

Tim C olde Hartman

MD, is a general practitioner and PhD student, Department of General Practice, Radboud University Nijmegen Medical Centre, The Netherlands. t.oldehartman@hag.umcn.nl

Patrick J P Poels

MD, is a general practitioner and PhD student, Department of General Practice, Radboud University Nijmegen Medical Centre, The Netherlands.

Els Licht-Strunk

MD, is a general practitioner and PhD student, Department of General Practice, VU University Medical Centre, Amsterdam, The Netherlands.

Combining vocational and research training

Background

The gap between research and clinical practice can be bridged by strengthening the position of the clinician-researcher with appropriate research training and protected time for research.

Methods

A Dutch program combines vocational training in family medicine with research training. This article describes the scientific output of registrars following this combined program.

Results

Forty family physician registrars who undertook the combined program from 2000–2006 produced 138 publications in both international and national journals. Most of these registrars participated in scientific committees and expert groups in the field of family medicine.

Discussion

Combining vocational training with research training in general practice has proven to be feasible and has resulted in considerable scientific output and professional participation.

■ **Despite the rapid increase in medical research, the transfer of findings into daily practice remains difficult. This is in part due to complicated interactions between the worlds of research and clinical practice. Strengthening the position of the clinician-researcher – with appropriate research training and protected time for research – has been proposed to bridge the gap between research and clinical practice.**^{1,2}

Patient related research is needed to improve quality of care.³ Although general practice has developed a research domain in its own right (including the integration of medical, psychological, social and behavioural sciences), the number of published studies remains relatively small.^{4,5} Research exposure during general practice training has been encouraged as a way of developing a more research oriented culture within the profession.^{6,7}

A Dutch program that combines vocational training with research training in family medicine (general practice) offers a significantly different way of ensuring early exposure to clinical research. It leads to a certificate of clinical specialisation and a PhD thesis, preparing family physician (general practice) registrars for a career as clinician-researchers in primary care.

This article describes the program and analyses registrars' participation, scientific output and involvement in research leadership tasks from 2000–2006.

Methods

The authors contacted the directors of the Netherlands' eight vocational training programs to establish the number of registrars who entered family medicine specialty training from 2000–2005, and the number who entered the combined clinical and research training pathway.

The authors measured the scientific output of these registrars and their involvement in research leadership by searching Medline and the journal of the Dutch College of General Practitioners for the period 1 January 2000 to 31 December 2005. An internet search was performed to estimate the registrars' professional participation in

Chris van Weel

MD, PhD, is Professor of General Practice and Head, Department of General Practice, Radboud University Nijmegen Medical Centre, The Netherlands.

family medicine related research committees and expert groups, and their participation in other family medicine organisations involved in developing the family physician (FP) profession.

Results

Vocational training program

The objective of the 3 year Dutch vocational training program is to educate and train specialists in the field of family medicine. Once a week, registrars (known as 'residents') have a day of vocational training; the rest of the week they participate in clinical practice. Family physician registrars spend the first and third year in family practice; in their second year they spend 6 months in an emergency department, 3 months in an aged care service, and 3 months in specialised mental health care.

Research training program

The research training program is a 4 year program which aims to produce highly qualified, independent and critically minded scientific researchers in the field of family medicine. These programs consist of research supervised by a senior researcher and a package of structured research courses. The scientific research program culminates in the submission of a PhD thesis.

Combined program

The combined program lasts 6 years and leads to a dual clinical and research qualification. Daily patient care and research activities are blended into combined programs through collaborations between the family physician-vocational training and family medicine departments. Depending on the resident's preferences and the type of study they wish to conduct, an individual scientific training

program is created with academic, statistical and epidemiological courses. The combined program culminates in a PhD thesis and qualification as a FP.

Forty FP registrars (2.1% of all Dutch FP registrars) participated in the combined program between 1 January 2000 and 31 December 2005 (Table 1). The authors located 138 publications written by these registrars during the period; 105 in international and 33 in national peer reviewed journals. Of these publications, 108 were original research articles and 30 were letters to editors.

Internet searching revealed that many of these registrars participated in committees and expert groups associated with family medicine (Table 2).

Discussion

Summary of main findings

Bakkenist et al⁹ found 364 international research articles from institutes participating in family medicine research in the Netherlands during the period 1999–2003. The present finding of 86 international publications by registrars during the Dutch program combining vocational training with research training in family medicine in a 6 year period is therefore considerable.

The small minority of registrars (2.1%) who participate in this challenging combined program represent a select group of ambitious and talented registrars. Whether research output and professional participation differs between those who choose the combined program compared with those who complete vocational training and go on to research training (or vice versa) is unclear. Experience suggests that starting a PhD project after finishing vocational training is difficult because of the demands of daily clinical practice.

Limitations of this study

The method used to estimate registrars' output may have underestimated their activities. The authors had access to published articles only. As most FP registrars are in the middle of their research projects and in the middle of the combined program, long submission processes for several journals mean that the number of written articles is probably higher than the number found.

Table 1. Characteristics of residents following the Dutch program combining vocational training and research training during the period January 2000 to December 2005

			N
FP residents in the Netherlands*			1421
FP residents participating in the Dutch program combining vocational training and research training (n [%])*			30 (2.1)
FP residents who had finished the Dutch program combining vocational training and research training by the end of 2005			10
Scientific output	International	Original research	86
		Letters to the editor	19
	National	Original research	22
		Letters to the editor	11

* As at 31 December 2005

Table 2. Involvement in research leadership of residents following the Dutch program combining vocational training and research training (n=40)*

	N
The Royal Dutch Medical Association	1
National Association of Family Physicians	1
National Association of Family Physicians Residents	5
Regional Association of Family Physicians Residents	2
The Dutch College of General Practitioners	3
Journal of the Dutch College of General Practitioners	2
National guidelines committee	2
International scientific expert group	1
National scientific expert group	4
* Some residents participated in more than one committee	

Advice for implementing the combined program in daily practice

The challenging combination of vocational training with a PhD project requires effective collaboration between different institutions.

Adequate funding is required before registrars commence their PhD project. In the Netherlands, most PhD projects are funded by external grants. Research funds specifically directed to FP registrars who are combining vocational training with research training in FM should be established or extended in order to stimulate new research projects and to build research capacity.

With registrars undertaking vocational training part time, clinical rotations need to be planned to integrate with the phase of the research project; thorough discussion with supervisors is required. Assistance from research nurses and data managers can be useful to monitor daily study proceedings, but the registrars are required to manage the logistics of both their research and vocational training themselves. A designated tutor to coach this process can increase the chance of success.

Investing in combined training programs is an important first step toward professionalising general practice. However, clinician researchers who have finished their combined program require greater career development to ensure that these investments lead to long term quality improvements.

Conflict of interest: none declared.

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