

Practice-based evidence for weight management: alliance between primary care and public health

A Stewart Truswell^a, Gerrit J Hiddink^{b,*}, Lawrence W Green^c,
Richard Roberts^d and Chris van Weel^e

^aUniversity of Sydney, Human Nutrition Unit, Biochemistry Building, G108, NSW 2006 Sydney, Australia, ^bNutrition Communication through Health Professionals Communication Strategies, Communication Science Social Sciences, Wageningen University, PO Box 8130, 6700 EW Wageningen, The Netherlands, ^cUniversity of California at San Francisco, Epidemiology & Biostatistics, 66 Santa Paula Avenue, San Francisco, CA 94127, USA, ^dWorld Organization of Family Doctors (Wonca), University of Wisconsin Department of Family Medicine, 1100 Delaplaine Court, Madison, WI 53715, USA and ^eUMC St Radboud, Primary & Community Care, PO Box 9101, Nijmegen, The Netherlands.

*Correspondence to Gerrit J Hiddink; E-mail: gert.janhiddink@wur.nl

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This supplement presents the papers from the Heelsum International Workshop on Nutrition in General Practice, held in Heelsum, near Wageningen in the Netherlands, on 13–15 December 2010.

The authors came from the Netherlands, USA, UK, Germany, Portugal, Spain, Iran and Australia. It was the 6th of these Heelsum workshops, held every 3 years, in 1995, 1998, 2001, 2003, 2007 and now 2010; all have been published in full in the *American Journal of Clinical Nutrition*,¹ the *European Journal of Clinical Nutrition*,² the *American Journal of Clinical Nutrition*,³ the *European Journal of Clinical Nutrition*,⁴ *Family Practice*⁵ and again in *Family Practice*.

This series of workshops have provided experiences and research from inside general practice. The last 15 years have seen major changes in general practice. Computers now routinely used by doctors in their consulting room capture clinical observations and access remote information. Patients increasingly search the Internet for their symptoms or disease name. Overweight and obesity have increased so much that GPs are expected to advise patients on its management even if this is not the presenting complaint. At the same time, it has become obvious that GPs cannot control the obesity epidemic on their own. Nor can they expect to be successful with most of their individual patients without referral, access and support to and from community resources. Community actions are also essential, requiring policy and resource support from national governments, mass media, municipalities, sports facilities, public transport, schools and the food industry.

Overweight/obesity now affects children, adolescents and adults. In the field of obesity, primary care and public health can form natural alliances with supermarkets, food industry, schools, gymnastics, sporting clubs, employers, child protection and medical insurance.⁶ The other theme of this 6th workshop

is undernutrition in old people. Numbers of old and very old people are increasing in developed countries. Their nutrition management is becoming a bigger challenge for family doctors and here too the whole community has to collaborate. In this field, primary care and public health can form natural alliances with supermarkets, food industry, meals on wheels, chain of care and community screening of elderly.⁶

Inside general practice

The Dutch College of General Practitioners (NHG) published Practice Guidelines on Obesity in 2010, described by Van Avendonk *et al.*⁶ Although rates of obesity are lower than in many developed countries, 12% of Dutch women, 11% of men and 2% of children are now obese. GPs should examine and treat patients who ask for help with weight reduction and obese/overweight people with co-morbidities (diabetes, cardiovascular disease and sleep apnoea). Treatment essentially is a reduced caloric diet and increased regular moderate exercise. The guideline also gives advice on careful management of obese children. In Britain, the Counterweight programme⁷ is now operating successfully in general practices up and down the country. Nearly 10 000 obese patients were enrolled in 2010. The Counterweight Project Team describes methods and results.⁸ Weight losses are moderate but sustained. This is a realistic and safe programme and experience of participants is valuable for health service planning. The programme has received better funding in Scotland than in England. Hiddink *et al.* report the second follow-up of a unique longitudinal study, 1992, 1997 and 2007 of changes in noticing and treating patients' overweight by large samples of Dutch GPs.⁹ There have been big changes in GPs acceptance of the weight—health relationship

and perception that treating obesity is one of their tasks, but nowadays, they are not alone: the rest of society is also becoming active.

