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CLINICAL HEALTH PROMOTION

Research & Best Practice for patients, staff and community

In this issue

Research and Best Practice

News from the HPH Network

Editorial Office
WHO-CC, Clinical Health Promotion Centre
Bispebjerg University Hospital,
Denmark

The Official Journal of the International Network of Health Promoting Hospitals and Health Services

CLINICAL HEALTH PROMOTION

Aim

The overall aim of the journal is to support the work towards better health gain by an integration of Health Promotion into the organisational structure and culture of the hospitals and health services. This is done by significant improvement of a worldwide publication of clinical health promotion based on best evidence-based practice for patient, staff and community.

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International Network of
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Research and Best Practice - Editorial

Clinical Health Promotion – what does it mean?

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Many readers may have an intuitive understanding of Clinical Health Promotion to be something about better health among patients. The term consists of two parts; Health Promotion and Clinical, but what does it really mean?

Health Promotion was originally defined in relation to the whole population and public health. The Ottawa Charter gives the following definition: *'the process of enabling people to increase control over, and to improve their health'* (1). In the Health Promotion Glossary from the World Health Organization (WHO) it is also added that people should be enabled to increase control over *'determinants of health and thereby improve their health'* (2-3).

The other term 'clinical' is very old and derives from the Greek language, where *kline* is a couch or a bed. *Klinikos* means sloping, reclining or leaning back, and the corresponding Latin word is *clinicus* (4). Today the term is used in a broader sense to describe professional functions directly involving the patients, such as clinical intervention, clinical microbiology and clinical psychology. Likewise, a clinician is a health care professional specialised/authorised to be involved in and responsible for active patient management. Previously, the term clinician was limited to physicians, but now it also includes nurses, physiotherapists and others directly working together with patients.

The name of this scientific journal '*Clinical Health Promotion*' brings together different areas, involving quite different experts from different cultures, targeting different groups, using different strategies and having different goals. One may ask why it is relevant to bring the clinical and the public health areas together at all?

Traditionally, public health experts do seldomly interact or communicate directly with patients in hospitals and health care services, since their focus on public health often is aimed at populations as a whole. In contrast, the clinical experts do only to a minor degree interact or communicate with the whole population, because they have their focus on the individual patient, or groups of patients, and their relatives.

At first glance, the gap between the clinical specialists and the public health experts seems wide and difficult to bridge. At international conferences one may still experience well-esteemed public health experts recommend the clinicians to skip evidence-based health promotion activities for their patients, such as smoking cessation in relation to surgery. In addition, one may hear from highly esteemed clinicians that they do not want to consider offering their patients the same evidence-based activities. Instead, they would really appreciate if smoking cessation intervention is taken care of in a public health arena without relation to the clinical world.

However, when realising the number of patients in need of concrete health promotion in the clinical pathway, collaboration seems to be the only way forward.

Sometimes necessity is the mother of invention. Several years ago, Clinical Health Promotion was formally defined by the Terminology Council under the National Board of Health in Denmark, as it was necessary to clarify the clinical terminology for electronic medical records. Clinical Health Promotion was also integrated in the reimbursement system in line with treatment, so the definition was highly needed in the clinical daily life. It is defined as an activity or process, involv-

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ing elements of health promotion, disease prevention and rehabilitation, which takes place in the health care sector, and which involves the patient as the active (or activated) key person. The intention is to address and integrate health promotion in the patient pathways, thereby limiting the development of illness, complications and relapses as well as obtaining the highest possible level of health control and life quality (5).

Another important part of the answer to the question on why the clinical area and the public health field should work closer together has been given in recent high-quality studies. During the last decade, these studies establish the highest possible evidence level of Clinical Health Promotion. A good example is the benefit of adding concrete evidence-based health promotion programmes on smoking cessation to the surgical pathways in the same way as adding better surgical techniques. The significant effect can be measured directly on the surgical outcomes (6). The immediate treatment results improve on short term and the health gain becomes better on long term (7). Interestingly, further health promotion studies of the same high scientific calibre are ongoing among other patient groups, and they will be published in the years to come.

In other words, the patients, their families, the community and the society as a whole have so much to win, if the hospitals and other health services offer the new and better intervention that combine clinical treatment and health promotion, thus bringing the clinical and the public health areas together.

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Upcoming WHO-HPH Schools

The WHO-HPH Schools are yearly recurring events (usually both summer, autumn and winter) and they target National / Regional HPH Coordinators, HPH Hospital / Health Service Coordinators, HPH Task Force Leaders & Members as well as other interested health care providers and administrators.

The WHO-HPH Schools are great opportunities to gain practical insight into the field of Health Promotion in Hospitals & Health Services.

The 2012 and early 2013 WHO-HPH Schools are:

WHO-HPH Winter School in Bangkok, Thailand (February 21-24, 2012)
WHO-HPH Summer School in Taipei City, Taiwan (April 9-10, 2012)
WHO-HPH Summer School in Gothenburg, Sweden (May 20-21, 2013)

You can read more about the schools and register for participation at hphnet.org, where information, programs etc. will be updated continuously.

We look forward to seeing you in Bangkok, Taipei City or Gothenburg or at another of the many future WHO-HPH Schools.

To participate contact Jeff Kirk Svane from The International HPH Secretariat. Email: jsva0004@bbh.regionh.dk

Research and Best Practice - Original article

Bridging Intervention in Anaesthesiology:

First results on treatment need, demand and utilization of an innovative psychotherapy program for surgical patients

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Abstract

Background Bridging Intervention in Anaesthesiology (BRIA) is a stepped care approach of psychotherapy for surgical patients in preoperative anaesthesiological assessment clinics. The objectives of this feasibility study on BRIA were 1) to determine how many patients have clinically relevant psychological problems and interest in psychotherapy sessions; 2) to compare patients with and without interest in psychotherapy with regard to indicators of psychological distress; 3) to report on the first therapy outcomes.

Methods In total, 4,568 consecutive patients participated in a computer assisted psychosocial self-assessment including a comprehensive battery of psychiatric screening tests. Patients with interest in psychotherapy were offered therapeutic sessions for up to 3 months that aimed primarily at motivating them for subsequent outpatient psycho- or addiction therapy.

Results Clinically relevant psychological problems ranged from 7.5% (n=338) for illicit substance use to 38% (n=1698) for depressive states. 11.6% (n=529) of the patients were interested in psychotherapy sessions. Compared with patients without interest in psychotherapy, they showed statistically significantly higher rates of depression, anxiety, substance use disorders and general psychological distress. 3.2% (n=145) of the patients had one therapeutic session. Additional 3.2% (n=144) had at least two therapeutic sessions, of whom 37.5% (n=54) engaged in subsequent psychosocial treatment programs.

Conclusion The high rate of clinically relevant psychological problems suggests considerable need for psychotherapy in surgical patients. Significant demand and utilization of treatment are reflected by approximately 12% of patients showing interest and over 6% participating in BRIA sessions, as well as a success rate of motivational interventions of more than 30%.

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Introduction

The majority of research on comorbid psychiatric disorders in medical illness is focused on chronic medical conditions (1) or general medical inpatients (2). Few studies have explicitly dealt with surgical patients. With the exception of two earlier large-scale studies (3;4), these trials are mostly based on small samples, distinct surgical fields and specific psychological factors. Taken together, the results suggest that depression, anxiety and substance use disorders are highly prevalent in surgical patients and that these disorders are associated with perioperative complications and increased morbidity and mortality, leading to worse surgical outcomes and higher health care costs (5-15). In a recent study, 5,429 consecutive patients from diverse surgical fields were examined, and finds showed that clinically significant depressive states are frequent preoperative conditions that are significantly associated with a prolonged hospital stay (16).

However, despite their obvious clinical relevance, routine assessment of psychological problems is rare in anaesthesiology and surgery. Psychotherapy, although available, effective and well-established for patients with medical illness (17), is often not offered as a regular service for surgical patients with psychiatric disorders. As a consequence, knowledge is still limited on frequency of psychological distress, as well as on treatment needs, demand and utilisation of psychotherapy in surgical patients.

Bridging Intervention in Anaesthesiology (BRIA) has been designed as a treatment option to reach patients from all surgical fields. Implemented in the preoperative

anaesthesiological assessment clinic, this stepped care approach comprises of a) the application of brief screening questionnaires for psychological problems, and b) subsequent comprehensive psychological assessment and treatment for those patients with a clinically relevant level of distress in the first therapeutic contact. The primary objective is to bridge the gap between inpatient surgical treatment and outpatient psychosocial health care including psychotherapy, psychiatry, and addiction treatment. BRIA consists of two major therapeutic elements: 1) A computer assisted self-assessment of social, lifestyle and psychological factors including a comprehensive battery of psychiatric screening tests, items concerning interest in psychotherapy and computerised tailored brief written advice (18), and; 2) Psychotherapeutic contacts with the objective either to motivate patients with psychiatric disorders and support them in participating in subsequent outpatient psycho- and addiction therapy, or to improve the patients' psychological symptoms and well-being so that a subsequent psychosocial treatment is not necessary.

This study investigated the feasibility of BRIA, focusing on treatment need, demand and utilisation. The primary objectives were: 1) to determine the frequency of clinically relevant psychological problems at preoperative assessment in an anaesthesiology clinic, including depression, anxiety and substance use disorders; 2) to determine how many of these patients are interested in psychotherapeutic sessions during their hospital stay; 3) to compare patients with and without interest in psychotherapy with regard to general psychological distress, subjective health, depression, anxiety, substance use disorders and clinical characteristics, and; 4) to report on treatment outcomes of those patients who participated in psychotherapeutic contacts of BRIA.

Material and Methods

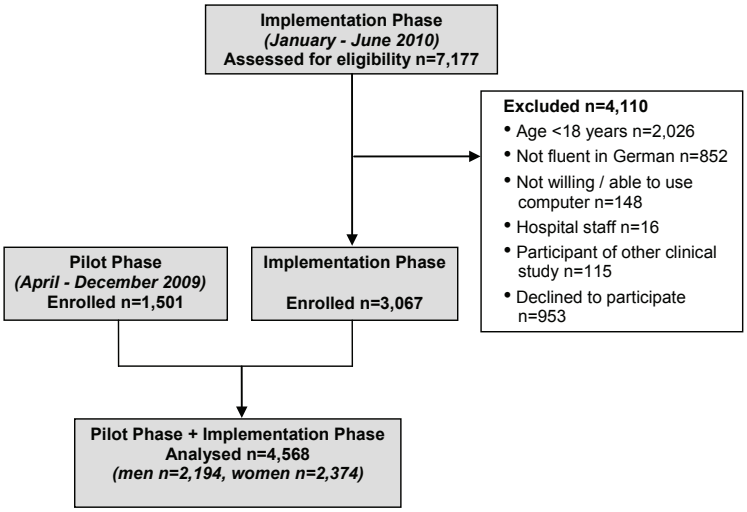
Setting and Design

This study was designed as a prospective observational study and approved by the local Ethics Committee (EA1/23/2004). It was conducted in the preoperative assessment clinics of the Charité - Universitätsmedizin Berlin, Campus Charité Mitte and Campus Virchow Klinikum, Berlin, Germany, between April 2009 and June 2010. The Department of Anaesthesiology and Intensive Care Medicine performs approximately 65,000 general anaesthesias per year. Each patient undergoing elective surgery is examined by an anaesthetist with two principle goals: Clarification of anaesthesia related risks of the intended surgery and the evaluation of the patient's individual level of risk.

During the pilot phase (April to December 2009), the treatment program was introduced in the preoperative assessment clinics and the computer-assisted self-assessment took place approximately two to three days per week between 9.00 am and 5.00 pm. In the following implementation phase (January to June 2010), BRIA was integrated in the routine care of the hospital so that the computer assisted self-assessment was performed from Monday to Friday, between 9.00 am and 5.00 pm, in order to cover the complete opening hours of the assessment clinics. Surgical patients examined by an anaesthesiologist in one of the two preoperative assessment clinics were assessed for inclusion and exclusion criteria (see below) and, in case of eligibility, asked for participation in the study. Inclusion and exclusion criteria were defined as follows. Inclusion criteria: Patient in preoperative anaesthesiological assessment clinic, sufficient knowledge of German language, age ≥ 18 years, written informed consent. Exclusion criteria: Surgery with an emergency or urgent indication; inability to attend the preoperative assessment clinic (bedside visit); members of the hospital staff; relatives of the study team; study participation in another clinical trial; homelessness; admitted in police custody; unwilling to use or incapable of using a computer.

