

Visiting scholar grant report:

A COLLABORATIVE STUDY ON INTERVENTIONS FOR SMOKING CESSATION IN CARDIAC PATIENTS

Nadine Berndt is a PhD Fellow at the Department of Health Psychology at the Open University of the Netherlands. She studies the (cost-)effectiveness of two intensive counseling methods for smoking cessation in patients with coronary heart disease. During her visit at the University of California San Francisco (UCSF) she worked with Professor Wendy Max at the Institute for Health and Aging to establish a health economic model to estimate the long-term cost-effectiveness of the interventions under investigation. During her stay she also had the chance to meet Erika Froelicher, professor Emeritus, at the School of Nursing to particularly work with her on the effectiveness study. Nadine Berndt was a visiting scholar at UCSF in the period from the 27th of February to the 30th of March 2012.



University of California
San Francisco

UCSF is a leading university dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care. It is dedicated exclusively to health sciences. One of the Institutes of UCSF is the Institute for Health & Aging which has made major contributions to the fields of health policy, aging, disability, health promotion, and the economics of tobacco control.

Collaboration with Professor Wendy Max at the Institute for Health & Aging

My dissertation research started in 2009 and examines within the cardiac outpatient setting two intensive smoking cessation interventions; i.e. telephone counseling and face-to-face counseling both combined with nicotine replacement therapy. The effectiveness study specifically compares health and smoking cessation outcomes, while the cost-effectiveness study compares the health outcomes with costs of the interventions, and assesses their budgetary impact. As regards the economic evaluation, my visit to the Institute for Health & Aging at UCSF was particularly oriented towards a collaboration to develop a Health Economic Model.

My primary supervisor at UCSF was Professor Wendy Max. Wendy is Professor-in Residence of Health Economics and Co-Director of the Institute for Health & Aging at the Department of Social and Behavioral Sciences. Her work includes a study of the cost of smoking in California, the development of a US model of smoking costs, and its application to the public sector. To date,



Wendy has developed various models of the economic impact of the health effects and costs of tobacco use. Due to her expertise, I contacted Wendy in April 2011. I told her that I was interested in her research on health economics, with particular emphasis on the economic impact of smoking and health expenditures. I also mentioned that I was potentially interested in visiting her at UCSF as a visiting scholar to learn from her on how to design, develop and execute cost-effectiveness analyses and health economic models for smoking cessation interventions in practice. Wendy responded very fast and informed me that she would be interested in hosting me as a visiting scholar. Shortly after, a cordial official invitation letter appeared in my Email inbox and we started arranging all the formalities for me going abroad. As such, I

excitedly submitted an application for the CREATE Visiting Scholar Grant. I was very delighted when I heard that I awarded the grant!

When I arrived in San Francisco in February 2012, I first had an introduction session at the International Students and Scholars Office to get information about the campus facilities, student life, recreation, transportation and activities for international students at UCSF. The second day of my visit at UCSF I met Wendy for lunch. She welcomed me very warmly and introduced me to the faculty staff, my personal office space including computer equipment, and the library facilities. She also helped me arranging my short-term ID card to have access to all relevant UCSF buildings. Although Wendy was very busy since her own teaching course was running during my visiting period, she did everything possible so that this visit would be of high benefit for my project and my education. She introduced me to many other faculty members who possessed expertise relevant to my research, resulting in numerous very interesting and cooperative meetings with great people (such as Professor Stanton Glantz whose work leads the field of Tobacco Control). I believe it was my fourth day at UCSF when we went to the main campus (Parnassus) to attend a talk about the US Framework Convention on Tobacco Control at the Center for Tobacco Research and Education.

Professor Wendy Max & Nadine Berndt at the UCSF Laurel Heights Campus



Wendy and I decided to meet once up to twice per week to share our common research interests, and to discuss about my project for which we aimed to develop a health economic model. Wendy was hardworking, but always enthusiastic and humorous, and I admire her for being so tremendously smart! Towards the end of my visit, we had a first concept of the Markov Tree Model, which we are going to run in a specific software for building and testing health economic models. The model (as simplified below) will allow us to extrapolate decreases in smoking (resulting from the smoking cessation interventions) to long-term health gains. This will then give us estimates of the total effects on healthcare costs.