Assendelft *et al.*¹⁰ has made a study of the work involved for GPs in prevention programmes such as Health Check and Prevention Consult. The latter was launched at the annual conference of GPs in late 2010. Brotons *et al.*¹¹ report on a questionnaire sent to 40 patients of 10 practices in 22 European countries. Many patients hoped to improve their eating habits and increase physical activity. But only about half the patients said that their doctor had initiated discussion about body weight and exercise.

The best type of food

Streppel *et al.*¹² investigated the question whether foods with a higher nutrient density (and lower in fat and sugar) can be shown to help in weight control. They used data from the large Rotterdam cohort (~5000 men and women aged 55+ years). The NRF9.3 score (Nutrient Rich Food score 9.3) consists of nine nutrients to encourage—protein, dietary fibre, vitamin A, vitamin C, vitamin E, calcium, magnesium, iron and potassium—and three nutrients to limit: saturated fat, added sugar and sodium. The NRF9.3 sum scores provide a ‘weighted average’ daily food quality score. Subjects with a high sum score were considered to have a healthier dietary pattern than those with a low score. However, analysis at the baseline showed surprisingly little benefit on anthropometry. Saris presented a comprehensive review of different food patterns and their role in weight control and maintenance. These include fat consumption, low glycaemic index, increased protein, liquid diets and calcium and the DIOGENES (Diet, Obesity and Genes) study, which was recently reported.¹³

Evidence-based medicine

Van Weel *et al.*¹⁴ describe practice and research, seeking common ground to benefit people. Practice and research have different realities. Reviewing the evidence is the start, not the conclusion, of a dialogue. How to match empirical and experiential data? The context is from disease to person to people. They conclude to a paradigm shift: from research for practice to practice through research. Green is a leading authority on health promotion and planning and regular speaker at Heelsum workshops. He gave four major reasons for the importance of alliances between primary care and public health.¹⁵

- Most of the influences on weight management behaviour are beyond the control of primary care,

- Most of the influences are not subject to RCT methods of evidence-based medicine,
- The ratio of intervention effort to impact does not favour clinical interventions,
- Physician support is needed for community intervention success.

Green has emphasized the gap or pipeline between a research results and clinical action. We need better bridges between trials and good appropriate practice. He discusses the barriers to translation and the need to include the patient’s perspective. Research funding should give more priority to practice-based research, including collaborations with community groups. His paper with colleagues from Johns Hopkins University and the Centres for Disease Control takes the example of Primary Prevention of Type 2 diabetes and shows how integration of efforts between primary care and public health can produce more effective outcomes.¹⁵

In Discussion, Richard Roberts, President of the World Organisation of family doctors, WONCA, emphasized that probability ($P \leq 0.05$) is the state of information, not the state of reality. He quoted results from a study that examined how well major clinical research stood up in subsequent years.¹⁶ Generally, such research does not hold up well with only 44% of major studies coming to conclusions that are affirmed by subsequent studies.¹⁶

Hooft van Huijsduijnen *et al.*¹⁷ have made a systematic review of 111 papers (!) to find out how often theoretical models of behaviour change were used in research on nutrition guidance practices of GPs. Forty-five per cent used theoretical models. It would be beneficial if more researchers bring in a theoretical basis when they plan their research. Nasser *et al.*¹⁸ discussed the importance of applicability and transferability of evidence-based medicine in the context of general practice.

Community work

Seidell *et al.*¹⁹ in a major paper discusses a systems approach for obesity between disease management and multi-sectoral prevention programmes. He gives examples of work in progress by the World Health Organisation (WHO), the EPODE (Ensemble, Prévenons l’Obésité Des Enfants) international programme and of consortia of health professionals.

Without waiting for the final scientific answers, every section of society can work together to make the environment more supportive towards healthy lifestyles. Naul *et al.*²⁰ have a remarkable programme, started in 2004 in small towns on two sides of the German/Netherlands border, entitled *Gesunde Kinder in gesunde Kommunen* (German) and *Gezonde kinderen*

in gezonde gemeenten (Dutch). Work involves health and nutrition teaching in primary schools and exercise activities five times a week with community support. In early results, they find reduction of overweight children with—better—motorfitness.

