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Ministry of Health

2nd INTERNATIONAL HEALTH PROMOTION AND COMMUNICATION SYMPOSIUM

GRAND CEVAHİR HOTEL, İSTANBUL
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How to Promote Good Health!

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Welcome ;

We are organizing II. International Symposium on Health Promotion and Communication bearing in mind the objective of health society, health future. Our goal is to contribute to the promotion of health related activities launched by Turkish Ministry of Health so as to elevate the status of health of Turkish society.

Anything done to improve healthcare is not part of what we do on daily basis but the responsibility we feel towards life and we carry this more over our shoulders in that we do not have any limit. A health promotion program could be applied at a school or in a neighbor-hood or a play-ground for kids at the corner. Wherever there is a human-being, we will be there available. There is no one or group to exclude from the target audience, which means our responsibility is that huge.

Our advantage is also as major as our responsibility. For instance, our advantage is the ability to plan programs or to implement projects or launch campaigns. We have a chance of making long term plans and do know that whatever we carry out shall pay this or that way because we derive our strength from trust in the fact that people shall adopt the right decisions. All our activities aim to empower people in managing their health, to enable them to have a say about this matter and to orient their life in the right direction. In fact, this is what health promotion is about. At the beginning, health promotion may seem complicated since it requires arrangements, planning, control and evaluation. In fact, this is the easy side of the coin but what counts is: people want to have a healthy life and this is the overarching objective we are working against.

Promotion of health in Turkey is a new venue of activity, which is managed by the related General Directorate that focuses on large scale campaigns such as obesity, tobacco use, physical activity and hygiene and gets internationally recognized books translated and published, reports written and prepared booklets and has organized various competitions to raise awareness and delivered presentations to share know-

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how. Thus, in order to follow this path, put one more brick on another; enjoy common will-power and produce together, we are organizing the second symposium this year.

You are kindly invited to the symposium with a theme of "How to Promote Good Health?" where popular experts, international and national speakers shall deliver presentations. We look forward to following this path to cooperate further and shall be honored in welcoming you in Istanbul.

PROGRAM
09 APRIL 2013 TUESDAY

09.30 - 11.30	Opening Speeches Prof. Çağatay GÜLER Faculty of Medicine, Hacettepe University Dr. Mehmet MÜEZZİNOĞLU Minister of Health of Republic of Turkey
11.30 - 12.40	**Special Session - 1** **Global Examples on Health Promotion Programs**
11.30 - 11.35	Presentation Session **Moderator:** Prof. Nihat TOSUN Undersecretary of Turkish Ministry of Health
11.35 - 12.30	Keynote: Prof. Pekka JOUSILAHTI North Karelia Project
12.30 - 12.40	Discussion
12.40 - 14.00	*Lunch Break*
14.00 - 15.45	**Session - 1** **Health Behavior Models for Health Education in 21st Century Health Education**
14.00 - 14.05	Presentation Session

Moderator: Prof. Sabahattin AYDIN
Rector of Istanbul Medipol University

14.05 - 14.35 Assoc. Prof. Carl FERTMAN
Role of Education on Health in Health Promotion Efforts

14.35 - 15.05 Prof. Sandra Van DULMEN
Health Behavior Related Innovations and Behavioral Interventions

15.05 - 15.35 Prof. Diane D. ALLENSWORTH
Equity in Health Promotion Programs

15.35 - 15.45 Discussion

15.45 - 16.00 *Coffee Break*

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Health Content in Media and Health Literacy

16.00 – 16.05 Presentation Session
Moderator: Assoc. Prof. Can BİLGİLİ
Faculty of Communication, İstanbul Ticaret University

16.05 - 16.35 Esra TÜZÜN
Responsibilities of Journalists for Public Health

16.35 - 17.05 Esra KAZANCIBAŞI ÖZTEKİN
New Media and Ethics

17.05 - 17.35 Mine TUNÇEL
Management of Media Campaigns on Health Promotion

10 APRIL 2013 WEDNESDAY

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Moderator: Assoc. Prof. Mustafa AKSOY
President of Turkish Public Health Association

09.35 - 10.05 John ILLMAN
What Could Health Media Change for a Healthy Life?

10.05 - 10.35 Jerril RECHTER
Effective Media Applications in Health Promotion

10.35 - 10.45 Discussion

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11.00 - 12.40	**Special Session - 2** **Case Study for Sustainable Healthy Society: Healthy People 2020**
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	Moderator: Prof. Diane D. ALLENSWORTH Centers for Disease Control and Prevention (CDC)
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14.00 – 14.05	Presentation Session
	Moderator: Assoc. Prof. Turan BUZGAN Deputy Undersecretary of Turkish Ministry of Health
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14.35 - 15.05	Assoc. Prof. Kasisomayajula VISWANATH Information Discrepancy and Communication in Health
15.05 - 15.15	Discussion
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15.30 - 16.45	**Session - 5** **Approaches Developing in Health Communication Practices**
15.30 – 15.35	Presentation Session
	Moderator: Erdoğan AKTAŞ atv and a Haber Editor in Chief
15.35 - 16.05	Prof. Kevin WRIGHT Awareness Raising Strategies in Health Communication Campaign Applications
16.05 – 16.35	Tim CHURCH Health Communication Campaign Applications in Local Governments

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09.35 - 10.05	Prof. Jay BERNHARDT Social Media and Health Development
10.05 - 10.35	Assoc. Prof. Suzanne SUGGS Role of New Media Applications in Public Health Promotion
10.35 - 11.05	Dr. Craig LEFEBVRE Examples of Mobile and Social Media Applications to Achieve Public Health Goals
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12.40 - 13.00	Evaluation and Closing
13.00 - 14.00	*Lunch*

PROF. PEKKA JOUSILAHTI

Professor Pekka Jousilahti, born in 1955, graduated in medicine in 1979 from the University of Kuopio, and later he got the degrees of MPH and PhD in epidemiology and public health. After graduation he worked as clinical practitioner in Finland and Sweden, and received the specialist degree in General Medicine and Health Care Administration. From 1987 to 1989 he worked as associate expert for WHO Western Pacific Region in Papua New Guinea having immunization and diarrheal disease programs as main responsibility. In 1991 he joined to the Finnish National Public Health Institute (KTL), known since 2009 as National Institute for Health and Welfare (THL) (www.thl.fi). In KTL epidemiology and prevention of non-communicable diseases became the main topic of his public health and research activities. In 2006 he was appointed as Research Professor in the Department of Chronic Diseases Prevention.

In the 1990s doctor Jousilahti coordinated the National FINRISK Study, a large population-based survey on cardiovascular and other chronic disease risk factors, and since then he has been a member of the FINRISK Executive Board, and the leader two research groups of the study: obesity and physical activity, and cancer. The origins of the FINRISK Study are in the North Karelia Project, a large comprehensive community based non-communicable disease prevention and control program initiated in the early 1970s in Eastern Finland. The first study was conducted in 1972, and since then the study has been conducted every five years, last one in 2012. The FINRISK Study is one of the first population based non-communicable disease risk factor studies in the world and it has been used as a model for many international studies, such

as the WHO MONICA Study, WHO STEPS Surveys, and the European Union Health Examination Surveys (HES) (www.ehes.info).

Professor Jousilahti has published over 250 scientific articles in international peer reviewed journals. His main research topics are epidemiology and prevention of cardiovascular and other non-communicable diseases, such as type 2 diabetes, respiratory diseases - asthma and allergy in particular - and the risk factors of different types of cancer. Health effects of obesity and physical activity have been of special interest of professor Jousilahti's research in the recent years, but he has studied also the role of other behavioral and biological risk factors, and genetic factors, on the risk of chronic disease. He is a member of several international research collaboration groups.

Professor Jousilahti is one of the founding collaborators of the International Association of National Public Health Institutes (IANPHI), and he served as the Secretary General of the Association from 2006 to 2010. During its founding in 2006 IANPHI had 25 member institutes, and currently the Association has over 80 members, representing public health institutes from all over the world, from both developed and developing countries (www.ianphi.org). In 2009 IANPHI received 20 million USD operating grant from the Gates Foundation.

During his career professor Jousilahti has worked as public health expert for several international organizations, including WHO, World Bank and the European Union. He has participated in the planning, implementation and evaluation of non-communicable disease prevention and other public health programs in number of countries, such as Oman, Latvia, Bosnia-Herzegovina, China, Philippines, Vietnam and Tonga. Since 2010 he has been the Key Expert in the MCA Mongolia Health Project, a large non-communicable disease prevention and control program funded by the US Millenium Challenge Corporation (www.mcc.gov).

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Successful Non-Communicable Disease Prevention in Finland: The North Karelia Project

Non-communicable diseases (NCDs) form the major health burden in the industrialized countries and are rapidly growing elsewhere. But on the same time they present the area where the greatest health gains can be achieved. Three out of four deaths in most developed countries are due to NCDs, such as cardiovascular diseases, cancers, chronic respiratory diseases, or accidents and other violent causes. Medical and public health research over the past few decades probed the causes and mechanisms of major NCDs. NCDs have their roots in unhealthy lifestyles or adverse physical or social environments. The major lifestyle factors implicated are unhealthy nutrition, smoking, physical inactivity, excess use of alcohol and psychosocial stress. The main question in NCD prevention is no longer "what should be done", but how should it be done". So, the key issue is how best to apply our existing knowledge to effective prevention in real life.

Before World War II, Finland was a very poor country, having infectious diseases, such as tuberculosis, and high child and maternal mortality as main health problems. After the war, as standard of living gradually increased, infectious diseases were brought under control and public health improved. But new, chronic diseases emerged. Rates of cardiovascular diseases, coronary heart diseases in particular, and lung cancer rose. Deaths from these diseases become common, even among quite young men. In the 1960s Finland reached the highest coronary heart disease mortality known in the world at that time. Furthermore, there was a marked difference in heart disease mortality between different parts of the country, and the highest mortality

rates were recorded in the North Karelia province in eastern Finland.

The North Karelia Project was launched in 1972, after a petition of local community and political leaders. The main objective of the project was to reduce morbidity and mortality due to cardiovascular diseases – and later on extended to other NCSs – by reducing the main NCD risk factors, not only in the high risk individuals, but in the whole population through community actions. The source of NCD epidemics is unhealthy lifestyles, and large proportions of society are under at least some risk, and therefor major reductions in disease rates call for widespread changes in the related lifestyles. Moreover, since the lifestyles are embedded in the community in complex ways, major lifestyle changes are only possible if their socioeconomic determinants in the community are somehow modified.

In primary prevention the choice of main risk factors to be intervened in is derived from medical literature and epidemiological studies. In case of the North Karelia Project during its launching in the 1970s, this aspect was quite easy: serum cholesterol, blood pressure levels and smoking rates were very high among the North Karelian men, and except smoking also among women. Later on prevention of obesity and sedentary lifestyles become targets of the project as well. Once the target risk factors are agreed upon, the strategy of the program intervention needs to be chosen. The "high risk" or "clinical" approach attempts to identify people with particularly high risk factor levels through screening and clinical examination, and to intervene in them through lifestyle changes, and often also through pharmacological drug treatment. By contrast, the "population" or "community" strategy attempts to modify the general risk factor profile of the entire population, usually by promoting lifestyle changes, and affecting the socioeconomic determinants of the lifestyle in the community.

Although an individual's coronary heart disease risk increases with increasing risk factor level – which is obviously relevant in clinical practice – it is essential to understand that individuals with clinically high risk factor levels are responsible for only a small proportion of disease cases that occur in the population. Most cases arise among people with only moderate risk factor elevations – although they usually have several of them at once – who far outnumber the much smaller numbers of high risk individuals. So, from the epidemiological and public health standpoint, major reductions of NCD rates in the community can be achieved by broad reduction in the levels of multiple generally common risk factors. This demands community-wide efforts in promoting healthy lifestyles that are likely to impact the common

risk factor levels in the population and thereby reduce the NCD rates. Such lifestyle changes are likely to be beneficial for those with a wide range of NCDs, as well as be safe, and promote health in general.

Accordingly, the North Karelia Project involved a population-based strategy from the very outset: i.e. employing general community activities to influence the risk factor profile of the whole population. The aim was to change the lifestyles of the whole North Karelian population, not merely a restricted number of high risk individuals. In more technical terms, the task was to shift the entire risk factor distribution to the left rather than influencing the "high risk" end of the distribution only.

Once the program to promote healthy lifestyle and risk factor changes in the community has been defined, the task has to make use of the behavioral and social sciences. Medical practices have long been based on assumption that after identifying the behavioral agents leading to diseases, merely informing the subjects concerned is enough to rectify the situation. However, numerous studies and every day practice have shown that this is seldom the case. Behaviors are embedded in social and physical environments in a complex way.

Health related lifestyles are largely determined by social forces and environmental factors. Efforts toward major progress in influencing disease rates in the community have to contend with environmental forces and structures. The natural and most effective way of changing a population's risk factor levels is to operate through the community: the entire community rather its individual members should form the target of activities.

Implementation of the North Karelia Project was integrated into the existing service structure and social organizations of the area. Practical intervention activities can be grouped under four main categories: (1) Media activities, (2) Health service activities (especially primary health care), (3) Community organization activities (campaigns and activities in partnership with various organizations in the community), and (4) Environmental and policy activities (national legislation, community planning, collaboration with private sector). At the beginning of the project, three specific target programs were formed: (1) anti-smoking, (2) cholesterol lowering nutrition, and (3) blood pressure lowering (mainly emphasizing non-pharmacological interventions). During the later years, more emphasis was put on increased leisure time physical activity, and also other aspects of health promotion were included (psychosocial aspects, prevention of obesity, alcohol consumption). A general

intervention trend over the decades of the project has been an evolution from somewhat risk factor and health care oriented intervention towards more health promotion and community mobilizing interventions.

In order to maximize the impact of the North Karelia intervention, and what could be learned from it, a commitment to also evaluate the project scientifically was made during the planning phase. The evaluation categories were: (1) feasibility/performance, (2) effects (behaviors and risk factors, diseases rates and mortality), (3) process, (4) cost, and (5) other consequences. The effect evaluation assessed the extent to which the objectives of the project were achieved. Effect assessment satisfied two questions in particular: (1) did the target behaviors and risk factors change and (2) were these changes associated with the changes in NCD morbidity and mortality.

Since the target of the project was the whole community, information was collected to represent the whole population. Data on health behavior and biological risk factors needed to be collected systematically, at baseline and periodically during the project life time, through representative population sample surveys. The North Karelia Project baseline survey was conducted in 1972, and repeated since then every five years. The last survey was conducted in 2012. During the years, survey areas were expanded from eastern Finland to other areas to be more representative for the whole Finland, and the survey - called nowadays a the National FINRISK Study - become a major tool for risk factor monitoring in the country. Data on morbidity and mortality were collected mainly using national hospital discharge and mortality registers, but also specific myocardial infarction and stroke registers were developed for more detailed analysis and validation of routine register data.

Table 1 shows the change of main risk factors in North Karelia from 1972 to 2012 among men and women aged 30 to 59 years. Among men smoking prevalence decreased from 52 to 27%. Smoking among women was rare in eastern Finland in the 1970s, and there was an increase in the 80s and 90s to the level of around 20%. In the 1970s, serum cholesterol levels were very high, nearly 7 mmol/L both among men and women. A marked decrease was observed during the next 25 years. Reduction of the cholesterol levels was mainly explained by dietary changes – reduction of saturated fat intake and dietary cholesterol. Use of cholesterol lowering drugs played only a minor role. In the last survey in 2012, a small increase in serum cholesterol levels was observed due to the popularity of low-carbohydrate (and often high on saturated fat) diet during the survey. Blood pressure levels decreased also very remarkable, due to the reduction of salt (sodium chloride) intake and

other lifestyle and dietary changes, and partly due to more effective drug treatment of hypertension.

Table 1. (here)

The last and most important question is, whether the risk factor reduction was followed by decrease in coronary heart diseases morbidity and mortality. In the late 1960s, mortality was markedly higher in North Karelia than in other parts of the country. From 1969 to 2011, coronary mortality among working age men (35-64 years) decreased 87% (from 710/100000 to 97/1000000) in North Karelia and 83% in whole Finland (from 497 to 85/100000). Separate analyses have shown that the observed reduction in population risk factor levels can account for most of the decline in mortality. Of the single risk factors, reduction in serum cholesterol level had the greatest impact. It is thus likely that most of the mortality decline is explained by primary prevention, but presumable that concurrent improvements in medical therapy have also contributed to the favorable developments.

Not only coronary heart disease mortality, but also mortality due to other NCDs reduced markedly during the same time period. Stroke mortality decreased 69%, cancer mortality 67% and total mortality 63%, respectively. Due to marked reduction of smoking among men, lung cancer mortality decreased to one fifth from its original level. Furthermore, also self-reported perceived health improved markedly. In 1972 less than one third of North Karelian population reported that they health is good or very good, compared to nearly two thirds forty years later.

The original aim of the North Karelia Project was to carry out a comprehensive preventive intervention in North Karelia for a five-year period (1972-1977). In this way, North Karelia was seen as a pilot project for all of Finland. After this period, many positive changes were already observed. Thus, the decision was made by national authorities to start to apply the Project experiences nationally, and at the same time to continue carrying out the project in North Karelia as a national "demonstration" or "model" project for the whole country. National interest helped sustain the North Karelia Project, and the visible example of North Karelia helped the national work. During the past 20 years, the North Karelia Project has become a model for NCD prevention not only for Finland, but also globally.

Main risk factors in North Karelia 1972-2012 and regional projection for all years.

Year	Men				Women			
	Smoking (%)	Serum cholesterol (mmol/L)	Blood pressure (mmHg)		Smoking (%)	Serum cholesterol (mmol/L)	Blood pressure (mmHg)	
1972	52	6.9	149/92		40	6.8	153/92	
1977	44	6.5	145/89		30	6.4	147/90	
1982	36	6.3	144/88		19	6.1	141/85	
1987	36	6.3	144/88		16	6.0	139/83	
1992	32	5.9	142/85		17	5.6	135/80	
1997	34	5.7	140/84		15	5.4	133/81	
2002	33	5.7	137/83		22	5.5	132/78	
2007	31	5.4	138/83		18	5.2	134/78	
2012	27	5.5	134/85		23	5.4	127/77	

ASSOC. PROF. CARL I. FERTMAN

Carl I. Fertman PhD, MBA, MCHES is associate professor and executive director of the Maximizing Adolescent Potentials Program at the School of Education at the University of Pittsburgh. He teaches courses in health promotion program planning, implementation and evaluation; health theory, and health counseling. His areas of expertise are health promotion program planning, implementation and evaluation, promoting child and adolescent mental health, and workplace health promotion. His research focuses on the effectiveness of health programs to address the needs of children, adolescents, and adults in schools, communities, and workplaces.

Dr. Fertman has more than 30 years of experience in the health promotion working at the local, state, national and international levels. While pursuing his master's degree at Temple University in Philadelphia, Dr. Fertman had the opportunity to participate in the initial research and program development on substance abuse prevention in the workplace. Upon graduation from Temple, he worked in the substance abuse field as a halfway house manager, vocational counselor, and outpatient counselor. He worked in Philadelphia with teenagers and young adults. In the late 1970's Dr. Fertman served with the Peace Corps in Chile, South America. He developed vocational educational programs for teenagers and young adult special education populations in Chile. Upon returning from the Peace Corps, Dr. Fertman worked as director of a drug and alcohol program in Pittsburgh and entered doctoral studies at the University of Pittsburgh in Rehabilitation Counseling (Ph.D., 1986).

In the 1990's Dr. Fertman was the principal evaluator for the TVS Coalition

Network: a community demonstration project to evaluate the effectiveness of community partnerships in small steel towns to prevent the abuse of alcohol and other drugs, supported by U.S. Department of Health & Human Services, Center for Substance Abuse Prevention. During the same period of time he also served as director of the Pennsylvania Service Learning Evaluation Network Dr. Fertman researched the use of volunteer service activities to reach students' academic goals. In the 2000's Dr. Fertman was the principal investigator of the Pennsylvania Student Assistance Program Evaluation and Director of the National Center for Student Assistance Program Research both at the University of Pittsburgh The Pennsylvania Student Assistance Program is a collaboration of the Pennsylvania Departments of Education, Health, and Public Welfare, schools, and community agencies that addresses barriers to student learning related to substance abuse and mental health problems.

Recently Dr. Fertman worked with the University of Pittsburgh, Graduate School of Public Health, Center for Public Health Practice. He assisted in the implementation of the Pennsylvania and Ohio Centers for Public Health Workforce Development and the University of Pittsburgh Preparedness Center. Dr. Fertman has written extensively on the subject of school and community collaboration to improve the health status and academic outcomes for youth. Dr. Fertman has authored more than 80 professional articles. His recently authored the book Student-Athlete Success: Meeting the Challenges of College Life. Dr. Fertman co-edited with Dr. Diane Allensworth the Society for Public Health Education (SOPHE) Health Promotion Programs from Theory to Practice. In 2012 the Turkish Ministry of Health translated the text into Turkish. Dr. Fertman forthcoming book is Promoting Child and Adolescent Mental Health to be published in May 2013 (http://www.jblearning.com/catalog/9781449658991/).

In 2007, Dr. Fertman was elected to University of Pittsburgh and School of Education faculty committees for government relations, governance, academic affairs and design of an Educational Doctoral Degree (EdD program). On the Academic Affairs Committee, he is involved with the oversight and review of academic programs, courses, curriculum and instructional methods for professional preparation (pre-service) and career development at both the undergraduate and graduate (Masters, Ph.D, Ed.D) levels. He works with varied class formats including classroom, executive and online (web-based instruction) as well as educational technologies and applications. Currently he is working on the Ed.D Design Committee to plan, implement and

evaluate a new Ed.D program in collaboration with the Carnegie Initiative on the Doctorate using a cohort model with students producing a culminating collaborative capstone project for an organization (e.g. hospital, public health organization, school or business).

