa. Neonates born to obese mothers in low-income settings are at increased risk of complications including admission to neonatal intensive care, macrosomia, low Apgar scores, and perinatal death. We investigated whether maternal obesity is a risk factor for neonatal death in sub-Saharan Africa and the effect on the detailed timing of death within the neonatal period.

Cross-sectional Demographic and Health Surveys from 27 sub-Saharan countries (2003-09) were pooled. We used multivariable logistic regression to assess the risk of neonatal death (in women’s most recent singleton livebirth in the 5 years preceding the survey) by maternal body-mass index (BMI) category (measured during the survey). Timing of death was investigated with a discrete-time survival model. 15,518 of 81,126 eligible women were overweight (4266 were obese), 52,006 had an optimum BMI, and 13,602 were underweight. Maternal obesity was associated with an increased odds of neonatal death after adjustment for confounding factors (adjusted odds ratio 1.46, 95% CI 1.11-1.91). Maternal obesity was a significant risk factor for neonatal deaths occurring during the first 2 days of life (1.62, 1.11-2.37). We noted no statistically significant relation later in the neonatal period (days 2-6 1.36, 0.84-2.21; days 7-27 1.19, 0.65-2.18), possibly because of low statistical power.

Maternal obesity in sub-Saharan Africa is associated with increased risk of early neonatal death. Potential mechanisms include prematurity, intrapartum events, or infections. Strategies to prevent and reduce obesity need to be considered; obese women should be advised to deliver in a health-care facility that can provide emergency obstetric and neonatal care.
Table 1. Distribution of maternal BMI category by country and region

<table>
<thead>
<tr>
<th>n</th>
<th>Underweight (&lt;18.5 kg/m²)</th>
<th>Optimum (18.5–24.9 kg/m²)</th>
<th>Overweight (25–29.9 kg/m²)</th>
<th>Obese (≥30 kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethopia (2005)</td>
<td>2237</td>
<td>785 (33.5%)</td>
<td>1339 (63.1%)</td>
<td>86 (2.8%)</td>
</tr>
<tr>
<td>Kenya (2008–09)</td>
<td>2809</td>
<td>513 (17.9%)</td>
<td>600 (59.1%)</td>
<td>499 (17.6%)</td>
</tr>
<tr>
<td>Madagascar (2008–09)</td>
<td>2765</td>
<td>928 (35.8%)</td>
<td>1665 (58.9%)</td>
<td>144 (4.5%)</td>
</tr>
<tr>
<td>Malawi (2004)</td>
<td>4542</td>
<td>558 (12.4%)</td>
<td>3408 (74.6%)</td>
<td>479 (10.9%)</td>
</tr>
<tr>
<td>Mozambique (2003)</td>
<td>4216</td>
<td>500 (12.4%)</td>
<td>3101 (74.6%)</td>
<td>474 (9.7%)</td>
</tr>
<tr>
<td>Rwanda (2005)</td>
<td>2011</td>
<td>220 (10.9%)</td>
<td>1556 (78.0%)</td>
<td>212 (10.1%)</td>
</tr>
<tr>
<td>Tanzania (2004)</td>
<td>3745</td>
<td>549 (12.3%)</td>
<td>2576 (71.1%)</td>
<td>455 (12.7%)</td>
</tr>
<tr>
<td>Uganda (2006)</td>
<td>1115</td>
<td>221 (19.0%)</td>
<td>732 (64.7%)</td>
<td>120 (11.9%)</td>
</tr>
<tr>
<td>Zambia (2007)</td>
<td>2653</td>
<td>333 (12.6%)</td>
<td>1830 (69.1%)</td>
<td>376 (13.9%)</td>
</tr>
<tr>
<td>Zimbabwe (2005–06)</td>
<td>2843</td>
<td>334 (11.7%)</td>
<td>1802 (64.2%)</td>
<td>538 (18.1%)</td>
</tr>
<tr>
<td>Eastern pooled</td>
<td>28 936</td>
<td>4941 (17.0%)</td>
<td>19 609 (68.4%)</td>
<td>3383 (11.3%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>n</th>
<th>Underweight (&lt;18.5 kg/m²)</th>
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<th>Overweight (25–29.9 kg/m²)</th>
<th>Obese (≥30 kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon (2004)</td>
<td>1659</td>
<td>137 (8.6%)</td>
<td>1042 (62.6%)</td>
<td>350 (21.0%)</td>
</tr>
<tr>
<td>Chad (2004)</td>
<td>1982</td>
<td>546 (28.5%)</td>
<td>1199 (63.9%)</td>
<td>182 (5.7%)</td>
</tr>
<tr>
<td>Congo-Brazzaville (2005)</td>
<td>2289</td>
<td>379 (15.9%)</td>
<td>1292 (55.6%)</td>
<td>440 (20.1%)</td>
</tr>
<tr>
<td>Democratic Republic of the Congo (2007)</td>
<td>1772</td>
<td>372 (21.6%)</td>
<td>1161 (66.7%)</td>
<td>195 (9.4%)</td>
</tr>
<tr>
<td>Middle pooled</td>
<td>7702</td>
<td>1434 (19.0%)</td>
<td>4694 (61.8%)</td>
<td>1167 (14.0%)</td>
</tr>
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</table>