Helmink *et al.*²¹ report a new programme, 'Beweegkuur' (prescription for movement) which is a collaboration between general practice, physiotherapists/sports facilities and dieticians. Pilot trials have been mostly encouraging. The ultimate support of GPs work with obesity could be a national mass media campaign. Verheijden *et al.*²² attempted with a panel of >1000 representative people to assess the impact of two Dutch campaigns: the first general and the second to a lower SES subgroup. Impacts appeared to be small. Other changes in society happen at the same time as a mass media campaign.

Loureiro and Freudenberg²³ describe and compare municipal activities towards healthy nutrition and recreation in New York, London and Lisbon. Szwajcer *et al.*²⁴ investigated nutrition awareness in five groups each of 100 women: not pregnant, not pregnant with child wish and first, second and third trimesters of pregnancy. They report all three groups of pregnant women have about the same higher level of nutrition awareness. This could carry over into the woman's future life and possibly the next generation if effectively encouraged, enabled and reinforced.

Alliances

Koelen *et al.*²⁵ set out their important conclusions from research on prerequisites for success of alliances. This applies to alliances between GPs and community workers. Partners bring in individual differences which can be driving forces OR obstacles. The different skills of partners should make alliances strong.

Fransen *et al.*²⁶ describe how the idea of EPODE is being applied in the Netherlands and meetings between different groups in three different municipalities in the Nijmegen area. Many different interventions are happening but in a fragmented way. More attention needs to be paid especially to involving parents of schoolchildren. Molleman and Fransen²⁷ describe the principles behind the setting up of collaborations between universities and health promotion in the Netherlands, Academic collaborative centres for health promotion. One of the challenges is that the scientific research partners have so far been more dominant.

Duijzer *et al.*²⁸ have completed a pilot study with general practice doctors and nurses, dieticians and physiotherapists in Apeldoorn of a diet and exercise programme in people with impaired glucose tolerance, a simplified version of the SLIM (Study on Lifestyle Intervention Maastricht) programme to delay/prevent type 2 diabetes.²⁹ It is hoped that the experiences can

be built into a bigger trial next year. Swan *et al.*³⁰ reviewed the literature and conducted interviews to look for a set of science and practice-based recommendations for weight management interventions in obese adolescents. One of the important findings was how communication has to be appropriate for the stage and maturity of adolescents. They stress the complex social nature of obesity and the present gap between research and practice.

And undernutrition

The Dutch College of General Practitioners in 2010 also released practice guidelines on undernutrition. One of the messages is 'Family physician, make sure that your still healthy, elderly patient is in optimal nutritional state. When he or she is sick it's too late'. In developed countries, most undernutrition occurs in old people, reviewed by Morley.³¹

This protein-energy undernutrition is frequently overlooked by physicians and is specially common in old people at the time they are discharged from hospital. Loss of weight in the elderly carries increased risk of mortality even in obese and diabetic people. Muscle (and strength) is lost as well as fat and immunity is impaired. Weight loss and anorexia have multiple causes, with depression high on the list. The 'Intercom' trial in the Netherlands is a good example of the benefit of nutrition and building muscle strength. The Cochrane database reported significantly reduced mortality with protein and energy supplements across 31 trials. Sarcopenia, next reviewed by Morley³² is age-related loss of muscle bulk, defined as muscle mass >2 SD below mean for young persons. It leads to loss of strength and power, risk of falling and eventually to frailty. Sarcopenia is very common in people over 80 years of age. Inactivity and inadequate protein intake contribute to its development. Resistance exercise and an adequate protein intake are the cornerstones of management.

Finally, Stewart Truswell described a historical overview Behind the scenes of Doctors' nutritional advice.³³ In conclusion, the primary need to align primary care and public health, GPs and the community, in addressing nutrition-related health problems, is generally accepted. To have a lasting effect, this alignment needs to be more explicit and precise. Major features for success that emerged from the Heelsum presentations and discussions included speaking the same technical language and engaging in joint primary care and community activities for primary prevention of obesity, weight management and other nutrition-related health problems. From the doctor's surgery and from health campaigns, a consistent message should come that people have the key to their own health, that habits can be changed and lifestyle change can be supported when needed. Prevention of

nutrition-related health problems is the best approach to its treatment, based on community activities, with social engagement and physical exercise as much as actions on food and eating.

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