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Table 1 (TABLO 1.3 Page 16) Components of Health Promotion Programs

Health education to improve	Environmental actions to promote
Health knowledge	Advocacy
Health attitudes	Environmental change
Health skills	Legislation
Health behaviors	Policy mandates, regulations
Health indicators	Resource development
Health status	Social support
	Financial support
	Community development
	Organizational development

ROLE OF HEALTH EDUCATION IN HEALTH PROMOTION EFFORTS

The role of health education in health promotion efforts is to provide the tools to change health behavior and improve the quality of life for the citizens of Turkey. Health promotion programs use both health education and environmental actions to promote good health and quality of life for all. Table 1 (TABLO 1.3 Page 16) lists the components of health promotion programs.

Traditionally health education is closely associated with the teaching of health in school settings and patient education by health professionals. For example in the United States the National Health Education Standards provide a framework for state and local initiatives related to school health education (Table 2 - TABLO 12.2 Page 328) identify the important concepts, skills, and attitudes that students need in order to engage in health-enhancing behaviors and avoid health risks. Each standard has performance indicators that identify the key concepts and skills that students need to know or be able to do as well as the beliefs, values, and norms that students need to espouse in order to demonstrate achievement of each standard. National Health Education Standard 1 emphasizes the functional knowledge that students need in order to engage in healthy behaviors. Standards 2, 3, 4, 5, 6 and 7 emphasize the skills that students need in order to engage in health-enhancing behaviors. Standard 8 emphasizes the elements of advocacy that students need in order to advocate for personal, family, and community health.

Table 2 - TABLO 12.2 Page 328) United States National Health Education Standards (Table 2 - TABLO 12.2 Page 328) United States National Health Education Standards

1. Students will comprehend concepts related to health promotion and disease prevention to enhance health.
2. Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
3. Students will demonstrate the ability to access valid information, products, and services to enhance health.
4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
5. Students will demonstrate the ability to use decision-making skills to enhance health.
6. Students will demonstrate the ability to use goal-setting skills to enhance health.
7. Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
8. Students will demonstrate the ability to advocate for personal, family, and community health.

In Turkey the Healthy Nutrition and Active Life Program of the Turkish Ministry of Health General Directorate of Primary Health Care, Nutrition and Physical Activity Department is an example of a current health education program. Likewise the Ministry of National Education's Department of Health Affairs undertakes health education activities aimed at increasing awareness of certain aspects of health, particularly in schools. The School Health Project

carries out screening activities in schools and provides basic health education to pupils. There is also an oral and dental training project; an adolescent training project that covers education on sexual behavior, well-balanced diet and physical activity, and harmful use of alcohol, tobacco and other substances; a drug addiction control project; and a first-aid training project for school-aged children. Hygiene programs are also offered in the schools across the provinces.

A second traditional type of health education is patient education, the process by which health professionals and others impart information to patients that will alter their health behaviors or improve their health status. Important elements of patient education are skill building and responsibility: patients need to know when, how, and why they need to make a lifestyle change. Patient education (health education) has become more important as health care systems have become more complex.

Health education as part of health promotion has changed in the recent decades as a result of increasing need for health care and rising cost of health care. Changes have occurred internationally, in the United States and in Turkey. These include the Jakarta Declaration on Leading Health Promotion into the 21st Century (WHO 1997), Turkish Health Transformation Program (Sag˘lıkta Dönüs¸üm Programı, 2003), Turkish Law on Tobacco and Tobacco Products (January 2008), Healthy People 2020 – United States, and Health 2020 – Europe.

The role of health education in health promotion has changed from educating citizens to now supplying the resources, knowledge, and tools to propel health promotion. The new role of health education is to provide the tools for health promotion. The reason for this change is that the Turkish Health Ministry (as well as United States Health Ministry, and every other Health Ministry in the world) cannot train and hire enough staff (doctors, nurses, directors, clinic and hospital staff) to address all of the health problems and concerns of the 80 million Turkish citizens. There are not enough resources, human energy, materials, hospitals, clinics, and time to address all of the health needs of the 80 million Turkish citizens. The solution to this problem is the use health education tools as part of health promotion efforts to address the health needs of Turkish citizens in their schools, workplaces, hospitals, clinics, communities, and homes. In every place people play, learn, pray, work, and live. Assessments, sites and partners, health theory, and health education approaches are four health education tools that the Health Ministry can use

to meet the of increasing need for health care and address the rising cost of health care.

Tool # 1. Assessment: Understanding how the health of a group of individuals might be improved requires information (assessment) on both their current health status and their ideal health status. In an assessment we identify the needs, support, resources, and capacity of individuals, families, communities, and organizations. In an assessment we identify health problems and concerns (e.g. obesity, tobacco use, cancer, diabetes). We identify different priority populations – primary, secondary, and tertiary populations. Primary prevention populations are healthy individuals that can take action prior to the onset of a health problem to intercept its causation and to prevent new incidents. Primary prevention health promotion program examples are preventing falls among the elderly, preventing smoking and tobacco use among teenagers, and stopping risky drinking among college students. Secondary prevention populations have early indicators of a health problem. Secondary prevention health promotion programs can interrupt problematic behaviors among those who are engaged in unhealthy decision making and perhaps showing early signs of disease or disability. Examples of this type of health promotion program include smoking cessation programs for tobacco users and physical activity and nutrition programs for overweight and sedentary individuals. Tertiary prevention populations are individuals with a health problems and chronic illness. Tertiary health prevention programs improve individuals' quality of life. Program examples include diabetes self management and cancer survivor support programs. The results of an assessment provide a foundation for health promotion programs to addresses identified health problems and concerns. Furthermore, the results are used to allocate health resources and to establish a baseline against which to gauge the effectiveness of programs (through evaluation of interventions).

Tool # 2. Sites and Partners: Health is promoted where people work, live, play, pray, and learn. Health is promoted where people live their lives: Most prominently, workplaces and health care organizations as well as schools and communities are now sites for health promotion. At these sites people can now access need health programs and services. Health promotion programs are planned, implemented, and evaluated for specific sites, reflecting the unique characteristics of the environment as well as the individuals at the site. Sites are partners in health education and health promotion. The sites provide staff, materials, space and access to individuals.

Tool # 3. Health Theory: The most effective health promotion programs are based on health theories. Table 3 (TABLO 3.11 page 82) lists useful health theories for health promotion. Theories are used for two purposes. First is to provide the conceptual basis on which health promotion programs are built. Second is to guide the actual process of planning, implementing, and evaluating a program. The theories used in the field of health promotion have been derived from multiple disciplines, including education, sociology, psychology, anthropology and public health. Health promotion program staff recognizes that if programs do not use tested theories they may not produce the desired improvements in health. Specifically, in the absence of theories it is difficult to identify how health promotion programs affect factors that influence health at individual, family, setting, or societal levels.

Table 3 (TABLO 3.11 - Page 82). Using Health Theory to Plan Multilevel Interventions

Change Strategies	*Examples of Strategies*	*Ecological Level*	*Useful Theories*
Change People's Behavior	• Education sessions • Interactive kiosks • Print brochures • Social marketing campaigns	Individual	Health Belief Model Theory of Planned Behavior Theory of Reasoned Action Transtheoretical Model
	• Mentoring programs • Lay health advising ▫ Goal setting ▫ Enhancing social networks or improving social support	Interpersonal	Social Cognitive Theory Social Networks and Social Support Theory
Change the Environment	• Media advocacy campaigns • Advocating changes to company policy	Community	Communication Theory Diffusion of Innovations Community Mobilization

Tool # 4. Health Education Approaches: In planning a health promotion program it is important to use the different health education approaches in order to affect the program participants in different ways, depending

on whether individuals need knowledge, change of attitudes, practice in specific skills, change in behaviors, support by significant others, or broad environmental change. For example, tobacco use prevention programs for school-age adolescents can achieve significant reductions in smoking when interventions are designed with different approaches for youths who are at risk for beginning to experiment with cigarettes and tobacco products.

In summary the role of health education in health promotion efforts is to provide the tools to change health behavior and improve the life for the citizens of Turkey (Table 4). The main drive behind the use and role of health education tools in health promotion efforts is the need to develop easily accessible, high-quality, efficient, and effective health care services for the Turkish population. Although in Turkey considerable improvements have been made to this end, there are still challenges ahead. The sustainability

Table 4 Health education tools to change health behavior and improve the life for the citizens of Turkey

ASSESSMENT	SITES & PARTNERS	HEALTH THEORY	HEALTH EDUCATION APPROACHES
Needs	Schools	Health Belief	Information
Support	Universities	Model	Attitudes
Resources	Hospital/	Social Cognitive	Skills
Capacity	clinics	Model	Behavior
	Workplace	Social Support	Social Change
	Community	Theory	
	Home	Other Theories …	

Improved Quality of Life

PROF. SANDRA VAN DULMEN

Job experience

- Professor II at the Department of Health Sciences, Buskerud University College, Drammen, Norway (2012-now)
- Professor at the Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, Nijmegen, The Netherlands (2012-now)
- Senior Research Co-ordinator, NIVEL (Netherlands Institute for Health Services Research) Utrecht, the Netherlands (1999-now)
- Researcher, NIVEL, Utrecht, the Netherlands (1995-1999)
- PhD-student/Researcher, Department of General Practice, Radboud University Nijmegen, the Netherlands (1989-1995)

Education

- PhD, Psychology, Nijmegen University, 1996
- MA, Clinical Psychology (cum laude), Nijmegen University, 1987

Membership

- Editorial board of Patient Education and Counseling
- Editorial board of the International Journal for Person Centered

Medicine

- Cofounder and Secretary of EACH (European Association for Communication in Health Care), www.each.eu
- Member of the International Network for Person-Centered Medicine (INPCM)
- Member of the Radboud Expert Centre for Psychology & Medicine
- Senior Research Fellow within the Connecticut Institute for Primary Care Innovation (CIPCI)

Awards

- Dissertation-award 1996; Netherlands School of Primary Care Research (CaRe)
- 3rd price Medical Contact Communication Award 2010 for project VOICE
- 1st price Medical Contact Communication Award 2012 for project E-info geneca

Supervision of PhD-theses

- Julia van Weert "Multi-sensory stimulation in 24-hour dementia care. Effects of snoezelen on residents and caregivers", 2004
- Arwen Pieterse "Counselees' needs and their reflection in cancer genetic counseling", 2005
- Jesse Jansen "Communicating with older cancer patients: impact on information recall", 2009

- Akke Albada "Preparing for breast cancer genetic counselling; web-based education for counselees", 2011

Sandra van Dulmen currently supervises 9 PhD-students

Selection of international publications since 2007

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Health Behaviour Innovations and Interventions to Behaviour

My presentation during the symposium consists of three parts:

1. Rationale for intervening on health behaviour based on increasing prevalence rates of lifestyle-related chronic diseases and theoretical considerations

2. The Dutch context of primary care with challenges for healthcare interventions

3. Examples of innovative health behaviour interventions tested in clinical practice

Rationale for intervening on health behaviour based on increasing prevalence rates of lifestyle-related chronic diseases and theoretical considerations

In the European Union, almost one third of the population is diagnosed with a chronic disease, especially those of 65 years and older. This has resulted in an increasing demand on (prolonged and complex) healthcare and rising healthcare costs. As smoking, poor nutrition, alcohol abuse and physical inactivity are known to be related to chronic diseases like heart and vascular disease, diabetes type 2, Chronic Obstructive Pulmonary Disease (COPD) and certain cancers, changes in lifestyle are likely to improve overall health and wellbeing. Previous studies indeed found significant improvements following lifestyle interventions in primary care, e.g. among obese patients. However,

adherence to lifestyle interventions seems low.

A relevant model for studying and facilitating behaviour change with a focus on intrapersonal determinants and environmental factors is the Integrated Model for Change (I-Change model) (see Figure 1). The I-Change model integrates determinants of several theories, such as 'self-efficacy' from Bandura's Social Learning Theory, 'attitude, intention and social influences' from the Theory of Planned Behaviour, 'cues to action, risk perception and barriers' from the Health Belief Model and the motivational phases from the Transtheoretical Model or Stages of Change Model. At the heart of the I-Change model is the Attitude – Social influence – Self-efficacy (ASE) model, which is fairly similar to the Theory of Planned Behaviour, though includes modelling and social support as social influences. According to the I-Change model, the process of behaviour change consists of three phases: awareness, motivation and action. In the awareness (pre-motivational) phase, people should become aware of their risk behaviour. To proceed to the motivational phase, knowledge, risk perception and cues to action are important. In the motivational or intentional phase, important factors are attitude, social support and self-efficacy. When people are motivated to change their behaviour, intentions need to be translated into actual change of the behaviour. Therefore, people should make action plans and overcome barriers to behaviour change. Factors that influence a person's motivation according to the I-Change model are behavioural factors (e.g. lifestyles), psychological factors (e.g. personality), biological factors (e.g. gender, genetic predisposition), social and cultural factors (e.g. policies) and information factors (quality of the message, channels and sources used).

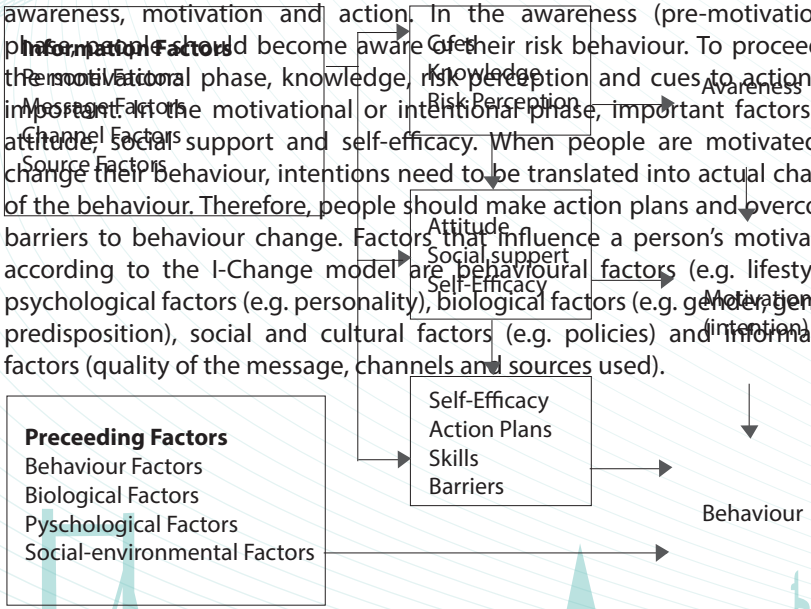

Figure 1. The I-Change model

2. The Dutch context of primary care with challenges for healthcare interventions

Primary health care is the most relevant setting to address behavioural risk factors, since a majority of the people visits the physician or general practitioner (GP) at least once a year and behaviour change requires regular healthcare contacts. Besides, nowadays most GPs (84%) and patients (78%), think that it is within GPs tasks description to provide (unsolicited) advice to patients about their lifestyle behaviour. However, previous research shows that patient's lifestyle behaviour is discussed in a minority of the GP consultations. In the United Kingdom, GPs have a contract since 1990 to promote health, which has encouraged a new structure of general practice, with practice nurses (PNs) and nurse practitioners (NPs) working alongside GPs. One of the reasons to adopt this structure is the increasing demand on health care and especially workload of GPs. In Sweden, Finland, Australia, New Zealand and The Netherlands, among other Western countries, this collaborative system is also implemented. This enables GPs to delegate tasks, regarding patients with chronic illnesses and their lifestyle, to primary care nurses. Generally, GPs diagnose and initiate treatments and lifestyle counselling, whereas practice nurses (or nurse practitioners) monitor treatment outcome, provide education and support for behaviour change, and offer follow-up contacts. PNs were first introduced in Dutch general practice around 1999 to (1) reduce the workload of GPs as a result of the rising demand for care (task delegation), (2) to improve the quality of care for chronically ill people, and (3) to stimulate the cooperation between GPs. A total of 4500 patients is required for employing a PN. PNs work under supervision of GPs, which means that PNs cannot refer patients or prescribe medicines without permission of a GP. However, PNs manage

consultations independently, similar to GPs. Furthermore, both GPs and PNs follow clinical practice guidelines (Dutch College of General Practitioners (DCGP) standards), as for example on diabetes type 2, cardiovascular disease prevention and the quit smoking guideline, during their encounters with patients. Nowadays, between 3700 and 4700 PNs are working within 3482 general practices in 2011 in the Netherlands. Dutch patients with chronic diseases visit the PN more often than the GP (from 2% in 2003 to 39% in 2008), while the total number of general practice visits remains stable.

Adequate communication between patients and primary care providers is essential for good clinical practice and can (indirectly) result in improved health outcomes in patients. Patients have the 'need to know and understand' (cognitive need) and the 'need to feel known and understood' (affective need). The patient's needs have consequences for the communication between primary care provider and patient. The cognitive need of patients asks for task-oriented communication, e.g. giving information, structuring the consultation. Patient's affective need suggests supportive, affective communication from the healthcare provider, e.g. showing empathy, exploration of expectations and feelings, dealing with emotions.

Motivational Interviewing (MI) is also a promising, patient-centred approach to health behaviour change. MI focuses on increasing intrinsic motivation to behaviour change by helping patients explore and resolve ambivalence between desired behaviour and actual behaviour. It is seen as the patient's task to express and resolve this ambivalence, whereas the healthcare provider expects and recognises ambivalence and guides the patients in examining and resolving it (elicit and support 'change talk'). MI is both a counselling style and a set of techniques. The four basic principles of MI are: expressing empathy, developing discrepancy, rolling with resistance and supporting self-efficacy. Expressing empathy is central to MI, which includes reflective listening, an attitude of acceptance, and the belief that patient's ambivalence is normal. MI facilitates behaviour change instead of argumenting about it. Therefore, direct persuasion is seen as opposite to MI and counterproductive. However, resistance may be looked upon as a prerequisite for change strategy, which should be acknowledged and explored. Furthermore, the patient is seen as skilled in finding solutions to his/her own problems of behaviour change. Healthcare providers should support patient's self-efficacy, i.e. stimulate patients' belief in their ability to change and support the chosen strategy and process to change. Therefore, the main interview techniques of MI are: showing empathy, asking open-ended questions, affirmation, reflective

listening and summarizing.

Given the increased attention to primary care, the high burden of chronic, lifestyle-related diseases, and the task substitution between different primary care professionals, it is important to get insight into the most helpful health behaviour interventions, to evaluate the quality of current health behaviour interventions, and to find out who is most competent in delivering these to the patient. i.e. the GP or the PN. For this purpose we first systematically reviewed the literature on the relative effectiveness of face-to-face communication-related behaviour change techniques (BCTs) used in interventions to influence patient's lifestyle behaviour. Furthermore, we investigated which primary care provider (GP or nurse) was more effective in using face-to-face communication-related BCTs, according to the literature. In total 50 studies were included and assessed on their methodological quality. Twenty-six studies reported significantly favourable health outcomes following communication-related BCTs and provided enough evidence according to a 'best evidence synthesis'. The results indicated that behavioural counselling, motivational interviewing, education and advice all seem effective communication-related BCTs. However, based on existing literature, one primary care profession (GP) seemed not better equipped than the other (nurse) to provide face-to-face communication-related BCTs.

To evaluate the delivery of health behavior interventions in primary care, we then asked thirteen Dutch practice nurses from four general practices, trained in motivational interviewing to videotape consecutive patient consultations and rated PNs' motivational interviewing skills using the Behaviour Change Counselling Index (BECCI). The participating PNs indeed appeared to use motivational interviewing techniques, but only to some extent. Substantial variation was found between motivational interviewing items. Apparently, motivational interviewing skills are not easily applicable in routine practice. Health care providers who want to acquire motivational interview skills may need to follow booster sessions after the first training. The training could also be strengthened by video-feedback and feedback based on participating observation.

Apart from our interest in the application of MI-techniques, we also wanted to know whether or not healthy and unhealthy lifestyle choices of patients are currently being discussed more often in primary care consultations than in former decades. Furthermore, we were interested in GPs' approach to lifestyle behaviour during consultations and if lifestyle behaviour is discussed more

with certain patients during consultations, depending on gender, age and educational background. We therefore analysed video-recordings of medical consultations, collected between 1975 and 2008 in Dutch GP practices using logistic regression. The results show that discussion of smoking behaviour and physical activity has increased somewhat over time. A change in discussion of nutrition and alcohol was, however, less clear. Overall, alcohol use was the least discussed and physical activity the most discussed during consultations. GPs mainly referred to lifestyle when it was relevant to the patient's complaints (symptom approach). GPs' approach to lifestyle behaviour did not change over time. In general, lifestyle behaviour was discussed more with older, male patients (except for nutrition). GPs talked about lifestyle behaviour with patients from different educational backgrounds equally (except for physical activity). Although, in recent years, there is greater awareness of a healthy lifestyle, this is only reflected to a limited extent in this study. Lifestyle behaviour is still discussed in a minority of consultations. In addition, GPs do not refer to lifestyle behaviour as a routine procedure, i.e. they do not include it in primary prevention.

3. Examples of innovative health behaviour interventions tested in clinical practice

Chronic illness places high demands on patients. Interventions supporting self-management and providing personalized feedback might help patients to gain new perspectives and enhance use of constructive self-management strategies. We developed three comparable web-based CBT-grounded interventions including e-diaries and feedback delivered through PDAs/ smartphones. The feasibility and efficacy of these interventions were subsequently investigated for patients with irritable bowel syndrome (in an RCT), chronic widespread pain (RCT) and type 2 diabetes (feasibility study). Communicating using wireless devices such as mobile phones and computers has become an integral and accepted part of our daily life. Smartphone services can make health care more accessible to patients, especially for those living in remote areas or those who are housebound. Smartphone services can also provide educational information about habits related to health, which help improve preventive care. The use and applicability of Internet is still rapidly increasing. More and more people receive their health information from the Internet.

The content and set up of our web-based health behaviour interventions were based on: 1) theoretical frameworks well-known for their relevance in

enhancing patients' quality of life and behavior change, i.e. CBT and ACT, and 2) the results of a systematic review on predictors of adherence to completing electronic diaries. In all studies the intervention group participants completed e-diaries during several weeks on a PDA or smartphone and received personalized, situational feedback based on their input on the same day. In the e-diaries, the participants registered activities, emotions and pain cognitions three times daily using the mobile device by choosing between predefined options and using scales. A therapist had immediate access to this information through a secure website and used the situational information to formulate and send a personalized message to the participant with the aim of stimulating effective self-management in coping with the current situation. The results of the three studies, which will be presented during the symposium, suggest that these innovative, personalized web-based interventions are effective and have the potential to support self-management and health behaviour change in daily healthcare.