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<th>Overweight (25–29.9 kg/m²)</th>
<th>Obese (≥30 kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho (2004)</td>
<td>986</td>
<td>56 (5.6%)</td>
<td>510 (49.7%)</td>
<td>251 (26.4%)</td>
</tr>
<tr>
<td>Namibia (2006–07)</td>
<td>2857</td>
<td>492 (16.1%)</td>
<td>1477 (52.0%)</td>
<td>528 (19.2%)</td>
</tr>
<tr>
<td>Swaziland (2006)</td>
<td>1402</td>
<td>28 (2.0%)</td>
<td>552 (39.1%)</td>
<td>436 (31.7%)</td>
</tr>
<tr>
<td>Southern pooled</td>
<td>5245</td>
<td>576 (10.3%)</td>
<td>539 (48.0%)</td>
<td>1215 (23.9%)</td>
</tr>
</tbody>
</table>

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<th>Obese (≥30 kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin (2006)</td>
<td>6922</td>
<td>929 (13.0%)</td>
<td>4809 (68.9%)</td>
<td>856 (13.1%)</td>
</tr>
<tr>
<td>Burkina Faso (2003)</td>
<td>4995</td>
<td>1396 (27.2%)</td>
<td>3221 (65.0%)</td>
<td>291 (6.0%)</td>
</tr>
<tr>
<td>Ghana (2008)</td>
<td>1542</td>
<td>178 (10.8%)</td>
<td>913 (57.7%)</td>
<td>330 (22.9%)</td>
</tr>
<tr>
<td>Guinea (2005)</td>
<td>1445</td>
<td>254 (16.8%)</td>
<td>1004 (69.2%)</td>
<td>149 (10.9%)</td>
</tr>
<tr>
<td>Liberia (2007)</td>
<td>2631</td>
<td>338 (13.3%)</td>
<td>1751 (67.4%)</td>
<td>398 (13.9%)</td>
</tr>
<tr>
<td>Mali (2006)</td>
<td>5515</td>
<td>817 (15.2%)</td>
<td>3596 (67.1%)</td>
<td>819 (13.2%)</td>
</tr>
<tr>
<td>Niger (2006)</td>
<td>1836</td>
<td>336 (19.9%)</td>
<td>1108 (65.1%)</td>
<td>281 (11.5%)</td>
</tr>
<tr>
<td>Nigeria (2008)</td>
<td>11 611</td>
<td>1983 (16.3%)</td>
<td>7105 (60.1%)</td>
<td>1885 (17.3%)</td>
</tr>
<tr>
<td>Senegal (2005)</td>
<td>1467</td>
<td>250 (16.5%)</td>
<td>883 (59.5%)</td>
<td>229 (16.3%)</td>
</tr>
<tr>
<td>Sierra Leone (2008)</td>
<td>1279</td>
<td>170 (13.7%)</td>
<td>774 (62.0%)</td>
<td>249 (18.7%)</td>
</tr>
<tr>
<td>Western pooled</td>
<td>39 243</td>
<td>6651 (16.6%)</td>
<td>25 164 (64.3%)</td>
<td>5487 (14.0%)</td>
</tr>
<tr>
<td>All sub-Saharan Africa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pooled</td>
<td>81 126</td>
<td>13 602 (16.6%)</td>
<td>52 006 (64.5%)</td>
<td>11 252 (13.7%)</td>
</tr>
</tbody>
</table>
In October 2010, nearly 10 months after a dev-astating earthquake, Haiti was stricken by epidemic cholera. Within days after detection, the Ministry of Public Health and Population established a National Cholera Surveillance System (NCSS).