During the pilot phase, 1,501 patients were enrolled. Detailed information on the inclusion process is available for the implementation phase: A total of 7,177 patients were assessed for eligibility, with 4,110 not being eligible according to the inclusion/exclusion criteria and 953 refusing to participate, resulting in 3,067 enrolled patients. In total, 4,568 patients participated in both pilot phase and implementation phase (see Figure 1 for details of the inclusion process).

Figure 1 Flowchart of phases of the clinical trial



BRIA step 1: Computer assisted self-assessment

Upon receipt of written informed consent, eligible patients completed the computer-assisted self-assessment on demographic, lifestyle and psychological factors. In this assessment, psychological distress, anxiety and depression were assessed with several standardised screening questionnaires in order to cover a wide range of psychological symptoms and to increase the sensitivity of the screening (details of the screening tools in Table 1). All items were multiple choice questions that could be answered by the use of a mouse. The screening took approximately 25 minutes per patient, and a research assistant was permanently present to assist patients when problems occurred concerning technical details or contents of the questionnaires.

Immediately after the completion of the screening, the patients´ data were analysed automatically and all patients received a computerised tailored brief written advice (18). The written advice was designed according to the client-centered principles of motivational interviewing (19;20) and contained feedback on the results of the screening tests, as well as suggestions for therapy options and behavior changes. Topics included depres-

Table 1 Standardised self-report screening questionnaires of the computer assisted self-assessment

Name	Description	Cut off score
Patient Health Questionnaire-4 [PHQ-4 (21)]	Ultra-brief screening tool: Subscales for depression (PHQ-2), anxiety (GAD-2), 1 single-item for impairment rating. Domains: Depression, anxiety; time frame: Past 14 days. 5 items, 4-point Likert scale from 0 to 3; for PHQ-2 and GAD-2 each 2 items, depression and anxiety subscales range from 0 to 6.	PHQ-2 sum score: ≥ 3 GAD-2 sum score: ≥ 3 (21;22)
Center for Epidemiologic Studies Depression Scale [CES-D (23)]	Short version of the CES-D: Frequency of depressive symptoms. Domain: Depression; time frame: Past 7 days. 15 items, 4-point Likert scale from 0 to 3; total score from 0 to 45.	CES-D sum score: ≥18 (23)
Brief Symptom Inventory [BSI (24)]	Short version of the Symptom Checklist 90-R (SCL-90-R): Severity of psychiatric symptoms. Domains: General and specific psychological distress; time frame: Past 7 days. 53 items, 5-point Likert scale from 0 to 4; total mean score from 0 to 4. Applied scores in this study: Global severity index (GSI), subscales depression and anxiety.	GSI, depression and anxiety T scores: ≥ 0.63 (24)
World Health Organization 5-item Well-Being Index [WHO-5 (25)]	Short depression screening tool of the WHO. Domain: Psychological well-being (mood, interests, energy, sleep, psychomotor functioning); time frame: Past 14 days. 5 items, 6-point Likert scale from 0 to 5; total score from 0 to 25; higher scores indicating better well-being.	WHO-5 sum score <14: clinically relevant depressive state (25)
Alcohol Use Disorder Identification Test [AUDIT (27;29)]	WHO screening tool for alcohol-related problems. Domain: Hazardous and harmful alcohol consumption, and alcohol-related problems; time frame: Past 12 months. 10 items, 5-point Likert scale from 0 to 4; total score from 0 to 40. Applied scores in this study: AUDIT sum score for any AUD, AUDIT-C score for risky consumption (sum of items 1 to 3), item 3 for heavy episodic drinking.	AUDIT sum score: ≥ 8 for men, ≥ 5 for women (27) AUDIT-C score: > 4 for men, > 3 for women AUDIT-item 3: ≥ 2 (29)
Heavy Smoking Index [HIS (26)]	Ultra-brief screening tool for nicotine dependence; short version of Fagerstroem Test for Nicotine Dependence (FTND-G). Domain: Nicotine dependence; time frame: Present, not otherwise specified. 2 items (FTND-G items 1, 4), 4-point Likert scale from 0 to 3; total score from 0 to 6.	HIS-G: ≥ 4 (26)
Illicit drug use adaption of the CAGE questionnaire (28)	Ultra-brief screening tool for illicit substance abuse / dependence. Domain: Illicit substance use (marijuana, cocaine, ecstasy, heroin and other illicit substances); time frame: Last 12 months. 4 items, 2-point scale of 0 and 1; total score from 0 to 4.	Sum score: ≥ 2 (28)

sion, anxiety, general psychological distress, well-being and quality of life, substance use (alcohol, illicit drugs, tobacco), as well as other health factors like weight, sleep and physical exercise. The written advice also contained an offer for face-to-face-feedback of the screening results and immediate psycho- and/or addiction therapy sessions for patients who indicated interest during assessment.

BRIA step 2: Psychotherapeutic treatment

Patients with interest in psycho- or addiction therapy were offered therapeutic sessions which were provided by a team of certified psychologists (two licensed psychotherapists, three psychotherapists in training). The date of the first session was arranged according to the patients' demand either preoperatively, (e.g. immediately after the anaesthesiology examination), or the day after surgery at the bedside. Therapy sessions were offered during inpatient hospital stay as well as in outpatient setting for a period of up to three months after discharge. Patients who missed all inpatient appointments were not contacted after discharge. However, all patients who called BRIA at their own initiative were offered therapy sessions. In case patients missed an outpatient appointment, the therapist called him or her by telephone to arrange another appointment. The BRIA therapeutic interventions aimed primarily at clarifying whether a subsequent psychosocial treatment would be needed, and if so, at motivating patients to search for outpatient psycho- or addiction therapy. Patients were assisted in finding a therapy option that they would consider appropriate for their condition, were taught strategies on how to search for therapists by telephone or by Internet, as well as how to differentiate between specific therapeutic approaches. In case patients' psychological symptoms and well-being improved sufficiently during BRIA, no further psychosocial treatment was recommended. The BRIA program combines procedures from Motivational Interviewing in the treatment of psychological problems (19;20), cognitive-behavioral therapy and social casework. Important topics are displayed in Table 2.

Table 2 Important topics of the BRIA psychotherapeutic treatment

- Detailed psychological assessment and clarification of psychiatric diagnoses according to ICD-10
- Development of therapeutic alliance and activation of resources
- Enhancement of motivation for behaviour change and for therapy participation
- Emotional relief and individually oriented crisis interventions
- Training of relaxation and stress management techniques
- Guided discovery of complex reciprocal relationships between behaviour, cognition, emotion and medical condition
- Elaboration of a biopsychosocial model of disease and health
- Introduction to the concept of coping and problem skills training
- Information on options of psycho- and addiction therapy and teaching of skills how to apply for psychosocial health care

Measurements

The computer assisted self-assessment included a set of standardised screening questionnaires with sound psychometric properties. It covered the domains of general psychiatric distress, well-being, depression, generalised anxiety (21-25) and substance use disorders (26-29) (details in Table 1). Additional single-item questions dealt with interest in psycho- and/or addiction therapy sessions of BRIA, demographic information (gender, age, partnership status, level of education, current status of employment), self-reported physical characteristics (body weight, height), sleeping disturbances, stress, loneliness, subjective health status (visual analogue scale of the EQ-5D, 30), as well as number of disability days and primary care consultations during the last 6 months.

Data on ASA (American Society of Anaesthesiologists) classification and surgical field were available for 2,981 patients in the implementation phase. The evaluation of patients' perioperative risk according to the ASA physical status classification system was used as an overall indicator for physical health. The evaluation was performed by the anaesthesiologists who did the preoperative assessment. Information on the surgical field was obtained from the electronic patient management system of the Charité - Universitätsmedizin Berlin and comprised the categories 1) abdomino-thoracic surgery, 2) peripheral surgery 3) neuro-, head and neck surgery.

For patients who participated in at least two therapy sessions, their psychiatric diagnoses according to ICD-10 were made by clinical psychologists. Therapy outcomes were either rated by the therapist at the time of last therapeutic contact or asked within 6 months after the baseline assessment by personal interview, telephone, email or by post. Outcomes were classified into 5 categories: 1) improvement of well-being with no further demand of subsequent therapy, 2) engagement in subsequent psychosocial treatment program, 3) resumption of preoperatively interrupted psychotherapy, 4) dropout, 5) death.

Statistical Analyses

Data were entered into a computerised database and statistical analyses were performed with SPSS Statistics for Windows, Version 18 (SPSS Inc., Chicago, Illinois 60606, USA). Results were expressed as relative frequencies in percent, or median (Md) and range of the

25th-75th percentiles (interquartile range IQR). Statistical comparisons of patients with and without interest in psychotherapy were tested with Chi-squared test for categorical data or Mann-Whitney-U-Test for ordinal data as well as for continuous data because distributions were skewed. A two-tailed p-value <0.05 was considered statistically significant. Due to the exploratory nature of the study, p-values were not adjusted for the number of tests that were performed.

Results

Computer assisted self-assessment

A total of 4,568 surgical patients participated in the computer-assisted self-assessment. The rate of patients with clinically relevant psychological problems was high and ranged from 7.5% (n=338) for illicit substance use to 38% (n=1698) for clinically relevant depressive states according to the WHO-5 (World Health Organisation 5-item Well Being Index). Specific indicators of psychological distress and substance use problems are displayed in Table 3, and details of demographic and clinical characteristics are shown in Table 4.

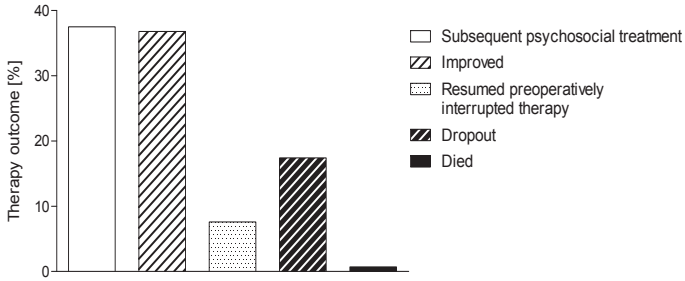
16.7% of the patients (n=762) asked for face-to-face feedback of their screening results and 11.6% (n=529) showed interest in psycho- and/or addiction therapy. Regarding surgical field and physical health according to the ASA classification, patients with interest in therapy sessions did not differ from those with no interest (Table 4). However, they showed statistically significantly higher rates of clinically relevant general psychological distress, depression, anxiety, substance use disorders and general health problems, as well as worse subjective health, more disability days and more primary care consultations during the last six months (p's between <.001 and .04 for the specific comparisons, for details see Table 3). There were also statistically significant differences concerning demographic variables: Patients with interest in therapy sessions were younger, were more likely to be female and unemployed subjects, as well as less likely to live with a partner (p's between <.001 and .021 for the specific comparisons, for details see Table 4).

Psychotherapeutic treatment

145 patients (3.2%) had one therapeutic session. An additional 3.2% (n=144) engaged in two therapy sessions or more (Md: 2, Min: 2, Max: 23, 25th percentile: 2, 75th percentile: 3). Data are available on psychiatric diagnoses and therapy outcomes for those patients who received two or more therapeutic sessions. The most frequent primary diagnoses were mood disorders (n=53/144; 36.8%), adjustment disorders (n=37, 25.7%) and substance-use disorders (n=16, 11.1%). Further psychiatric diagnoses included anxiety disorders (n=11, 7.7%), behavioural syndromes associated with physiological disturbances and physical factors (n=10; 6.9%), personality disorders (n=8; 5.6%) and unspecified mental disorder (n=3; 2.1%). Finally, 4.2% of patients (n=6) had no mental disorder according to ICD-10 criteria. Therapy outcomes are shown in Figure 2.

37.5% (n=54) of the patients with at least two BRIA contacts engaged in subsequent psychosocial treatment programmes, 36.8% (n=53) were rated by their therapist as improved with no further demand of subsequent therapy, 7.6% (n=11) resumed their preoperatively interrupted psychotherapy after discharge from hospital, 17.4% (n=25) dropped out of the BRIA treatment, and 1 patient (0.7%) died after discharge from hospital. Therapy outcomes did not differ between groups of mental disorders (Chi^2=28.290; p=.78).

Figure 2 First therapy outcomes of BRIA patients with at least two therapy sessions (n=144)



37.5% of the patients (n=54, white column) were engaged in subsequent psychosocial treatment programs, 36.8% (n=53, column with white and black stripes) improved with no further demand of subsequent therapy, 7.6% (n=11, dotted column) resumed their preoperatively interrupted psychotherapy after discharge from hospital, 17.4% (n=25, column with black and white stripes) dropped out of the BRIA treatment, and 1 patient (0.7%, black column) died after discharge from hospital.