PROF. DIANE D. ALLENSWORTH

Diane Allensworth has 40 years of experience in health and education working as a registered nurse and health educator. She began her career in school health in 1966 as a school nurse after she returned from serving in a public health project in the Peace Corps in Panama. She taught health education at Kent State University from 1976 to 1995 and now is a Professor Emeritus. While best known for her work promoting a coordinated school health program initiated with the publication by Allensworth and Kolbe: The Comprehensive School Health Program: Exploring an Expanded Concept in the Journal of School Health in 1987, the Institute of Medicine's report on school health in 1997, Schools and Health: Our Nation's Investment, in which she served as both writer and editor was her most comprehensive publication. She has written numerous books for the practitioner including, School Health in America; Healthy Students 2000: An Agenda for Continuous Improvement in America's Schools; Achieving the 1990 Health Objectives for the Nation: The Role of the School which all contained sections on physical activity and physical education. In 2010, she co-edited, with Carl Fertman Health Promotion Programs: From Theory to Practice.

While on faculty at Kent State University, she began her work with the American School Health Association as the Associate Executive Director for Sponsored Programs securing over three million in funding, and ultimately serving as their Executive Director from 1995-1997. Beginning in 1997, she became the Branch Chief for Program Development Services Branch within the Division of Adolescent School Health, CDC overseeing and setting the direction for programming and evaluation for approximately 90 funded projects. From 2001-2005, Dr. Allensworth was on loan from CDC to Health

MPowers, where she served as the organizations' first Executive Director. Returning to CDC in 2006, Dr. Allensworth served as the Associate Director for Education, in the Division of Partnerships and Strategic Alliances. She retired from CDC working in the Office of Policy at the agency level. Currently she is working as a consultant for HRSA, International School Health Organization and the Society for Public Health Education. The focus of her work currently addresses issues of youth health disparities, educational inequities, social determinants of health and health literacy. She has over thirty publications in peer reviewed journals, provided over 200 presentations at international, national and state professional meetings and has received extensive external funding from federal organizations and foundations.

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Health Equity: A Health Promotion Goal

"Health is a universal human aspiration and a basic human need. The development of society, rich or poor, can be judged by the quality of its population's health, how fairly health is distributed across the social spectrum, and the degree of protection provided from disadvantage due to ill-health. Health equity is central to this premise.

Sir Michael Marmot (2007)

This presentation on equity in health promotion builds upon the work of Sir Michael Marmot and the World Health Organization's (WHO) Commission on Social Determinants of Health which has as its basic tenet to strengthen health equity worldwide. This requires those planning any health promotion initiative to look beyond the contemporary concentration on the immediate causes of disease (genetics, microorganisms, environmental conditions, behaviors or lifestyle) to address the socially determined conditions that often are the root cause of disease, particularly for the poor within all countries.

The World Health Organization, in a series of documents, has called our attention to the confluence of social factors associated with disease causation. Variations in disease exist in marked social gradients for a variety of diseases in both high income countries as well as low income countries. Differences between countries and within countries are not only noted in health status outcomes (deaths, disease, injuries), but also in health care services provided as well as the quality of that health care (Blas & Kurup, 2010).

While most of the examples will be from the United States, these inequities

exist worldwide. An analysis of 43 indicators in the United States by the Commonwealth Fund found that where one lived determined the performance of the health care system on four outcomes: access, prevention and treatment, costs and health status. The 306 local health care areas known as hospital referral regions that were used in the analysis found that access, quality, costs and health outcomes all varied significantly from one local community to another, often with a two-to-threefold variation in key indicators between leading and lagging communities. This analysis also found that the health care received was associated with socioeconomic status for many but not all of the indicators (Radley, et al., 2012). The Unites States government in its analysis found that disparities in quality of care and access to care were common. Poor people received worse health care than high-income people for 47% of the 98 measures analyzed. Poor people in the U.S. had worse access to care than high-income people for 89% of 19 measures analyzed (AHRQ, 2012). Inequities by race and ethnicity care are common basically because of historical injustices that have resulted in a greater percentage of minorities in the United States living in poverty. This 2012 study by the Agency for Healthcare Research and Quality also found:

- Blacks received worse health care than Whites for 41% of 182 quality measures and had worse access to care than Whites for 32% of access to care measures.

- American Indians and Alaska Natives (AI/ANs) received worse care than Whites for about 30% of 107 quality measures, and had worse access to care than Whites for 32% of the 13 access measures.

- Hispanics received worse care than non-Hispanic Whites for 39% of quality measures, and had worse access to care than non-Hispanic Whites for 63% of the 19 access measures.

- Interestingly, adults age 65 and over received worse care than adults ages 18-44 for 39% of quality measures but because of federal law enacted to provide the elderly with health care, adults age 65 and over rarely had worse access to care than adults ages 18-44 (AHRQ, 2012).

There are conditions within a society in which people live, work and age that can significantly influence their health, particularly for the poor and vulnerable populations within all countries. These social and environmental conditions that often are based upon historical injustices and discrimination

result in current conditions that place specific groups of people within the population at a disadvantage for excellent health. They include social conditions such as poor early childhood experiences (e.g. quality of parenting, lack of access to nutrition and/or exercise, stress, etc.) quality of education and job training, employment opportunities, social norms and attitudes (e.g., discrimination and racism) as well as broader environmental or infrastructure issues such as poor housing options, exposure to toxic substances and other physical hazards, lack of transportation and the existence of physical barriers for people with disabilities, etc. The most vulnerable within all countries tend to be those that are poor, minority racial or ethnic groups; religious minorities; women, the elderly, the disabled and/or those from a rural geographic location (Wilkinson, & Malmot, 2003).

The WHO report by the Commission on Social Determinants of Health, found abundant evidence that the true upstream drivers of health inequities reside in the social, economic and political environments. Because these environments were shaped by policies, governments can enact policy changes making the social determinants of health amenable to change. Improving the conditions in which we live, learn, work, and play will create a healthier population. During the WHO conference in Rio in 2011 on Social Determinants, Sir Michael Marmot, noted that Ministries of Health worldwide needed to do three major tasks: 1) Ensure equitable access to health care, particularly primary care with a greater focus on prevention and health promotion, 2) Ensure advocacy and partnership across government agencies to address the social determinants of health, and 3) Contribute to increased knowledge, measurement and understanding of the social determinants to assist stakeholders understand the opportunities for action (WHO, 2012). While this presentation will address all three strategies, I will focus on the first - Ensuring equitable access to health care, particularly primary care with greater focus on prevention and health promotion. Spending more money on prevention through health promotion is fundamental to achieving health equity (WHO, 2012), because most ministries of health and the healthcare systems in their respective countries are still primarily concerned with the delivery of the downstream treatment regimens that respond to the health care treatment needs of their population (Blas & Kurup, 2010).

The WHO in 2010, published Equity, social determinants and public health programmes, which reviewed the evidence for 12 specific diseases (e.g. heart disease, diabetes) or behaviors (e.g. tobacco use, nutrition behaviors) through a health equity lens which is particularly useful for the planner implementing health promotion programs either locally or nationally. By showing how social

factors directly shape health outcomes and explain inequities, the report challenges public health programs to tackle the leading causes of ill-health at their roots, even when these causes lie beyond the direct control of the health sector.

The document addressed four groups of questions about each of the 12 health issues:

- What can public health programs do individually?

- What can public health programs do collectively?
- What can public health programs do vis-à-vis other sectors?
- What must be done differently?

The diseases and behaviors analyzed by this review were chosen because they represented a large aggregate burden of disease, they displayed large disparities across and within populations, they disproportionately affected certain populations or groups within populations and they are emerging or epidemic prone health problems. The WH0 used as a framework for analysis five elements: socioeconomic context, differential exposure, differential vulnerability, differential health outcomes, and differential consequences. For each disease, the analysis aimed to document: social determinants at play and their contribution to inequity, promising entry-points for intervention, potential adverse side-effects of eventual change, possible sources of resistance to change, and what has been tried and what were the lessons learned (Blas & Kurup, 2010).

The summary from this WHO document also provided specific actions that public health programs could pursue in taking a social determinant approach to health promotion including:

- Upgrading Information systems by reviewing, revising or developing information systems to provide insight into condition-specific distribution of health problems among the country's populations;

- Strengthening the analysis of the social equity gradient, patterns and steps to reduce each specific condition within the country;

- Developing Intervention packages relevant to each condition addressing patterns of social gradients;

- Analyzing the critical pathways and identifying the most promising entry-points for interventions by sectors other than the health sector;

- Presenting evidence based interventions to address the social determinants of health demonstrating the need for and benefits of social interventions to reduce the current prevalence of specific conditions;

- Working simultaneously from the bottom up and from the top down by involving local as well as national government agencies; and
- Adopting collaborative cross sector indicators so that other sectors see the value of participating in health promotion program activities (Blas & Kurup, 2010).

The presentation ends with the identification of some of the interventions that the United States has implemented in the past ten years to address the social determinants of health. This summary will be organized using selected recommendations for actions emanating from the Rio Declaration on the Social Determinants of Health in 2011. The international conference had numerous recommendations including the following actions: 1) Adopting better governance for health and development acknowledging that governance to address social determinants involves transparent and inclusive decision-making processes that give voice to all groups and sectors; 2) Promoting participation in policy-making and implementation by empowering the role of communities; 3) Reorienting the health sector towards reducing health inequities; 4) Monitoring progress and increasing accountability mechanisms to guide policy-making in all sectors; and 5) Strengthening global governance and collaboration (WHO, 2012).

Action 1: Adopting better governance for health and development:

Beginning with the 1985, Report of the Secretary's Task Force on Black and Minority Health, the federal government began to address reducing health disparities. Specific goals to reduce health disparities were incorporated into the second decade of Health and Human Services' public-private initiative called Healthy People which established national goals for public health agencies in partnership with private groups (e.g. universities, non-governmental organizations focusing on health, etc.). Healthy People 2000, constructed in 1990, outlined three broad goals for public health over the next 10 years: 1) to increase the span of healthy life, 2) to reduce disparities

in health status among different populations, and 3) to provide access to preventive health-care services. In 2010, with the release of the 2020 Healthy People in 2010, the U.S began to focus on the social determinants of health. This is reflected in the goals chosen for this decade:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death

- Achieve health equity, eliminate disparities, and improve the health of all groups.

- Create social and physical environments that promote good health for all.

- Promote quality of life, healthy development, and healthy behaviors across all life stages.

- Cross –sector objectives to reduce the social determinants of health are evident throughout the document (CDC, 2012a).

Action 2: Promoting participation in policy-making and implementation by empowering the role of communities:

The Centers for Disease Control and Prevention (CDC), the major public health agency of the federal government, has provided more than 103 million in Community Transformation Grants beginning in 2011 to fund health promotion projects throughout the nation to implement community-level programs that prevent chronic diseases such as cancer, diabetes, and heart disease. Awardees are required to engage partners from multiple sectors, such as education, transportation, and business to improve the health of their community. The program is expected to improve the health of more than 4 out of 10 U.S. citizens (CDC, 2012). One mechanism to facilitate collaboration among grant recipients was the utilization of the Community Commons which is partially funded by the CDC. The Community Commons is an interactive mapping, networking and learning utility on the web. The Community Commons web site aims to assist community health organizations and government health agencies to connect and solve public health problems through cooperation (Dylan, 2012).

Action 3: Reorienting the health sector towards reducing health

inequities:

The U.S. focus on reorienting the health sector towards reducing health inequities occurred with the passage of the historic Affordable Care Act in 2010 which will be fully implemented in 2014 providing health care services to 31 million of U.S. citizens currently without health insurance. The Affordable Care Act also mandated the development of a National Prevention Strategy which encourages partnerships among Federal, state, tribal, local, and territorial governments; business, industry, and other private sector partners; philanthropic organizations; and community and faith-based organizations to implement a national prevention strategy. The National Prevention Strategy (2011) has four Strategic Directions including:

- Elimination of Health Disparities by improving the quality of life for all Americans.

- Healthy and Safe Community Environments which recognizes and promotes the need for communities to address health and wellness through prevention.

- Clinical and Community Preventive Services that ensure that prevention-focused health care and community prevention efforts are available, integrated, and mutually reinforcing, and

- Empowered People who have support in making healthy choices.

Action 4: Monitoring progress and increasing accountability mechanisms to guide policy-making in all sectors:

The U.S. is committed to monitoring progress and increasing accountability. For the ninth year in a row, the Agency for Healthcare Research and Quality (AHRQ) has produced the National Healthcare Disparities Report (2012a) and the National Healthcare Quality Report (2012b). These reports measure trends in effectiveness of care, patient safety, timeliness of care, patient centeredness, and efficiency of care. The National Healthcare Quality Report tracks the health care system through quality measures, such as the percentage of heart attack patients who received recommended care when they reached the hospital or the percentage of children who received recommended vaccinations. The National Healthcare Disparities Report summarizes health care quality and access among various racial, ethnic, and income groups and other priority populations, such as residents of rural areas and people with disabilities

(AHRQ, 2012a).

Health disparities are costly to a nation. In addition to the social justice reasons for ensuring health equity, there are also economic reasons to do so. In the U.S., for example, among African Americans and Hispanics, the cost of just three preventable conditions--high blood pressure, diabetes, and stroke--was approximately $23.9 billion in 2009. Further, these health inequities were estimated to contribute $1.2 trillion in lost wages and productivity between 2003 and 2006. The analysis included the direct costs associated with providing care to a sicker population as well as the indirect costs such as a lost productivity, lost wages, absenteeism and premature death (Bahls, 2011).

As you continue to address the path for addressing health equity in Turkish health promotion programs, remember these words from the introduction of the Final Report of the Commission on Social Determinants of Health (CSDH, 2008):

Social and economic policies have a determining impact on whether a child can grow and develop to its full potential and live a flourishing life, or whether its life will be blighted.

Achieving health equity within a generation is achievable, it is the right thing to do, and now is the right time to do it.

ESRA TÜZÜN

She was born in 1970 in İstanbul and graduated from the Faculty of Communication of İstanbul University. She started to work for Güneş in 1987. Later on, she worked as a manager at Trend Magazine and Sabah Magazines Group and the editor of Tempo Magazine and wrote a column called "Ten Questions by Esra". Following her career at Radikal Daily, she started at Sabah Daily. She became the first health editor appearing in the list of columnists in a daily and prepares many series of medical news from all over the world. Still, she is the health editor of Sabah Daily and the only medical news manager in Turkey and publishes a health dossier at Günaydın Daily during the week days. Ms. Tüzün organized two exhibits and wrote a book and had an exhibit called `Secret of Living beyond 100`. Thanks to this effort, she won the International Gerontology Award. At the moment, she has a mobile exhibit called `32`, travelling around the country. She travelled the country whose life longevity is the lowest and took their smiling faces. She won a `golden stetescope` from Turkish Ministry of Health. She is married and owns a dog.

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MEDIA AND HEALTH NEWS

It is read a lot, increasing rating but the most importantly, it is attracting the communities interested in the EU and the advertisers that the newspapers like.

The best quality readers follow health news through press.

Nonetheless, in terms of news coverage design, both good and bad deeds are committed.

ROSEBAY ZİYA

1. One of the major health reporting scandals is the one about Rosebay Ziya. Once he appeared on TRT Turkish Radio Television claiming that he found a cure for cancer, thousands of people travelled to Istanbul to find him. Even some people got poisoned since they sought remedy by eating the flowers of rosebay.

This incidence paved the way to the censoring of cancer related news for many years. Doctors did not reveal their new therapy methods that they employed or some were distant to seek new therapies for fear of the impact of rosebay incidence. Furthermore, patients did not reveal that they were cancer or did not share their grief with others.

Since there was no more trust in cancer treatment in Turkey, the ones who had financial means went abroad.

In time, patients started to talk and this taboo was eliminated. Late Kazım

Kanat elaborated his fight against cancer so well that the view like not only the medical doctors or hospitals but also the patients play a role in treatment was accepted by public. Other cancer survivors followed this trend and the curtain of fear was opened.

AIDS

AIDS is one of the diseases stigmatized by pres. Turkish press made such a big mistake about this disease that even the wounds caused cannot be dressed today. The case of Murti who suffered from AIDS remained in memories so strongly that still AIDS is stigmatized. While the patients cry over their disease, they are trying to find ways to keep it a secret.

While Turkish press covered the photos of Murti getting burried in the soil with lime, Rock Hudson explained how he captured AIDS that could happen to anyone.

We did not make mistakes at all times … we also had good deeds

In-Vitro Baby Treatments

In-vitro Baby Treatments: It was labeled as a deed of Demon but the families who have gone through this procedure took the floor and shared their experiences and male sterility started to be seen as a disease. Medical doctors specialized in in-vitro baby treatment demolished the taboos in this field by sharing their success stories. The families were not dismantled because they could not have a baby. Shame of sterility was eliminated thanks to pres and medicine.

ORGAN TRANSPLANT

We really tried hard, still there are problems but in general, press ensured excellent guidance about it.

HEALTH CORRESPONDENTS

In last 25 years, health system and investments changed a lot but health journalism din not, at all. There happened no change in media like the one in health sector. 25 years ago, there was only one correspondent of health matters, so is today in general…

Thanks to me, the concept of health editor appeared in our lives but generally, its content is empty. There are no health correspondents or journalists in management cadre or the board of editors.

WHO CARES ABOUT HEALTH EDITORS?

You may say who cares about health editors but it does interest you directly and so will it in the future. As a person who has been participating newspaper management meetings for 8 years, I worked for many different editors in chief but since there is no journalist to confirm accuracy of this news, even leading newspapers make big mistakes.

SOMEONE WHO WALKED INTO THE MEETING ROOM MANAGED THE ROCHE CRISIS.

Since there were no journalists experienced in management of such crisis in the field of health, it was hard to find somebody to take place at the other end of the table and do PR. This exact situation was experienced during the Roche crisis. All managers of a pharmaceutical company were put under custody. This caused a huge erosion of reputation. Roche managed to overcome this crisis thanks to a high level manager from economy press. They could not transfer a journalist from health pres because there was no such person.

ER RAIDS BY MEDIA.

Once there was a popular trend of news coverage. Especially, the state hospitals were the target, their ER Departments were stormed by the journalists; they were severely criticized. In particular, a TV producer and journalist Savaş Ay was the one who had those raids most.

Sometimes, hot pursuit of news caused questionable news reporting.

For example, Savaş Ay posed with kids who caught bird flu and were under quarantine at a hospital.

Ayşe Arman, another columnist joined an organ transplant surgery and held a warm kidney in her hands and made a headline about it.

UĞUR DÜNDAR DOES NOT HAVE ANY OBSESSION WITH HYGIENE ANYMORE.

On account of TV programs on food hygiene reported by Uğur Dündar, an investigative journalist, people drove trucks after wearing gloves and bonnets.

NOW, NEW ERA STARTS

The most luxurious hospitals in the world, like a space hub have been constructed in Turkey but they have poor communication strategies.

Patient demands in such hospitals increase massively; now, the era of litigations asking for an explanation and accountability shall start. The hospitals could get ready fort his through a specialized legal affairs section but they will have hard time in preparing communication strategies. When they read an article about their hospital, it will be difficult for them. There was nobody to warn them about such an imminent situation. So the mistakes were not prevented.

FACE TRANSPLANT COMPARISON OF HACETTEPE AND AKDENİZ UNIVERSITIES

To prevent loss of trust, communication strategies are very important for hospitals. I would like to give a recent example.

Akdeniz University pursued a very good communication strategy following the face transplants. It had a highly experienced communication team and highlighted the concept of openness. It was sincere in presenting the medical doctor in charge of the team; so, the content was full and media liked it. There is a need in physicians who will be a role model in Turkey. Following such a beginning, doctor's consecutive failure in terms of surgery outcome did not echo that much or it did not become a scandal.

On the other hand, Hacettepe University made big communication mistakes. Everything was wrong from the words used to the ones who made a statement to public.

In the end, reactions occurred and Hacettepe University lost trust of public to a great extent.

INSUFFICIENT CADRES

SMART BOMB

Each and every hospital recruits one or two communication consultants just for the sake of doing it and trying to guide their communication with minimum number of staff. That's is Impossible.

Because communication requires team-work.

Now that we invited top people from the best medical centers in the world to ensure better patient management, why do not we try to do the same and use communication strategies?

For instance, Johns Hopkins has a communication department as large as its hospital unit. They do plan everything such as the name of a research Project and where it will be launched as well as the cadres. They even have a department focused on developing a title for a scientific study so that it could be presented to the public in the best way. For example, they name a targeted therapy as `smart bomb` and it is easily understood by public.

SUCCESS STORIES

Turkish hospitals got used to invest in Italian couches but they do not spend on communication. There are nice paintings on the walls but you do not have any success stories in health. When you look at the walls of Harvard or Johns Hopkins, messages by survivors of a disease hang. As for Turkey, people sing the tune of ethics like patients cannot be revealed or they cannot talk. No such system to facilitate their going out to public has been established yet.

Press is the trendsetter of all media. Press is a mirror and in my view, if you set out on the route with small cadres, your major investments may be harmed…

You cannot work it out with the communications counsellors who have not been abroad before. The same applies to the ones who have never reported on any health matter before. It is a matter of team-work and the communication cadres must be founded meticulously.

ESRA KAZANCIBAŞI ÖZTEKİN

EDUCATION

Ms. Öztekin graduated from the Department of Journalism and Public Relations of the Faculty of Communication at Istanbul University and received further education at the Department of Journalism of London City University. Her graduation news research was on "British health system and current problems".

TV RELATED WORKS

She is producing and presenting a program called `Medical with Esra Kazancıbaşı ` on A Haber TV. She also presented a program called Medical on HaberTürk TV between 2002 and 2010. She produced another program on the same TV channel between March 2010 and May 2010 called: Health Desk

She held the position of program producer, anchor-woman or health editor on TV channels such as TRT1, Show TV, BRT, Kanal 6 and HBB.

PRESS

She worked as a correspondent at Tercuman Daily where she started her career for the first time and managed the column on health. She held the position of editor in chief at Kadınca Magazine for five years. She was the first journalist opening a sport related page in a women's magazine and put Woman Magazine and Light on health and diet into life. She was also a columnist at HaberTürk Daily, HaberTürk website,Yarın and Tercüman Dailies.