The NCSS used a modified World Health Orga-nization case definition for cholera that included acute watery diarrhea, with or without vomiting, in persons of all ages residing in an area in which at least one case of Vibrio cholerae O1 infection had been con-firmed by culture.

Within 29 days after the first report, cases of V. cholerae O1 (serotype Ogawa, biotype El Tor) were confirmed in all 10 administrative departments (similar to states or provinces) in Haiti. Through October 20, 2012, the public health ministry reported 604,634 cases of infection, 329,697 hospitalizations, and 7436 deaths from cholera and isolated V. cholerae O1 from 1675 of 2703 stool specimens tested (62.0%). The cu-mulative attack rate was 5.1% at the end of the first year and 6.1% at the end of the second year. The cu-mulative case fatality rate consistently trended down-ward, reaching 1.2% at the close of year 2, with de-partmental cumulative rates ranging from 0.6% to 4.6% (median, 1.4%). Within 3 months after the start of the epidemic, the rolling 14-day case fatality rate was 1.0% and remained at or below this level with few, brief exceptions. Overall, the cholera epidemic in Hai-ti accounted for 57% of all cholera cases and 53% of all cholera deaths reported to the World Health Organiza-tion in 2010 and 58% of all cholera cases and 37% of all cholera deaths in 2011.

A review of NCSS data shows that during the first 2 years of the cholera epidemic in Haiti, the cu-mulative attack rate was 6.1%, with cases reported in all 10 departments. Within 3 months after the first case was reported, there was a downward trend in mortality, with a 14-day case fatality rate of 1.0% or less in most areas.

There is a need for a simple and efficacious treatment for cutaneous leishmaniasis with an accept-able side-effect profile.

We conducted a randomized, vehicle-con-trolled phase 3 trial of topical treatments containing 15% paromomycin, with and without 0.5% gentamicin, for cutaneous leishmaniasis caused by Leishmania major in Tunisia. We randomly assigned 375 patients with one to five ulcerative lesions from cutaneous leishmaniasis to receive a cream containing 15% paromomycin–0.5% gentamicin (called WR 279,396), 15% paromomycin alone, or vehicle control (with the same base as the other two creams but con-taining neither paromomycin nor gentamicin). Each lesion was treated once daily for 20 days. The primary end point was the cure of the index lesion. Cure was defined as at least 50% reduction in the size of the in-dex lesion by 42 days, complete reepithelialization by 98 days, and absence of relapse by the end of the trial (168 days). Any withdrawal from the trial was consid-ered a treatment failure.

The rate of cure of the index lesion was 81% (95% confidence interval [CI], 73 to 87) for paromo-mycin–gentamicin, 82% (95% CI, 74 to 87) for paromomycin alone, and 58% (95% CI, 50 to 67) for ve-hicle control (P<0.001 for each treatment group vs. the vehicle-control group). Cure of the index lesion was accompanied by cure of all other lesions except in five patients, one in each of the paromomycin groups and three in the vehicle-control group. Cure of the index lesion was accompanied by cure of all other lesions except in five patients, one in each of the paromomycin groups and three in the vehicle-control group. Mild-to-mod-erate application-site reactions were more frequent in the paromomycin groups than in the vehicle-control group.

This trial provides evidence of the efficacy of paromomycin–gentamicin and paromomycin alone for ulcerative L. major disease.

Michael W. Climo

Results of previous single-center, observation-al studies suggest that daily bathing of patients with chlorhexidine may prevent hospital-acquired blood-stream infections and the acquisition of multidrug-resistant organisms (MDROs).

We conducted a multicenter, cluster-rand-
A randomized, nonblinded crossover trial to evaluate the effect of daily bathing with chlorhexidine-impregnated washcloths on the acquisition of MDROs and the incidence of hospital-acquired bloodstream infections. Nine intensive care and bone marrow transplantation units in six hospitals were randomly assigned to bathe patients either with no-rinse 2% chlorhexidine-impregnated washcloths or with nonantimicrobial washcloths for a 6-month period, exchanged for the alternate product during the subsequent 6 months. The incidence rates of acquisition of MDROs and the rates of hospital-acquired bloodstream infections were compared between the two periods by means of Poisson regression analysis.

