



Federatie  
**Medisch  
Specialisten**

**Vision document**

# Medical Specialist 2025

*Ambition, trust, cooperation*





## The Hippocratic Oath

*I swear/promise to practise the art of medicine as well as I can for **the benefit of my fellow man**. I will take care of the ill, **promote health** and relieve suffering. **I put the interest of the patient first** and respect his convictions. I will not harm the patient. I will listen and will inform him well. I will keep secret what has been entrusted to me.*

*I will further the medical knowledge of myself and others. I **acknowledge the boundaries of my possibilities**. I will adopt an open and testable attitude.*

*I know my responsibilities towards society and I will further the availability and accessibility of health care. I will not misuse my medical knowledge, not even under pressure.*

*This is how I will honour the profession of medical doctor.*

*This I promise.  
or  
So help me God Almighty.*

MORE INFORMATION IN CHAPTER ON:

◆ Ambition

◆ The Unique Patient and the Modern Medical Specialist

◆ Involved with Health and Behaviour

◆ At the Forefront of Innovation

◆ Towards Network Medicine

# The Medical Specialist Towards 2025

Since the presentation in 2012 of the vision document Medical Specialist 2015, medical specialists have clearly shown the extent to which they embrace the cornerstones of that vision (transparent care, coherent care, care in the different life stages, and effective care). It is a privilege that I am now able to co-present to you the vision document Medical Specialist 2025! It is a document that takes an unambiguously ambitious and progressive look at specialised medical care in the coming years, including the role of the modern medical specialist in this respect. It is also a document full of passion for both the profession itself and for the patient's wellbeing, about working 'with a cool head and a warm heart' and with 'professional enjoyment'. It's about being motivated to promote the health of everyone in the Netherlands (and potentially those beyond our country's borders), about seeing every patient as a unique person, being involved with how healthcare works, and being willing to bear in mind the possibilities and impossibilities within our society. It's about being driven to increase specialised medical knowledge and skills, and to implement these in an innovative fashion, linked more with network than institutions. Not only does the document show that the cornerstones of the 2015 vision document are still as relevant today as they were, it provides suggestions for how and when to tackle healthcare in the period leading up to 2025.

The vision document Medical Specialist 2025 also offers a fantastic source of inspiration for medical specialists, scientific associations, and the Dutch Association of Medical Specialists that will help them continue along the path they have been following for the last few years, and to explore new paths and possibilities. I would therefore like to invite all the parties involved in specialised medical care here in the Netherlands to join us on those pathways.

On behalf of all medical specialists, I would like to thank the committee and sounding board group for all the time and effort they have dedicated to drawing up this document.  
Medical specialists: a professional group our country can be proud of!



Marcel Daniëls, cardiologist  
*Chair of the Dutch Association of Medical Specialists*

# Introduction

**You can't make patients better with ambition!**

**How holistic can an operation be?**

**In the future, will patients be lonely in a network?**

**I don't have to do anything! Go jogging yourself!**

**Oh, innovations are 'the emperor's new clothes' of healthcare...**

It would be easy to react sceptically to this vision document. However, I hope that it will serve as a source of inspiration for your collaboration with patients, fellow health care providers and others. By setting ambitious goals together and using them as a starting point for agreements with other parties in the field, we can shape the future of specialised medical care.

The vision document deliberately omits details about the system or the cost of healthcare. Those are resources, not goals. These resources need only be changed if our goals require it. The 'Medical Specialist 2025' committee has focused on formulating the ambition, expectations and goals we have for specialised medical care in 2025. What we want to achieve is:

## *Healthcare that is demonstrably the best in the world in 2025*

You can only fulfil ambitions by working hard. This document is a call for action to scientific associations, the supervisory boards of the Dutch Association of Medical Specialists, but also to hospital staff units and professional groups. Together with patients, colleagues, hospital management teams, government departments and businesses, we can achieve this collaborative ambition.

The previous vision document, 'Medical Specialist 2015', under the Chair of Carina Hilders, served as a powerful policy guide for the Dutch Association of Medical Specialists. 'Medical Specialist 2025' illustrates the developments that we expect to see in the coming years, and how dynamic this profession of medical specialist is.

Over the last few months, a diverse group of medical specialists from both academic and general hospitals have met many times. Under the direction of Phillip Idenburg of BeBright, discussions have been held with patient associations, managers and subject specialists. A sounding board group under the Chair of Jan Kimpen has critically evaluated the committee's work.

I would very much like to thank the committee, the sounding board group, BeBright and the many conversation partners for all the inspiring meetings. My thanks also go to Lynette Wijgergangs for her contribution in clarifying and enhancing the text, and to Iris Sengers and Mirjam van Baarzel of the Federation of Medical Specialists office for their excellent support.