ONLINE HEALTH

www.sagligimicinhersey.com and www.sagliklierkek.com, for men.

HEALTH RELATED PUBLISHING

In 2011, she founded Health Island Publications Co. to publish public health books and health magazines. In addition, she launched a series of books named after www.sagligimicinhersey.com which is comprised of three books:

Questions and Answers on Hepatitis, Questions and Answers on Eye Diseases, Questions and Answers on Diabetes. She also published a book called "Health Guide of a Smart Patient" aiming to guide people in reaching a good doctor, right treatment and perfect health.

HEALTH COMMUNICATION

She lectured on `health communication` at the Program of Hospital Management at Beykent University. Furthermore, she delivered training courses on `health communication, media relations regarding health in times of crisis` to various hospitals, doctors and nurses.

AWARDS

She received a mention by Turkish Association of Journalists in the field of investigative journalism thanks to her research on "Did you say health?!"in 1987.

Many times, she has been awarded by Turkish Medical Association, Turkish Pharmacists Association, Turkish Dental Association, Istanbul Medical Chamber, Istanbul Pharmacists Chamber, Istanbul Dentists Chamber in the category of the best news and research.

She was also awarded by Hospital Magazine in 2004 in the field of press in health due to her contributions to public health through Medical Program on HaberTürk TV. The same program was awarded by Istanbul Medical Chamber in 2009 as the Best Health Program of the Year. In 2010, Turkish Psychiatry Association awarded her in the category of TV, due to her contributions to

public awareness on mental health. Furthermore, students of Yeditepe University Faculty of Dentistry awarded the Medical Program with the best TV program prize in 2012 due to its contributions to oral and dental health.

MEMBERSHIP

She is a founding member of Education and Health Correspondents Association (ESAM) as well as a member of Turkish Journalists Association.

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NEW MEDIA AND ETHICS

Within the context of today's media, television channels and internet constitute a major source of information to communicate information on health to public. As for medical issues, use of social media is on the rise.

According to the statistical data of 2012 by Turkish Radio and Television Regulatory Authority (RTUK), there are 553 TV channels and 1120 radio stations. For instance, in 2012, every minute, 168 million emails were posted and 694, 445 search was made via google. The number of facebook users in Turkey has exceeded 31 million. According to data of August 2012, Turkey ranks number 11 in the world, due to 9 million twitter users.

Without doubt how reliable and accurate the information on health reached via TV and internet is a major issue to be discussed. Here are the issues encountered in terms of TV and internet coverage on health:

HOW HEALTHY IS HEALTH ON TV?

- TV channels compromise the quality of health related program content due to rating-commercials-sponsorship concerns.

- Anyone who pays a sponsorship fee is invited to the programs. Broadcast is sponsorship focused irrespective of area of concentration, knowledge, experience of a specialist or the content of messages.

- Program producers or hosts treat anyone who has a title of professorship like a medical doctor

- Due to a concern to increase rating, the ones who exploit medicinal herbs in cure of various diseases such as diabetes, hepatitis or cancer appear more on TV.

- To increase the number of the audience members, marriage coaches or energy specialists are invited to the programs rather than physicians who have been working on medicine-based for so many years

- Women and health programs have become a venue of cosmetic, weight loss or health-care product sales-marketing

- Medical doctors are captured by the charm of magic box and media rather than in-job training courses or congresses taking place in a setting where medical advances occur in a head spinning way, in this era.

- There is no medical correspondent or health editor. For this reason, the audio-visual media lacking such journalists pave the way to wrong, misleading or commercial type news coverage

- For the sake of rating, the investigation drugs or the ones recently launched to the market or the methods the long term outcomes of which are not known are promoted or covered in an exaggerated manner like "miraculous cure", "cancer is over", "revolution in surgery".

- The ones who prepare and present health programs have education, experience and know-how problems.

Considering that there is at least one health program on more than 500 national and local TV stations in Turkey, accuracy of information for the viewers on diseases, causes, diagnosis and treatment methods gain importance. The Survey of 2007 by Sexual Training Treatment and Research Association (CETAD) indicates that 32 people out of 100 believe that the most reliable programs are the ones on health. Since 2007 till now, what would be the rate of public trust in tv programs on health?

IS HEALTH ONLINE HEALTH CONTENT IN INTERNET HEALTHY?

- The websites copying each other's content with no scientific value aiming to get advertisements only pose a potential threat.

- Majority of people claiming that they could cure diabetes, hepatitis, psoriasis, cancer, cardiovascular diseases and sexual problems and giving false hopes to public have access to patients and their families via internet.

- Names of many websites marketing herbal products contain a word like the name of a disease and for this reason, they do appear on top when people google them. This is posing a specific threat to patients and their families browsing the websites appearing on top of the search engines.

- Furthermore the individuals introducing themselves as a health coach handling marriage problems, diet, nutrition, exercise and mental problems reach audience through websites, facebook or twitter.

- Without doubt, it is also possible to buy counterfeit drugs online.

- It must be born in mind that social media plays a crucial role in awareness raising on protection against diseases and enables abusers to sell counterfeit herbal prescriptions and energy experts and the ones marketing a new health related method to reach larger masses.

RESULTS AND RECOMMENDATIONS

- Health literacy must be increased. The communities must be informed about the responsibilities of a smart patient.

- Patients and their relatives must be informed on what to pay attention to while selecting a doctor or a hospital or web browsing

- Faculties of Communication must include courses on health journalism and health communication

- The number of the health correspondents in newspapers and at TV stations must be increased.

- Specialized health editors experienced in international, domestic and tabloid news and editing health coverage must be employed by audio-visual media

- Experts knowing what PR and news mean must be employed at

public and private hospitals

- Websites must bear a corporate ID synopsis indicating the name of its owner, editor-in-chief so that the ones with content threatening public health could be controlled.)

- Amount of fines must be increased if herbal supplements licenses by the Ministry of Food, Agriculture and Livestock are used out of their intended purpose.

- Sanctions against televisions and websites threatening public health or marketing herbal products or methods must be revised.

Turkish Ministry of Health must be in contact with media and journalists specialized in health care issues and aim to ensure roll-out of public health motto on protection and how to be a smart patient and give more efficient messages through interviews with people. Furthermore, messages warning against health related threats created by new media may be covered by popular tv series. (for example; by covering the story of somebody whose health gone bad because of weight loss drugs he or she purchased online, right messages could be given to the communities)

JOHN ILLMAN

John Illman has worked as an international communication consultant specializing in medicine and public health since 2001. Recognizing that medicine and the media are disparate cultures, with different story telling traditions, he focuses on communication techniques to bridge the cultural divide. He aims to help healthcare professionals use old and new media to develop communication strategies that generate change. Beneficial change in attitude, practice or philosophy, he emphasizes, is the outcome of successful communication. He encourages healthcare professionals to meet what he calls "The Einstein challenge". The Nobel Prize winner is famously reported to have said: "Things should be made as simple as possible – but no simpler." This is perhaps the ultimate communication challenge in public health.

John started his career in UK repertory theatre - an experience he now finds invaluable in presentation skills training, but his consultancy work is based primarily on more than 30 years in medical journalism in London. He is still heavily involved in the field. In 2012, he was on the judging panels of the Medical Journalists' Association Summer Awards and the European Union Health Prize. He also helped to judge the 2012 £200,000 UK Orange Different Business Awards.

John spent five years as medical correspondent on the mass market Daily Mail; eight years as health editor on The Guardian; and three years as medical correspondent on The Observer. He was founder editor of New Psychiatry, the first UK journal for the multi-disciplinary psychiatric team. A former editor of General Practitioner, a weekly publication for family doctors, he was also for four years a columnist on Woman, one of Britain's best selling magazines.

He was chair of the Medical Journalists' Association, which has more 400 members, for six years until 2002 and "caretaker chair" in 2010. In 2011 he was made an honorary member of the association after completing 30 years on the executive committee. He is still on the committee.

His reports include Masks and Mirrors of Mental Illness (I978); Pathways to the Mind, with Malcolm Lader (1984); The Expert Patient (I999); and Animal Research and Medical Advances (2007). Books include The Body Machine with heart transplant pioneer Christian Barnard (1981); Use your brain to beat Depression (2004); Use your brain to beat Panic and Anxiety (2005); Beat Panic and Anxiety (2006); and Politics, Protest and Progress: 100 years of animal research - the History of the Research Defence Society (2008) In 2005, John won the Tony Thistlethwaite Award for Use your brain to beat Depression. He has also won five journalism awards. His latest book, Handling the Media. Communication skills for healthcare professionals, (see below) is due for publication in 2013.

He has attracted glowing reviews. For example, writing about The Body Machine in The New England Journal of Medicine, Dr Curtis Prout, of The Harvard Medical School, declared: "The writing is clear, explicit and well done." ……"The text…is accurate, well written and surprisingly detailed for a book of this length".

The title of the book reveals its thesis: the analogy of the human body to a machine, following in the tradition of Descartes. Prout's review concludes: "Lest one fear that the authors are too carried away by a mechanical view of the human body, we can do no better than to quote their conclusion. 'The body machine …demands many different kinds of fuel, not least self-respect, dignity, pride, love, excitement and challenge, all the things which cannot be measured quantitatively on a fuel gauge, and which never be incorporated into the machines we make."

Reviewing Use your brain to beat Depression, the British GP and award winning author Tom Smith, wrote in MJA News: "This book is the best book I have read on depression – by far…. John's writing style makes it simple for the reader with no scientific background to understand the most complicated aspects of this subject, which include the anatomy and function of the brain and the role of neurotransmitters mood change. Yet at the same time he manages not to write down to people with no biological or medical training. This is no mean achievement."

A visiting tutor at the University of Westminster in London since 1999, John helped to pioneer Europe's first BA (Hons) Medical Journalism course for medical students. He also lectures in communication skills to postgraduate science students at the University of Cambridge and has been a guest speaker at the UK Royal College of General Practitioners, The Royal Society of Medicine, the British Medical Association and the Association of Healthcare Communications and Marketing. John has more than 300 broadcast credits, both as an interviewer and interviewee.

He is now preparing for this year's publication of his latest book, Handling the Media: communication skills for healthcare professionals. Topics include

- The medicine-media relationship: 20 key developments that have changed public perception of healthcare and the changing relationship between medicine and the media – from the thalidomide scandal and the first human-to-human heart transplant in the 1960s to the advent of the internet in the 1990s and the emergence of social media in the 21st century.

- What makes news? the difference between the worthy and the newsworthy.

- Journalists: who are the people who report on medicine and healthcare? Although medicine and the media are disparate cultures, journalists have a lot in common with healthcare professionals.

- Responding to a media interview request: potential pitfalls and common errors.

- Preparing for a media interview: defining objectives, developing messages, anticipating questions and interview technique.

- The media interview: from the telephone interview to prime time TV.

- Writing and broadcasting: opportunities for healthcare professionals.

- Patient case histories: most patients who talk to the media do so without any preparation even though they may be talking about intimate problems that have profound effects on them and their families.

- Narrative medicine – keep taking the words: this underlines the

potential therapeutic benefits for patients who write about their experiences of illness. Celebrated writers and journalists describe what it has meant for them.

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WHAT DIFFERENCES CAN HEALTH REPORTING MAKE TO HEALTHY LIVING?

Many healthcare professionals shy away from the media for fear of controversy or that they may be misreported. However, Dr Philip Timms, a London psychiatrist has advised: "Psychiatrists should not be discouraged from talking to or writing for the media. If we do not represent our position, it will be misrepresented by the media." This is good advice for all healthcare professionals – especially public health professionals. Various doctors have observed that a journalist like me could achieve far more in public health than any individual doctor. This is debatable. For every example of good media practice there is probably an example of bad practice. I want to present examples of both good and bad practice. I also want to discuss why health reporting can make a difference.

GOOD PRACTICE: US President Ronald Reagan – the USA (bowel cancer)

Healthcare professionals frequently say to journalists: "You should write about this or that topic. It's important. They are invariably right, but there is a critical difference between what is "important" or "worthy" and what is "newsworthy". The rule is simple: no news, no story. For example, smoking is life threatening is still an important public health message, but it is no longer news. It was news in 1950 when scientists first revealed a link between smoking and lung cancer.

I have been guilty of confusing the worthy with the newsworthy. As The Daily Mail medical correspondent in London in the mid-1980s, I wanted to alert readers to the early warning symptoms of bowel cancer. I presented a

story idea to the news editor who exploded: "Who wants to read about bowel cancer over breakfast?" In fact, it wasn't readership sensitivity to bowels over breakfast that was the problem but my story idea. It wasn't news. Three weeks later everything changed when US President Ronald Reagan was reported to have bowel cancer. He was perhaps the most famous man in the world in one of the most demanding of jobs – making this one of the biggest medical news of the decade.

His case created a topical window for medical correspondents all over the world to write about bowel cancer – news is primarily about today, yesterday and tomorrow.

A critically important message for public heath specialists is that these "windows" can open and shut very quickly – often within only a few days. The media moves on. The Reagan case was an exception because of his unique status. I was still writing follow-up articles three weeks after the initial announcement of his illness.

What difference did all the media coverage make to treatment outcomes? Monitoring showed that It coincided with a sharp but transitory rise in public interest in bowel cancer; a corresponding increase in early detection tests, resulting in increased diagnosis of early stage colorectal cancers; and a fall in advanced disease in 1986-87, suggesting a life-saving screening effect. Note the word 'transitory'. Media messages and stories quickly fade away as new headlines compete for attention. Few commodities perish as quickly as news – especially in the new Twitter culture.

GOOD PRACTICE: Clare Oliver – Australia (melanoma)

Aspiring journalist Clare Olive died, aged 26, in Australia in 2007 - leaving a remarkable legacy. In the last month of her life she publicized the dangers of sun beds in a campaign that generated about 100 articles and nearly 400 broadcasts - and support from the Victoria health minister, state premier and federal health minister.

The media frenzy began when she appeared live on ABC-TV and wrote in the Herald-Sun: "If I could go back and talk to myself when I was 19, I would tell that girl not to use a solarium. Subconsciously I did know that cancer was involved with solariums because I was aware of UVA and UVB rays. But when I was 19, I saw a cheap offer: 'Buy ten sessions and get 20'."

It helped that she was young and pretty - and that the Victorian government had been collecting data about sunbeds for ten years. Research by the Cancer Council Victoria had shown that 50 per cent of sunbed operators admitted teenagers under 17 without parental permission and 90 per cent allowed access to adults with Fitzpatrick's skin type 1, which burns but does not tan. Both these findings breached the solarium industry's own code of conduct.

The BMJ reported: "The… story is a powerful example of one person's achievement in enlisting the media to shape public health policy. However, as the case illustrates, it is also important that the evidence base for determining policy is in place, thus enabling stories like Clare's to resonate, resulting in swift government action."

Again it is critical to recognize the story's topical appeal. Topicality is a so called "news value". News values, the raw constituents of news, also include:

- Novelty (this was a first);
- Universality (we are all susceptible to the sun);
- Impact (Oliver's case had a significant emotional impact)
- Controversy (the breaching by the solarium industry of its own code of conduct).

People are also an integral part of news. One UK media mogul's maxim is: "No people – no news."

GOOD PRACTICE: Soul City -South Africa (HIV/AIDS)

Stories don't have to be real to make a difference if they combine traditional story telling with a robust evidence base. Tackling a gritty range of public health issues, the South African TV soap opera, Soul City, had a significant life saving effect, according to a BMJ report. The audience exceeded 34 million people, ten per cent of whom were estimated to have HIV/AIDS.

Doug Storey, associate director of the Center for Communication Programs at John Hopkins School of Public Health in Baltimore, Maryland, described Soul City as one of the world's best examples of entertainment education. He

said: "The strategy behind successful entertainment education programmes lies in bringing scientists and artists together so that they can learn to speak each other's language. As a story script develops, it should be informed by science. Soul City does this beautifully."

THE POWER OF ONE

The above examples highlight the power of story telling - an integral part of human culture. Spanning across both medical education and medical journalism, medical stories help us to define ourselves and to compare ourselves with others, giving us a sense of perspective about our place in the scheme of things.

A consumer media case history can help patients to learn from one another about what to expect physically and mentally and help healthcare professionals to take a leap of imagination into the patient's shoes, into what it is really like to feel vulnerable, at risk and, dependent. A good case history will blend objective scientific knowledge with the patient's subjective experience.

Paradoxically, a story about one person can be more powerful than one about ten thousand people. This phenenomon, the "power of one", is also known as "The Mother Teresa Effect". Able to communicate with anyone from world leaders,to the poorest beggars, the nun, who became famous for her work in India, reportedly said: "If I look at the mass, I will never act. If I look at the one, I will."

"The power of one" affects not only media stories, but how much people give to charity. What follows may dismay researchers and clinicians who rely on the power of big numbers – but, in one study, the better statistically informed potential donors were, the less money they gave. People who read a short emotional appeal about an African child at risk from hunger gave more than twice as much as those who just saw raw statistics about the threat to millions of Africans. The facelessness of statistics, a robust strength in science, can be an abject weakness in public relations.

Statistics, it seems, encourage analytical thinking, blunt emotions and turn people off. This is why charities invite donors to sponsor a specific child and the media focuses on individual case histories.

BAD PRACTICE

While the above examples show clear benefits, editorial criteria for patient case histories can have adverse effects. They include:

Triumph over tragedy (ToT)

The ToT formula may present subjects as super-heroes who overcome innumerable obstacles. A marathon-running cancer patient, for example, may make 'good' copy, only to make other cancer patients feel inadequate. Angela Wilkie, the British author of Having Cancer and How to Live With It, emphasised that her story was not how she "bravely battled" against cancer to "find true happiness". To dress up cancer with such words as "heroism" or "challenge", as the media did, she said, was to deny the pain thousands of people endure when they learn the worst.

Beauty

Walt Disney is reported to have observed: "Of all inventions for mass communication, pictures still speak the most universal language." The media has become increasingly visual, with "beautiful" people taking precedence. A case history, irrespective of editorial quality, may be rejected if it lacks viusual appeal.;

Youth

The media is ageist. This may reflect not just on the media but on society at large, the media's target audience Editors prefer young attractive subjects, even in stories story about older people. I reported on an elderly man who survived an abdominal aneurysm after being "clinically dead". His rupture occurred, fortuitously, in hospital. It was an extraordinary story, but it remained unpublished because the patient looked older than his years.

Celebrity

It can help ordinary people if a celebrity "goes public" to talk about their experience of disease or conditions associated with social stigmas, such as alcoholism, drug addiction, bulimia or HIV/AIDS. Many famous people publicly support organisations that promote research into their diseases or provide care for other patients and their families and friends.

Working with celebrities can create confidentiality problems. For example,

President Reagan was reported to have remained upset for years after one of his physicians announced that he he "has" cancer rather than he "had" cancer. Celebrities and their families may also be unduly pressurised to go public to raise money for a charity or to create "disease awareness". For example, a former UK prime minister's family came under pressure from an Alzheimer's disease group to go public. The family successfully resisted. Perhaps informed consent should only be sought after a cooling down period.

The alternative case history model

The traditional media-centred model has been challenged by web-based, patient-centred models such as www.heathtalkonline, which was co-founded in the UK in 2001 by the late GP and author Dr Ann McPherson and Professor Andrew Herxheimer, founder of The Drugs and Therapeutics Bulletin.

McPherson recalled: "When I was diagnosed with breast cancer, even as a GP with 25 years' experience, I remember being struck by a sudden dreaded and overwhelming sense of isolation. Though I had all the hard facts, I had no idea how it would actually affect me and I wanted to hear the stories of others who had been through the same thing. I tried a support group. It was not for me."

Healthtalkonline and its sister website, Youthhealthtalk, now presents more than 2,000 people's experiences of over 60 health-related conditions and illnesses through video and audio clips and the written word.. Charity websites like these can present a wide range of patients' experiences without having to make concessions to media news values. Traditional media may still have a significantly larger reach than electronic media, but websites run by and for patients will probably become increasingly dominant.

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JERRIL RECHTER

Jerril Rechter is the CEO of VicHealth. She has extensive experience in leadership across the areas of government and not-for-profit sectors. She comes to VicHealth from Leadership Victoria where she held the position of Executive Director. Before this, she was CEO of Footscray Community Arts Centre, CEO/Founder of Stompin Youth Dance Company, and Artistic Associate at the Melbourne International Festival of the Arts.

She has served on various state and national boards and committees, including VicHealth's as Board Member from 2004 to 2010. Her ministerial appointment includes the Victorian Eating Disorders Taskforce Victoria and previously she held the roles of member of the Australia Day Committee in Victoria, Australia Council for the Arts Deputy Chair Dance Board, Arts Tasmania Board, Brand Tasmania Board and the Community Leaders Group Tasmania.

Most recently, Jerril has worked as a World Health Organization Advisor and has joined the International Network of Health Promotion Foundations as a board member. She has presented at State, National and International seminars and events, sharing her experiences in Health Promotion, leadership and the potential of digital communications and social media.

Jerril is a recipient of a Centenary Medal, Tasmania Day Award, and Fellowships from the Winston Churchill Memorial Trust, Australia Council, Harvard Club of Australia, the Australian Davos Forum-Future Summit, and Williamson Community Leadership Program (Leadership Victoria).

Jerril holds a Master of Business Leadership from RMIT University.

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DR. JANET L. COLLINS

Dr. Collins has had a highly successful 20-year career at the Centers for Disease Control and Prevention (CDC), a federal agency within the U.S. Department of Health and Human Services. For the past three years, Dr. Collins has served as Associate Director for Program, CDC. As part of CDC's executive leadership team, she provides guidance to CDC programs on strategic planning, evaluation, women's health, minority health, and Healthy People 2020. She also runs the Agency's Quarterly Program Review to ensure that each of CDC's 80 Divisions has meaningful 4 year goals with priority initiatives and performance targets.