A total of 7727 patients were enrolled during the study. The overall rate of MDRO acquisition was 5.10 cases per 1000 patient-days with chlorhexidine bathing versus 6.60 cases per 1000 patient-days with nonantimicrobial washcloths (P=0.03), the equivalent of a 23% lower rate with chlorhexidine bathing. The overall rate of hospital-acquired bloodstream infections was 4.78 cases per 1000 patient-days with chlorhexidine bathing versus 6.60 cases per 1000 patient-days with nonantimicrobial washcloths (P=0.007), a 28% lower rate with chlorhexidine-impregnated washcloths. No serious skin reactions were noted during either study period.

Daily bathing with chlorhexidine-impregnated washcloths significantly reduced the risks of acquisition of MDROs and development of hospital-acquired bloodstream infections.

**PROTECTIVE EFFICACY OF THE RECOMBINANT, LIVE-ATTENUATED CYD TETRA VALENT DENGUE VACCINE IN THAI SCHOOLCHILDREN: A RANDOMISED, CONTROLLED PHASE 2B TRIAL**

Arunee Sabchareon


Roughly half the world’s population live in dengue-endemic countries, but no vaccine is licensed. We investigated the efficacy of a recombinant, live, attenuated tetravalent dengue vaccine.

In this observer-masked, randomised, controlled, monocentre, phase 2b, proof-of-concept trial, healthy Thai schoolchildren aged 4—11 years were randomly assigned (2:1) to receive three injections of dengue vaccine or control (rabies vaccine or placebo) at months 0, 6, and 12. Randomisation was by computer-generated permuted blocks of six and participants were assigned with an interactive response system. Participants were actively followed up until month 25. All acute febrile illnesses were investigated. Dengue viraemia was confirmed by serotype-specific RT-PCR and non-structural protein 1 ELISA. The primary objective was to assess protective efficacy against virologically confirmed, symptomatic dengue, irrespective of severity or serotype, occurring 1 month or longer after the third injection (per-protocol analysis).

4002 participants were assigned to vaccine (n=2669) or control (n=1333). 3673 were included in the primary analysis (2452 vaccine, 1221 control). 134 cases of virologically confirmed dengue occurred during the study. Efficacy was 30.2% (95% CI –13.4 to 56.6), and differed by serotype. Dengue vaccine was well tolerated, with no safety signals after 2 years of follow-up after the first dose.

These data show for the first time that a safe vaccine against dengue is possible. Ongoing large-scale phase 3 studies in various epidemiological settings will provide pivotal data for the CYD dengue vaccine candidate.

**FUNGAL INFECTIONS ASSOCIATED WITH CONTAMINATED METHYPREDNISOLON E IN TENNESSEE**

Marion A.


We investigated an outbreak of fungal infections of the central nervous system that occurred among patients who received epidural or paraspinal glucocorticoid injections of preservative-free methylprednisolone acetate prepared by a single compounding pharmacy.

Case patients were defined as patients with fungal meningitis, posterior circulation stroke, spinal osteomyelitis, or epidural abscess that developed after epidural or paraspinal glucocorticoid injections. Clinical and procedure data were abstracted. A cohort analysis was performed.

The median age of the 66 case patients was 69 years (range, 23 to 91). The median time from the last epidural glucocorticoid injection to symptom onset was 18 days (range, 0 to 56). Patients presented with meningitis alone (73%), the cauda equina syndrome or focal infection (15%), or posterior circulation stroke with or without meningitis (12%). Symptoms and signs included headache (in 73% of the patients), new or worsening back pain (in 50%), neurologic
symptoms (in 48%), nausea (in 39%), and stiff neck (in 29%). The median cerebrospinal fluid white-cell count on the first lumbar puncture among patients who presented with meningitis, with or without stroke or focal infection, was 648 per cubic millimeter (range, 6 to 10,140), with 78% granulocytes (range, 0 to 97); the protein level was 114 mg per deciliter (range, 29 to 440); and the glucose concentration was 44 mg per deciliter (range, 12 to 121) (2.5 mmol per liter [range, 0.7 to 6.7]). A total of 22 patients had laboratory confirmation of Exserohilum rostratum infection (21 patients) or Aspergillus fumigatus infection (1 patient). The risk of infection increased with exposure to lot 06292012@26, older vials, higher doses, multiple procedures, and translaminar approach to epidural glucocorticoid injection. Voriconazole was used to treat 61 patients (92%); 35 patients (53%) were also treated with liposomal amphotericin B. Eight patients (12%) died, seven of whom had stroke.