Discussion

The most important result of this study is that approximately 12% of all patients included showed interest in BRIA. Patients with interest in therapy sessions had an increased severity of psychological distress and half of them had at least one therapeutic session.

Concerning frequency of psychological distress and substance use problems, the prevalence rates of this study are comparable with the rates of previous studies in surgical patients regarding depression (10, 11, 14-16), anxiety (4), alcohol use disorders (7;13), smoking (13;16) and misuse of illicit substances (8). To the authors´ knowledge, this is the first study to provide data on interest and engagement in psychotherapy sessions in surgical patients. We found that treatment need, demand and utilisation of psychotherapy for surgical patients are very different in preoperative anaesthesiological assessment. The most general indicator of treatment need can be seen in the high rate of clinically relevant psychologi-

Table 3 Indicators of psychological distress and substance use problems

	All participants in the screening		Patients interested in therapy sessions		Patients not interested in therapy sessions		*p*
	N=4568 +		n=529 +		n=4039 +		
General indicators of psychological distress and subjective health		%		%		%	
BSI, severity of psychological distress during last 7 days: GSI T-score≥ 0.63	691	(15.7)	251	(48.2)	440	(11.3)	<0.001
Self-rating of current subjective health [a)]	71	[50-85]	59	[38-79]	75	[50-85]	<0.001
Number of disability days during last 6 months	0	[0-14]	2	[0-21]	0	[0-10]	<0.001
Number of primary care consultations during last 6 months	3	[2-6]	4	[2-6]	3	[2-6]	<0.001
Interest in face-to-face-feedback of the screening results				++	416	(10.6)	-
Depression							
WHO-5, well-being during last 14 days Clinically relevant depressive states: Sum score < 14	1698	(38.0)	345	(66.0)	1353	(34.3)	<0.001
PHQ-2, depression during last 14 days: Sum score ≥3	782	(17.6)	207	(40.0)	575	(14.7)	<0.001
CES-D, depression during last 7 days: Sum score ≥18	532	(12.2)	191	(37.2)	341	(8.9)	<0.001
BSI, depression during last 7 days: T-score≥ 0.63	603	(13.7)	210	(40.5)	393	(10.1)	<0.001
Anxiety							
GAD-2, anxiety during last 14 days: Sum score ≥3	623	(14.1)	198	(38.2)	425	(10.9)	<0.001
BSI, anxiety during last 7 days: T-score≥ 0.63	541	(12.3)	195	(37.4)	346	(8.9)	<0.001
BSI, interpersonal sensitivity during last 7 days: T-score≥ 0.63	429	(9.7)	152	(29.2)	277	(7.1)	<0.001
BSI, phobic anxiety during last 7days: T-score≥ 0.63	488	(11.0)	166	(31.7)	322	(8.3)	<0.001
Alcohol use during last 12 months							
Alcohol abuse/dependence: ♂ AUDIT sum ≥8; ♀ AUDIT sum ≥5	509	(11.3)	96	(18.4)	413	(10.4)	<0.001
Risky alcohol consumption: ♂ AUDIT-C≥4; ♀ AUDIT-C≥3	942	(21.2)	133	(25.6)	809	(20.6)	0.008
Heavy episodic drinking: AUDIT-3 ≥2	424	(9.5)	62	(11.8)	362	(9.1)	0.044
Tobacco smoking							
Current smoker	1591	(35.1)	220	(41.8)	1371	(34.2)	0.001
Severity of tobacco dependence in current smokers	312	(20.2)	61	(28.5)	251	(18.8)	0.001
Heavy smoking: HIS score ≥ 4							
Illicit substance consumption during last 12 months							
Any illicit substance use	338	(7.5)	69	(13.1)	269	(6.7)	<0.001
Any illicit substance abuse/dependence in illicit substance users: CAGE sum score ≥ 2	106	(31.7)	29	(43.9)	77	(28.7)	0.017
General current health problems – single item questions							
Sleeping disturbances: Yes	2029	(44.7)	336	(64.0)	1693	(42.2)	<0.001
Stress: Yes	1598	(36.4)	330	(63.8)	1268	(32.7)	<0.001
Loneliness: Yes	471	(10.4)	155	(29.7)	316	(7.9)	<0.001
Pain: Yes	1889	(42.0)	277	(53.2)	1612	(40.5)	<0.001

Between 04/2009 and 06/2010 (N=4568) participated in the screening, to comparison; (n=529) showed interest in therapy sessions and (n=4039) were not interested in therapy sessions. Median [25th – 75th percentiles].

+ Number ranges for the specific variables from 4275 to 4568 (all participants in the screening), from 510 to 529 (patients interested in therapy sessions), and from 3780 to 4039 (patients not interested in therapy sessions) because of missing data.

++ Therapy sessions included face-to-to-face feedback of the screening results

[a)] Visual analogue scale, 0 to 100 with higher scores indicating better subjective health.

Table 4 Sociodemographic and clinical characteristics of all patients participating in the BRIA screening

	All participants in the screening		Patients interested in therapy sessions		Patients not interested in therapy sessions		*p*
	N=4568 +		n=529 +		n=4039 +		
Sociodemographic characteristics		%		%		%	
Age	47	[34-60]	45	[35-56]	47	[34-61]	0.021
Male	2193	(48.0)	206	(38.9)	1987	(49.2)	<0.001
Partnership status: living with a partner	2819	(62.4)	283	(54.3)	2536	(63.4)	<0.001
Level of education: university entrance qualification	1885	(41.6)	235	(44.7)	1650	(41.2)	0.124
Employment status							
Employed	1954	(44.6)	200	(39.1)	1754	(45.3)	
Unemployed	457	(10.4)	91	(17.8)	366	(9.5)	
Pension	789	(18.0)	58	(11.3)	731	(18.9)	<0.001
Invalidity pension	330	(7.5)	60	(11.7)	270	(7.0)	
Undergoing education / training [a)]	755	(17.2)	93	(18.2)	662	(17.1)	
Residual group [b)]	99	(2.3)	10	(2.0)	89	(2.3)	
Clinical characteristics							
BMI	25	[22.15-28.34]	24.43	[21.76-28.03]	25.10	[22.22-28.37]	0.016
ASA Classification ++							
ASA I, II [c)]	2579	(86.5)	263	(83.8)	2316	(86.9)	0.126
ASA III, IV [c)]	401	(13.5)	51	(16.2)	350	(13.1)	
Surgical field ++							
Abdomino thoracic surgery	1151	(38.6)	139	(44.3)	1012	(37.9)	
Peripheral surgery	895	(30.0)	83	(26.4)	812	(30.4)	0.087
Neuro-, head and neck surgery	935	(31.4)	92	(29.3)	843	(31.6)	

Between 04/2009 and 06/2010 (N=4568) participated in the screening, to comparison; (n=529) showed interest in therapy sessions and (n=4039) were not interested in therapy sessions. Median [25th – 75th percentiles].

+ Number ranges for the specific variables from 4384 to 4568 (all participants in the screening), from 512 to 529 (patients interested in therapy sessions and from 3872 to 4039 (patients not interested in therapy sessions) because of missing data.

++ Data are available for the implementation phase; numbers account to 2980 (ASA: All participants in the screening) and 2981 (surgical field: All participants in the screening), 314 (both ASA and surgical field: Patients interested in therapy sessions), 2666 (ASA: Patients not interested in therapy sessions) and 2667 (surgical field: Patients not interested in therapy sessions) because of missing data.

[a)] School education, tertiary education, re-education, apprenticeship

[b)] Working at home, military service, community service, gap year

[c)] ASA I, II: Healthy patients (ASA I, n=944) and patients with mild systemic disease presenting no functional limitations (ASA II, n=1635); ASA III, IV: Patients with severe systemic disease presenting definite functional limitation (ASA III, n=394) and patients presenting a constant threat to life (ASA IV, n=7).

cal distress of up to 38%. However, demand for psychosocial treatment is lower with 11.6% of the patients showing explicit interest in psycho- and/or addiction therapy sessions. Regarding treatment utilisation, approximately 6% made use of therapy sessions, and only a small portion of 3% engaged in at least two therapy sessions. Importantly, analyses revealed that severity of psychological problems and treatment demand are associated since interested patients scored higher in all domains of psychological distress, substance use disorders, as well as healthcare utilisation and disability days. 37.5% of the patients with psychotherapeutic sessions decided to engage in subsequent psychosocial treatment alternatives. Taken together, these results can be interpreted as first evidence for the feasibility of BRIA. Future randomised controlled trials are needed to investigate the efficacy of this therapy program.

The considerable difference between high prevalence of clinically significant psychological distress and relatively low proportions of patients who were interested in therapy sessions, and who engaged in therapeutic sessions, might be explained by two major factors: First, the applied screening questionnaires referred to self-reported symptoms. Patients scoring above any of the cut-off criteria may show subthreshold clinical syndromes, tran-

sient elevated symptoms or specific psychiatric disorders. Preoperatively elevated psychological distress may improve during hospital stay so that patients reconsider their interest in therapeutic sessions. Second, it should be taken into account that the major reason for patients' hospital stay was not the psychiatric condition, but the medical disease. Despite a high rate of patients may have felt the need of therapy in terms of distress, they may not have been ready for change at this specific point in time. This interpretation is supported by the finding that none of the patients who missed the therapy appointments during the inpatient treatment made use of the possibility to ask by telephone for outpatient sessions with the BRIA therapists. On the other hand, the request of BRIA, at least in 12% of the patients included, and the engagement in therapeutic sessions in half of them is very promising to motivate for behavioural change.

One might also speculate to what extent stress posed by facing surgery may contribute to the high rate of clinically relevant psychological distress and may thus affect specificity rather than sensitivity of the screening questionnaires. Interestingly, O'Hara et al (1989) found in a pioneering large-scale study that the rate of patients with clinically relevant psychological distress was even higher 3 months after surgery than at the day before surgery suggesting a rather small influence of worries concerning surgery (4). Finally, it has to be mentioned that data on sensitivity and specificity of the applied screening tools only exist for the general medical field, but are missing for the perioperative setting.

Methodological limitations

As a nonrandomised feasibility study, this trial did not provide efficacy data of BRIA. Because the program was developed step-by-step, detailed information of the inclusion process, as well as data concerning surgical field and ASA classification were only available for the patients of the implementation phase.

The inclusion tree of this study is similar to that of our earlier work on computer assisted self-assessment of lifestyle factors of surgical patients in the preoperative anaesthesiological assessment clinic (7;8;16). Out of all patients assessed for eligibility, a considerable proportion was not included due to obvious reasons such as age below 18 years, or insufficient knowledge of German language. Only a minor portion (2%) was not able or willing to use a computer, and 13% refused participation.

Clinical implications and conclusion

Previous investigations found that - despite high prevalence rates - psychotherapy and psychopharmacological therapy are not offered to the majority of surgical patients with psychological distress and/or substance use disorders (7;10;14;16). These studies concluded that clinicians should more often apply established psychiatric interventions (10;14), and that innovative treatment programmes are needed that can be integrated in a primarily non-psychological setting (16). To the authors' knowledge, the present study is the first one that showed feasibility of a psychotherapeutic bridging intervention that addresses patients from all surgical fields.

In a stepped-care approach, BRIA combines screening, brief intervention, an offer to extend therapy sessions, and finally the support to engage in subsequent long-term therapy programmes. Frequency of interest in psychotherapy did not differ with regard to surgical field and physical health as estimated by the ASA classification. This finding supports the idea to offer psychotherapy concepts to hospital patients from all surgical fields and independently from physical health status and medical disease. Preoperative anaesthesiological assessment clinics are an ideal setting for the BRIA approach because these clinics are not restricted to specific surgical fields so that a wide range of hospital patients can be addressed. The question arises of how BRIA might be implemented in clinical practice of hospitals that need to save time and resources. BRIA has the advantage that, in routine care, the patients can complete the computer-assisted self-assessment without the supervision of a research assistant and independently from the anaesthesiological assessment, e.g. during waiting periods for medical examinations. In case the hospital does not have a preoperative anaesthesiological assessment clinic, the screening may also be completed at the hospital ward. Basically, there are 2 major prerequisites: 1) The patients need computer access in order to perform the self-assessment; 2) The psychotherapeutic contacts need to be provided by either clinical psychologists or medical staff who are trained in psychotherapy. After the screening, the patients may communicate potential interest in psychotherapy to the nursing staff to arrange first sessions with psychotherapists. This approach is both patient-oriented and cost-efficient given the fact that, on the one hand, possible psychotherapy starts on patients' own initiative, and on the other hand, all participants of the screening may benefit from the computerised tailored brief written advice: It comprises positive feedback for patients with a healthy lifestyle, non-confrontational brief advice for patients who show harmful health behavior but lack motivation for therapy, and finally immediate help for those who have relevant problems and are ready for psychotherapeutic sessions.