I sincerely hope that our efforts will inspire you and that you will continue working with 'professional enjoyment', but with a single goal in mind: The best healthcare for your patient!



Huib Cense, surgeon  
*Chair, Medical Specialist 2025 Committee*



*Justified Trust*



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## READING GUIDE

Although 'he' is used throughout this document, it should be read to mean 'he or she'. When we use the term 'medical specialist' in this document, we mean all specialised professional medical groups, including hospital pharmacists, clinical chemists and clinical physicists.

# Ambition and Justified Trust

## Our ambition for 2025:

**In 2025, Dutch specialised medical care will have proven itself to be among the most innovative, efficient and high-quality in the world. As a result of this, Dutch healthcare, just like Dutch water management, will serve as an international example from which patients and medical specialists all over the world can benefit.**

Medical specialists have a fantastic profession, are ambitious and are not afraid to change in order to continually improve patient care. Significant steps have been taken over the last few years with regard to quality, transparency and efficiency, and it is partly for this reason that healthcare in the Netherlands is so good. We have been at the top in numerous international comparisons for many years now. And yet patient care is often still non-transparent, fragmented and insufficiently patient oriented. In other words, we could make it better still.

In this document, the Medical Specialist Committee 2025 of the Dutch Association of Medical Specialists describes the developments that are needed in specialised medical care in order for us to fulfil our ambition. These developments require that an active approach be taken by the scientific associations and the boards of the Federation, but also by hospitals, professional groups and individual medical specialists. Moreover, intensive collaboration with patients is also a fundamental condition for success. The days of blind trust in a medical specialist's thoughts and actions have given way to a more market-minded approach and the need for 'justification born from a lack of trust'. In order to offer the best specialised medical care in the world, we have to work together in an atmosphere of 'justified trust'.

## Cooperation and justified trust

Cooperation and trust may sound like hollow words, but they are essential for optimum healthcare. Optimum healthcare is provided by motivated professionals who feel appreciated, and that requires justified trust in those professionals; justified in the sense that the quality and healthcare outcomes are transparent. To achieve this, cooperation between the various healthcare professionals and cooperation with hospitals, insurers, organisations and governments, but cooperation with patients in particular, is essential. After all, it is the patient who determines whether or not healthcare contributes towards their quality of life. It is not possible to measure everything that is important to patients and medical specialists, and this is why a lot more attention will be devoted to issues such as well-being, humanity, compassion and job satisfaction among medical specialists.

## Justified trust through continuous improvement with reduced registration workload

It is not possible to measure everything that is important for the patient and the medical specialist, but in 2025 a great deal of information about quality and efficiency will be available thanks to 'automatic' registration at the source and national evaluations. This data will be fully incorporated into our quality cycle in 2025. This will improve quality, and increasingly justify the trust that patients and society place in us. The conditions for this are adequate ICT, and registrations made immediately as part of the primary process. This will generate a complete picture of the healthcare provided, reducing the registration workload and making more information available by 2025. We have divided this information into three types:

- a) 'Hard' quality information such as morbidity and mortality, or measurement data from national registrations.
- b) 'Soft' quality information such as patient questionnaires, service measurement data and individual or team evaluations.



- c) Efficiency information, such as costs per intervention or course of treatment, ordering behaviour or variations in practice.

For many diseases or medical conditions, national and regional targets can be set within these three types of information with the ambition of achieving this in 2025. We set high standards for Dutch healthcare. Take a particular condition or disease, and examine it together with patients, hospitals, insurers, organisations and governments to determine best practices, and then make it our ambition to do this even better in the Netherlands in 2025. In this way, we can justify trust and set concrete ambitions.

Setting targets does not alter the fact that changes in healthcare will also take place, changes that are indeed essential in ensuring that Dutch healthcare is demonstrably among the best in the world. According to the 2025 Medical Specialist Committee, the following four developments are required:



### 1. THE INDIVIDUAL PATIENT AND THE MODERN MEDICAL SPECIALIST

The relationship between medical specialist and patient in 2025 will focus in particular on optimising the patient's quality of life. This means more than simply treating an illness. It demands that a holistic approach is taken by the medical specialist for each unique patient, far more so than is the case at present.



### 2. TOWARDS NETWORK MEDICINE

Medical specialists lead the way in developing networks for healthcare professionals (network medicine), both physical and virtual. Patient needs are the starting point for healthcare networks, based on the idea that the various players in the network can offer the patient added value at different moments. Digital developments fulfil an important role in this respect.



### 3. INVOLVED WITH HEALTH AND BEHAVIOUR

In 2025, in addition to treating disease, medical specialists will play an important role in disease prevention and functional maintenance, both at the level of society and that of the individual patient.



