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# Who does become an internist?

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## ABSTRACT

Internal medicine is a broad medical speciality and choosing the residency programme opens up a variety of career tracks. Despite this broad choice of subspecialities, we found that within our residency programme for internal medicine in the Nijmegen region between 1981 and 2000, 29% of the residents did not become internists but switched to other medical specialities. To further complicate the efficiency of the residency programme, about 20% of the residents who became internists did not finish within six years, but had a delay of two years due to combined internal medicine/PhD tracks (the training for internist/clinical investigator). In another 20% there is a delay of six to 12 months due to part-time training tracks as well as to (multiple) pregnancies of female residents and parental leave of both sexes. Our data imply that nationwide data are urgently needed to re-evaluate the manpower planning for internal medicine by taking into consideration not only the number of residents starting in the residency programme but also to include the number of residents who actually do become internists.

## INTRODUCTION

In the year 2000, the Netherlands Association for Internal Medicine (NIV) formulated the clinical competence requirements for the residency training programme of internists for the first time; a revision was published in 2002. In these documents internal medicine was defined as follows: 'Internal medicine is the part of medicine that is directed towards occurrence, recognition and treatment of diseases

of internal organs and organ systems in adolescents and adults. Primary disorders of the central nervous system and the female reproductive organs are not considered to belong to the area of internal medicine' (Raamplan Interne Geneeskunde 2002, NIV).

It is clear from this definition that internal medicine is a broad medical speciality, and the choice of a young medical doctor to apply for the residency programme is a choice that leaves open a wide array of career tracks. Despite the broad choice of subspecialities within the field of internal medicine, it was our impression that a sizable number of residents did not become internists, or switched to another internal speciality and that – for a variety of reasons – many residents did not finish their training programme within six years.

In this short paper, we briefly review the Dutch training programme for internal medicine and present data on the numbers of residents that have become internists and of those that have not in the Nijmegen region over the last 20 years. In addition, actual data on the time needed to complete the residency training programme are provided.

## STRUCTURE OF THE INTERNAL MEDICINE RESIDENCY PROGRAMME

The Dutch residency programme takes six years. Recently the structure has been revised. In short, the first 4 to 4.5 years deal with a common trunk consisting of obligatory training periods (*table 1*). Within this timeframe, elective training periods of four to six months can be done in (sub)speciality

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**Table 1**  
*The training programme for internal medicine in the Netherlands*

COMMON TRUNK (4 TO 4.5 YEARS)
General internal medicine (24 months)
Intensive care (4-6 months)
Internal medicine consultation (4-6 months)
Outpatient clinic for internal medicine (8-12 months)
Electives in internal medicine (including pulmonology, cardiology)
SUBSPECIALITY TRAINING (1.5 TO 2 YEARS) IN ONE OF THE FOLOWING
General internal medicine
Endocrinology
Nephrology
Haematology
Medical oncology
Intensive care medicine
Infectious diseases
Vascular medicine
Clinical pharmacology
Blood transfusion medicine
Allergy and clinical immunology

areas. The final 1.5 to 2 years give the opportunity for the official subspeciality training programmes within internal medicine (table 1).

For a number of reasons, residents may not succeed in finishing within six years. First of all, pregnancies may lead to an extension of residency time; until recently one pregnancy leave of 16 weeks was accepted by the Board of the Registration Committee of Medical Specialists (MSRC), but nowadays all pregnancies have to be compensated for. Secondly, there is a growing appeal by the residents to do the training programme on a part-time basis, which is approved by the MSRC. The delay built up in this way has to be compensated for. This also holds for parental leave, which is allowed by Dutch law and the MSRC.

Finally, there is a very successful national MD/PhD track for talented residents. These residents in training for clinical investigator ('agiko') embark on an eight-year training programme (five years clinical training and three years research).

The residency programmes for internal medicine in the Netherlands are centred around the eight university medical centres (UMC), which collaborate with regional hospitals that take care of part of the training programme (two to four years). The total number of residents in the Netherlands in 2003 amounted to 781.

Furthermore, residents who have completed two years or more of the common trunk training, subsequently switch to the programme of another internal speciality instead

of becoming an internist with any of the subspecialities (table 2). Sometimes this change occurs directly after registration as an internist.

**Table 2**  
*Internal specialities in the Netherlands*

INTERNAL MEDICINE	WITH SUBSPECIALITIES (SEE TABLE 1)
Cardiology	(two years common trunk internal medicine)
Pulmonology	(two years common trunk internal medicine)
Gastroenterology	(three years common trunk internal medicine)
Rheumatology	(three years common trunk internal medicine)
Geriatrics	(two years common trunk internal medicine)

## MANPOWER PLANNING FOR INTERNAL MEDICINE

Over the past decades there have been several attempts at manpower planning for internal medicine. The latest one in 1996 projected that there was a greater need for internists because of the ageing population, and the earlier retirement of internists, as well as the steadily increasing wish for part-time work. The latter was only partly due to the increasing female-male ratio among internists. Since similar trends were observed for many medical specialities, the government became concerned that the numbers of medical specialists being trained were too low to satisfy future needs.