To conclude, as a major result, this feasibility study showed that based on a close collaboration of clinical

psychologists with anaesthesiologists, surgeons and psychiatrists, it is possible to integrate a novel psychotherapy program into a context of clinical care that is dominated by somatic medical procedures often not alone sufficient to induce self-healing processes in the patient as required after each surgical procedure.

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Research and Best Practice - Original article

Do alcohol-attributable diagnoses reflect current hazardous drinking patterns in Norwegian hospital patients?

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Abstract

Background In everyday life, hospital staff complies poorly with alcohol screening programs, and may be concerned about patients' drinking patterns only when they consider alcohol abuse clinically relevant. An unknown proportion of patients with hazardous drinking patterns may thereby miss the opportunity to take part in successful alcohol intervention programmes. A strategy for improving hospital staff's motivation and compliance with alcohol screening programs may be to identify the patients most likely to be at risk, and thus select only these patients for further alcohol screening. The aim of this study was therefore to assess the potential for screening, using alcohol-attributable conditions to predict current hazardous drinking among hospital patients.

Methods A multi-centre cross-sectional study was carried out at three university hospitals. 1515 patients were asked about quantity and frequency of alcohol intake. Hazardous drinking was defined by exceeding the weekly limits and/or binge drinking. Alcohol-attributable conditions were collected from patient diagnoses in the discharge reports. Diagnostic tests were used to determine if alcohol-attributable conditions were good predictors for current hazardous drinking.

Results Alcohol-attributable diagnoses at discharge were poor predictors of current hazardous drinking (18% sensitivity and 16% positive predictive value). The positive predictive values were 15% for binge drinking in the previous month and 10% for exceeding the weekly limits, but binge drinking was also more prevalent (22% vs. 9%).

Conclusion We found no evidence to support screening for current hazardous drinking by the use of alcohol-attributable diagnoses.

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Introduction

Current hazardous drinking is associated with increased risk of hospital admission due to stroke, liver disease and respiratory diseases (1,2). Overall 1 in 16 of all hospital admissions are alcohol-related, and 1 in 5 patients admitted to hospitals for other reasons have a hazardous drinking pattern (3). These patients may be at increased risk for poor clinical outcomes including more postoperative complications as well as prolonged hospital stay (4). In everyday life hospital staff may be concerned about patients drinking patterns only when they consider alcohol abuse clinically relevant. A consequence of this approach may be that hazardous drinking patterns remain unidentified, even though there is a potential for alcohol interventions to improve clinical outcomes.

Several screening tools have been developed and tested to identify different types of alcohol abuse including hazardous drinking (5), and alcohol screening questionnaires have also been found useful for predicting subsequent hospital admissions for alcohol-related conditions (6). However, many hospitals lack sufficient resources to undertake widespread screening programs (7).

In Europe, the average adult drinks 13 litre of alcohol per year but with considerable variation between countries. Nordic countries such as Norway and Sweden have some of the lowest levels of alcohol consumption per capita (< 8 litre per adult per year), whereas the consumption in other Nordic is comparable to the European average (Finland; 11 litres and Denmark; 13 litres per adult per year, respectively) (8). In cultures where the prevalence of hazardous drinkers is relatively low, the low detection rate may per se discourage hospital staff from complying with the screening programs, thus the detection rates will be even lower in the long run.

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A strategy to improve hospital staff compliance with screening programs may be to identify the patients most likely to be at risk by other means, and thus select these patients for further screening by a validated tool (semi-systematic screening). If this strategy is to be successful, we must ensure that the selected patients are in the target groups of the interventions.

The aim of this study was therefore to assess the potential of screening by using alcohol-attributable conditions to predict current hazardous drinking in a Norwegian hospital population.

Material and methods

A multi-centre cross-sectional survey was carried out at all non-psychiatric wards and outpatient clinics at Haukeland University Hospital, Stavanger University Hospital, and Haraldsplass University Hospital, with the exception of intensive care units and paediatrics departments. These hospitals serve approximately one million inhabitants in the western region of Norway, and comprise 80 wards and 49 outpatient clinics. Inclusion took place during a 24-h assessment period in April 2009, which did not include the weekend. Due to organisational issues, five wards and four outpatient clinics did not wish to take part in the study.

The inclusion criteria were being admitted to or treated at an outpatient clinic, being at least 18 years old, and giving informed consent to participate. The exclusion criteria were reduced ability or lack of competence to provide consent, and inability to answer the questions in Norwegian due to inadequate language skills.

The eligible patients were interviewed and examined by 350 specially trained nursing students using a modified version of the WHO-Data model (9). The questionnaire covered different health risk factors including current drinking patterns: weekly alcohol consumption (number of drinking days pr week x number of AU (alcohol units) consumed on a normal drinking day) as well as the frequency of binge drinking (drinking five or more AU on one drinking day) episodes during the previous month. Current hazardous drinking was defined by exceeding the weekly limits (≥9 AU/week for women and ≥14 AU per week for men) and/or binge drinking (10) during the previous month. One AU was defined as a drink containing 12 g of ethanol.

For each patient we obtained the discharge diagnosis from the medical records. Alcohol-attributable conditions were reported for 13 conditions wholly attributable to alcohol, such as alcoholic liver disease and gastritis, and for 21 conditions partly attributable to alcohol including different types of cancer (11).

A reliability test was carried out based on twenty patient interviews that were recorded and transcribed. Twenty randomly drawn nursing students read all of the transcriptions and scored hazardous drinking patterns for each of the twenty patient interviews.

Statistics

Analyses of sensitivity, specificity, and positive and negative predictive values were calculated to determine if alcohol-attributable conditions could predict current hazardous drinking.

Kappa statistics (multirater version) was used to describe the interrater reliability in the twenty selected patient interviews. A kappa of 0.7 or higher indicated adequate interrater agreement. CI values were calculated for each kappa statistic. Analyses were carried out using SPSS 17.0.

Ethics

The study protocol was in accordance with the Declaration of Helsinki II and was approved by the Regional Committee for Medical Research Ethics for Western Norway (no. 2009/106-ØYSV) and the Norwegian Social Science Data Services (no. 20985). Informed consent was obtained from all study participants.

Results

In total, we assessed 2932 patients for eligibility. Altogether, 2350 patients fulfilled the inclusion criteria. In total, 1515 patients (65%) were included in the analyses. Seven patients were excluded due to missing data. Forty-six percent of the included patients were women. The mean age was 58 years (Std Deviation (SD) 18 years), with women being slightly but not significantly (p=0.063, t-test) older than men (60 years versus 57 years). See figure 1 for study profile, and table 1 for characteristics of the study population.

Interrater reliability

Based on twenty interviews the interrater reliability among the nursing students was more than adequate for scoring both drinking patterns (0.90 (CI 0.81–1.00) for exceeding the weekly limits, 0.90 (CI 0.78–1.00) for binge drinking).

Alcohol-attributable conditions as predictor of current hazardous drinking

In total 395 patients were discharged with 575 diagnosis wholly or partly attributable to alcohol. Table 2 shows the distribution of alcohol-attributable conditions (not number of patients). Among all patients, having an al-

Figure 1 Study profile

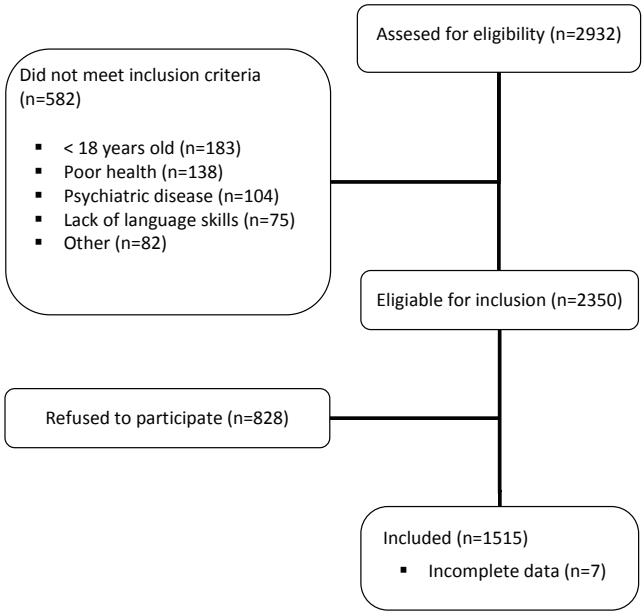

Table 1 Characteristics of included patients

		%	N=1515
Sex	Women	46%	(n=700)
	Men	54%	(n=815)
Drinking pattern	Exceeding the weekly limits	9%	(n=129)
	Binge drinking	22%	(n=334)
Inpatient/ outpatient	Inpatients	50%	(n=761)
	Outpatients	48%	(n=730)
	Unknown	2%	(n=24)
Department	Surgical disciplines	37%	(n=561)
	Internal medicine and Neurology	43%	(n=652)
	Obstetrics and gynaecology	2%	(n=28)
	Emergency room	6%	(n=92)
	Other	11%	(n=165)
	Unknown	1%	(n=17)

cohol-attributable diagnosis was a poor predictor of current hazardous drinking with 18% sensitivity and 16% positive predictive value. The positive predictive values were a little better for binge drinking (15%) than for exceeding the weekly limits (10%), but binge drinking was also more prevalent (22% vs. 9%). Both sensitivity and positive predictive values for current hazardous drinking were a little better for men than women; 20% and 23% versus 13% and 7%, respectively (see all values in table 3).

Discussion

Although alcohol-attributable conditions may be useful in order to estimate the disease burden of alcohol at a

Table 2 Distributions of alcohol-attributable conditions (ICD10 codes) among 395 patients (given in numbers = N)

Conditions wholly attributable to alcohol		**N**
Alcohol-induced pseudo-Cushing's syndrome	E24.4	-
Mental and behavioural disorders due to alcohol	F10	6
Degeneration of nervous system due to alcohol	G31.2	1
Alcoholic polyneuropathy	G62.1	1
Alcoholic myopathy	G72.1	-
Alcoholic cardiomyopathy	I42.6	-
Alcoholic gastritis	K29.2	-
Alcoholic liver disease	K70	-
Alcohol-induced chronic panxcreatitis	K86.0	-
Ethanol poisoning	T51.0	-
Methanol poisoning	T51.1	-
Toxic effect of alcohol, unspecified	T51.9	-
Accidental poisoning by exposure to alcohol	X45	-
Sum		**8**
Conditions partly attributable to alcohol		**N**
Malignant neoplasm of lip, oral cavity or pharynx	C00–C14	12
Malignant neoplasm of oesophagus	C15	11
Malignant neoplasm of colon	C18	24
Malignant neoplasm of rectum	C20	15
Malignant neoplasm of liver or intrahepatic bile ducts	C22	-
Malignant neoplasm of larynx	C32	3
Malignant neoplasm of breast	C50	30
Diabetes mellitus (type II)	E11	63
Epilepsy or status epilepticus	G40 or G41	7
Hypertensive diseases	I10–I15	152
Ischaemic heart disease	I20–I25	116
Cardiac arrhythmias	I47–I49	88
Haemorrhagic stroke	I60–I62, I69.0–I69.2	2
Ischaemic stroke	I63–I66, I69.3 or I69.4	10
Oesophageal varices	I85	2
Gastro-oesophageal laceration-haemorrhage syndrome	K22.6	1
Unspecified liver disease	K73, K74	5
Cholelithiasis	K80	4
Acute and chronic pancreatitis	K85, K86.1	4
Psoriasis	L40 excluding L40.5	28
Spontaneous abortion	O03	2
Sum		**575**

Table 3 Alcohol-attributable conditions as predictors of current hazardous drinking

	Sensitivity	Specificity	Positive predictive value	Negative predictive value
All patients				
> 9/14 AU/week (w/m)	21%	70%	10%	85%
> 1 binging day/month	18%	72%	15%	76%
> 9/14 AU/week (w/m) and/ or > 1 binging day/month	18%	71%	16%	74%
Men				
> 14 AU/week	23%	73%	10%	88%
> 1 binging day/month	21%	71%	22%	69%
> 14 AU/week and/or > 1 binging day/month	20%	70%	23%	66%
Women				
> 9 AU/week	15%	73%	3%	93%
> 1 binging day/month	12%	73%	7%	84%
> 9 AU/week and/or > 1 binging day/month	13%	72%	7%	83%

AU = Alcohol Units w/m = women/men

community or national level (11), our findings indicate that they are not useful in order to identify individual hospital patients to be prioritised for screening.