### 4. AT THE FOREFRONT OF INNOVATION

In 2025, medical specialists together with patients will be more involved in thinking up, developing and evaluating innovations in healthcare. Hospital organisations will focus on helping to further develop and implement these innovations. In 2025, patients will be able to get a diagnosis more quickly thanks to 'big data analysis' combined with 'wearables' and home diagnostics. Self-management of chronic diseases with online support will be more commonplace.



# 01 Vision

## BACKGROUND

We are currently facing a great social challenge as a result of increasing healthcare demands and the growing complexity of those demands. Fortunately, there is also a significant increase in technological and organisational developments, which could provide the answer to this challenge. In order to keep healthcare affordable, accessible, close to the patient and of high quality, all those involved are convinced that healthcare must change. Transparency can serve as a starting point for this essential change and innovation. In recent years, medical specialists have taken great steps in the field of transparency, but more is needed than transparency alone. A feeling of urgency and ambition is required to facilitate a positive change; a shared ambition in which the leading role is played not by the healthcare system, but by the intrinsic motivation of patients, and the professionals working in healthcare. A shared ambition also serves as the starting point for the 2025 Medical Specialists Committee, which came about thanks to the input of all parties involved (see [www.demedischspecialist.nl/visie2025](http://www.demedischspecialist.nl/visie2025)).

## Who is the patient and what does he need?

In 2025, all parties involved in care and well-being will work together in a healthcare system in which the needs of the patient serve as the starting point. For most healthcare professionals, this goes without saying, and is already the starting point for the work they do. Unfortunately, many feel that the healthcare system with its rules and protocols prevents them from providing optimum healthcare and being able to meet the needs of the patient. In order to change this, both patients and medical specialists need more knowledge and skills to make genuinely collaborative decisions. Patients must have access to reliable and objective information and to their own health data; medical specialists must be able to follow patients' wishes, experiences and perceptions through the care process in order to anticipate on these. These aims apply intramurally, but are also applicable to collaboration with other health and welfare professionals and informal caregivers. Multimorbidity in the aging population is leading to an increase in the complexity of healthcare and increasingly demands a well-cooperating team comprising different medical specialisations and healthcare professionals.

## Positive Health as a starting point

Machteld Huber developed and tested a new definition of health (1):

***“Health as the ability to adapt and self-manage,  
in the light of the physical, emotional and social challenges of life.”***

This definition of 'Positive Health' provides an opportunity for us to look at health and health issues differently. Positive health has six main dimensions: bodily functions, mental well-being, spiritual dimension, quality of life, social and societal participation and daily functioning. This definition provides reference points with which to engage in a social dialogue about whether medical intervention always contributes to an individual's quality of life and self-sufficiency. In addition to physical and mental functioning, a patient's daily functioning, social participation, quality of life and fulfilment are used increasingly as starting points for treatment.

# Curative healthcare in the past, present and future



## Past IVORY TOWER Professional dominance



### THE MEDICAL SPECIALIST

- Paternalistic
- Expert
- Self-regulating
- The patient as case study



### THE PATIENT

- Follows the specialist
- Trusts the specialist



### THE HEALTHCARE SYSTEM

- Disease oriented
- Non transparent
- Empirical basis
- Government driven



## Present MAGNIFYING GLASS Disease oriented & Accountability



### THE HEALTHCARE SYSTEM

- Market driven
- Integrated care
- Control & supervision
- Transparency
- Non transparent
- Risk avoiding
- Line orientation



### THE MEDICAL SPECIALIST

- Professional
- Subspecialist
- Evidence based
- Supply driven



### THE PATIENT

- Client
- Supply driven
- Becoming increasingly involved



## Future JUSTIFIED TRUST Value creation & people oriented



### PATIENT AND MEDICAL SPECIALIST WITHIN THE HEALTHCARE SYSTEM

- Cooperation between patient and medical specialist
- Quality of life and self-reliance have priority
- Patient responsible for own health and use of healthcare
- The medical specialist is competent, coach, networker, team player and innovator
- Compassion and humanity
- The patient and the medical specialist are agenda-setting
- Focus on networking
- Healthcare is result oriented
- Governance based on norms and values
- Social value creation

*This table is based on:  
Donald M. Berwick, MD, MPP. JAMA  
April 5, 2016 Volume 315, Number 13  
1329-13-30*



### THE MEDICAL SPECIALIST IN 2025

In 2025, healthcare will be organised around and, where possible, close to the patient. The medical specialist will, far more than at present, be able and willing to work together with other healthcare professionals. The specialist will continually take into account where and by whom the healthcare can best be provided. The medical specialist will be part of a flexible network of healthcare professionals in which the healthcare outcomes and the needs of the patient serve as the point of departure.