This was the reason for installing a national committee (Capaciteitsorgaan) in 1999 to determine the capacity necessary for training enough medical specialists. Estimations are made in particular taking into account the age distribution among doctors, age of retirement, number of male and female doctors, amount of part-time work and the ageing population. The committee makes a planning of the numbers of residents starting the various training programmes, and not of the numbers that become licensed for a certain speciality. No data are available on the efficiency of the residency for internal medicine in the Netherlands, including the number of residents who do become an internist.

## EFFICIENCY OF THE RESIDENCY OF INTERNAL MEDICINE

The UMC St Radboud Nijmegen, being one of the eight UMCs in the Netherlands, has the largest training programme for internal medicine: by the end of 2003, 118 residents (15% of total capacity in the Netherlands), 62% females, were in training, 60 in the UMC Nijmegen and 58 in one of the six regional hospitals. Eighteen are in

the combined internal medicine/PhD programme and nine are following a part-time (0.5 to 0.8) training programme. Between 1981 and 2000, 249 residents entered the training programme in the Nijmegen region, varying from ten a year in the 1980s to 25 in the late 1990s. Tables 3 to 5 present some characteristics of these residents in cohorts of five years. The number of residents has increased over the years because of foreseen shortage of internists. The number of females has increased from 22 to 63% (table 3). Each year on average almost one resident left the programme due to

making the wrong personal choice or apparent incompetence (table 3). Two to three residents or recently graduated internists each year switched to other internal specialities, mostly pulmonology, gastroenterology or rheumatology (table 4). The final efficiency of the Nijmegen internal medicine programme was therefore 61 to 75% (mean 71%) (table 3). The number of graduated female internists shifted from a quarter to almost two-thirds in 20 years. For the reasons mentioned above, many residents will not finish their training within six years. About 40% of the

**Table 3**  
*Number of residents starting and completing the internal medicine training programme in Nijmegen*

YEAR STARTING COHORT	STARTING RESIDENTS		RESIDENTS WHO LEFT	SWITCH TO ANOTHER INTERNAL SPECIALITY	LICENSED INTERNISTS		STARTING RESIDENTS BECOMING INTERNISTS %
	N	% FEMALES			N	% FEMALES	
1981-1985	41	22	-	13	28	25	68
1986-1990	54	46	3	18	33	42	61
1991-1995	58	41	4	11	43	47	74
1996-2000	96	63	8	16	72	63	75*

\*For 1999 and 2000 predicted because of as yet uncompleted programmes.

**Table 4**  
*Number of internal medicine residents switching to other internal specialities*

YEAR STARTING COHORT	STARTING RESIDENTS	SWITCHED TO				
		CARDIOLOGY	PULMONOLOGY	GASTRO-ENTEROLOGY	RHEUMATOLOGY	GERIATRICS
1981-1981	41	-	3	4	6	-
1986-1990	54	-	4	7	6	1
1991-1995	58	-	1	7	3	-
1996-2000	96	1	3	6	6	-

**Table 5**  
*Number of internal medicine residents with prolongation in training due to pregnancy, parental leave and internal medicine/PhD track*

YEAR STARTING COHORT	INTERNISTS WHO COMPLETED PROGRAMME		PREGNANT DURING TRAINING		PROLONGATION IN TRAINING DUE TO PREGNANCY, PARENTAL LEAVE, PART-TIME WORK	PROLONGATION IN TRAINING DUE TO INTERNAL MEDICINE/PHD TRACK
	N	N FEMALES	N	% OF FEMALES	N (% OF TOTAL)	N (% OF TOTAL)
1981-1985	28	7	*	*	*	1 (4)
1986-1990	33	14	*	*	*	6 (18)
1991-1995	43	20	8	(40)	2 (5)	7 (16)
1996-2000	72	45	20	(44)	16 (22)	15 (21)

\*Not documented.

female residents in the last ten years became pregnant during their training (*table 5*). Because of pregnancies, parental leave and part-time work up to 22% of the residents in the last five years had a delay in completing their training of six months to one year (*table 5*). Over 20 years an increasing proportion of the residents (21% in the five-year cohort) participated in scientific research (the above-mentioned MD/PhD programme), resulting in a delay of two years in completing the combined residency programme.

## DISCUSSION

It is clear from the data presented here that the efficiency of the training programme for internal medicine in the Nijmegen region is only 71%. In other words, more than one out of four residents who start the training programme do not become an internist. For manpower planning at a national level these data are very important. These data do not seem to be unique for the Nijmegen region since for the Leiden region, a similar trend is seen: of the residents entering during the last ten years, 74% became internists (AE Meinders, personal communication).

It should be stressed that many of the residents who do not become internists will take positions in related specialities (such as pulmonology, gastroenterology and rheumatology). It is important to realise that these specialities have their own manpower planning, and policymakers should not confuse these with those for internal medicine. Another inefficiency in the training programme is the intermission in training due to pregnancies, part-time work, parental leave and the combined internal medicine/PhD track. In conclusion, a considerable proportion of young doctors who enter the training programme for internal medicine do not become internists for a variety of reasons. So far, discussions about the manpower planning for internal medicine in the Netherlands have not taken into account this inefficiency of the training programme. Our data imply that nationwide data are urgently needed to adjust the manpower calculations for internal medicine by including all aspects of the inefficiency of the residency programme. Therefore, policymakers should take into consideration not only the number of residents starting in the residency programme but also include the number of residents actually becoming an internist and practising internal medicine.