Recently Dr. Collins co-led the development of the first ever U.S. National Prevention Strategy. The National Prevention Strategy is designed to move the country from a system of sick care to one based on wellness and prevention. The strategy depends on partnerships among government, business, industry, philanthropic organizations, community and faith-based organizations to improve health through prevention. Dr. Collins also directs CDC's work on its priority health outcomes through a program called "Winnable Battles." CDC Winnable Battles are public health priorities with a large impact on health and with known, effective strategies to intervene. The Winnable Battle program works to identify key strategies and to rally resources and partnerships to accelerate improvements in health in the areas of obesity, tobacco, motor vehicle crashes, food safety, healthcare associated infections, teen pregnancy, and HIV

Prior to her current role, Dr. Collins served as Director for the National Center for Chronic Disease Prevention and Health Promotion, CDC. As Center Director

she oversaw the work of ten Divisions, including tobacco, nutrition, physical activity, oral health, reproductive health, cancer, diabetes, heart disease, and adult and community health. Under her leadership the Center established the Division for Heart Disease and Stroke Prevention and worked to expand CDC's focus on obesity prevention and community health.

Throughout her career, Dr. Collins has designed and evaluated large-scale community intervention programs. In 2003 she helped launch STEPS to a Healthier US which supported evidence-based interventions in 40 U.S. communities to reduce the burden of diabetes, obesity and asthma. STEPS was unique due to its focus on public-private partnerships that enabled communities to establish programs in community settings, health care facilities, schools, and work sites.

Dr. Collins also designed the Communities Putting Prevention to Work program which supports 50 rural and urban locations across the country to prevent heart attacks, cancer, strokes, and diabetes by improving nutrition, increasing physical activity, and reducing tobacco use and secondhand smoke exposure. Funded communities are implementing environmental changes to make healthy living easier, such as improving safe transportation for pedestrians, bicyclists, and mass transit users; ensuring healthy food and beverage options in schools and communities; and increasing tobacco cessation services. More than 50 million people have benefitted from this program to date.

Earlier in her career, Dr. Collins worked extensively in the area of adolescent health including designing and implementing the Youth Risk Behavior Survey, which has served since 1991 as the leading source of information on the health risk behaviors of youth in the U.S. and around the world. She also directed the nationwide VERB™ It's what you do campaign to increase physical activity among youth. VERB™ was a mass-media communications campaign, based on social marketing principles, that surrounded young people with promotional messages about physical activity—on radio, television, in print, on the Internet, in schools, and through youth-serving agencies and organizations.

Dr. Collins is a behavioral scientist with a PhD in educational psychology from Stanford University and a master's degree in clinical psychology from San Diego State University. . In addition to her work at CDC, Dr. Collins serves as a member of the National Board of Directors for the YMCA of the USA. Dr. Collins

has published extensively in the area of chronic disease prevention and has given numerous invited addresses, keynotes, briefings, and media interviews on health promotion and disease prevention issues. Her recent publications focus on policy interventions including reducing childhood obesity through policy change and using health impact assessment to influence public health policy.

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International Health Promotion and Communication Symposium

For years health experts in the US and around the world have recognized that clinical care alone cannot produce optimal health outcomes. In fact, a growing recognition has emerged that social and environmental influences within families, neighborhoods, and communities have a major impact on health. From this understanding grew Healthy People - a system of health goals that focus on the role of individual behavior, health policy, and evidence-based health promotion programs to protect health and prevent disease.

Each decade since 1980, the U.S. Department of Health and Human Services (HHS) has released a comprehensive set of national public health goals and objectives. The Healthy People initiative is grounded in the principle that setting objectives and providing benchmarks to track and monitor progress can motivate, guide, and focus action. Creating a stable system that would survive changes of leadership and political administrations has been key to its success. The longevity of the system has been attributed to several factors including: 1) establishing the system through a legislative or other legal, policy, or regulatory mandate, 2) assigning coordinating responsibility to an agency or office with legislative authority, 3) ensuring the support and commitment of high-level officials and 4) making the initiative nonpartisan and inclusive.

Two legislative statutes serve as the foundation for the Healthy People initiative. The National Health Planning and Resources Development Act of 1974 directed the Secretary of the Department of Health, Education, and Welfare (DHEW; the precursor to HHS) to develop national health planning goals. In 1976 Public Law 94-317 called for the Secretary to establish national goals, a strategy to achieve the goals, and created the Office of Disease

Prevention and Health Promotion (ODPHP) within DHEW to coordinate the process. The first formal release of the Healthy People framework took place in 1979. The following year, official objectives were established to be achieved by 1990. As early as 1983 DHEW required the use of the objectives as justification for Agency budget requests. Green and Fielding (2011) argue that "This step probably accounts as much as any other factor for the sustainability of the decennial objective-setting process." http://www.annualreviews.org/doi/pdf/10.1146/annurev-publhealth-031210-101148

In recent years, HHS established the Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives (Advisory Committee) to help guide the process. The Advisory Committee is comprised of 13 nationally known experts with diverse expertise on public health issues. The Advisory Committee describes Healthy People as "a national health agenda that communicates a vision and a strategy for improving the health of the nation's population and achieving health equity. It should offer overarching, national-level goals to show where we want to go as a nation and how we will get there, both collectively and individually. Healthy People should be both inspirational and action-oriented, offering leadership, guidance, and direction to stakeholders at all levels, including local communities and should redirect our attention from health care to health determinants in our social and physical environments." The Advisory Committee established the Framework for Healthy People 2020 (HP2020), setting the following vision, mission and goals:

Vision: A society in which all people live long, healthy lives.

Mission:

- Identify nationwide health improvement priorities;
- Increase public awareness and understanding of the determinants of health, disease and disability and the opportunities for progress;
- Provide measurable objectives and goals that are applicable at the national, state, and local levels;
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge; and

- Identify critical research, evaluation and data collection needs.

Overarching Goals:

- Attain high quality, longer lives free of preventable disease, disability, injury, and premature death.

- Achieve health equity, eliminate disparities, and improve the health of all groups.

- Create social and physical environments that promote good health for all.

- Promote quality of life, healthy development and healthy behaviors across all life stages.

Under the direction of ODPHP, a Federal Interagency Workgroup helps direct the development and implementation of Healthy People. The Federal Interagency Workgroup includes representatives from all HHS agencies and offices as well as the U.S. Department of Agriculture, U.S. Department of Education, U.S. Department of Housing and Urban Development, U.S. Department of Justice, U.S. Department of Interior, U.S. Department of Veterans Affairs, and the Environmental Protection Agency.

Every decade topic areas are selected for inclusion such as tobacco, obesity, and cancer. There are currently 42 topic areas in HP2020 (see Attachment A). Once the topic areas are decided, lead Federal Agencies are assigned to oversee each topic and to seek input from public health experts on the exact health objectives to be included.

To qualify as an objective there must be available baseline data from which to track progress and set targets as well as evidence that interventions are available with scientific evidence of effectiveness. Not all important areas of work have the data necessary to monitor progress. These areas are included as "developmental objectives" with the expectation that data systems will be established to measure these objectives as soon as possible. By including development objectives, important areas of public health work are not excluded due to a lack of data.

Once draft objectives are available for review, an engagement effort is launched to seek broad public input. Since its inception, Healthy People has sponsored public engagement with thousands of citizens helping to shape the process and content. These efforts are designed to increase the visibility of Healthy People and to heighten the involvement of as many parties as possible in achieving the objectives. Currently the Healthy People process includes a consortium of diverse and motivated agencies and organizations that are committed to achieving the HP2020 goals and objectives. Consortium members include colleges and universities, private businesses, religious organizations, and many others. Any agency or organization that supports HP2020 is welcome to join. Organizations such as the American Medical Association, the Association for the Advancement of Retired Persons, the Girl Scouts, and the National Association of Hispanic Health and Human Services Organizations are examples of Consortium members who are using their expertise, contacts, and resources to contribute to national efforts of improving health for all Americans. To extend the leadership beyond the national level, Healthy People has also identified a coordinator for every State and Territory who serves as a liaison with the Office of Disease Prevention and Health Promotion, HHS.

Following the public input period, HHS finalizes and publishes the health objectives for the decade. Not surprisingly, topic areas and objectives have grown in number with each release. HP2020 has approximately 600 objectives (with 1200 measures) across 42 topic areas, up from 467 objectives and 28 topic areas in HP2010. Despite high regard for the system, some believe it has become too cumbersome and should be streamlined. Responding to this criticism has proven difficult, however, due to vocal proponents for each of the topic areas and objectives. In response to these concerns HP2020 has identified 26 Leading Health Indicators across 12 topic areas that were selected due to their overall importance (see Attachment B).

In addition to establishing the objectives there are several other critical steps in the process. First, a measurement system is needed to track and report the most recent data for each objective. This is currently handled through an interactive, on-line "Health Indicators Warehouse" (http://www.healthindicators.gov/) which provides easy access to the data. Interested individuals can obtain trend data for the nation and for subgroups by age, race, ethnicity, gender, income, and geographic location. Second, it is important to identify and share evidence-based interventions to achieve the Healthy People objectives. Currently this is done through webinars, conferences,

tools, resources, and the Healthy People website (http://www.healthypeople.gov). Under each topic area is a section on "Interventions and Resources" that provides links to evidence-based resources. One of the major sources of evidence-based interventions is the systematic reviews conducted by the Guide to Community Preventive Services (http://www.thecommunityguide.org/index.html.

Healthy People serves a wide variety of audiences and purposes. Healthy People is used in agency and community priority- and budget-setting processes, to onduct program planning, and to set local goals. Healthy People is also used as a data source to support applications for grants or funding and as a framework for teaching public health courses. Other users cite the role of Healthy People in helping leverage resources through partnerships and networks and to develop alliances with nontraditional partners in sectors such as urban planning, agriculture, and transportation. Other purposes include:

- To provide a baseline assessment of the population's health
- To establish a tracking system for monitoring change in the population's health
- To facilitate evaluation of the impact of health improvement activities
- To increase the breadth and intensity of health improvement activities (through ambitious goal setting)
- To improve the efficiency and effectiveness of health improvement activities by defining priority strategies to reach the goals that have been set
- To foster a unity of purpose, organizational participation and partnerships, and a spirit of cooperation (by defining goals and strategies through a consensus process)
- To help build awareness of, and support for, health programs among policymakers and the public
- To guide decisions on the allocation of funding

Over the decades the Healthy People process has seen dramatic changes from a focus on the leading causes of death to one that incorporates equal

consideration for quality of life; from a focus on the population as a whole to a recognition of the importance of health disparities among subgroups of the population; and from a focus on individual behavior change to one that emphasizes social and environmental influences on health. These changes, especially the last, have corresponded to increased attention by the field of public health to social determinants of health, health in all policies, and the importance of sectors beyond public health/health care on health outcomes. These evolving priorities have been reinforced through the recent release of the first ever National Prevention Strategy in the U.S. (http://www.surgeongeneral.gov/initiatives/prevention/strategy/report.pdf).

Implementation and oversight of the Healthy People process requires substantial investments of time and resources. The question has been raised whether the effort provides sufficient value in terms of improved health outcomes. This is a hard question to answer as there are many influences on health that co-occur with Healthy People over the course of a decade. The final review of HP2010 outcomes reveals that 23% of the 733 objectives were met and another 48% were moving toward the 2010 targets for a total of 71% of objectives moving in the right direction (http://www.cdc.gov/nchs/data/hpdata2010/hp2010_final_review.pdf). Other advances achieved during each decade of Healthy People arise from improvements in data sources, monitoring, and information technology. In addition to collecting new data on important health outcomes, attention has been devoted to making the objectives and data even more relevant and usable for organizations and leaders at the nation, state, and local levels. Despite generally favorable findings, some areas showed little improvement or worsening such as obesity rates which rose over the course of the decade. The final review also showed a lack of progress in reducing health disparities. During the decade, health disparities increased for an estimated 13% of objectives and were unchanged for approximately 80% of objectives.

Support for Healthy People remains strong. Perhaps the greatest strength of the system is the ability for diverse stakeholders to take ownership of specific objectives and to provide leadership across a wide range of agencies, organizations, and communities nationwide. The potential for better health through prevention is within our grasp.

Attachment A: Topic Areas for Healthy People 2020

1. Access to Health Services
2. Adolescent Health
3. Arthritis, Osteoporosis and Chronic Back Pain
4. Blood Disorders and Blood Safety
5. Cancer
6. Chronic Kidney Disease
7. Dementias, including Alzheimer's Disease
8. Diabetes
9. Disability and Health
10. Early and Middle Childhood
11. Educational and Community-Based Programs
12. Environmental Health
13. Family Planning
14. Food Safety
15. Genomics
16. Global Health
17. Healthcare-Associated Infections
18. Health Communication and Health Information Technology
19. Health-Related Quality of Life and Well-Being
20. Hearing and Other Sensory or Communication Disorders

21. Heart Disease and Stroke
22. HIV
23. Immunization and Infectious Disease
24. Injury and Violence Prevention
25. Lesbian, Gay, Bisexual, and Transgender Health
26. Maternal, Infant, and Child Health
27. Medical Product Safety
28. Mental Health and Mental Disorders
29. Nutrition and Weight Status
30. Occupational Health
31. Older Adults
32. Oral Health
33. Physical Activity
34. Preparedness
35. Public Health Infrastructure
36. Respiratory Diseases
37. Sexually Transmitted Diseases
38. Sleep Health
39. Social Determinants of Health
40. Substance Abuse

41. Tobacco Use

42. Vision

Attachment B: Healthy People 2020 Leading Health Indicators

Access to Health Services

Persons with medical insurance (AHS-1.1)
Persons with a usual primary care provider (AHS-3)

Clinical Preventive Services

Adults who receive a colorectal cancer screening based on the most recent guidelines (C-16)
Adults with hypertension whose blood pressure is under control (HDS-12)
Adult diabetic population with an A1c value greater than 9 percent (D-5.1)
Children aged 19 to 35 months who receive the recommended doses of DTaP, polio, MMR, Hib, hepatitis B, varicella, and PCV vaccines (IID-8)

Environmental Quality

Air Quality Index (AQI) exceeding 100 (EH-1)
Children aged 3 to 11 years exposed to secondhand smoke (TU-11.1)

Injury and Violence

Fatal injuries (IVP-1.1)
Homicides (IVP-29)

Maternal, Infant, and Child Health

Infant deaths (MICH-1.3)
Preterm births (MICH-9.1)

Mental Health

Suicides (MHMD-1)
Adolescents who experience major depressive episodes (MDE) (MHMD-4.1)

Nutrition, Physical Activity, and Obesity

Adults who meet current Federal physical activity guidelines for aerobic physical activity and muscle-strengthening activity (PA-2.4)
Adults who are obese (NWS-9)
Children and adolescents who are considered obese (NWS-10.4)
Total vegetable intake for persons aged 2 years and older (NWS-15.1)

Oral Health

Persons aged 2 years and older who used the oral health care system in past 12 months (OH-7)

Reproductive and Sexual Health

Sexually active females aged 15 to 44 years who received reproductive health services in the past 12 months (FP-7.1)
Persons living with HIV who know their serostatus (HIV-13)

Social Determinants

Students who graduate with a regular diploma 4 years after starting 9th grade (AH-5.1)

Substance Abuse

Adolescents using alcohol or any illicit drugs during the past 30 days (SA-13.1)
Adults engaging in binge drinking during the past 30 days (SA-14.3)

Tobacco

Adults who are current cigarette smokers (TU-1.1)
Adolescents who smoked cigarettes in the past 30 days (TU-2.2)

ASSOC. PROF. SEMA YILDIRIM BECERIKLI

She was born in Ankara in 1973 and graduated from the Faculty of Communication at Ankara University in 1995. Ms. Becerikli worked as an editor and scripter for many women, children and advertisement magazines. In 1999, she was awarded with the MA degree from PR and Promotion Department at Social Sciences Institute of Ankara University, upon completion of her thesis on "Role of Intra-organizational Communication in Formation of Organizational Culture: Assessment in view of Public Relations in Department Store Business: Example of Beğendik A.Ş.". In 2003, she received her PhD from the same department upon completion of her dissertation on "A Critical Approach to Public Relations; Use of Socio-drama in intra-Organizational Public Relations and its Association with Job Satisfaction: Research on Elementary School Teachers". Ms. Becerikli worked as research assistant at the Faculty of Communication of Gazi University between 1998 and 2004. Since 2004, she has been teaching at the Faculty of Communication at Ankara University. She the head of Department of PR and Promotion, a member of executive board at the Faculty of Communication at Ankara University and the representative of the Career Center (KARMER). She is lecturing the following classes at undergraduate program such as Research Methods in Social Sciences, Commercials Analysis, Critical Approaches to Public Relations and Social Psychology and post-graduate classes such as Communication Research Methods I-II, Commercials Analysis Approach, Critical Analysis of Commercials, Critical Approaches to PR, International PR. Her area of academic studies and publications include; organizational sociology, women studies, child rights, health communication and public relations. In addition, she is the author of the following books: Marketing and Communication Strategies (Pazarlama ve İletişim Stratejileri (2004), Selected Essays on PR: a Review regarding the Field

(co-authored with Hanife Güz) (2004); International PR (Uluslararası Halkla İlişkiler (2005); …and from Devil's Advocate to Mediation in Public Relaitons (Halkla İlişkiler Şeytanın Avukatlığından Arabuluculuğa); A Critical Analysis on a Discipline (Bir Disiplinin Eleştirel Analizi (2008), Women Focused NGOs and Media: Opportunities, Problems, Solutions (Kadın Odaklı Sivil Toplum Kuruluşları ve Medya: Olanaklar, Sorunlar, Çözümler (2008); Public Relations adn Anatomy of Commercials (Halkla İlişkiler ve Reklamın Anatomisi (2011). Furthermore, she lecture to private sector on organizational culture, gender mainstreaming, organizational identity, public relations, leadership, meeting, time and stress management. Ms. Becerikli is a member of the executive board of Ankara PR Association and a member of Consumer Rights Association. She is on editorial board of various scientific journals and implementing national and international projects.

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OBSTACLES BEFORE HEALTH COMMUNICATION AND HEALTH INFORMATION MANIPULATION

Today, the area of health communication has started to become a venue of problems according to public and academic organizations and is in need of solution focused strategies. When the works in the field of communication are defined as the ones realized within the scope of production, representation and perception, it is possible to mention the same for the area of health communication. Health communication information has an economic-political aspect and a representative aspect on the basis of the documents in circulation and a process of perception on the side of the recipients of health communication messages. For this reason, the issue is complicated and takes place in a different cultural and historic setting and information where many elements are elaborated. Apart from all these elements, the health communication platform is comprised of interpersonal communication and media components.

As mentioned by Çınarlı (2008: 39-40); health communication provides significant contribution within the scope of works aiming to fight against health issues, by making use of methods such as social marketing, advocacy in media and PR in the field of health promotion. The field of communication is a primary mechanism in efficient information provision during public education campaigns at healthcare institutions. In addition, health communication is an important area of practice which is a subject of social responsibility and any such social responsibility campaigns are comprised of efforts to protect, improve and promote public health; and to a great extent, affect quality of life of communities today and tomorrow. Improvement of public health is also source of existence for certain organizations. Majority of active NGOs in Turkey

do operate in the field of healthcare issues but private healthcare institutes the vision and structure of which are different and they place public health in the heart of corporate social responsibility. Mostly, all these organizations and institutions do cooperate and aim to increase their messages and their impact on the recipients.

Health communication has a very comprehensive scope and interested in the following matters: health status of the individuals in a community, improvement of their quality of life, preparation of national and universal health programs, design of health programs. Both at the level of mass communication and interpersonal communication, health communication could be elaborated by and large and their recognition, roll-out of accurate information, improvement of health behaviour, changing health attitudes are some of the objectives to be achieved. Public health campaigns and dissemination of health messages constitute another sub-field, aiming to guide community environment towards a specific attitude, to create awareness, to change attitudes and to motivate the individuals towards commonly approved attitudes (Çınarlı, 2008: 45).

As indicated above, health communication is comprised of two main elements: interpersonal communication and communication via media. For this reason, the obstacles before health communication must be elaborated from the standpoint of these elements. Many studies and surveys conducted in Turkey indicate that health communication operates on the basis of information coding through healthcare professionals such as medical doctors, nurses etc. Contribution to this field comes both from healthcare sciences and social sciences. When such studies are performed on patients, way of communication used by healthcare professionals and how understandable the language they employ are also concentrated. Such a mentality lowering communication to technical know-how operates in a way far from generating realistic resolutions and rather mitigating everything to a form of message delivery. It is generally ignored that health communication has an ideological aspect and is formed as a fruit of certain production conditions. The major handicap and obstacle of health communication studies is the blindness of information towards ideology.

The most important solution for the content created at the interpersonal communication and mass communication level is to develop perception analysis on viewers/readers/health information recipients. The field of health communication follows a line under the aegis of source and message coding.

Nonetheless, any study to analyze where, with whom and how and in what context such information is consumed is impingent upon the viewers. The over-arching objective of this proceeding is to identify the role of gender, level of education, age, ethnicity and cultural background, class position and the sense of social belonging context in perception of health communication and to open a pathway to enable interpretation of such contexts. For this reason, focus group results on health related news coverage shall shared under the main heading of science communication.

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The Communications Revolution and Information Gaps in the 21st Century

The dazzling advances in new communication technologies such as the Internet and telecommunications equally match the revolutionary developments in the biomedical sciences, offering the potential to transcend the conventional barriers of time and space that previously constrained human communication. Today's communication landscape is rapidly expanding through a number of different platforms and channels, and the amount of information that can be accessed on any given topic is skyrocketing. This flood of data, sometimes called "Big Data," encompasses this explosion of information from many sources, including Web-based, mass media and other electronic channels. This communications revolution and the resulting cyberinfrastructure is comprised of two main dimensions: 1) the enormous capacity to generate, integrate, manipulate, and distribute information across boundaries of geography and space, and 2) the integration of different digital domains, from libraries, data archives, scientific groups, and research on people.

Implications of this revolution of information are profound, offering unprecedented opportunities to make information available to scholars to examine grand questions, health professionals to make decisions based on evidence, policymakers to enact policies based on data, and to empower people to make or not make health-related decisions. For example, this stream of information has implications for the potential to access information on any point along the health continuum, from prevention to the end of life. For example, the readily available and large amounts of information on cancer prevention, treatment, and scientific advances has enormous potential to

influence not only what people know about cancer, but how they interact with their doctors, family members, other cancer patients, caregivers and friends.