#### **As coach and advisor**

In 2025, in addition to their role as a medical practitioners, medical specialists will act as coaches or advisors, from a position of compassion and humanity, with a cool head and a warm heart, not only with respect to their patients, but also to their colleagues. There will be plenty of scope for sharing experiences and giving feedback. There will be a culture of open dialogue between healthcare professionals in which everyone feels comfortable approaching each other on the subjects of quality, efficiency and conduct.

#### **As innovator and clinical leader**

In 2025, technology will play a greater role than in 2016. The medical specialist will play a more active role than at present in developing, evaluating and implementing technological innovations that add genuine value for the patient. The patient will be closely involved in the development, adoption and implementation of innovations, which will demand leadership by medical specialists.

#### **As an enthusiastic professional**

Enthusiasm contributes towards the job satisfaction experienced by the medical specialist, and it affects the service provided to the patient. Attention will be given to enthusiasm by speaking to each other about

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1. Based on the ideas of Kiki Lombarts (professor Professional performance, University of Amsterdam)

energy sources (autonomy, opportunity for professional development, feedback, social support, medical job satisfaction and training climate) and energy drainers (workload, administrative load, physical and emotional stress) at work. Studies have shown that stimulating energy sources has a greater effect on stimulating enthusiasm than removing or reducing energy drainers. (2) It is for this reason that in 2025 structural attention will be devoted to the well-being of healthcare professionals, and to a positive culture in which the healthcare is provided.

### **Medical specialist training**

The requirements and expectations for medical specialists will be different in 2025 compared with now. Obviously, this must be accounted for in medical specialist training. The vision document 'Opleiden is vooruitzien' ('Training means looking forward') by the Dutch Association of Medical Specialists Training Committee (3) provides recommendations regarding changes to medical follow-up training in anticipation of future developments. For example, it suggests that an increase in multimorbidity and chronic diseases will result in 'a greater need for more widely-trained medical specialists'. It also emphasises the fact that training will have to 'surpass the boundaries of the individual medical specialities' to facilitate cooperation and network development. This is a clear ambition for scientific associations, trainers and junior doctors in the period between now and 2025.

### **The healthcare system in 2025**

Who will the patient be referred to? What treatment will the patient receive? Which healthcare professional will be responsible? For many years, role division and work processes in healthcare seemed to be set in stone and closed for discussion. However, this situation is changing as a result of the switch from supply-driven healthcare to demand-driven healthcare (or patient-driven healthcare). A different way of organising healthcare and the creation of new professions and competencies in the field of patient care are unavoidable. This will lead to various ways of shifting tasks. The desired effect of organising things differently and shifting healthcare tasks to new and established professional groups is better-quality and more efficient healthcare that preferably takes place closer to the patient.

### **Cooperation leads to improvement**

The innovation in healthcare needed to match future demand can only be achieved through cooperation between healthcare professionals, patients and healthcare providers. The medical specialist is not superior to other parties, but realises that coalitions are required in order to change healthcare in a sustainable fashion. The right kind of healthcare in the right place will give medical specialists more time to speak to and remain in contact with patients.

### **Registrations and quality of care**

The current system places the emphasis on regulations, control and responsibility. Using various registration and quality systems creates an increased administration load. On the other hand, quality registers are needed in order to make improvements and to learn from each other. Smarter registration could be the answer. Information can be automatically generated, more so than it is today, via a digital link to the electronic patient dossiers (EPD). Together with patients and other parties, medical specialists will argue in favour of systematic improvements so that in 2025, more information will be available, but with a lower registration workload. It is also essential that medical specialists and patients together maintain some control over the content and interpretation of the registrations. If registrations are to be successful, medical specialists and patients will have to regard them as useful and see that they lead to the improved quality of healthcare.

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1. The Job Demands-Resources model (JD-R model) is a commonly used model for studying the relationship between job demands and job resources. The model works on the assumption that high job demands lead to stress responses and ill health (the exhaustion process), while having many energy sources (job resources) leads to higher levels of motivation and productivity (the motivation process).

### Outcome-based healthcare

Medical specialists cooperate with other healthcare professionals and social organisations to promote the well-being of populations. In the future, healthcare will not only be based on structural indicators and processes indicators, but primarily on outcome indicators. Healthcare outcomes are broadly defined and viewed in perspective with the costs of a course of treatment. In addition to quality and the cost of healthcare, there is a third element of value in healthcare: the suitability of healthcare, the degree to which the care given to a patient is actually indicated.