We describe an outbreak of fungal meningitis after epidural or paraspinal glucocorticoid injection with methylprednisolone from a single compounding pharmacy. Rapid recognition of illness and prompt initiation of therapy are important to prevent complications.

NECROTIZING CUTANEOUS MUCORMYCOSIS AFTER A TORNADO IN JOPLIN, MISSOURI, IN 2011

Robyn Neblett Fanfair


Mucormycosis is a fungal infection caused by environmentally acquired molds. We investigated a cluster of cases of cutaneous mucormycosis among persons injured during the May 22, 2011, tornado in Joplin, Missouri.

We defined a case as a soft-tissue infection in a person injured during the tornado, with evidence of a mucormycete on culture or immunohistochemical testing plus DNA sequencing. We conducted a case-control study by reviewing medical records and conducting interviews with case patients and hospitalized controls. DNA sequencing and whole-genome sequencing were performed on clinical specimens to identify species and assess strain-level differences, respectively.

A total of 13 case patients were identified, 5 of whom (38%) died. The patients had a median of 5 wounds (range, 1 to 7); 11 patients (85%) had at least one fracture, 9 (69%) had blunt trauma, and 5 (38%) had penetrating trauma. All case patients had been located in the zone that sustained the most severe damage during the tornado. On multivariate analysis, infection was associated with penetrating trauma (adjusted odds ratio for case patients vs. controls, 8.8; 95% confidence interval [CI], 1.1 to 69.2) and an increased number of wounds (adjusted odds ratio, 2.0 for each additional wound; 95% CI, 1.2 to 3.2). Sequencing of the D1–D2 region of the 28S ribosomal DNA yielded Apophysomyces trapeziformis in all 13 case patients. Whole-genome sequencing showed that the apophysomyces isolates were four separate strains.

We report a cluster of cases of cutaneous mucormycosis among Joplin tornado survivors that were associated with substantial morbidity and mortality. Increased awareness of fungi as a cause of necrotizing soft-tissue infections after a natural disaster is warranted.

References:


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INSTRUCTIONS FOR AUTHORS

We would like to offer you an opportunity to contribute to CSW Journal content as we would like to aspire to create a collection of real experiences of social workers, doctors, missionaries, teachers, etc. CWS Journal is published by the International Scientific Group of Applied Preventive Medicine I-GAP in Vienna, Austria.

The journal is to be published quarterly and only in English language as it will be distributed in various foreign countries.

We prefer to use the term ‘clinical social work’ rather than social work even though it is less common. In the profession of clinical social work, there clearly is some tension coming from unclear definitions of competence of social workers and their role in the lives of the clients; the position of social work in the structures of scientific disciplines especially in cases where people declare themselves to be professionals even though they have no professional educational background. These are only few of the topics we would like to discuss in the CWS Journal.

Your contribution should fit into the following structure:

1. Editorial
2. Interview, Case Reports
3. Review
4. Original article
5. Letters

Instructions for contributors:

All articles must be in accordance with the current language standards in English, current ISO and the law on copyrights and rights related to copyrights.

Your contributions are to be sent via e-mail (addressed to: michalolah@gmail.com) as an attachment or on a CD via regular postal service. In both cases written and saved in MS Word (no older version than year 2000).

Style Sheet Requirements:

Maximum length: 3500 words
Letter type: Times New Roman
Letter size: 12
Lining: 1

All articles must include:

1. Name of the article and author's address in English
2. Article abstract of 150 words in English
3. Brief professional CV of the author (100 words)
4. Text of the article consisting of at most 3500 words

Publishing languages: English, German

Each article must be an original never published before. When using references, parts of other articles or publications it is inevitable to quote them and provide information about the source. We reserve the right to formally edit and reduce the text if needed. Academic articles undergo an anonymous critique. Each author will receive a prior statement of publishing his/her article.

When writing a review it is necessary to attach a copy of the cover of the book.

Thank you for your cooperation.

Yours sincerely,

Michal Olah, Ph.D.
Edition of journal