This may have several explanations, including considerable variation of the etiological fraction of alcohol for the different alcohol-attributable conditions (11).

In addition, a list of alcohol-attributable conditions will never be complete. This is likely to be the case also in this particular study, as it did not include a number of facial injuries and other accidents, often related to excessive alcohol consumption (12).

Huntley et al. reported alcohol-attributable conditions to be more successful in identifying hazardous drinkers admitted to accident and emergency department (13). They identified the ten most common categories of complains among the alcohol-attributable conditions. This top 10 list was arranged as follows (in falling order); fall, collapse, head injury, assault, non-specific gastrointestinal problem, being unwell, psychiatric complain (including depression, overdose and confusion), cardiac complain (including palpitations and chest pain), self neglect, and repeated attendance (13). Our study does not evaluate whether such a list could be successful for Norwegian hospital patients characterised by a lower prevalence of hazardous drinkers compared to the UK (14,15).

Several conditions may have a negative impact on the use of alcohol-attributable conditions as a clinical screening tool to identify hazardous drinkers. For example, abstainers can be characterised by either former drinking or lifetime abstinence, and thereby differ substantially regarding the risk of developing an alcohol-attributable condition (11). It is also possible that an unknown proportion of the patients with alcohol-attributable conditions stopped or reduced their alcohol intake after developing such a condition. In addition, some alcohol-attributable conditions may still exist after several years of abstinence (16). Furthermore, It is also possible that a proportion of the patients in the study may not yet have developed an alcohol-attributable condition, though they have a hazardously intake. This time delay, both from introducing/quitting hazardous alcohol intake, until onset/recovery of alcohol-attributable condition will have a negative impact.

Hospital staff may, however, still find alcohol-attributable conditions useful when performing semi-systematic or non-systematic screening when combining them with other clinical and psychosocial factors not necessarily present in discharge reports. These factors may include for example caput medusa, spider nevi, ascites, insomnia, legal and family problems, patient demography, socio-economic factors etc. However, there is still lack of evidence that such a semi-systematic approach can substitute systematic screening in terms of numbers of risky drinkers detected (17).

In conclusion, we found no evidence to support semi-systematic screening of Norwegian hospital patients by using alcohol-attributable conditions to predict hazardous drinking. Other strategies including validated alco-

hol use disorder questionnaires, patient interviews and biological markers may be more successful in order to identify hazardous drinkers. The potential of alcohol interventions is substantial, and may include reduced morbidity and length of stay. Therefore there is an urgent need for more knowledge on how to better identify current hazardous drinkers in hospitals.

Competing interest: None declared.

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Research and Best Practice - Review

Review: Does the amount of physical exercise before arthroplasty influence the postoperative outcome?

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Abstract

Background Clinical studies have evaluated a correlation between preoperative walking capacity or function and outcome after hip and knee joint replacement surgery with contradictory results. Our aim was to investigate the effect of preoperative metabolic and/or aerobic exercise on surgical outcome, as well as to evaluate the effect of cumulated exercise by using a cut-off value at 3.5 hours through a systematic review.

Methods The literature search was performed in Pubmed, Embase, and Cochrane Library databases. The inclusion criteria were randomised controlled trials, full paper publications, describing the preoperative exercise program and reporting outcome data. Exclusion criteria were inadequate randomisation, and unclear interventions or outcomes. The final literature analysis involved 12 studies. The review included meta-analyses on postoperative complications, specifically deep venous thrombosis, and length of stay.

Results The trials included 616 patients in samples sizing from 20 to 131. The duration of follow-up ranged from 12 to 96 weeks. The preoperative period of training ranged from 4 to 8 weeks; the number and duration of individual sessions varied from 9 to 56 and from 30 to 60 minutes, respectively. All trials reported one or more primary outcome. Meta-analyses were possible for postoperative complications and lengths of stay. Neither development of deep venous thrombosis, odds ratio 0.48 (95% CI 0.18 to1.25) nor the total complication was significantly reduced, 1.08 (0.64 to 1.86). The result for length of stay was –0.22 (-0.86 to 0.42).

Conclusion This review showed that preoperative exercise had no effect on the surgical outcome, neither overall nor for the cut-off value of 3.5 hours per week.

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Introduction

Joint replacement surgery is an effective operation to relieve pain and reduce disability in patients with severe hip and knee arthritis. These operations are used increasingly, and accordingly, attention is paid to programs in the perioperative period that would improve the outcome after surgery.

Major surgical intervention is often followed by a decrease in functional capacity and fatigue, which correlates well to the preoperative conditions, such as health status and muscle strength. Fatigue is also influenced by intraoperative factors like surgical trauma and stress-response (1). In recent years, several surgical disciplines have focused on optimal perioperative treatment-related procedures, such as Fast-track surgery (2). This concept operates with a multi-modal intervention aiming at an enhanced recovery, where the intraoperative procedures are optimised and combined with early post-operative mobilisation. The results have been positive, measured as reduced morbidity and early discharge; however, there is still room for improvement. Clinically, it would therefore be interesting to investigate whether adding preoperative optimisation of patients with training programs before the operation could further improve the outcome.

Studies have suggested a correlation between preoperative walking capacity or function and outcome after arthroplasty (3;4). The effect of exercise programs in the preoperative period has been evaluated in several randomised controlled studies. The results of the studies and the interpretation in reviews have been contradictory (5-19). This could be explained by the heterogeneity regarding training programs, which included different degrees of training intensity and duration, muscle strengthening and cardiovascular conditioning exercises. In addition, the outcome measurements and the follow-

up varied among the studies. However, other explanations should be considered, such as the effect of cumulated amount of exercise.

The recommendation for the general population concerning physical activity includes both metabolic and aerobic fitness for 3-4 hours per week, or until metabolising about 2000 kcal per week (20;21). Thereby, any kind of exercise program would be effective, and the training programs of 3-4 hours or more per week may be more effective compared to shorter programs. This recommendation is based on population studies as well as patho-physiological studies regarding cardio-vascular, pulmonary, immune and muscular-skeletal functions (22;23); functions which are also important for the outcome after undergoing surgery. Hypothetically, the general recommended level of activity would also be effective for patients that are scheduled for surgery.

Our aim was to investigate the effect of preoperative metabolic and/or aerobic exercise on surgical outcome, as well as to evaluate the effect of cumulated exercise by using a cut-off value at 3.5 hours through a systematic review. The primary outcomes were postoperative complications and length of stay, functionality, pain and patient satisfaction, while patho-physiological parameters were secondary outcomes.

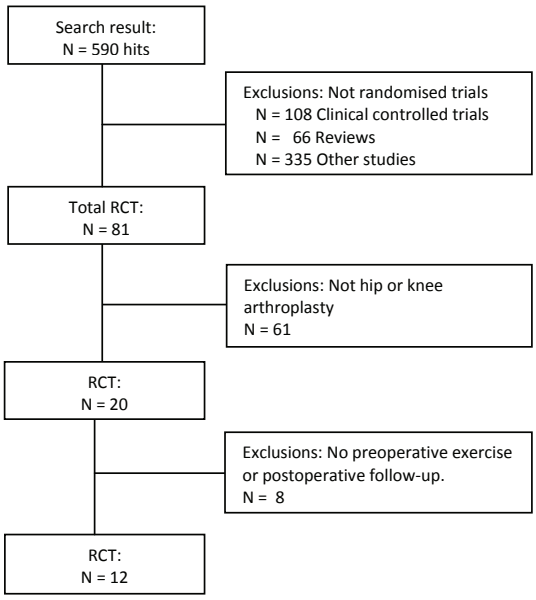
Methods

A systematic literature review was performed. The keywords were; (multimodal Rehabilit* OR activity OR exercise OR physiotherapy OR exercise movement techniques OR physical therapy techniques OR physical therapy OR training) AND (preoperative OR presurgical) AND (hip arthroplasty OR knee arthroplasty). The search was performed in Pubmed, Embase, and Cochrane Library databases. We limited the search to randomised controlled trials in humans. We also searched the reference lists of included trials and relevant reviews for additional studies. There were no language restrictions.

The inclusion criteria were randomised clinical trials, full paper publications, describing the preoperative exercise program and reporting outcome data. Exclusion criteria were inadequate randomisation, and unclear interventions or outcomes.

The title and abstracts were screened for relevant articles, which fulfilled the inclusion criteria, but not the exclusion criteria, see the trial profile in figure 1. Each study was evaluated regarding the quality (24;25).
The final literature analysis involved 12 studies (5;9-11;14;15;17;18;19;26-28).

Figure 1 Trial profile (RCT = randomised clinical trials)



Two papers (10;11) have previously been identified as publications on the same patient population (6). Nevertheless, both papers were included in the present review, since the authors reported different measurements. One study included both knee and hip arthroplasty, but differentiated between the procedures and results (17). It was therefore handled as two separate trials.
Among the excluded studies were those without physical training programs in the intervention groups (12;13;16;29;30).

Categorisation

The exercise sessions included cardiopulmonary exercise, muscle strengthening or both. They were further categorized into:

- Weekly exercise of 3.5 hours or more
- Weekly exercise below 3.5 hours

The accumulated exercise was calculated. If the duration of sessions was not given, it was estimated based on the information of the exercise program.

The outcome measurements were categorized into:

- Postoperative complications and length of stay
- Functionality measured by:
  - Walking capacity, walking speed, twenty meter walk test, six-minute walk test, timed up and go, WOMAC, AIMS, SF-36, Barthel Index, Harris hip score, Oxford hip score
  - Quality of life measured by quality of well-being
  - Patho-physiological parameters such as muscle strength, knee stability, ranges of motion, hospital-for-special-surgery-knee-rating-scale

Meta-analyses were performed regarding postoperative complications, specifically deep venous thrombosis, and length of stay. No further analyses were performed due to high heterogeneity in the other outcome measurements.

Results

The trials included 616 patients in samples sizing from 20 to 131. The short exercise programs included 432 patients of which 219 patients were randomised to the intervention groups and 213 to control groups; the longer programs included 184 patients (96 and 88 patients, respectively). The duration of follow-up ranged from 12 to 96 weeks.

All the 12 included trials performed intention-to-treat analyses. Two trials reported adequate allocation sequence generation; three trials reported adequate allocation concealment; four reported assessment blinding; and the remaining trials excluded dropouts from the final analyses. Only one trial reported adequate generation of allocation sequence, allocation concealment, blinded assessment, and intention-to-treat analyses 24. The methodological quality of the included studies was not high when assessed according to the criteria list recommended by the Cochrane Bone, Joint and Muscle Trauma Group (31;32) and the supplemental criteria from Jadad et al. (33) (table 1).

Time spent on exercise

The preoperative period of training ranged from 4 to 8 weeks, and the number and duration of individual sessions varied from 9 to 56 and from 30 to 60 minutes, respectively. The accumulated exercise time ranged from 6 to 32 hours, and the weekly exercise from 1.5 to 5.3 hours. Four trials exceeded the minimum limit for recommended exercise per week, (table 2).

