

## Materials that accompany lectures in Social medicine

### Lecture 03 – Health interventions

The main mechanism how social medicine affects population is through the public health interventions. These targeted activities have a role of reducing disease risk or burden, or simply improving population health. The first step in any intervention is the needs assessment, which attempts to inform us how big the problem is, give a contextual meaning to it and provide measurable evidence for the intervention. When needs assessment informs us on the true need for an intervention, there are three main groups of actions we can undertake. Biologic measures rely on biological mechanism in our bodies as the means for achieving target. The examples include vaccinations, sanitation, the use of antibiotics and prophylaxis, which all aim to improve or retain health. The second group of measures are behavioural, where we try to change behaviour patterns. These include various activities that attempt to introduce more healthy behaviour patterns, such as physical exercise, health diet or safer sex practices. Third approach is through advocacy, a systematic way of promoting and supporting desirable behavioural patterns.



Prevention is one of the main tools of public health and social medicine. In the essence, prevention includes measures that prevent diseases from progressing or developing. It can be defined on three levels – primary (no disease, neither patient nor physician can detect it), secondary (patient does not feel the disease, but the physician can detect it) and tertiary (both patient and physician can define the disease status, but now we try to prevent the disease from re-appearing). The examples for primary prevention include all situation where the disease did not occur, and we are reducing risk factors that increase the odds for disease occurrence. Secondary prevention aims to detect the existing disease in the early stages, with an aim of increasing the odds for successful treatment, primarily in the domain of cancer. Tertiary prevention aims to prevent the existing disease from re-occurrence. We can also define primordial prevention (health promotion), which includes activities that aim to retain health and not focus on prevention. While prevention aims to prevent the disease, health promotion is non-specific, and it aims to keep health, regardless on the disease risks. An interesting example of interventions are harm reduction measures, which accept that there is a medical problem that can not be resolved completely. Regardless, we try to improve health of people at an increased risks, trying to achieve what we can. These include needle exchange programs and interventions in the hard-to-reach population sub-groups.



Often in practice, we use emotional means for the goal achievement. These include commercials or ads that increase awareness of a problem, or show the over-emphasized consequence of problem when left untreated. Worthy examples of very successful interventions include sexually transmitted disease reduction in Thailand, where a systematic and multi-faceted intervention led to massive reduction of disease risks and prevalence. On the other hand, there are numerous examples of interventions that failed to achieve its target, most commonly due to poor planning or execution.