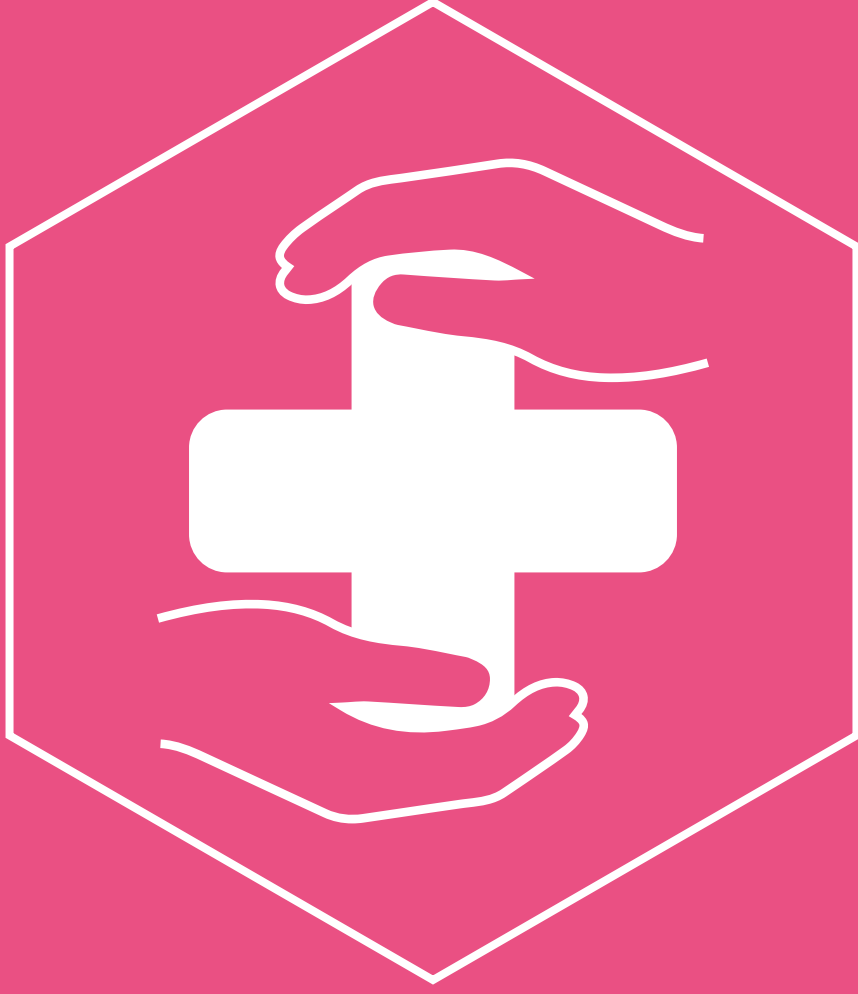
### Outcomes according to Value Based Healthcare

In order to measure outcomes, indicators are needed. Increasingly, outcome indicators are being developed on the basis of Value-Based healthcare (VBHC) methodology. The concept of 'value' lies at the heart of this methodology, not as an abstract ideal or code word for cutbacks, but as a measurable target for healthcare. 'Value' in the sense of VBHC is defined from the perspective of the patient as 'outcomes relative to costs'. In this way, the healthcare process becomes a 'Care Delivery Value Chain', which includes all activities that offer value to the patient, from prevention and diagnosis to treatment and aftercare. (4)

$$\text{value} = \frac{\text{outcomes}}{\text{costs}}$$

### Added value for the patient

Innovation and improvement can become part of everyday clinical practice by making Patient Reported Outcome Measures (PROMs) and the added value for the patient, Patient Reported Experience Measurements (PREMs), the central focus. Professionals and hospitals view the organisation of the care process differently, so more patient-oriented solutions are found. The outcomes of quality and efficiency measurements are the starting point for improvements in healthcare.





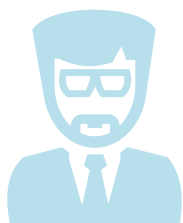
# 02 The Unique Patient and the Modern Medical Specialist

## Our ambition for 2025:

**The medical specialist will work together with patients and their families in various roles and collaborations in order to improve and maintain quality of life at all stages of the care and treatment process, from prevention to aftercare.**

**Shared decision making will be everyday practice. Medical specialists will work on the basis of Positive Health. Patients are unique; they have different needs and wishes. Moreover, they differ with regard to 'health skills', for which there will be much attention. Together, we will ensure that patients' health skills improve.**

**Technology (including IT) will change the processes within and beyond healthcare facilities. Patients and medical specialists will be able to make contact easily using digital technology. Both patients and medical specialists will make frequent use of digital tools.**