Table 1 Methodological quality of included trials

Orthopaedic surgery	Country Study year	Was the study described as randomised?	Was the study described as double blind?	Was there a description of withdrawal and dropouts?	Was the assigned treatment adequately concealed prior to allocation?	Were the outcomes of the participant withdrawals described and included in the analysis (intention to treat)?	Were the treatment providers blind to assignment status after allocation?	Were the inclusion and exclusion criteria clearly defined?	Overall Quality
Weidenhielm L (1993)	Sweden (unknown)	Yes	No	Yes	No	No	No	No	Low
D'Lima DD (1996)	USA (unknown)	Yes	No	No	No	No	No	Yes	Low
Rodgers JA (1998)	USA 1992-1995	Yes Quasi re. geography	No	Yes	No	No	No	Yes	Low
Wang AW (2002)	Australia (unknown)	Yes	No	Yes	Yes	No	No	Yes	Low
Gilbey HJ (2003)	Australia 1997-1999	Yes	No	Yes	Yes	No	No	Yes	Low
Gocen Z (2004)	Turkey (unknown)	Yes	No	Yes	No	No	Yes	Yes	Low
Beaupre LA (2004)	Canada (unknown)	Yes	No	Yes	Yes	Yes	No/Yes	No	Low
Rooks DS (2006)	USA 2001-2003	Yes	No	Yes	Yes	Yes	No	No	Low
Vukomansovic A (2008)	Serbia (unknown)	Yes	No	Yes	No	No	No	Yes	Low
Ferrara PE (2008)	Italy	Yes	No	Yes	No	No	No	Yes	Low
Topp R (2009)	USA (unknown)	Yes	No	No	Yes	No	Yes	Yes	Low
Hoogeboom TJ (2010)	Netherland	Yes	No	Yes	Yes	No	Yes	No	Low

High quality = All criteria met (low risk of bias), Low quality = Not all criteria met (moderate or high risk of bias)

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Table 2 Description of randomised trials investigating preoperative rehabilitation programmes in relation to total hip or knee arthroplasty

							Preoperative training in the Intervention group (IG)						
Authors	Op	Postop rehabi-litation	N° of Eligible patients	Incl. rate (%)	Patient (IG + C)	Drop outs (IG + C %)	Follow-up (weeks)	Exercises	Program duration (weeks)	Session duration (min)	N° of Session (range)	Accu-mulated (hours)	Weekly (hours)
Ferrara PE	THA	Yes	63	37	11 + 12	2-9	12	LL Strength Stretch Bicycling Mobilities	4	30	12	6.0	2.5
Beaupre LA	TKA	No	-	-	65+66	12+21	12+24+48	LL Strength Bicycling	4	30	12	6.0	2.5
Hoogeboom TJ	THA	No	62	34	10+11	16+18	1	Strength Bicycling Functional	3-6	60	9 S+H	9.0	2.0
Topp R	TKA	Yes	54	68	26+28	-	4+12	Strength Stretch Aerobic	4	60	13 (4-23) S	13.0	3.3
Vukomannovic A	THA	Yes	-	-	23+22	13-9	1+60	Short term exercises and basic activities	-	-	-	-	-
D'Lima DD	TKA	No	-	-	(10+10)[1] +10	0+0	3+12+24 +48	Arm and leg cycling	6	45	18	13.5	2.3
Rodgers JA	TKA	No	-	-	10+10	9+16	6+12	LL Strength Stretch Bicycling Mobilities	6	45[2]	18	13.5	2.3
Rooks DS	TKA	No	942	5	23+23	35+26	8+26	Strength, Hydro-therapy, Aerobic, Bicycling	6	45	18	13.5	2.3
Rooks DS	THA	No	-	-	31+31	29+28	8+26	-	6	45	18	13.5	2.3
Gocen Z	THA	Yes	-	-	30+30	3+0	1+12+96	UL strength LL stretch	8	30[2] (3*10)	56	28	3.5
Weidenhielm L	TKA	No	-	-	19+20	0+3	12	Ergocycling	5	45[2]	35 S+H	26.3	5.3
Wang AW	THA	Yes	-	-	15+13	0+13	3+12+24	Strength, Hydro-therapy, Bicycling	8	60	32 S+H	32.0	4.0
Gilbey HJ	THA	Yes	127	44	32+25	19+32	3+12+24	Strength, Hydro-therapy, Bicycling	8	60	32 S+H	32.0	4.0

The dotted line shows the cut-off value of 3.5 hours training per week.
[1]Two intervention groups;
[2]Estimated from the description of the program
C = Controls, IG = Intervention group, LL = Lower limbs, Postop = Postoperative, Op = operation, THA = Total hip arthroplasty, TKA = Total knee arthroplasty, UL = Upper limbs, S = supervised, H = home sessions

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Effect

All trials reported one or more primary outcome. Meta-analyses were possible for postoperative complications and lengths of stay. The development of deep venous thrombosis was not significantly reduced 0.48 (95% confidence interval 0.18-1.25). The numbers were 1.09 (0.64-1.86) for the total complication and –0.22 (-0.86-0.42) for length of stay, (figure 2). One paper (26) reported length of stay but did not include the standard deviation and could therefore not be included in the meta-analysis. Due to the missing numerical data in the papers reporting results from the longer programs, it was not possible to analyse short-term versus long-term intervention studies.

There seemed to be a tendency of dose-response between time spent on exercise and the functionality measures such as walking tests; thus indicating a threshold at 3.5 hours per week or 26 hours accumulated.
The patho-physiological results were reported in 8 studies (9;15;17;18;19;26-28) and tended to be significant at a lower level of training; about 2.3 hours per week; however, the heterogeneity among the trials was too high to make these meta-analyses (table 3).

Discussion

This review showed that preoperative exercise halved the development of postoperative deep venous thrombosis among patients undergoing elective hip or knee arthroplasty; however, not to a significant level.
Furthermore, this review could neither accept nor reject the hypothesis of a cut-off value of 3.5 hours of cumulated preoperative physical training before surgery was related to the outcome, due to lack of measurable data.

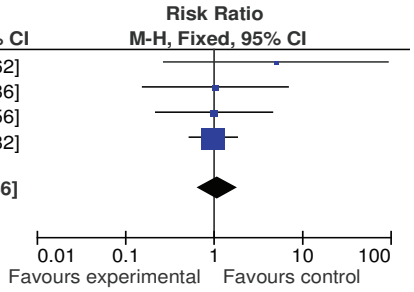
This review had limitations, which were closely related

Figure 2 Meta-analyses

Any complication

Study or Subgroup	Preoperative training Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Hoogeboom TJ	2	10	0	10	2.5%	5.00 [0.27, 92.62]
Gocen Z (1)	2	29	2	30	9.9%	1.03 [0.16, 6.86]
D'Lima DD	4	20	2	10	13.5%	1.00 [0.22, 4.56]
Beaupre LA	15	57	14	52	74.0%	0.98 [0.52, 1.82]
Total (95% CI)		**116**		**102**	**100.0%**	**1.09 [0.64, 1.86]**
Total events	23		18			

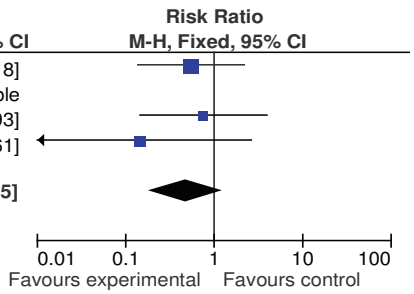
Heterogeneity: Chi² = 1.18, df = 3 (P = 0.76); I² = 0%
Test for overall effect: Z = 0.31 (P = 0.76)



DVT

Study or Subgroup	Preoperative training Events	Total	Standard care Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Beaupre LA	3	57	5	52	45.3%	0.55 [0.14, 2.18]
Rodgers JA	0	9	0	8		Not estimable
Rooks DS (a)	2	15	3	17	24.4%	0.76 [0.15, 3.93]
Rooks DS (b)	0	22	3	22	30.3%	0.14 [0.01, 2.61]
Total (95% CI)		**103**		**99**	**100.0%**	**0.48 [0.18, 1.25]**
Total events	5		11			

Heterogeneity: Chi² = 1.00, df = 2 (P = 0.61); I² = 0%
Test for overall effect: Z = 1.50 (P = 0.13)



Length of stay (days)

Study or Subgroup	Preoperative training Mean	SD	Total	Standard care Mean	SD	Total	Weight	Mean Difference IV, Fixed, 95% CI
Beaupre LA	10.2	4.5	57	11.7	5.2	52	12.3%	-1.50 [-3.33, 0.33]
D'Lima DD	6.2	1	20	6.1	1.1	10	62.9%	0.10 [-0.71, 0.91]
Vukomannovic A	9.8	2.4	20	10.2	1.7	20	24.9%	-0.40 [-1.69, 0.89]
Total (95% CI)			**97**			**82**	**100.0%**	**-0.22 [-0.86, 0.42]**

Heterogeneity: Chi² = 2.55, df = 2 (P = 0.28); I² = 21%
Test for overall effect: Z = 0.67 (P = 0.50)

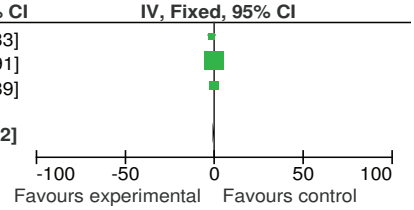


Table 3 Results of randomised trials investigating preoperative rehabilitation programs in relation to total hip or knee arthroplasty

						Functionality – integrated tests					
Aurthors	**Preop training weekly (hours)**	**Postoperative complications**	**Length of stay (days)**	**Quality of life**	**Pain**	**Walking Test**	**WO-MAC**	**SF-36**	**AIMS**	**Hip/ Knee scores**	**Others**
Hoogeboom TJ	2.0	NS Preop fract. All: 20% vs 0%	6.0 vs 6.0	NS	NS	NS	-	-	-	-	NS
Ferrara PE	2.5	-	-	NS	**Sign***	-	NS	NS	NS	NS	**Sign***
Beaupre LA	2.5	All: 27% (DVT 5 vs 10%)	10,2 vs 11,7	NS	NS	-	NS	NS	-	-	-
Vukomannovic A	(short)	-	9,8 vs 10,2	-	NS	**After 1 week***	-	-	-	NS	**Sign***
D'Lima DD	2.3	All: 20% vs 20%	6,1-6,3 vs 6,1	NS	NS	NS	-	-	NS	NS	NS
Rodgers JA	2.3	(DVT 0 vs 0%)	5 vs 6	-	-	NS	-	-	-	NS	NS
Rooks DS	2.3	(DVT 13 vs 17%)	-	-	NS	NS	NS	NS	NS	NS	NS
Rooks DS	2.3	**(DVT 0 vs 13%)***	-	-	NS	NS	NS	NS	-	-	-
Topp R	3.3.	-	-	-	NS	NS	-	-	-	NS	**Sign***
Gocen Z	3.5	(Infections 7 vs 7%)	-	-	-	-	-	-	-	**Sign***	**Sign***
Weidenheilm L	5.3	-	-	-	NS	**After 12 weeks***	-	-	-	-	-
Wang AW	4.0	-	-	-	-	**After 3+12+24 weeks***	-	-	-	-	-
Gilbey HJ	4.0	-	-	**Sign* Preop**	-	-	**Sign***	-	-	-	-

The dotted line shows the cut-off value of 3.5 hours training per week. If nothing indicated (-) = no results
All: all complications, DVT = Deep venous thrombosis, NS = no significance at any measurement, Preop = preoperative, Sign* = Significance at 0.05, sst = Sit to Stand Test, vs = versus

to the weaknesses in the individual studies. The drawbacks included small sample sizes, lack of power calculation, and sparse information on number of patients eligible for inclusion, excluded, drop outs, follow-up. The studies were not powered for evaluation of postoperative complications or other primary outcomes. The use of blinded assessor, intention-to treat analyses and correction for multiple significance tests were seldom. Furthermore, one study used quasi-randomisation based on place of residence. It all reduces reliability and hinders generalization of the results. All papers lacked information on the patients' training activities at inclusion and follow-up. The addition of an intensive postoperative exercise program only for the intervention group and participation in exercise in the control group (pre- or postoperatively) may have overshadowed any effect of the preoperative exercise program. Few papers presented information on validation of compliance of the intervention group; they used an exercise log book. The period between intervention and evaluation should be considered, because aerobic training is effective only a few weeks after quitting.

In four studies, the first visit was 3 months postoperatively, thereby increasing the risk of overlooking a significant effect in the earlier period (5;10;14;15).

In general, the papers included in this review showed a relatively low scientific quality when using the Jadad Score system (34). One might wonder, if the use of another score system may change the evaluation results of the study quality, but the Jadad Score System includes

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similar elements as general score systems accepted by the Cochrane Collaboration and (34). While double-blindness may always be a problem in this kind of interventions, other factors could relatively easy be improved; such as using intention to treat analyses and give clear inclusion and exclusion criteria. In order to bring the research on prehabilitation among surgical patients to a higher level of quality, we have to aim for better scientific performances.

It is obvious to measure the clinical outcome, as well as the physical function, in studies evaluating preoperative training programs (35). Nevertheless, in clinical trials the outcome measures should be clinically meaningful by inclusion of functional tests such as WOMAC, length of stay related to predefined milestones that should be reached before discharge, inclusion of all postoperative complications as well as convalescence defined as time until return to work or other activities. The choice of having surrogate data as the only outcome should be reserved for experimental studies. In this review, one study exclusively presented the total postoperative complications (18), while others were selected to present the prevalence of deep venous thrombosis (9;17) and infections (15), respectively. The rest gave no numeric data on their complication rates.