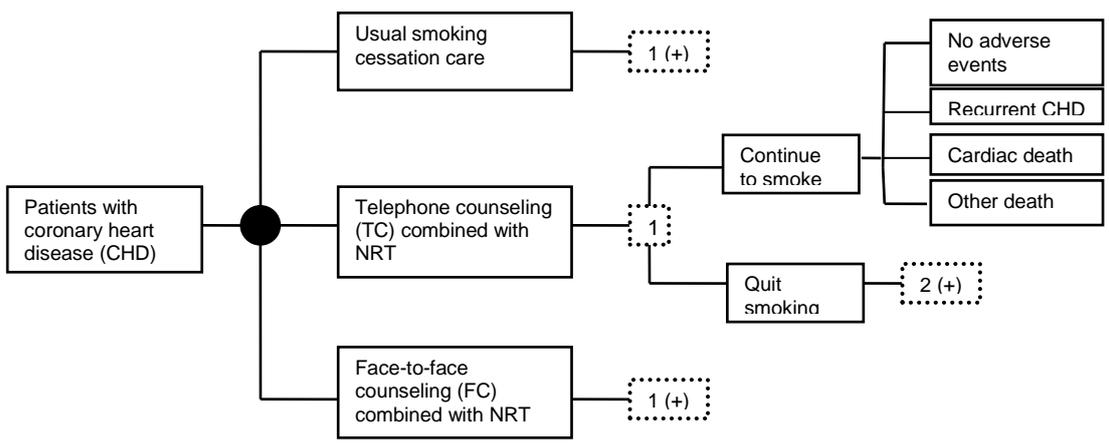


Figure 1. Hospitalized patients with CHD receive (1) usual care, (2) telephone counseling with nicotine replacement therapy (NRT) or (3) face-to-face counseling with NRT in the three months after discharge. Patients experience health events whose likelihoods depend on their smoking status. 1 and 2 represent probability nodes and the plus sign (+) signifies clones of these nodes.

We are currently writing a joint scientific article on the cost-effectiveness of the two intensive smoking cessation interventions in cardiac patients that are evaluated in my project and are planning to write another paper on the outcomes of the health economic model.

Collaboration with Professor Erika Froelicher at the UCSF School of Nursing

The research program of professor Erika Froelicher, professor Emeritus, focuses on the prevention through nursing interventions to reduce cardiovascular disease risk factors such as smoking cessation and depression. She also has a strong interest in physiological, psychosocial, and economic issues relevant to Expertise in methods, design, and epidemiology. In the past, Erika tested the short- and long-term efficacy of a nurse-managed smoking cessation and relapse prevention program for women smokers, hospitalized for cardiovascular disease (WINS study). Since this intervention is very similar to my dissertation research on smoking cessation treatment delivered by nurses to cardiac patients, I also collaborated with Erika during my visit at UCSF.

Although Erika has officially started her retirement, she is still very active by mentoring graduate students, teaching courses and traveling all around the world. During our first meeting at the School of Nursing, we discussed the need of smoking cessation interventions for cardiac patients and the methodology of the interventions in my PhD study. We had a great first conversation and figured out that our research interests are strongly linked. Since Erika has been involved in the development of the US Guideline Treatment Tobacco Use and Dependence, received numerous awards and honors from the American Heart Association, and has contributed to many papers in high-impact journals, her input was invaluable. The next time we met at her home where we spread around her dining table to work on the short-term effectiveness paper of the interventions under investigation in my study. Her expertise provided clarity in terms of appropriate methodology and analysis for the paper. She also provided me with useful literature she has published about the WINS study which additionally helped me to advance my paper. Anyone who has ever met Erika knows that she is a great teacher, encouraging and brilliant. Erika and I met once a week for the month March to talk through my project, and since my return to the Netherlands, our conversations continue over Skype and Email. She really helped me to find new energy and motivation towards the end of my dissertation.



Professor Erika Froelicher &
Nadine Berndt
at the UCSF School of Nursing

Outcomes of the visit and the future

My visit to UCSF was supported by a visiting scholar grant from CREATE. Without the grant support it would not have been possible to go abroad to collaborate with Professor Wendy Max and Professor Erika Froelicher. My stay allowed me to study the latest theoretical and empirical perspectives of health economics and tobacco research in the US, to present my own research at the Institute for Health & Aging and other relevant Institutes at UCSF, and to network, establish and strengthen international cooperation in

academic research for the future. The weekly seminars and discussion groups I additionally attended were very helpful for meeting the people actually standing behind the methodology and tools linked to smoking cessation research. To sum up, my visit to Professor Wendy Max and Professor Erika Froelicher was an amazing opportunity and a fabulous experience. Unfortunately, my time as a visiting scholar at UCSF was short - but long enough to find two fantastic mentors who inspired, engaged and motivated me for my upcoming career. Everything I learned I will definitely use for my future research, and my visit was just the start of a fruitful collaboration. Being awarded with the CREATE Visiting Scholar Grant made a valuable impact on my development as a young researcher!

A special place in this report should be given to my supervisors at the Open University of the Netherlands, Dr. Catherine Bolman and Professor Lilian Lechner, for supporting my visit to UCSF. I would also, once again, like to express my gratitude to Professor Wendy Max and Professor Erika Froelicher.