The results of this influx of data can be also seen in the shift of how information is delivered and received. While at one point information generation was limited by specialty and geography, the changing information environment has transformed aspects of the online environment from a command and control approach to a participatory model of information creation and exchange. The growth of these Web 2.0 technologies, which allow users to interact and collaborate with Web content, represent a shift from the one-way information sources that once dominated the information landscape to an environment where audiences are able to generate and respond to content posted on blogs, forums, social networking pages, and other sources. Contributing to this information expansion is the growth of social networking platforms, such as Twitter, Facebook, and other sites that strengthen social support and create an environment for information exchange. These new forms of content hold great promise for providing a more engaging environment for patients and their providers facilitating communication and increasing reach in low-cost, real-time environments.

The overall picture for the growth of these communication opportunities at first glance seems greatly promising. The Internet continues to rise as a main source of information, entertainment, and news gathering among most segments of the population. The addition of other forms of electronic devices, including smart phones and tablets, increases the potential for using the Web in a number of settings that do not require a traditional Internet connection. The portable, lower-cost nature of many of these devices has also opened the doors for lower-income individuals to access the Web in ways not possible before.

The promise of a fast-developing cyberinfrastructure to enhance population and individual health is not in contention. What is in contention is the extent to which the cyber architecture will evolve without accounting for current inequalities that characterize health and communication across different social groups. There are two important challenges to the technological advances in communication: unequal distribution of communication resources and the disadvantages that accrue from it, and the difficulty in separating the quantity and quality of information.

A social determinants lens may illuminate who does or does not have the resources to participate fully in the communications revolution. First, data documenting the impact of social determinants such as living conditions, race/ethnicity, socioeconomic status, gender, and immigration status on health outcomes continues to grow. The picture painted by these data is often stark. Compared to their higher SES counterparts, those from the lower income and education brackets often have poorer health, smoke more, and die sooner. Within this traditional view of social determinants, these socioeconomic variables may be seen to influence a number of health outcomes.

To fully elucidate the pathway between these social determinants and health, other intermediate factors that impact this relationship should also be considered. The Structural Influence Model of Communication states that health outcomes and health disparities can be explained by understanding how structural determinants, such as socioeconomic status, other mediating/moderating mechanisms, and health communication factors lead to differential outcomes for people. Structural antecedents such as SES influence exposure to specific types of information and thus the information environment, resources for consumption, and differences in information processing. These health communication variables highlight the notion of communication inequalities, or the "differences among social classes in the generation, manipulation, and distribution of information at the group level and differences in access to and ability to take advantage of information at the individual level."

Communication inequalities can manifest in several dimensions, including use, access, and exposure; attention; information seeking; processing; and communication effects. Use and access barriers may lead to differential outcomes such as health knowledge through the restriction of information from those who are unable to purchase or subscribe to the correct channel. In the United States, race, class, and urbanicity matter as determinants for broadband internet access, with those in high income brackets almost 2.6 times more likely to be connected by broadband compared to households that make less than $25,000 per year. Reasons for lack of broadband use include lack of adequate equipment, lack of interest, and expense. These disparities are mirrored in the inequalities in telecommunications use among rich and poor nations. Globally, while the use of cell phones is steadily increasing in both developed and developing countries, there remains a broad gap between the two in the number of cell phones per inhabitants that remains to be closed.

However, access or exposure to information alone is not enough. Individuals must also attend to and process health information. Importantly, the main sources that are paid attention to can vary by certain demographic factors. Both SES and race/ethnicity have been associated with differential subscription status, time, and preferences regarding different sources of media; for example, with some exceptions, people who are white and have both a higher education and income are more likely to subscribe to cable or satellite TV services and newspapers. Levels of education and literacy may make a dramatic difference in the ability to process information, particularly complex statistics on risk or medical terminology. In an increasingly participatory model of medical care, having information be accessible, communicated through the proper channels, and at the comprehension level of the audience is key to effective communication.

The increasing emphasis and expectation placed on being an active participant in health information gathering is gaining attention as a key area of research. In short, patients are often expected to gather information on their illness, carefully weigh the evidence, and balance this evidence with their personal preferences and values in order to become an active consumer in their healthcare and to participate in clinical decisions. This level of involvement requires active information seeking, in which the individual purposefully searches for health information on a certain topic. Unfortunately, disparities also exist regarding who is most likely to look for information. Studies have revealed that these seeking behaviors also fall along socioeconomic lines, with individuals with higher income and education being more likely to seek than their lower SES counterparts. However, the notion of information seeking is beginning to extend beyond just health information. In a nuanced analysis, it was found that while those with higher income and education may seek cancer-specific education on treatment and self care after diagnosis, participants with lower wealth and higher debt were more likely to seek work and finance information. This may indicate that it is not as much information seeking that varies between groups, but that the content of the information changes based on the needs and social class backgrounds of the recipient.

Although disparities exist in the ways in which information is sought, accessed, processed, and acted upon, communication factors represent areas for intervention that are more modifiable than sociodemographic characteristics. Interventions that focus on changing aspects of the communication environment, while being mindful of the context in which their participants live, may be an effective strategy to change health behaviors.

Within the Viswanath lab, we are working to address aspects of the communication environment at multiple levels of influence. Our projects range from individual to community capacity building to address disparities on a number of topics. A central focus of the lab is Community-Based Participatory Research (CBPR), which involves the buy-in and close guidance of our community partners to successfully bring about change within community settings. Through partnerships in three cities in Massachusetts (Lawrence, Worcester, and Boston) in the United States we have formed relationships with local organizations that have set the stage for intervention development and creating sustainable change in the community. Although these studies employ a variety of methods and strategies, the underlying goal remains to address communication inequalities.

Our Click to Connect (C2C) study focused on individual capacity building in order to address internet literacy among the underserved. Although many national surveys have documented internet use patterns in the US, many of these studies have primarily high-SES samples. Click to Connect employed an innovative approach to not only recruit lower income individuals to participate in our research study, but to include one of the most detailed sets of data on their online behaviors to date. In a comparison with participants from national datasets capturing Internet connectivity and use, the majority of Click to Connect participants had dramatically lower income and education. Thus, the information gathered by Click to Connect is crucial to fill in the gaps that remain about how low SES adults use the internet.

The study's central goal was to determine if improving both access and ability to use the Internet among low literacy, low SES individuals led to changes in internet use and health information seeking. Intervention group participants were given free computers and free internet service. They also received classes on basic computer and Internet skills and were able to call the study staff for technical support over the course of the study. Data were collected from a number of sources to provide a complete depiction of participants' Internet use. In addition to administering pre- and posttest surveys, intervention participants' online activities were recorded over the course of the study through web tracking software, gathering detailed data on every website they visited and the time spent per site. In-depth process data were also collected that described each call to the staff technical support team, tracking hardware and software issues as well as connectivity problems and life events that interfered with class attendance and online activities.

Taken together, these data paint a detailed picture of the Internet use of lower SES adults, providing information on how this population uses the Web once the issue of lack of access has been removed. Additionally, our detailed process data may help us elucidate the range of barriers and facilitators that may impact these information seeking behaviors. Preliminary results reveal that there are differences in the websites that participants visit based on race/ethnicity and gender. Future analyses will allow us to examine these differences in more depth to determine where different groups look for health information, as well as what other sites and topics are salient to their interests. This information may drive future efforts to reach low-SES internet users with relevant health information.

Our work at the community level can best be exemplified through MassCONECT, a project that leveraged the assets of our three partner communities to address disparities through intersectoral mobilization. Workshops and trainings were conducted in the communities that taught community-based organizations how to communicate strategically about health disparities and how to conduct community-based participatory research. The study also focused on cancer education and outreach, increasing mammography access in the town of Lawrence through sponsoring health fairs and a mammography van. Within MassCONECT, the community coalitions of each city were fully engaged in every part of the process and provided input that helped to build and strengthen the network. A social network analysis of the MassCONECT communities indicated that the intervention dramatically increased ties between network members and created an organizational network within the areas.

Funds from MassCONECT have been leveraged into other community-based projects that aim to address disparities at multiple levels, such as Project IMPACT. The goal of Project IMPACT is to build capacity to mobilize the community to change the public agenda on health and tobacco-related disparities. Several methods of data collection, including content analysis of local newspapers, key informant interviews, and a public opinion survey of Lawrence residents captured current ways in which newspapers framed health stories and how citizens prioritize health concerns. Findings from this data indicate a belief that the onus of health was on the individual level. In the next phase of our study, workshops will be conducted with members of community-based organizations to educate them on the social determinants frame for health, shifting focus from simply individual characteristics to a range of structural factors that may also influence health. Through these

workshops, they will learn how to re-frame health disparities as a problem that can be addressed by the community, with a focus on tobacco-related examples for improving access to cessation resources, promoting tobacco control policies, and reducing gaps in treatment.

The communications revolution is just beginning. As technologies evolve and penetrate, they have the potential to profoundly alter the healthcare landscape. A question for communities of science, technology, and policy is that, given the widespread and persistent inequalities in health and in communication, who will have the capacity and the capability to take advantage of these developments? As we look towards the future of communication inequalities in public health, more research is needed to fully understand the causal pathways between communication inequalities and health disparities. Inequalities are likely to increase as internet communication technologies evolve, so it is crucial that future intervention strategies consider the design of these systems from multiple levels of end users. We must learn from past experiences with communication inequalities to create strategies that can close the disparities gap. Potential strategies could include: 1) investing in building capacity among disadvantaged communities, groups, and nations to take advantage to cyberinfrastructure; 2) make data more easily accessible and useable; 3) involving end-users in designing and developing the systems, and 4) making the boundaries between the producers and consumers of knowledge more porous. As we engage these levels in new explorations of communication research, at the forefront should be the commitment to ensuring that inequalities are not exacerbated.

PROF. DR. KEVIN WRIGHT

Kevin B. Wright (Ph.D. University of Oklahoma) is Professor and Chair of the Department of Communication at Saint Louis University. His teaching and research interests include health communication, new technologies and health campaigns, and interpersonal issues in health communication. Dr. Wright has particular interest in social support processes and health outcomes in both face-to-face and computer-mediated contexts. He is the author of five books, including Health Communication in the 21st Century and Computer-Mediated Communication in Personal Relationships. He has published over 60 articles and book chapters, and his research appears in numerous journals such as Communication Monographs, Journal of Computer-Mediated Communication, Journal of Communication, Health Communication, Journal of Health Communication, Journal of Applied Communication Research, Journal of Personal and Social Relationships, Communication Quarterly, Communication Studies, and several other publications. Dr. Wright served from 2007 to 2010 as editor of the Journal of Computer-Mediated Communication published by the International Communication Association, he serves on numerous editorial boards of various communication journals, and he is a frequent presenter at regional, national, and international communication conferences.

During the late 1990's, Dr. Wright recognized that the advent of the Internet and the World Wide Web was influencing the ways in which individuals with health concerns sought social support and health information. Starting in 1995, he began researching the growing number of computer-mediated support groups on the Internet, including support groups for older adults, people with cancer, caregivers for people with cancer, and individuals facing

a variety of other health issues (including substance abuse, eating disorders, and HIV/AIDS). This interest led to dissertation work (which was published in the Journal of Communication) as well as a number of subsequent studies of computer-mediated support groups that continues to this day, including those have been published in a number of peer-reviewed journals, including the Communication Monographs, Journal of Applied Communication Research, Health Communication, Communication Quarterly, the Journal of Social and Personal Relationships, the Journal of Health Psychology, Journal of Health Communication, and many chapters on computer-mediated support, cancer support groups, palliative care, and other health-related topics in various edited volumes.

Also early in his research career, Dr. Wright focused upon the efficacy of computer-mediated support groups, particularly the links between group participation and various health outcomes. For example, his initial studies were centered on the relationship between social support mobilization within computer-mediated support groups and health outcomes, such as perceived stress levels, depression levels, and coping abilities of participants. Many of these studies dealt specifically with cancer patients or caregivers for people living with cancer.

Later, his research shifted to the study of self-perceptions and perceptions of other participants within computer-mediated support groups and how these perceptions influenced communication patterns. For example, this line of research focused on perceptions of participant similarity, credibility, communication competence, and individual motives for using computer-mediated support groups. In addition, Dr. Wright's research has focused on identifying advantages and disadvantages of computer-mediated social support vis-à-vis more traditional sources of social support (i.e. friend and family members) among people facing cancer and other health concerns.

The focus on motives and perceived advantages/disadvantages led to an interest in adapting and modifying Mark Granovetter's theory of weak tie support networks as a theoretical framework for understanding the motives/needs of computer-mediated support group members as well as how these groups meet their motives/needs.

The most interesting aspects of this work have been the discovery that participants in computer-mediated support groups appear to have underlying motives for using the groups that differ from individuals who prefer face-to-

face social support. In particular, several aspects of weak tie networks, such as great heterogeneity between participants, more diverse information, fewer role obligations, less risk/judgment, and greater objectivity, tend to predict use of computer-mediated support groups. Moreover, individuals who experience health-related stigma tend to prefer computer-mediated support interventions versus face-to-face support from traditional close ties.

Another focus of Dr. Wright's health communication research has been on several other intrapersonal/interpersonal issues within healthcare settings, particular among cancer patients. For example, he has conducted research that examines perceptions of communication skills training among medical students, patient willingness to communicate about health, and perceptions of the healthcare environment as influences on communication patterns and patient behaviors. These studies have been published in journals such as Communication Studies, Medical Education Online, and Health Communication.

One of the most interesting findings from this body of research is on the relationship between perceptions of the healthcare environment (including perceptions of providers) and patient communication patterns/behaviors is that perceptions of a variety of environmental features in healthcare settings (including provider nonverbal communication, physical aspects of the healthcare setting, waiting time, and the perceived usefulness of treatment options) tends to influence patient information-seeking patterns and patient satisfaction level.

In recent years, Dr. Wright has been interested in the development and testing of on-line social support interventions, web-based information interventions, and smart phone application interventions for cancer survivorship and symptom management. In his collaboration with the School of Public Health at Saint Louis University, he is currently pursuing external funding to test these interventions among populations facing health disparities around the greater St. Louis area. The development of these interventions has informed Dr. Wright's larger interests in health campaign design and implementation. In particular, Dr. Wright has developed an interest in using new technologies for the purpose of process and outcome evaluation. Moreover, his research has moved into the area of using new technologies to tailor health messages to campaign target audience members, particular messages associated with reminders for screenings and lifestyle changes that may ultimately impact health behavior change and maintenance of healthy behaviors.

Dr. Wright has served on a number of scientific review committees for the National Cancer Institute, the National Institutes of Health, and the Centers for Disease Control and Prevention where he has reviewed numerous grant applications dealing with new technologies and health interventions (particular those that were related to cancer prevention and survivorship).

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Awareness Building Strategies in Health Communication Campaigns

Awareness strategies are a crucial component of health communication campaigns, and campaign designers should assess such strategies at various stages in the campaign process, including during formative campaign research, implementation, process evaluation, and outcome evaluation. Most successful campaigns present messages that attempt to create awareness, such as messages designed to create recognition and recall of the topic or the behavior change that is being advocated. These messages should also trigger cognitive and behavioral activation on the part of favorably predisposed audience members and encourage further information seeking about the topic. Despite decades of research in the area of public health campaigns targeting health-related attitude and behavioral change, campaigns often fail or have limited effects in terms of influencing cognitions or behaviors among their intended audiences (Dillard & Shen, 2005; Hornik, 2002; Snyder, 2001). Therefore, it is important to consider features of health campaigns that can increase target audience awareness of messages, knowledge of the health issue, perceptions of risk and susceptibility, positive attitudes toward changing health-related behaviors, and ultimately changes in behaviors that will lead to positive physical and mental health outcomes.

In this presentation, I will discuss several awareness building strategies that health campaign designers should consider. These include a discussion of how awareness strategies can be cultivated during the various stages of the campaign process. Specifically, I will focus on factors that campaign designers/researchers should consider in terms of building awareness, such as elements to consider during focus group and survey research in the formative stages of campaigns, theoretical concerns, and message design characteristics. In

addition, I will focus on strategies for assessing campaign awareness during the implementation stage, and the role of process evaluation and outcome evaluation.

Given the failure or limited impact of many health campaigns, campaign designers should be concerned with ways to increase awareness of campaign messages at individual and community levels. A key role of awareness messages is to arouse interest or concern regarding the campaign's central message or messages. Awareness messages should motivate individuals to engage in additional information-seeking behaviors from sources that can be provided within the campaign itself, such as websites, books and other print media, or community resources (such as opinion leaders, clinical services, or counseling).

In terms of formative campaign research, audience analysis research plays a key role in terms of identifying ways to develop awareness building messages. For example, focus groups consisting of representative members of the target population can inform campaign designers about the most appropriate language and visual stimuli that will most likely raise awareness among other members of the population. In general, focus groups and other formative research methods, such as survey research and the use of available data about a target audience can help campaign designers to conduct a systematic assessment of the immediate social and physical environment of the target population. This includes identifying pre-existing knowledge about the health issue, social support resources for help seeking, social norms of expected behaviors, physical barriers to seeking care, stigma associated with the health behavior, accessibility and availability of services, and the quality of treatment by health care professionals in a particular community. Moreover, focus groups, surveys, and available data can help campaign designers to identify factors such as knowledge of the health issues, attitudes, beliefs, values, and perceived needs and abilities related to the motivation to act on the health behavior change that is being advocated in the campaign.

Moreover, the data generated from these methods can help campaign designers in the process of audience segmentation, or the process of grouping target audience members into smaller subsets based on characteristics such as demographic variables, attitudes, beliefs, values, and readiness to change their health behavior. For example, in recent year, health communication researchers (e.g. Palmgreen & Donahue, 2003) have successfully used sensation-seeking as an effective audience segmentation variable. Research

has demonstrated that high sensation-seekers tend to prefer more vivid, colorful, and fast-paced campaign messages than low sensation-seekers. In addition, tailoring campaign messages to segments of populations that exhibit this trait has been shown to increase attention to messages, awareness of health issues, and recall of messages. In general, this method has been successful in terms of designing more memorable and effective messages for high-sensation seekers in campaigns targeting such issues as drug abuse, risky sexual practices, and other high risk behaviors associated with negative health outcomes. Along the same lines, the use of models such as the Transtheoretical Model (Prochaska & DiClemente, 1984) or the Multi-Stage Model of Behavioral Change (Lippke & Ziegelmann, 2006) are useful frameworks for identifying segments of the target audience that are in different stages of awareness about health behavior change that is being advocated by campaign designers. For example, these models can help researchers identify segments of the population who are unaware of the health issue, those who have thought about the issue but who have not changed their behavior, and those individuals who have changed their behavior (but who may be in danger of relapsing into risky behaviors (that may lead to negative health outcomes). By segmenting audiences in this manner, campaign messages can be tailored for each segment. This tailored approach tends to lead to greater awareness than more generic messages that are designed to reach the larger audience (Kreuter et al., 2000).

Formative campaign research is also important in terms of identifying target audience members' channel preferences. Depending on the target population, effective message dissemination may vary, with some audiences preferring interpersonal communication channels or traditional media (such as television, radio, newspapers, magazine advertisement, billboards, pamphlets, etc.) while other audiences (or subsets of an audience) may prefer newer media, such as social networking websites, Twitter, email, or via smart phone applications. In recent years, researchers have explored the efficacy of using interactive media to tailor messages faster and more conveniently to specific segments of the target audience (Kreuter et al., 2008). Such tailored messages not only foster greater awareness of the larger health issue targeted in a campaign, but they have also been found to be more influential in terms of cognitive and behavioral change (Kreuter et al., 2006). In addition, for audiences that have access to and the ability to use new interactive communication technologies, campaign messages can be designed to help audience members manage their own health in proactive ways, such as reminding them of suggested check ups and routine screenings

(Avtgis et al., 2011). Such technological reminders appear to be particular important in terms of helping target audience members maintain positive health behaviors over time. Assessing these and other individual, social, and environmental variables are important for identifying resources and circumstances in the target audience members' setting that may hinder or facilitate the development of the health campaign.

An assessment of the target audience's everyday environment should also be an opportunity to find existing influences that can complement the health campaign messages as well as a chance to identify competing messages that may distract audience members attention from the campaign. According Atkin & Freimuth (2001), a target audience member may be exposed to numerous news stories, interpersonal interactions, advertisements, entertainment portrayals, and other information in his or her environment that is either consist with campaign goals or undermines them. Assessing these competing messages can help campaign designers build awareness among audience members about campaign-consistent messages, or they can be useful in terms of inoculating audience members against messages that compete with campaign goals or that can potentially undermine positive behavior change. In addition, other channel considerations are well known in terms of increasing campaign message awareness. For example, Atkin & Freimuth (2001) advocates conducting an assessment of specific channel characteristics, such as accessibility, decodability, intrusiveness, personalization, and cost considerations, associated with the different channels that are used by target audience members. Once an ideal channel or combination of channels is identified in the formative campaign research process, it is important for researchers to secure commitments from media gatekeepers (e.g. broadcasting organizations, newspaper editors, etc.) or key opinion leaders within the target audience community to ensure adequate message dissemination and repletion of messages. It is well known that frequent repetition of campaign messages increases awareness, stimulate motivation, and makes messages more memorable (Hornik, 2002).

Formative research also plays a crucial role in identifying features of target audience members' environment that can help reinforce campaign messages through repetition not only in the mediated environment, but also through interpersonal channels. For example, partnerships between campaign designers and community leaders, key organizations (such as businesses, churches, and mosques), coworkers, and other social networks members can help reinforce messages as well as foster trust among target audience

members.

In addition to awareness messages and information, a campaign needs to present cogent reasons why the audience should adopt the advocated action or avoid harmful behaviors. Campaign designers need to find ways increase an audience member's perceived susceptibility and potential negative outcomes to risky health behaviors during the formative stages of the campaign. For audiences that are favorably inclined to a campaign message, the campaign designers have an easier task of reinforcing predispositions, strengthening positive attitudes, and motivating behavioral maintenance over time. Messages should be tested in the formative stages of a campaign to ensure attractiveness, vividness, memorability, and likeability among members of the target audience. When encountering audience members who are negatively predisposed to campaign messages, campaign designers should consider drawing upon well established social influence theories as framework for designing influential messages vis-à-vis the information that is know about this segment of the target audience (collected in the formative research phase).