## A consultation in 2025

*Mr van Vlissingen (72) has a difficult decision to make. Last week he heard that he had prostate cancer. Fortunately, it has not spread. Together with his wife and daughter and his urologist, he has listed the various options available to him. He can choose between surgery and radiotherapy. The oncology nurse was also present at this consultation. Mr Van Vlissingen went through the pros and cons thoroughly once again with her. Is sex still important to him, for example? The treatment could cause erectile dysfunction. With his personal health record, he can study all the information he needs at home and discuss it with his loved ones. He is now taking part in a hologram meeting with his medical specialist and general practitioner. All the pros and cons are being carefully considered, although the choice is ultimately that of Mr Van Vlissingen.*

## BACKGROUND

Various trends and developments mean that the role of the patient and that of the medical specialist are going to change. This will also change the relationship between the patient and the medical specialist. Self-reliance, control and improved quality of life will become increasingly important. Patients will have more knowledge, be more assertive, gain insight into the quality of healthcare and have access to their own health records.

### Different roles for the medical specialists and the patient

The medical specialist and the patient play different roles. The roles they take on depend on circumstances, the type of health care demands and the stage of the care process. The role the patient is able to play also depends very much on his health skills. These are the skills of an individual to gain information about health, to understand it, assess it and use it when taking decisions about their own health. (5)

The increasing complexity and volume of healthcare demands will result in a changing division of roles between medical specialists and patients. The focus on health, functioning and disease prevention demands that health outcomes and quality of life are important focal points. This also demands different roles and attitudes from medical specialists, with a central focus on 'What is important to you?' rather than 'What is the matter with you?' This demands time and commitment from the





medical specialist at different stages of the care process. Working in multidisciplinary teams and networks will become increasingly important.

#### TOWARDS AN EQUAL PARTNERSHIP

The relationship between patient and medical specialist is based on the following values: autonomy, connectivity, humanity and control. In the relationship with the medical specialist, the unique patient is the primary concern: a patient in a specific medical situation, with specific characteristics, competencies and needs.

Increasing connectivity and accessibility of information has resulted in an increasingly large group of well-informed, assertive patients and family of patients with chronic or other diseases. These are equal discussion partners for the medical specialist. There are, however, also many patients who, as a result of their illness and lack of health skills, are not equal partners and play a more dependent role.

#### THE MODERN MEDICAL SPECIALIST IN 2025

- Takes Positive Health (see chapter 1) as a starting point for his actions at all stages of the care process. (1,6) The modern medical specialist connects with what the patient considers important regarding the various dimensions of Positive Health. In addition to the patient's physical and mental well-being, he also gives attention to their social welfare.
- He works together and makes agreements with the patient, their informal caregivers and with other healthcare professionals. There is opportunity for joint decision-making in the various stages of the care process (preventative care, diagnosis, treatment and after-care).
- He takes patients' different levels of health skills into account. The medical specialist, together with other healthcare providers, tries to improve these skills through communication, information and specific programmes.
- He gets on well with patients who inform themselves and also offer information about health, and even encourages this. The medical specialist also provides information through various channels (including online). Full advantage is taken of the opportunities available for 'healthcare at a distance'. Increasing use will be made of computer games, e-learning and practical exercises.
- Is a team player. (7) He works together with other healthcare professionals in multidisciplinary teams and in networks within and out of hospitals.

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II. Positive health has six main dimensions: bodily functions, mental well-being, spiritual dimension, quality of life, social and societal participation and daily functioning. There are different aspects to each dimension.

- He works on his professional performance and personal development in various ways. He strives for excellence and is accountable for his own performance. The modern medical specialist has self-knowledge and looks after himself in order to function optimally as a healthcare provider.

#### THE UNIQUE PATIENT IN 2025

- Is proactive with regard to his health and well-being. He takes control, where possible, of activities that maximise health and well-being. For patients with low health skills, tailor-made support is available in line with the level at which people are able to function. (8)
- Together with his family/relatives, he plays an active role with the aid of a personal health record. In this respect, the patient gathers collective medical and personal information, makes appointments himself, is able to consult and update his medical records and determine the time and the way in which he makes contact with the medical specialist and other healthcare providers.
- He exchanges experiences with other patients using online platforms. In addition to objective medical knowledge about their condition and treatment, platforms also offer patients the opportunity to share experiences about living with their condition.
- Is able to evaluate and compare the quality of the relationship with the healthcare provider and the service provided.