The possible long-term effect has not yet been evaluated for preoperative training programs.

In general, the complication rate and mortality are low in relation to knee- and hip arthroplasty, but age and co-morbidity are important risk factors for increased major complications (36;37). It would therefore be clinically relevant for especially elderly patients suffering from multiple co-morbidities, to become fit for surgery before the operation in an attempt to improve their outcome.

The time has come for performing high quality trials on the hypothetic effect of preoperative training programs. This should be done in a proper randomised design with a sizeable number of patients, possibly combined with optimised perioperative procedures known from the fast track surgery, with clear outcome measurements, and including long-term follow-up as well as cost-effectiveness analyses; the sooner the better. If no effect can be established, the resources are better used otherwise in health care. If an effect is established, the perspectives are tremendous for the individual patient, as well as for the health service systems due to improved outcome and on short-term, faster clinical pathways. A long-term effect could be a more active lifestyle than usual after arthroplasty, and thereby lesser development or progression of lifestyle related co-morbidity otherwise common in this patient group.

Contributors

P.R. Nielsen designed and managed the review, analysed and interpreted the data. H. Tønnesen designed the review and analysed and interpreted the data. P. Nielsen and H. Tønnesen wrote the paper, and approved the final edition.

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Research and Best Practice - New PHD Theses on Clinical HP

Patients in Court-Ordered Substance Abuse Treatment

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Commitment to involuntary care is a multistage process comprising many different aspects; legal, psychological, medical, social and ethical among others. It can also be analyzed from the perspective of a continuum starting from the report to the social authorities, the evaluations on whether to commit or not, the actual commitment and aftercare following involuntary treatment.

Through four original studies, this thesis aims at enhancing the knowledge of the total process:

1) 74 patients were interviewed about experiences of the evaluation prior to the decision on involuntary care. They reported anger and violation. Half of them had no contact with their social worker. Their substance use had not changed during evaluation. Of the interviewed patients, 35 had a previous experience of commitment. Even though a majority of the patients reported that coercive measures had been applied during care, they felt that they could influence the care and were satisfied with the care at the institution. The patients were not satisfied with the contact with the social worker in charge of planning aftercare and few plans were carried out.

2) This study explored the decision by the social welfare board to petition the court for commitment by having experts assess 106 cases that the board previously had made decisions about. The comparison between the boards' decisions and the experts' assessments revealed significant association between the patients' social variables and the board's decision. In contrast, the experts' assessment showed no such association.

3) Prior to an amendment of the involuntary legislation, the difference between municipalities in rate of petitions was very small. After the responsibility to petition the court for commitment was transferred from central authority to local authority, differences emerged. Two municipalities with high rate (55%) and two with low rate (12%) were contrasted in order to measure global outcome; substance abuse, housing and means of support. There was no significant difference in regard to global outcome between the patients from the two types of municipalities. Seven patients had deceased during two years after evaluation; none of the deceased patients had been committed.

4) Case management was used as an intervention in aftercare following commitment and 36 patients were randomised to either case management or treatment-as-usual. The patients in the case manager group seemed to have retained their abstinence in a higher degree than the patients in the control group. Despite the fact that one of the core components of case management is to link to care, the use of care did not differ between groups. Patients with a continued severe substance abuse had significantly more contact with in-patient care and social services, while abstinent patients had less contact with care and service.

Conclusion

A majority of the patients were unsatisfied with the contact to the social authorities during evaluation and aftercare. When petitioning the court, other variables beside the legal may influence the social authorities' decision. In spite of the involuntary care, most patients felt they could participate in the planning of their care. The case management interventions were well received by the patients in aftercare and case management assistance seems to have supported abstinence.

Editorial Office, WHO-CC • Clinical Health Promotion Centre • Bispebjerg University Hospital, Denmark

News from the International HPH Network

International Research on a WHO-HPH Recognition Process

About THE WHO-HPH PROJECT

The international research project on a WHO-HPH Recognition Process is part of the WHO/HPH Memorandum of Understanding Action Plan. The project is headed by the WHO Collaborating Centre in Copenhagen as part of a PhD study for Jeff Kirk Svane, supervised by an international team of experts (Prof Hanne Tønnesen, Prof Shu-Ti Chiou and lecturer Oliver Groene).

The study is still open for more participating departments and those interested are invited to take contact to the WHO-CC for further information.

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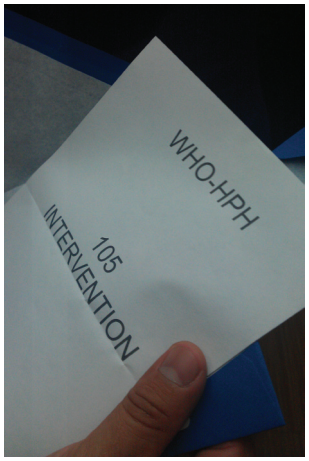


The international research on a WHO-HPH Recognition Process is now truly taking form. Teaching and training events, that have featured information about the project to interested departments, have been successfully held in several countries including Finland, the Czech Republic and, most recently, Taiwan.

It is anticipated that more countries will join in the future, as the study aims to include a total of 88 clinical hospital departments.

The main aim of the research project, which the WHO-HPH School in Taiwan in October 2011 also centered around, is to evaluate whether a Recognition Process will generate better health gains for patients and staff.

The study hypotheses is that hospitals allocated to start the recognition process immediately (intervention group) will have better health gains for their patients and staff, as well as deliver more health promotion services compared to the control group departments (which continue with their routine clinical practice for the first year).

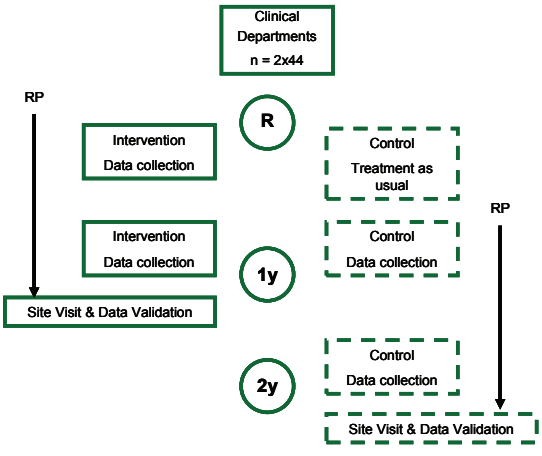
The study is designed as an RCT. After the first year the control group begins the recognition process (delayed start), while the intervention group (that started immediately) continues with the recognition process. This design allows for a great number of measurements between the groups and their various points of movement and work with the process.

The randomization of departments to intervention and control group is computerised, using blocks of unknown sizes and stratification for each participating country. Further, it is performed by an independent researcher.

Whether or not any difference can be found regarding the service delivery outcomes will be measured by counting the frequency of health promotion services regarding smoking, excessive alcohol use, overweight, mal-nutrition and physical inactivity. The difference in outcomes relating to better health gains will be measured by means of surveying staff and patients.

The study includes a variety of clinical hospital departments, from university as well as non-university hospitals. Excluded are only palliative care departments, paediatric departments, nursing homes, non-hospital departments, and primary care facilities, since the WHO-HPH standards and tools are not validated for these types of clinical activities.

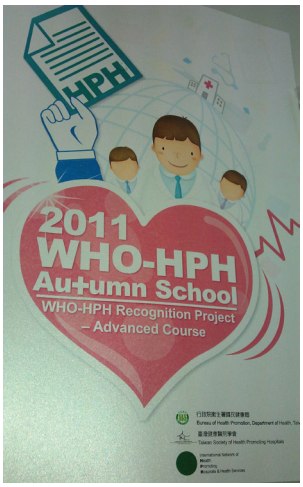
HPH-WHO Trial Profile



RP = Recognition Process, R = Randomisation, y = Years

News from the International HPH Network

WHO-HPH Autumn School 2011 in Taiwan (PoC)



About THE WHO-HPH SCHOOL

On October 22-23, 2011, The WHO-HPH Autumn School was held in Taipei City, Taiwan. The school was an advanced course on the WHO-HPH Recognition Project. A total of 80 representatives from more than 15 Taiwanese hospitals participated.

Similar teaching and training events will be held in the future in other participating countries, and video material from all teaching and training events pertaining to the recognition process research project will be posted at hphnet.org once it is edited.

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The WHO-HPH Autumn School 2011 was held with great success in Taipei City, Taiwan. The school focused on participation in the International Recognition Project research. The school had a great turn out of participants from all over Taiwan, totalling 80 representatives from more than 15 Taiwanese hospitals.

Dr. Chin-Lon Lin, Chief Executive Officer, Buddhist Tzu Chi General Hospital

Several workshops were held during the school. One workshop was on participant expectations to project participation, one was on reflections on what to do if allocated to either control or intervention group, and the last workshop was on specific and concrete participant plans. Among the many presentations was a talk on clinical research methods, a detailed project walk-through, a talk on experience with implementation of Quality Management in practice in Taiwan and finally, a talk on smoking cessation intervention on hospitalized patients in the Cathay General Hospital, Taipei (Taiwan).

During the school, the clinical departments that had already signed agreements to take part in the international research project were randomized to either intervention or control group.

The WHO-CC in Copenhagen was present at the events in Taiwan, as co-organizer of the school. CEO, Professor Hanne Tonnesen elaborates on the success of the WHO-HPH Autumn School:

> *"We were extremely happy to be in Taipei for the Autumn School 2011, and among the many sucesses was of course the high turn out of participants. We had such a broad range of Taiwanese hospitals and departments represented and that made for many interesting discussions and perspectives. I am deeply appreciative of the huge efforts of the Taiwan organizers, Dr. Chiou and her excellent staff, and most of all I was just so glad to see that the school turned out to be such a successful and inspiring exchange of knowledge and experience, which truly sent the international Recognition Process study off to a flying start."*

Dr. Shu-Ti Chiou, General Director, Bureau of Health Promotion, Department of Health, Taiwan (PoC)

News from the International HPH Network

Dear HPH National/Regional Coordinators, your attention please

About

THE N/R COORDINATORS' SCHOOL

The National/Regional HPH Network Coordinators' School 2012 takes place at:

The Taipei International Conference Center (TICC), Taiwan On April April 10, 2012, from 13:00 – 17:00

You can sign up via www.hph-net.org under conferences.

Contact:
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In 2010, the HPH General Assembly decided to dedicate a part of the yearly HPH Summer School to the National/Regional HPH Network Coordinators.

The aim was to allow the Coordinators of the 40 National/Regional Networks around the globe to share knowledge and experience freely once a year – without the restraints of a tight agenda, which is the case at the official General Assembly. The idea makes a lot of sense, since these 40 Coordinators are the only people with exactly that job description in the world.

In this light, it was unfortunate that no more coordinators could participate in the National/Regional Coordinators' Summer School in Turku.

On this basis, the General Assembly decided that even more should be done in terms of advertising the event in 2012 to boost the number of participating coordinators. The 2012 National/Regional HPH Network Coordinators' School will be held in Taiwan just before the annual International HPH Conference.

So why not come to Taiwan early and get all you can out of the long journey? Enjoy the beautiful island, share knowledge and experiences with other National/Regional Coordinators from all over the world.

The event will be freely organized and feature ample discussion time, brief updates on relevant topics and much more.

First HPH Member in Indonesia

The R. Syamsudin SH Regional Hospital is located in the West Java Province, in the City of Sukabumi close to Jakarta.

We are very pleased to inform that Indonesia now has their first member of the International HPH Network, the R. Syamsudin, SH Regional Hospital.

The R. Syamsudin SH Regional Hospital is located in the West Java Province, in the City of Sukabumi.

Welcoming the first member from Indonesia is an amazing progress in the South East Asian region. The HPH Network looks forward to a fruitful collaboration in the future for the benefit of patients, staff and communities all over Indonesia.

R. Syamsudin SH Regional Hospital

News from the International HPH Network

HPH participation in SEEHN Third Health Ministers Forum in Banja Luka

About SEEHN

SEEHN is an abbrevation for South-Eastern Europe Health Network.

SEEHN is a political and institutional forum set up by the governments of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, the Republic of Moldova, Romania, Serbia and the former Yugoslav Republic of Macedonia to promote peace, reconciliation and health in the region.

In 2011, Israel became the 10th member of the Network (www.euro.who.int).