Popular social influence frameworks such as the Health Belief Model, the Theory of Reasoned Action, the Extended Parallel Process Model, Inoculation Theory, and Psychological Reactance Theory can help campaign designers to emphasize incentives for behavioral change, to better present persuasive arguments stemming from credible sources and supportive evidence to motivate audience members through the stages of attention, attitude change, behavioral intentions, and action.

For example, in recent years, health communication researchers have used Psychological Reaction Theory (Dillard & Shen, 2005; Miller, Lane, Deatrick, Young, & Potts, 2007; Rains & Mitchell Turner, 2007; Quick & Considine, 2008) to identify persuasive messages that may lead to resistance or reactance from audience members. Previous research has found that features of campaign messages, such as inappropriate fear appeals, controlling language, and poorly designed guilt and shame appeals can increase audience member reactance and (in some cases) boomerang effects (i.e. engaging in the risk behavior that the campaign messages are advocating against). Similarly, campaign researchers using the Extended Parallel Process Model (Wiite, 1992) have found that moderate fear appeals tend to raise awareness of health issues in campaigns (as well as increase perceptions of susceptibility) among target audience members. However, overly threatening messages

(fear appeals) can activate defensive motivations among audience members and lead to rejection of messages, suppression of messages, and boomerang effects. For example, individuals often cope with fear by engaging in further risky behavior, such as increase substance abuse or other negative coping strategies. Again, effective audience analysis during the formative stage of the campaign can help to identify barriers to campaign message awareness as well as the long-term processing of campaign messages.

In terms of implementing a health campaign, campaign designers can increase awareness of campaign messages through careful process evaluation once the campaign is underway. Process evaluation consists of systematic research at various stages of the campaign process, including implementation. For example, focus groups and surveys of audience members can help campaign researchers to assess the degree to which audience members are aware of campaign advertisements and messages, the degree to which people are paying attention to campaign messages, and other aspects of message processing. Tracking the frequency of how often campaign advertisements are broadcast on television or radio spots and other campaign message tracking procedures is important in terms of ensuring that target audience members are being sufficiently exposed to the campaign messages. In addition, process evaluation can be used to determine the effectiveness of a health campaign's promotion activities and inform researchers about ways to potentially improve similar future campaigns. For example, if a process evaluation reveals that social influence variables are consistent with a specific theoretical framework, then it can provide evidence for underlying mechanisms in the campaign process that led to successful or unsuccessful outcomes (which has heuristic value for designing future campaigns).

Finally, the best evidence that a campaign was effective in terms of building awareness is the degree to which the campaign messages influenced desired health outcomes. Similar to process evaluation, outcome evaluation is an important component of campaign research. In the case of positive health outcomes, researchers should conduct focus groups or surveys with target audience members to assess which message sources, message characteristics, channels, and other aspects of the campaign were more memorable and effective in terms of raising awareness and motivating behavior (Valente, 2002). In campaigns were no cognitive or behavioral change is observed (or those that exhibit boomerang effects), questions about which message sources, message characteristics, channels and other variables were ineffective are also helpful for informing future campaigns (as well as suggestions from

target audience members for potentially improving aspects of the campaign).

Overall, raising awareness is a crucial component of health campaigns. My hope is that these suggestions will stimulate thinking about the need to take a more systematic approach to evaluating campaigns during the formative, implementation, and evaluation stages. This approach not only can inform campaign designers about the strengths and limitations of their particular health campaign, but it is also valuable in terms of informing other scholars who may be designing similar campaigns (at present and in the future).

TIM CHURCH

Tim Church is the director of communications for the Washington State Department of Health in the United States. He's also a board member and recent past president of the National Public Health Information Coalition (NPHIC) — the preeminent organization of local, state and national public health communication professionals.

Tim oversees all communication for the Washington State Department of Health including media relations, risk communications, employee communications, publications, web content and social media.

During his 14 years with the Department of Health, Tim has managed communications and media relations response for several significant public health issues and events including the 2012 whooping cough epidemic, the 2009 swine flu (H1N1) outbreak, mad cow disease, Japan tsunami response, and a major multi-year tobacco prevention campaign that significantly lowered adult and youth smoking rates.

Tim has an extensive communications background. He graduated from Washington State University's Edward R. Murrow School of Communication with a degree in broadcast journalism and worked in television news for almost 15 years. He's been a news writer, on-air reporter, producer, and managing editor. He's also served as a public information officer for the Washington State Senate.

Tim has won numerous national awards for public health awareness campaigns he has directed or overseen. He believes all communication should

be clear, easy to understand, and avoid acronyms and government jargon. He volunteers for the YMCA, and lives with his wife and two kids in Washington's Puget Sound area.

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Strategies for Successful Public Health Messaging

Communication is an essential part of protecting and improving the public's health. Those of us who work in the field also know it's a big responsibility. If we do our job well we can truly make a difference in the lives and health of people who live in our communities. When people "get the message" and get vaccinated, wash their hands, get more exercise, and make healthy food choices they can personally be healthier, and their communities are healthier, too. If we don't succeed and they continue to smoke, eat poorly, or don't get vaccinated, the consequences can be severe, even fatal.

Of course, public health messages are often complicated, so getting people to hear our information, understand it, and take action isn't easy. The Washington State Department of Health has held many focus groups over the years to learn more about our target audiences and to test messages on topics like tobacco prevention, immunization, whooping cough, and H1N1 (swine flu). One common theme in recent years has been concern about "information overload." People are confused and exhausted by the amount of information they receive every day telling them what's good for them, what's bad for them, and what actions they should take to be healthier. And with a proliferation of social media sites and 24 hour-a-day news coverage it's getting worse and not better.

Our job is to break through the clutter of messages people hear and see every day and get them to pay attention to ours. To do that we must do the best we can to identify the audience we're trying to reach. It's time consuming, expensive, and impossible to reach everyone, so you have to get specific. For example, we often focus on young moms because they typically

impact all of the health decisions made in the home. Once you know who your audience is you have to get their attention, and you do that by making sure you understand the ways they get information, what type of messages they'll listen to, and whom they trust.

To get through to people they need to hear and see your message frequently, they must understand it, and believe it. That's a tall order! We've had a lot of success using personal stories about people who have been impacted by a certain disease or illness. Our recent whooping cough campaign included radio ads with real moms telling about how their child got sick, what it was like, and how hard it was on their families. When we tested the spots, mothers told us the stories got their attention so they listened and remembered the messages.

Jargon and technical words get in the way of people understanding our messages; and public health and heath care have a lot of both. People understand what germs are, so we shouldn't call them "pathogens" when we are trying to get folks to wash their hands and cover their cough to avoid spreading the flu.

Along with how you say it, the person delivering the message also makes a big difference. In the United States people often don't trust government and they can be skeptical about the motives of elected officials. However, annual Gallup Polls routinely show that nurses, doctors, and pharmacists are considered "the most honest and ethical professions." That makes them highly credible sources for our public health messages. Department of Health focus groups confirm that. People tell us they're most likely to get a shot, quit smoking, or do something else to protect their health if they hear it from public health agencies and then are reminded and encouraged by their doctors. And bedside manner truly is important. In high concern settings people trust messages more if they come from someone who shows they are listening, caring, and empathetic.

Our information campaign budgets always include some money for research and assessment. It is money well spent; we always learn something. We recently held a series of focus groups to assess if people heard and understood our whooping cough messages. We learned a number of things. Overall knowledge was very good. Nearly every person in our focus groups knew about the epidemic. Broadcast news is still a primary way people get information in the U.S. They use it and they trust it. The personal stories

got people's attention, but most said they must feel the disease personally threatens them or their family before they'll do something about it.

Public health campaigns take research, effort, time, and money, but if you do them right it's worth it. When they succeed, they impact the health of our communities and can save lives.

PROF. DR. JAY BERNHARDT

Jay M. Bernhardt, PhD, MPH is Department Chairperson and Tenured Professor of Health Education and Behavior in the College of Health and Human Performance at the University of Florida (UF). The mission of the department is to improve health behaviors and health status of individuals and communities through research, education, innovation, leadership, and collaboration. Dr. Bernhardt also has an appointment in the Department of Behavioral Sciences and Community Health in the College of Public Health and Health Professions at UF.

Dr. Bernhardt also the Founding Director of the Center for Digital Health and Wellness, whose mission is to save lives, control diseases, and promote wellbeing in the US and globally through innovative research, training, and practice on applied information and communication technologies for health. The Center is the sponsoring organization of the annual "Digital Health Communication Extravaganza" conference and exposition in Orlando, Florida (see http://dhcx.org).

In addition, Dr. Bernhardt is the Founder and President of an expert consultancy called Digital Health Impact, Inc., which focuses on the intersection of science-based health communication and ubiquitous information technologies. Through his diverse work in multiple settings, Dr. Bernhardt is widely recognized as a visionary leader, innovative scholar, and dynamic speaker on the application of communication, marketing, and new media to public health, healthcare, and medicine.

From 2005-2010, Dr. Bernhardt served as the Director of the National

Center for Health Marketing (NCHM) at the US Centers for Disease Control and Prevention (CDC). In FY09, NCHM employed more than 500 staff with a budget of more than $100 million. Following Dr. Bernhardt's vision, the CDC led the federal government in the application of social media, web 2.0, and mobile applications, resulting in one of the most user-centered, award-winning federal websites. Under his leadership, NCHM expanded its programs to East Asia, Central America, and East Africa.

Prior to his tenure at CDC, Dr. Bernhardt was Assistant Professor of Behavioral Sciences and Health Education at Emory University Rollins School of Public Health and the Founding Director of the Emory Center for Public Health Communication. Previously, Dr. Bernhardt was Assistant Professor of Health Promotion and Behavior at the University of Georgia.

Dr. Bernhardt's PhD in Health Behavior and Health Education is from what is now called the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill. His MPH is from what is now called the UMDNJ School of Public Health and the Edward J Bloustein School of Planning and Public Policy at Rutgers, the State University of New Jersey. His BA in Sociology with a minor in Computer Science is from Rutgers College.

Dr. Bernhardt is an Associate Editor of the journal Health Education and Behavior, serves on three Editorial Boards, is a member of six honor societies, and has received numerous prestigious awards. In 2001, he was the youngest member ever elected to the Executive Board of the American Public Health Association. During his term, he was elected by his peers to serve as its Vice Chairperson.

Originally from New Jersey, Dr. Bernhardt lives in Gainesville, Florida with his wife, Sheryl Ball Bernhardt, MS, an Occupational Therapist, and their children, Lila and Nathan.

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New Media for Health Education and Health Promotion

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In a 2001 editorial titled, "Health Education and the Internet: The Beginning of a Revolution," my co-author and I noted that the Internet had the potential to completely revolutionize health education research and practice by providing far more powerful ways of "…compiling, facilitating, developing, packaging and delivering health information to and between individuals and communities." (Bernhardt & Hubley, 2001, p. 643). In 2013, Internet-enabled new media continue to have enormous potential to revolutionize health education with diverse populations by enhancing our ability to implement evidence-based behavior change strategies in manners that are often far more effective and efficient than were possible in the past. For example, new media can be used to do the following: improve the ability to deeply engage large numbers of targeted individuals and communities over a sustained period of time; facilitate the real-time solicitation and analysis of in-depth health-related data and feedback from participants and collaborators to identify and aggregate health needs and priorities for planning health education programs; design and deliver highly relevant and personalized health education messages that are sent through the most accessible and persuasive channels at the most appropriate and influential times; and assess the effectiveness of interventions by enabling the electronic collection and storage of process and impact data from participants. Therefore, new media can contribute to and improve upon virtually all steps in health education planning, intervention development, and evaluation process.

In 2001, there were an estimated 500 million Internet users throughout the world (Bernhardt & Hubley, 2001) and more than 20,000 health-related websites (Eng, 2001). The International Telecommunication Union (2013) currently estimates that there are more than 2.3 billion global Internet users; and there are almost 3.5 billion results available when searching for "health" on Google. In 2001, the dominant Internet-based channels besides the Web and email included newsgroups, chat rooms, instant messaging, and file exchange servers (Bernhardt & Hubley, 2001). Today, social media and information sharing sites, such as Facebook, YouTube, and Twitter, are among the most accessed websites on the Internet with more than 1 billion, 800 million, and 500 million users respectively (Facebook, 2013; Lawler, 2012; Lunden, 2012).

Internet and new media use has grown quickly in Turkey and throughout Europe. According to the European Travel Commission (2012), there were 35 million Internet users in Turkey in 2012, representing 44.4% of the population. Broadband access rates are much higher in urban areas than rural. Turkish Internet users on average spend almost 33 hours online, which is the usage level in Europe. Facebook was the website most used by Turkish Internet users with more than 13 billion minutes spent on the site in August of 2011, followed by Microsoft websites and Google websites, as the most used websites. Almost 90% of Turkish online users watched online videos in February 2011, and they watched an average of 144 videos per person or up to almost 15 hours of viewing time during the month. Almost 17% of Turkish Internet users over 15 years old used Twitter in March 2011, ranking Turkey as the 8th highest country in the world for Twitter use.

The technology revolution has spawned the rapid growth of new media channels, tools, devices and gadgets that leverage the Internet's access to vast collections of information. The Pew Internet & American Life Project (2013) data show that, in the United States, laptop computer use is now favored over desktop computer use, and music players, video game consoles, electronic book readers, and tablet computers have all grown rapidly since their introduction. However, the most explosive growth has been in the use of mobile phones, most of which feature the ability to make voice phone calls and send and receive SMS (or text) messages. At the turn of the millennium, it was estimated that nearly two-third of the world's population did not and would not possess the ability to make a phone call (Wang, 2000). Yet total mobile-cellular subscriptions reached almost 6 billion by the end of 2011, representing a global penetration of 86% (International Telecommunication Union, 2013). Smartphones, which contain many features in addition to voice

and SMS, such as mobile web access, send and receive emails, and run small downloadable programs called "apps," have also grown rapidly and according to Nielsen now represent approximately half of all mobile phones used in the US and two-thirds of new phones that are purchased (Pollicino, 2012). Additionally, there were more than 1 billion mobile-broadband subscriptions globally by the end of 2011 (International Telecommunication Union, 2013). In Turkey, the mobile phone penetration rate, or the ratio of mobile subscribers in the population in the country, is expected to surpass 108% by the end of 2014, up from 85% at the end of 2010 (Ersoy, 2011).

Health education and health communication researchers have continued to explore creative new ways to leverage the Internet and diverse new media tools to increase the efficacy of their interventions. The number of new media and health education studies continues to grow and the evidence based continues to increase as well.

One of the earliest strategies for Internet-based health education involves using websites to reach and educate consumers with health messages. The most common way that individual web users find online health information is through search engines like Google or Netbul. Therefore, it is very important that reliable health information providers use "search engine optimization" (SEO) strategies to increase the rank of their websites within search engines so they are easier for consumers to find them. Another important web-based strategy for health education and health communication is the use of online videos. Channels like YouTube have popularized the creation and sharing of online videos, and the literature suggests that the most persuasive videos are those that are of narrative format that contain highly emotional content.

Another effective strategy for presenting health information to users on the web to use computer programs to "tailor" the messages to each individual user. Tailoring means that each message is customized or personalized for each receiver based on his or her characteristics, preferences, and beliefs. Many studies have demonstrated that tailored messages are more effective than non-tailored messages for health education and health promotion. For example, a recent study by Ammann and colleagues (2013) evaluated a website based computer-tailored intervention for older adults. The study found that the oldest age group improved physical activity behaviors more than the other two groups. In addition, the older group spent the most time on the website, although the perceived Internet self-confidence scores of this group were lower when compared to the two younger groups.

One of the most popular activities that people do on the web and via the Internet is share personal information and follow their shared interests using social networks and social media such as Facebook and Twitter. There has been a limited amount of research done to date on the potential of using social media for health promotion, but the channels offer great potential for evaluating network effects and informing shared decision making for health. One of the areas of social media that has been explored in more depth is the potential for collecting and analyzing large quantaties of social media data for trends and sentiment analysis. Examples of this include Google Flu Trends and studies of "tweets" about influenza and immunizations.

Perhaps the most interesting and important development related to new media for health education is the incredibly rapid growth of mobile telephone use throughout the world. After telephone calls, the second most popular tool used on mobile phones is Short Message Service Messages, also known as SMS or text messages. These functions work on most mobile phones whether they are smart phones or not. The potential of using SMS for health promotion is very strong and there have been hundreds of studies conducted to date that show that SMS messages can help promote health by reminding people of appointments or treatments, encouraging people to manage and control their chronic diseases such as diabetes, asthma, or HIV, and by helping people to change their behaviors such as quitting smoking or eating more healthy.

There are many published studies that have shown the positive benefits of SMS for health education. For example, a recent article by Bock and colleagues (2013) describes the needs and preferences for using text messaging as a mechanism for delivering a smoking cessation program to young adult smokers. Using qualitative research, the authors found overall support among the young adult respondents for using SMS-based smoking cessation programs. Moreover, participants suggested including websites, social networking, an online profile, and text message features that enhance interaction between the user and the system.

As "smart" mobile phones have grown in popularity, the number of "apps" or downloadable programs that run on these phones, have shown enormous growth and popularity. There are now hundreds of thousands of available apps available on the most popular smart phones (including iPhones, Android Phones, and Windows Phones) and there have been billions of apps downloaded by individual users. Of these apps, tens of thousands of them are

related to health, fitness, and wellness. Although there has been only a small amount of research published to date on the potential effectiveness of apps for health promotion, that area of research is beginning to grow.

For example, in a recent article titled, "Apps of Steel: Are Exercise Apps Providing Consumers with Realistic Expectations? A Content Analysis of Exercise Apps for Presence of Behavior Change Theory", Cowan and colleagues (2013) examine the presence of health behavior theory in iPhone apps targeting physical activity. The content analysis was conducted by using an adapted instrument developed to assess the use of theoretical constructs in website development, and the app sample was selected from apps accessible in iTunes App Store's Health & Fitness category. The authors concluded that the sample generally lacked theoretical content and they suggest these findings highlight the need and opportunity for app developers to partner with health behavior change experts to incorporate theory into app development for possible improved health outcomes.

Similarly, in "Design, Development, and Formative Evaluation of a Smartphone Application for Recording and Monitoring Physical Activity Levels: The 10,000 Steps 'iStepLog'", Kirwan et al. (2013) focused on the use of new media to develop and evaluate an app targeting physical activity that promotes the use of step-counting pedometers to monitor physical activity levels. They developed a specialized smartphone app that allowed participants in the 10,000 Steps online physical activity program, which promotes the use of step-counting pedometers to monitor physical activity levels, to log and monitor their physical activity levels using the iStepLog app. The authors concluded that the usability testing procedures resulted in higher usability of the iStepLog app that may increase not only the usage, but the health behavior outcomes of the physical activity program.

Another digital tool that has gained in popularity in recent years is games, and video games have shown great potential for health education and promotion. Games can be played on many different platforms, including on computers, over the web, on gaming systems such as Sony Playstation or Microsoft Xbox, or increasingly on mobile phones. For example, a recent systematic literature review by Peng and colleagues explored the use of video games for physical activity promotion. The authors found that all of the published laboratory studies indicated that active video games have the capability of providing light-to-moderate intensity physical activity; however, only 3 active video game interventions supported the use as an effective

tool to significantly increase physical activity. They contend that additional research is warranted to determine the true potential and effectiveness of using AVGs to improve physical activity levels.

The areas of new media applications for health education and health promotion discussed above, including web-based and tailored interventions, streaming videos, mobile phone based health programs, and video games, represent a cross-section of current health education research involving the application of new media. Although systematic literature reviews have demonstrated the efficacy of computer-tailored health promotion (Baker et al., 2010), SMS-based interventions (Cole-Lewis & Kershaw, 2010) and video games for health (Hall et al., 2012), there is currently a paucity of published studies on the efficacy of smartphone apps for health promotion. More research and evaluation is necessary, particularly those that use designs that emphasize both internal and external validity, in order to draw conclusions on the potential effectiveness of mobile apps for measured and sustained health behavior change. Furthermore, there is a strong need for behavior change theories to inform new media interventions and for user-centered formative research strategies and closer collaborations with developers in order to improve the usability of new media applications with end users.

As we enter the third decade of the Internet revolution, we are beginning to see the benefits of early research on new media for health education. As new media platforms and channels used for electronic communication continue to evolve and expand, so too does the potential for leveraging these tools for effective health education programs. Mobile devices, in particular, offer incredible potential for revolutionizing health education because of their omnipotent presence in people's lives and their near ubiquity around the world. Other forthcoming breakthroughs with the potential to revolutionize health education include mobile interactive voice response systems for helping people overcome health literacy barriers and mobile telemonitoring devices to help individuals track, monitor, and leverage their own personal health data for managing diseases and promoting health and wellness. The future is exciting as we look forward to more innovations of new media for health education and the potential they hold for greater health for all.

ASSOC. PROF. SUZANNE SUGGS

Biography:

Professor L. Suzanne Suggs, PhD is an Assistant Professor of Social Marketing and Director of the BeCHANGE Research Group in the Institute for Public Communication, Faculty of Communication Sciences, Università della Svizzera italiana (USI) in Lugano, Switzerland. Her research examines social marketing, communication technologies, new media, and messaging strategies for health behaviour and social change. She is a co-founder of the European Social Marketing Association (ESMA), on the Editorial Board of the Journal of Health Communication, and Editor in Chief of the Journal of Communication Technology for Human Behavior.

Speech Abstract:

Role of New Media in Community Health Improvement

Current health and economic challenges require a greater need for individuals to self-manage their health and health related behaviours and to access health services in a more efficient and cost-effective way. Advances in information and communication technologies (ICT) and new media provide opportunities to advance health across communities in Europe and around the Globe.

New media are currently being used in a variety of health promoting contexts in communities. Community members talk with each other and search for health information, health organizations use them to communicate

their services and mission with audiences, and health professionals use them to facilitate skill and knowledge development among patients, consumer sna providers. For example, "PatientsLikeMe" (USA) provides a platform for people to find other people who are experiencing a similar condition, illness or symptom, to talk with each other, get advice and support and increase literacy about the condition and efficient ways to work with health care providers. "FAN Ticino" (CH) provides a platform for parents and their young children to communicate about health weight concerns, methods for improving diet and physical activity, and to share pictures, videos, recipes and activity options with each other. The WHO's "Health Cities, Healthy Lives" initiative provides a social media platform for people around the world to encourage their governments to facilitate health in their city planning activities.