## PROPOSED AGENDA TOWARDS 2025:

- Reinforce health skills. Contribute towards dealing with the fact that not all patients have equal health skills. Extra attention needs to be devoted particularly to people with low socioeconomic status. In concrete terms, this means setting up initiatives to reinforce the health skills of citizens/patients.
- Develop a good information structure. A good information infrastructure is required in order to successfully change the relationship between the medical specialist and patient while supporting the medical specialist in his work and in his collaboration with other professionals. In the years leading up to 2025, the attention will therefore focus on realising and implementing a national, personal health record (Dutch: persoonlijk gezondheidsdossier/ PGD) for patients.
- Putting Positive Health into practice and working with a holistic approach also means that fulfilment and work must also be taken into account during consultations between the medical specialist and the patient. In order to achieve this, the relationship with labour experts will be reinforced in the years leading up to 2025, with a view to increasing both parties' knowledge.
- The medical specialist's mental and physical vitality is the starting point and the basis for his relationship with the patient. Greater attention will be paid to the medical specialist's personal development. Moreover, greater emphasis will be placed on job satisfaction and professional enjoyment.

III. The aim of the Dutch Patient Federation is that in 2020 all residents of the Netherlands can have a personal health record (PGD) so that those who wish to can have online access to all their health information, which is currently fragmented among various health care providers, and so that everyone can add information themselves and determine with whom this is shared..





# 03 Towards Network Medicine

**Our ambition for 2025:**

**In 2025, the medical specialist will be part of a network surrounding the patient, and will also work within a network. This means that care will be planned around the patient, partly physically and partly virtually. It also means that the work of the medical specialist will not be limited to a single building or a single line. Many of the activities that used to take place intramurally will now be carried out elsewhere. 'The lines (1st, 2nd & 3rd) will no longer exist.'**

**The medical specialist will be part of a network of healthcare professionals who exchange knowledge and skills in order to continually improve the quality of specialised medical care.**

**In 2025, the patient, if at all able, will take significant responsibility for his health. Thanks to the opportunities that a patient has, partly thanks to technological developments, he will play an active role in all stages of the care process through a system of self-management. Medical specialists and other healthcare professionals will have an active role in supporting patients with regard to self-management.**



## **An operation and follow-up in 2025**

*In consultation with his family, GP and urologist, Mr Van Vlissingen opted to undergo surgery performed by a micro-robot and under local anaesthetic. The operation went well. After he had urinated, Mr Van Vlissingen was allowed to go home to recover there. Unfortunately, his diabetes was somewhat out of control as a result of his stay in hospital. The GP, medical practice assistant and internist have an online meeting to discuss how they can get Mr Van Vlissingen's diabetes back under control as quickly as possible. The hospital gave Mr Van Vlissingen a care robot to use at home. The medical practice assistant and urologist arrange to log on to the robot together and in so doing see Mr Van Vlissingen in a virtual home visit, the urologist for the surgery follow-up and the medical practice assistant to give advice about the patient's diabetes. The district nurse is available at that moment to provide support as needed.*

## **BACKGROUND**

Increasingly, we provide patient care in collaboration with patients, their family and other healthcare professionals in multidisciplinary, integrated care chains. However, future healthcare will not only be provided in care chains of successive healthcare professionals but increasingly in a care network based around the patient, in other words network medicine.

## **From integrated care to network medicine**

From a logistical point of view, the concept of integrated care is built on organising healthcare more effectively and efficiently, on the basis of the care available. Network medicine on the other hand, is based on patient needs, with various players in the network adding value for the patient at different moments. Network medicine is healthcare that puts the patient first and in which patients are in charge of their health, together with the aid of their family and healthcare professionals. The emphasis is on potential rather than limitations (see Positive Health, Chapter 1). Healthcare in an integrated care chain works well for monomorbidity patients with conditions such as diabetes, but flexible network medicine is more suitable for the growing proportion of chronic, complex multimorbidity patients.

## **Network medicine in 2025**

Network medicine is an approach in which healthcare professionals and informal caregivers look after the patient during clinical recovery (alleviation or improvement of symptoms) and social recovery, such as reintegration following illness. Multidisciplinary teams addressing themes such as 'treatment', 'work',



or 'home care' work together in a flexible network. The network adapts as necessary in relation to the changing health and needs of the patient. Within this network, the medical specialist plays various roles, which can change with time, depending on the needs of the patient. These range from supportive roles to sharing specific knowledge.

Most networks are currently based around vulnerable elderly people. (9) A circle of healthcare professionals and informal caregivers evolves around these elderly patients depending on their situation. A well-functioning underlying digital infrastructure is one of the conditions for effective and efficient cooperation for networks in order to maintain the quality of care provided.

In the future, there will be digital and physical networks at local, regional, national and international levels, not only networks based around the patient, but also networks of healthcare professionals, both intramurally and extramurally. The lines will disappear and there will be significant overlap between medical specialities.