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Upon invitation from WHO, the HPH network participated in the South-Eastern Europe Health Network's (SEEHN) Third Health Ministers Forum: "Health in All Policies in South-Eastern Europe: A shared Goal and Responsibility", which was held in Banja Luka, Bosnia and Herzegovina, October 13-14, 2011. The Forum was co-organized by SEEHN, the Council of Europe, the Council of Europe Development Bank, the European Commission and WHO Regional Office for Europe, and hosted by the Ministry of Civil Affairs and Ministries of Health of Bosnia and Herzegovina under the auspices of the Regional Cooperation Council.

At the meeting, the countries agreed on:

1. Evaluation of the South-Eastern political process of cooperation on health since Skopje 2005.
2. The values, priority areas and actions for the fu-ture development and implementation of Health in All Policies (HiAP) within the sub-regional context (Political Declaration).
3. An extended collaboration for public health reform in the region.

SEEHN is a political and institutional forum set up by the governments of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, the Republic of Moldova, Romania, Serbia and the former Yugoslav Republic of Macedonia with the aim to promote peace, reconciliation and health in the region. WHO Europe contributes to international reconstruction efforts in the south-eastern countries of the region, through its work with SEEHN. WHO Europe lends technical support to SEEHN's various health projects, along with the Council of Europe, from 2001 to 2009.

This aside, SEEHN also has a number of partner countries, most of which have national HPH Networks, and a number of partner organizations. The role of HPH is also anticipated to be formed as a full SEEHN partnership, potentially including a Memorandum of Understanding.

At the meetings, HPH was asked to give a presentation of the HPH approach and framework to the participating delegations and ministers. Subsequently, many ministers and delegations expressed enthusiasm and interest in developing HPH further in their countries.

As a result of the Forum, the year 2012 will hopefully witness a grand improvement of HPH memberships and work efforts in many of the SEEHN countries.

Group photo from the the South-Eastern Europe Health Network's (SEEHN) Third Health Ministers Forum: "Health in All Policies in South-eastern Europe: A shared Goal and Responsibility", held in Banja Luka, Bosnia and Herzegovina, October 13-14, 2011.

News from the International HPH Network

TFU Launches New Campaign

About TFU

The Tobacco Free United (TFU) Task Force was initiated as a joint project between HPH and the ENSH Global Network for Tobacco Free Health Care Services. The Task Force was approved by the HPH General Assembly in May 2008, and it has members from more than 60 hospitals/health services world wide.

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The collaborative ENSH and HPH Task Force, Tobacco Free United (TFU) has launched a new campaign, in which it calls for individuals to contribute. The campaign is entitled: "Health Care Professionals for a Comprehensive Tobacco Control Policy" and is about raising awareness among health personnel and professionals of their important role to reduce tobacco consumption. Furthermore, the campaign shows policy makers that personnel and professionals working in health care are calling for an effective implementation of the WHO Framework Convention on Tobacco Control (FCTC).

An invitation to participate has been sent out broadly to all the National/Regional HPH Networks, and you can join by:

1. Be the Campaign Country/Regional Coordinator by recruiting individual network health care services to participate in the campaign, using the TFU PACT and TFU Charter.

2. Support Health Service coordinators to collect and register signatures from within their organisations, using the HPH signature on-line database.

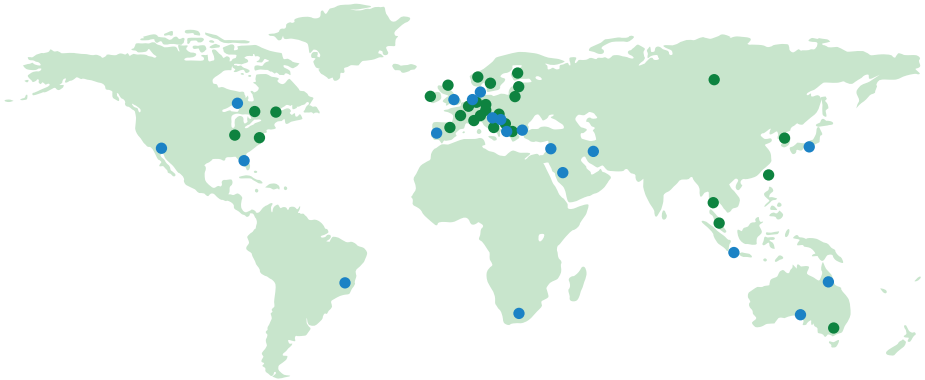
3. Once the on-line signatures are collected, you will be supported to hand them over to national policy makers on the occasion of WNTD 2012; calling for country specific measures in the frame of the FCTC.

On an international level a combined petition, drawing together signatories of all participating countries is planned to be presented to the next Assembly of the Framework Convention on Tobacco Control in November 2012 in Korea.

The TFU campaign is lead by Sibylle Fleitman (ENSH) and Simone Tasso (HPH) and is endorsed and supported by the HPH Governance Board. Facilitating the organisation of the campaign is handled by the TFU advocacy subgroup through providing administrative assistance, individual coaching and an electronic database for the collection of signatures.

HPH membership growth and activity

The number of HPH members continue to rise with the addition of the first member in Indonesia, The R. Syamsudin SH Regional Hospital. Also, the Slovenian member hospitals have joined forces and established a national Slovenian network, which will stregthen the HPH efforts in the region. To the right is the current HPH world map, displaying the global HPH membership status.



News from the International HPH Network

Minister of Health visits WHO HPH Autumn School in Czech Republic

Great meeting activity and fruitful workshops were keywords in Prague when Czech health professionals met to gain insight and share inspiration at the WHO HPH School on September 12-13, 2011.

About the CZECH HPH NETWORK

The Czech HPH Network is a strong and active network consisting of 4 members. Immidiate plans are underway, in collaboration with the Czech Ministry of health, for the network to grow its membership significantly.

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The WHO HPH School in Prague, held on September 12-13, 2011, was a great success for all parties. It was a major opportunity for Czech health professionals to gain insight and share inspiration in the area of Health Promotion in hospitals and health services. The meeting facilitated a close collaboration and sharing of experience, and allowed the participants to be inspired, get hands-on involvement and get ready for their own HP involvement. The purpose of the School was to bring key knowledge on the HPH concept and its benefits to a wider Czech healthcare environment, which is needed in order to develop HPH even further in the Czech Republic.

Czech Republic's Minister of Health, Leos Heger with Professor Hanne Tønnesen

The Czech Republic's Minister of Health, Leos Heger, opened the WHO HPH School with an inspiring introductory presentation. Among the other key note presenters were WHO's Head of the Czech Country Office, Alena Steflova, and Lenka Stepankova from the General University Hospital in Prague.

Hanne Tønnesen, Director and Head of Research of the WHO Collaborating Centre, and CEO of the International HPH Secretariat, also gave a presentation on Health Promotion value and importance for clinical practice. Milena Kalvachova, the National HPH Coordinator of the Czech Republic, gave a presentation on the Czech HPH Network and common projects of the Ministry of Health and WHO in 2010-2011. Lastly, the National HPH Coordinator from the Slovak HPH Network, Zora Bruchacova was also present and gave a talk on the experiences of the Slovak HPH Network.

The School in Prague was part of a larger teaching and training effort by the Czech HPH Network, which meant that six of the participating Czech hospitals could present inspiring HP action plans and projects from their own organizations.

At the School, two exciting workshops were also conducted with great interest from the participants. One workshop focused on the significance of a greater participation by the Czech HPH Network in international research project. The other workshop focused on the possibilities and conditions of the growth of the Czech HPH network.

Dr. Ivana Korinkova from the Czech HPH network

News from the International HPH Network

Pilot testing standards on Migrant Friendly and Culturally Competent Health Care

The HPH Task Force on Migrant Friendly and Culturally Competent Health Care (TFMFCCH) is well under way with its development of standards for equity in health care.

About TFMFCCH

First established in 2005, the Migrant Friendly and Culturally Competent Health Care is one of the longest standing HPH Task Forces.

It has members from more than 30 hospital/health services around the world as well as strong collaborations with many leading universities, the WHO, the Council of Europe and many others.

Find out more at www.hph-net.org under Task Forces.

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After the fruitful TFMFCCH meetings in Turku, Finland, in June 2011, the Task Force followed up at meeting in Norway and in Italy. Here, the project core group worked to revise the draft standards according to the results and discussions at the Turku workshops. As a result, it was decided by the TFMFCCH core group to postpone the actual pilot-test of the standards to January 2012, in order to have enough time to adequately develop measurable elements for each substandard.

WHO-HPH TF MFCCH
Task Force on Migrant-Friendly and Culturally Competent Healthcare

This work will be carried out by five newly established sub-groups, each tasked with development of all the measurable elements relating to one of the five WHO HPH Standards. The elements relating to Standard 1 and its substandards will be developed by Scotland, the ones for Standard 2 by Norway and Canda, the ones for Standard 3 by the Netherlands and Switzerland, the ones for Standard 4 by Spain and UK, and finally the ones for Standard 5 by Italy and Ireland.

We asked TF Leader, Antonio Chiarenza, about the planned course of events after final development of the elements. He noted that the group is:

> "[...] *quite far ahead in the organisation of the pilot test. National Coordinators have been identified from the networks that have already agreed to participate. They include Italy, Ireland, Norway, Sweden, Scotland, Spain, Canada (Toronto). Also, a draft review form has been developed together with instructions for the review team and a draft of the online review form has been developed by the International HPH Secretariat in Copenhagen*".

The TFMFCCH has had its next meeting on 11-12 November, 2011, with the specific aim of assembling the work of the 5 subgroups and define the final preliminary standards and the pilot test strategy. We look forward to hear and bring the results of this meeting.

CLINICAL HEALTH PROMOTION

Acknowledgements

During 2011 we have been so fortunate to have all submitted papers peer reviewed by our honoured panel of international scholars.

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Author Instructions for submission of papers for Clinical Health Promotion – Research and Best Practice for patients, staff and community

From the Editorial Group we would like to welcome papers on clinical health promotion from all readers.

For submission of papers, please visit our website: www.clinhp.org

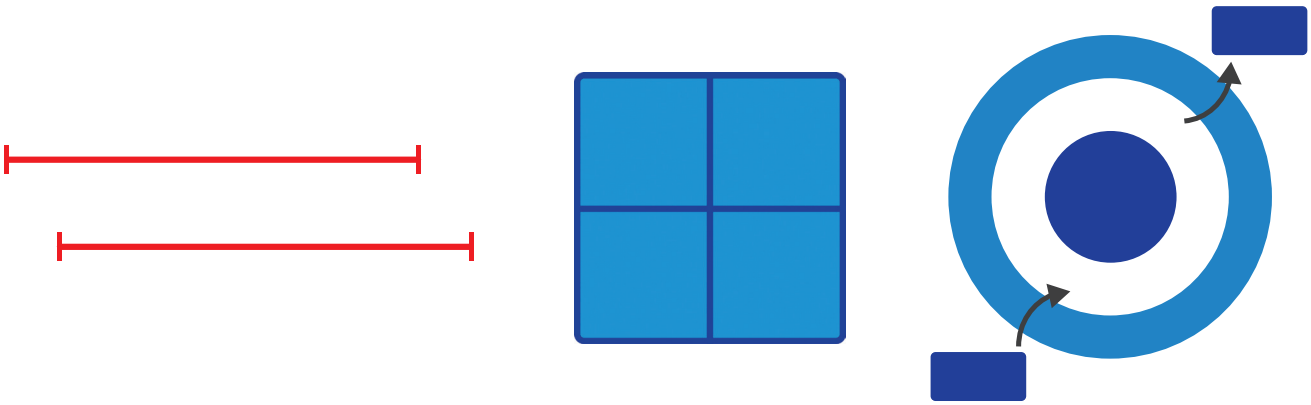
New Text Book

Engage in the Process of Change;
Facts and Methods

At the 20th International Conference on Health Promoting Hospitals and Health Services in Taipei, April 2012, WHO-CC, Clinical Health Promotion Centre and WHO Regional Office for Europe will present the new textbook *Engage in the Process of Change; Facts and Methods*.

By focusing on the interaction between the patient and the health care professionals, the role of unhealthy lifestyle and the benefits of changing them, this textbook creates an overview of what efforts need to be initiated, what methods to be used, and how this can be practically achieved. The engagement will give the patients the benefits of a clearer and more supportive motivational dialogue and especially a feeling of being understood in the specific situation with the challenges and difficulties of changing habits.

The book includes contributions from a long list of prominent authors and can be downloaded free of charge.



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