New media affords many opportunities for enhancing and supporting health. In this presentation, a examples of new media projects for community health advancement that offer valuable lessons for the future of health researchers, practitioners and policy makers will be presented. Background information and highlights of current research, practice, and policy in Europe will be presented.

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DR. R. CRAIG LEFEBVRE

R. Craig Lefebvre, PhD is an architect and designer of public health and social change programs. He is the chief maven at socialShift, the social|design, marketing and media consultancy located in Sarasota, FL. His framework blends empirical research and consumer experience to engage people's imagination and passions in the design, implementation and evaluation of purpose-driven marketing programs. His recent projects have included serving on the Translating Health Communications Scientific Advisory Panel for the European Centres for Disease Prevention and Control; the development of a service design model to recreate technical assistance programs with substance abuse treatment center grantees for the Substance Abuse and Mental Health Services Administration; strategic counsel to Tel Aviv University and the Israeli Ministry of Health on their national health promotion plan and community-based social marketing demonstration projects; and strategy development and planning for the Canadian Health Network (CHN) of the Public Health Agency of Canada to incorporate social marketing and social media strategies into their health information Web site and national affiliates program.

Dr. Lefebvre is also Lead Change Designer at RTI International where his responsibilities include senior advisor to the development of a Digital Media Strategy group; advisor to the RTI Center for Advancements in Health Information Technology; lead for developing an organizational research agenda for the Mobile Technology Initiative; senior counsel on health communication and social marketing strategy for projects with the Centers for Disease Control and Prevention, Food and Drug Administration and the Agency for Healthcare Quality and Research; and development of projects

with the Sarasota Institute for the Ages, a community-based incubator and proving ground for product, service and policy innovation to meet the global needs of aging populations. He also holds an appointment as Research Professor at the University of South Florida College of Public Health where he teaches an online course in advanced social marketing and is involved with research projects at the Florida Prevention Research Center examining community-based marketing approaches to obesity prevention policy, social marketing education and training experiences offered by schools of public health, and the use of social marketing in health promotion and disease prevention programs implemented by state departments of health.

Prior to these positions, he was the Chief Technical Officer at Population Services International (now PSI) and was responsible for technical quality and impact of health projects in 60 countries for the $320+ million NGO. His technical reporting relationships included the Research & Evaluation group; Technical Directors for Maternal and Child Health, Clean Water, HIV, Malaria and Reproductive Health programs that involve social marketing, distribution and promotion of subsidized commodities (condoms, family planning products, long-lasting insecticide treated nets), health communications and total market approaches to health; a Division for global staff capacity-building activities; and quality assurance initiatives for social marketing activities of country programs.

He has also been the Chief Technical Officer at Prospect Associates and Managing Director of Health Communication and Social Marketing Programs at the American Institutes for Research where he managed creative services, marketing and research and evaluation staff in supporting numerous programs for public, private and nonprofit clients including the Agency for International Development, Burroughs-Wellcome, Centers for Disease Control and Prevention, National Cancer Institute, Pfizer, DHHS Office of Disease Prevention and Health Promotion, US Department of Agriculture and numerous state heath departments. He began his career as the Intervention Director of the Pawtucket Heart Health Program, one of the world's first community-based research programs for the prevention of cardiovascular disease.

Craig is the author of over 125 publications in the areas of community health promotion, social marketing, social and mobile media and public health and has made more than 300 presentations at professional meetings and invited

venues around the world. His recent books include Social marketing and social change: Strategies and tools for improving health, well-being and the environment [San Francisco: Jossey-Bass, 2013] and a six-volume series on Social Marketing for the SAGE Library in Marketing [London: Sage Publications, 2013]. His professional service includes serving as a Founding Board Member for the International Social Marketing Association; participation on two National Cancer Institute Special Emphasis Review Panels for Centers of Excellence in Cancer Communications Research; Advisory Board of the Social Marketing Institute; the Editorial Boards of Social Marketing Quarterly and Journal of Social Marketing; and program advisory committees for the Digital Health Communication Extravaganza and the National Conference on Health Communication, Marketing and Media. His other faculty appointments have been at Brown University, George Washington University, Johns Hopkins University and the University of Virginia.

He is a Senior Fellow in the Society for New Communications Research, and was elected a member of the American Academy of Health Behavior in 2003 and a Fellow in the Council on Epidemiology and Preventive Cardiology, American Heart Association in 1988. His work has earned him the William D. Novelli Award for Innovations in Social Marketing with the NCI's 5 A Day media campaign and a Silver Anvil from the Public Relations Society of America for the USDA Team Nutrition program. He received his Ph.D. in Clinical Psychology from North Texas State University and completed post-doctoral fellowships in Behavioral Medicine at the University of Virginia and the University of Pittsburgh. He also produces and writes the blog On Social Marketing and Social Change [http://socialmarketing.blogs.com].

Selected Recent Publications

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- Lefebvre, R.C. & Kotler, P. (2011). Design thinking, demarketing and behavioural economics: Fostering interdisciplinary growth in social marketing. In G. Hastings, K. Angus, & C. Bryant (Eds.), The SAGE handbook of social marketing (pp. 80-94). Thousand Oaks, CA: SAGE Publications.

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Mobile and Social Media Practices for Achieving Public Health Objectives

Social and Mobile Technologies Present New Ways for Thinking About Behavior Change, Health Communication, Health Promotion and Social Marketing

"New communication technologies and the emergence of what is being called "Web 2.0" are providing the opportunity for health promotion professionals to truly engage with their patients, customers, and audiences in ways unimaginable just a few years ago. Some of the more recent applications include: text messaging and mobile telephones for educational interventions to reduce sexually transmitted diseases among teenagers; interactive and entertaining health websites such as VERB and Whyville; sites where people with medical conditions can seek, give, and receive advice from other patients and healthcare providers (Organized Wisdom); and blogs of all descriptions hosted by health professionals, commercial entities, patients and advocates, and CEOs of healthcare organizations. Yet, these innovations have barely scratched the surface of the potential for these new technologies.

What is underappreciated by many social marketers who are beginning to experiment with these new technologies is that they are not simply new types of media with which to do the same old things. These new media signal a shift in thinking about how we communicate with our audiences. Even more alarming, in using these new media many marketers – commercial and social – continue to perpetuate the myth of the source-message-channel-receiver paradigm rather than embrace the collaborative and dynamic communication models these new technologies embody. While the reality has not changed, what these new technologies make plain is that it is, indeed, a networked

world – one in which we do not design "messages" for priority audiences, stakeholders, partners, donors, and others groups, but a world in which they talk back to us, and just as importantly, with each other.

Social media facilitate collaborations and interactions among others. In its simplest forms, these media can be thought of as digital extensions of the interpersonal channels of promotion (the proliferation of word-of-mouth [WOM] and viral marketing campaigns in the commercial sector) and the narrowing of broadcast-type communication (slivercasting). However, thinking about these new media as simply new promotion channels to exploit misses the essence of what the new revolution is all about: using media in new ways NOT using new media. These new technologies have implications for how we think about the behaviors, products, and services we market; the incentives and costs we focus on; the opportunities we present; and places where we interact with our audience and allow them to try new things." [pp. 31-32]

All Media is Social: The Cluetrain Manifesto

"The appearance of the Cluetrain Manifesto in 1998 marked the emergence and definition of the web as an audience-centric force. Although the earliest years of the development of the Internet envisioned a digital world of democracy, in practice the web had, by most accounts and appearances, become a space where technological prowess, top-down planning, closed systems, and money (both for development of sites and access) had become predominating themes. The Manifesto, a set of 95 theses, challenged this status quo and has, directly or indirectly, refueled the search and development for making the web the social tool it is becoming. It also clearly stated that the audience was in control. Here are just a few of the statements that stand behind the audience as content creator movement.

Markets are conversations.

- The Internet is enabling conversations among human beings that were simply not possible in the era of mass media.
- These networked conversations are enabling powerful new forms of social organization and knowledge exchange to emerge.
- In just a few more years, the sound of mission statements and

brochures – will seem as contrived and artificial as the language of the 18th century French court.

- Even at its worst, our newfound conversation is more interesting than most trade shows, more entertaining than any TV sitcom, and certainly more true-to-life than the corporate websites we've been seeing." [p. 34]

"Once you have accepted, if not mastered, the Zen of Web 2.0, you are ready to face your biggest challenge: people formerly known as the audience. This phrase embodies the radical shift in perspective with which all professionals in the marketing and communication professions are grappling – the audience is in charge of what they look at and listen to, and if they don't like what you have, they'll just make their own or find someone else's." [p. 38]

Implications for Health Promotion

"What I suggest as first steps in responding to this world and effectively engaging with it are:

Be Everywhere. The idea of media multiplexity, using multiple channels and technologies in our programs, is paramount. In the networked and connected worlds, mobile phones may be more important than television for some audiences, podcasts less relevant than radio, print magazines irrelevant to users of RSS readers. But looking for "the magic bullet" is not where the commercial marketing is focused. Instead, ubiquity is the new exclusivity.

Interactivity and AGC. The offering of more, not some, occasions for our audiences to become people, collaborators, and directors must be built into our program development philosophies and practices. This means moving beyond coalition meetings and focus group rooms and embracing people as idea generators, strategists, and producers. A finding from the Edelman Trust Barometer Studies, that people trust information coming from people like themselves – not scientists, CEOs, or celebrities – goes to the point that elitist notions of message delivery need to be dumped. Whether people shop for shoes, electronic devices, books, hospitals, or solutions to health problems, what they look for is information from their peers – not from us, the "experts."

Collaboration and Sharing. This philosophy will have a substantial impact on not just how we think about the people formerly known as the audience, but how we collaborate with our colleagues, partners, and competitors.

When public health and social marketers learn how to harness and utilize our collective wisdom through things like social marketing wikis, we can unleash talent, apply wisdom, and be more efficient stewards of the program resources we have to address the health and social issues we face.

Social Networks and Social Capital. These new technologies also bring us to a new appreciation for the study of social networks and social capital. Somewhat intangible ideas now come alive on the web every moment of everyday. We can no longer ignore them. I believe that incorporating these two concepts into the core of what we do as social marketers is also one of our great challenges to improve our effectiveness and relevance in the next decade. Social media allows us ways to operationalize these concepts and create interventions to directly impact them. Inputs and outputs now become observable, tangible events, not the whispers and presumptions of interpersonal communication and group dynamics we have had to cope with in the past.

Aggregate or Centers of Gravity (COGs). The concept of "the long tail" (Anderson 2006) brings the commercial implications of the web to life by suggesting that although numbers will accumulate to a few – the COGs like Amazon, MySpace and Yahoo! – the space for many different groups to occupy niches or segments of the tail is wide open and more accessible than ever before.

One response to this observation is to try identifying "our" spaces on the long tails of health and social improvement. Another strategy is to search for the spaces others have already staked out. When you embrace the ideas I've been describing here, the choice is obvious.

Education, Engagement, Entertainment, Empowerment, and Evangelism. Finally, I propose that there are 5 Es we need to keep in mind as we work in this new world, whether the work is enabled by the "old" technologies or the latest ones. Again, it is not the technologies we use in our programs that need to change, but our frames for looking at the world and thinking about what we do. In designing interventions that will effectively lead to behavior change, we have to ask ourselves:

1. Do we harness the ability to educate people about issues and problems that are relevant to them (not us);

2. Is what we do engaging them in positive and meaningful ways;

3. Is there an entertainment value to our offerings;

4. Do people believe and feel empowered as a result of their experiences with our programs (products and services); and

5. Do we take advantage of every opportunity to let our customers and clients become our evangelists? If we fail to do all five, we are failing them and ourselves. And failure in our work is not an option." [p. 41-42]

How mobile applications are being used to address each of the 4 Ps of the marketing mix—products and services, price, place, and promotion—to achieve behavior change.

Products and Services

Mobile phones are rapidly becoming adjuncts or features of behavior change products and services; most commonly they are combined with Web sites to support behavioral monitoring, social support networks and feedback. The empirical evidence for the efficacy of these approaches is just developing. Hurling et al. (2007) evaluated a 9-week physical activity program that included both Internet and mobile components… In discussing their results, Hurling et al. (2007) noted that not only was the Internet and mobile phone– based intervention effective in increasing levels of physical activity, but also all parts of the Web and mobile system were used by at least one third of participants. They note that each individual requires an idiosyncratic selection of support tools to achieve behavior change, such that no one tool can be universally considered the most influential. Mobile technologies add to the arsenal of possible intervention products and services; they do not necessarily replace them.

Price

Especially in the area of sexual behavior and sexually transmitted diseases, where confidentiality and stigma can keep many people away from information and service providers, mobile phone applications are quite prevalent.

… the designers of the San Francisco project, SEXINFO, looked at the high rates of cell phone use among their priority audience— 15- to 19-year-old

African American youth. They developed an opt-in text messaging service to provide information about basic sexual health and relationship issues and referrals to youth-oriented services. In the first 25 weeks of offering the service, nearly 4,500 inquiries were made via SMS and 2,500 of those led to requests for more information and/or referrals (Levine, McCright, Dobkin, Woodruff, & Klausner, 2008). The authors concluded from this investigation that cell phones and text messaging were both feasible and culturally appropriate ways to provide sexual health information and service referrals to at-risk youth.

One of the exciting opportunities of mobile phones for public health is how to utilize this technology to overcome many psychological and social barriers (costs) people have to engaging in new behaviors, develop mobile-mediated incentives and reinforcers, and create new ways of providing social support to people who are trying to change behaviors.

Place

One of the great strengths of mobile technology is to place-shift many different tasks and also to use global positioning services (GPS) to create locator applications. In one of the earliest applications of the latter, a mobile phone service in South Africa began in 2007 to provide HIV testing station locations through the use of SMS. By sending an SMS with the term HIV followed by the name of their town or postal code, South Africans can receive the location of the two nearest traveling HIV testing units (Ramey, 2007).

Place-shifting finds mobile applications in the use of SMS and other mobile technologies to shift clinical interactions from health provider and clinic offices to people's natural environment. The SEXINFO project is one example of this place-shifting for asking questions about sexually transmitted diseases from the clinic to wherever the need occurs. BeWell Mobile (www.bewellmobile.com) provides a technology platform to health care providers and patients that incorporates self-monitoring, via cell phones, for remote patient monitoring of conditions such as asthma and diabetes…

Promotion

When most people think of a mobile phone, they think about communication or promotion opportunities. Yes, cell phones do provide the opportunity for one-to-one communication that becomes independent of landlines and

cables (and will likely become more so as wireless access to the Internet increases and Web sites can be accessed by more people from their phone). Providing health information on demand is one arena where this revolution is already taking place." [pp. 492-493]

Next Steps for Health Promotion

"The use of mobile phones offers public health professionals the opportunity to develop and expand their relationships with others (whether they are called patients, audiences, users, constituents, partners, or colleagues). Mobile technologies are unsurpassed for offering opportunities to engage people personally on such a scale and also when and where they are most likely to be open to communications and behavior change. They are more than a communication device—they can become marketing tools that address all elements of the marketing mix when strategically considered in the context of how people use them. Cell phones are an always-on, two-way communication channel, a signal or cue for action, a resource of instant access to health information, a tool for social support and the development of social capital, a production tool, a way to engage audiences, and a data collection and feedback device.

Alan Moore (2008) states that in the future, mobile technologies will play the roles of life enablers, life simplifiers, and life navigators for people. In this world, the language of search, proximity, recommendation, links, discovery, and the currency of information become the essence of new approaches to addressing issues of equity, civic engagement, poverty, health, and harnessing our collective intelligence to improve the public's health and well-being." [p. 493-494]

Why Are People Using SNS?

"If nearly half of all US adults are using SNS such as Facebook, Twitter, MySpace and LinkedIn, what is their appeal or attraction? Roughly two thirds of SNS users say that staying in touch with current friends and family members is a major reason they use these sites, while half say that connecting with old friends they have lost touch with is a major reason behind their use of these technologies.24 Other factors play a much smaller role - 14% of users say that connecting around a shared hobby or interest is a major reason they use SNS, and 9% say that making new friends is equally important. Just 5% and 3% of SNS users, respectively, say they read comments by public figures and find

potential romantic partners. 25

When it comes to health and medical issues though, the appeal of SNS is very different; only 6% of internet health-information seekers go to an SNS, 11% report visiting a patient online community, and 48% said they go to a medical website such as WebMD.26 Healthcare professionals who use social media for work-related purposes do so to access healthcare-related education (54%), share research or articles with colleagues (33%), and to communicate with employers (18%). Only 8% said they use social media at work to connect with patients.23 What these data make clear is that SNS sites are not sought out by people primarily for the health and medical information they can provide. Instead, social media are used to find and connect with people and as a tool to build and maintain relationships with people in similar circumstances. Among health care professionals, there is minimal use of social media to nurture and extend relationships with patients." [p. xx]

What Are They Doing With Social Media?

As we noted at the beginning of the paper, social media are more than SNS sites. And as we just saw in the last section, SNS are not used primarily for health and medical information discovery or sharing. However, there are other social aspects of the medical and health information space that are important to keep in mind. For example, when asked how they have used social media for health-related purposes:

- 42% of respondents said they have used social media to look up consumer reviews of health treatments or physicians;
- 30% said they have supported a health cause through social media;
- 25% said they have shared their own health experiences on social media websites; and
- 20% said they have joined a health forum or online health community.22

Social media have been found to potentially influence people's health decisions:

- 45% of respondents said health information obtained through social

media sites would cause them to seek a second opinion;

- 41% said social media sites would influence their choice of a specific physician, hospital or medical facility;

- More than 40% said health information on social media sites would affect how they manage a chronic condition or approach diet and exercise routines; and

- 34% said social media websites would affect their decision to take certain medications.22 [p. xx]

The Evidence for the Effectiveness of SNS for Improving Health

Research strongly links various properties of the social environment (e.g., the diversity of one's social networks, structural characteristics of these networks, the degrees of separation between people, the number of close social contacts, the provision of social support, social influence, access to resources, reducing social isolation) to both psychological and physical health as well as the practice of high-risk behaviors. 28-32 These findings are used by many proponents to justify the use of social media and SNS in disease prevention, detection and treatment. Indeed, online communities are full of stories that attest to the ability of social media sites to deliver on these promises.

There are few experimental studies that document a causal relationship between social networks and health in either the online or real world context.28 That is, there is very little empirical evidence on which to base the assertion that changes in the properties of one's social environment lead to improved behavioral and health outcomes. In particular, using online social networks for health improvement has received limited research attention.3 [pp. xx]

Future Directions for Research

The research demonstrates that the phenomenon of people using the internet and especially SNS for health information seeking and for health interventions is no passing fancy. Yet, there have been few controlled studies from which to draw valid conclusions for the efficacy of SNS to impact health-related knowledge, behaviors and status.34 The literature has also not produced examples of trial designs that would allow for systematic

investigation of the relative benefits of various SNS features and their impacts on social network typology and dynamics.33,55 And important questions remain unaddressed by research that could improve the quality and efficacy of the many social media sites that currently exist.

Bennet & Glasgow33 posed several questions for future research efforts in this field to consider:

- Is social networking more useful for some outcomes (e.g., weight loss, physical activity promotion, smoking cessation) than for others (e.g., pediatric enuresis, HIV/STD prevention)?

- What are the relative benefits of professionally moderated versus unmoderated social networking?

- Does intervention efficacy vary as a function of whether an individual chooses to affiliate with (versus being assigned to) a given social network?

- Are specific social-networking designs (e.g., information aggregation, forums, blog-style comment systems, syndicated content strategies) associated with differential Web site utilization?

A workshop that explored a research agenda for online social networks and smoking cessation developed an extensive list of questions that included understanding fundamental mechanisms of online networks, how information and behavior diffusion occur through online social networks, designing intervention systems that leverage online social networks and mobile technologies, and evaluation of smoking cessation trials that link social network structure and dynamics to outcomes. 55 We propose additional questions for further study:

- What types of people (and with what types of health and medical conditions) are more likely to voluntarily seek out online digital support networks, engage with them and persist in using them to change health related behaviors and/or manage health and medical conditions?

- To what extent are “general’ social networks used by people for instrumental and/or emotional support in making behavior changes and/or managing health conditions? What characterizes these people? What outcomes do they expect and experience?

- What types of characteristics are people looking for in health SNS, such as being able to socialize with others, access to information, having mobile access and privacy? 56

- What types of network data, for what types of target behaviors, and under what circumstances are needed to create feasible and effective social network interventions? What kinds of social network analyses are necessary to evaluate their effectiveness? 50,55

- Is behavior change more likely to occur in an SNS with people they know, have previous connections with or share other interests? 57,58

- Does participation in SNS on any kind lead to, or sustain, better health status – whether this is greater resistance to infections, better prognosis among people with life-threatening illnesses, less cognitive decline or more resilience to daily life and work stress? 28

- Do SNS facilitate the adoption and/or maintenance of risky or healthy behaviors in a social network and through what mechanisms (high network centrality, degree of openness, susceptibility, threshold)? 31,32

- How can online patient communities be engaged with researchers to evaluate medical interventions and conduct post-market surveillance studies of medical drugs and devices? 59

"Social and mobile technologies are disruptive to traditional ways of thinking about solving wicked problems. They provide additional support for the idea that changing health and prosocial behaviors is a network phenomenon and not just an individual proclivity. These new technologies and software are making social networks more tangible to people, including social marketers, both in terms of the interactions they support and our ability to measure results from using them. At the same time, many principles of marketing, such as segmentation and the marketing mix, still operate in this new world. Social technologies also remind us that user-generated content and engagement (or co-creation) is essential for developing social marketing programs in this new environment too. Nevertheless, we cannot approach the new social media with all the same cookie-cutters we used before and nothing more. We will have to adjust our intervention strategies and create new ones, using concepts such as social objects. Only then can we make use of the powerful role social media and mobile technologies can play in generating a scalable,

multidirectional process to improve the well-being of people and the society in which they live." [p. 444]