### National information system

High-quality and efficient patient care demands the exchange and availability of information, for both healthcare professionals, and patients and their informal carers. Network medicine needs a well-functioning national information system that gives patients access to their health records and enables them to gather and manage personal health information. A system like this would enable healthcare professionals to exchange information and to communicate with colleague and patients. The patient could add healthcare professionals and informal caregivers to their digital network and give them access to their health records. Until such time as a national system is operational, we will try to ensure that systems can communicate with each other the best they can so that information can be exchanged as effectively as possible.

## PROPOSED AGENDA FOR THE PERIOD UP TO 2025:

- A shift will take place within hospitals with respect to healthcare for multimorbid (vulnerable and elderly) patients, from supply-oriented and specialisation-oriented care to patient-oriented care. Increasingly, healthcare will be planned around the patient, partly virtual and partly face-to-face. Medical specialists will lead the way, through various partnerships, in taking the needs of the patient as a starting point, rather than following their own individual policy. Technology will also be used.
- When providing chronic and low-complexity care, the medical specialist will consistently ask himself the following: 'Who is the most suitable person in the network to provide this care?' In the interests of quality and efficiency, consideration will be given to whether certain activities could take place elsewhere. An important factor in this regard is that quality remains paramount, and this raises the question of what conditions are required for a successful shift in care. Prior to a possible shift in care, a risk assessment should be made and the quality of care evaluated over time.









# 04 Involved with Health and Behaviour

## Our ambition for 2025:

**People will smoke less, drink less alcohol and get more physical exercise. The medical specialists will work towards meeting this end. In public and in the consulting room, they will express the importance of a healthy lifestyle.**

**Medical specialists will provide their patients with more concrete tips on the subject of prevention. They will do this thanks to increased knowledge about the relationship between lifestyle, health, disease and functioning, and about the effectiveness of preventative interventions.**



## The role of the healthcare professional in improving lifestyle in 2025

*Mr Van Vlissingen is doing reasonably well, but he is not recovering as quickly as had been expected. He is still quite fatigued and his blood glucose levels are still too erratic. During consultations between the various healthcare professionals, concerns have already been expressed about Mr Van Vlissingen being significantly overweight and getting almost no physical exercise. They agree that Van Vlissingen's GP will discuss the importance of exercise and losing weight with him at his next check-up. The GP will talk to him to find out how motivated he is on the subject. The medical practice assistant will subsequently give Mr Van Vlissingen some specific guidance, namely a diet to follow, and the option of walking twice a week with the help of a physiotherapy walking app from the hospital or together with the medical practice assistant from the GP surgery.*

## BACKGROUND

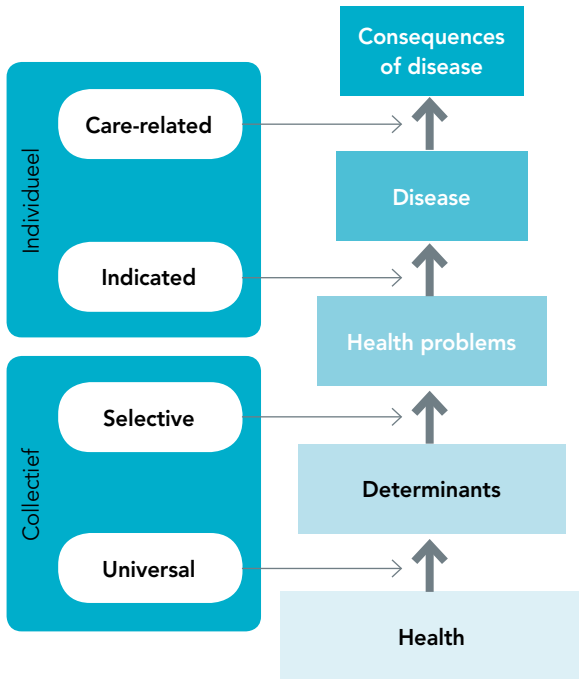
Obviously, the most important task for the medical specialist is, and will always be, to treat a condition or disease. However, medical specialists can also help to promote health on the basis of their social responsibility as a care professional. Various developments will ensure that increasing attention is given to prevention and promoting health: demographic developments, changing healthcare demands and the new definition of health (Positive Health, See Chapter 1). Partly as a result of the increased prevalence of chronic conditions and multimorbidity, 'promoting health' is becoming all the more important.

***Prevention is: 'The total of all measures, both within and beyond healthcare, which aim to protect and promote health through the prevention of disease and health problems.'***  
**(10)**

We apply a classification of prevention according to target group (11): universal, selective, indicated and care-related prevention.

Within curative healthcare, the medical specialist's role and degree of involvement differs according to specialisation but also to the various types of prevention (see diagram). The medical specialist is primarily involved with indicated and care-related prevention. With respect to universal and selective prevention, the medical specialist has a more advisory and prioritising role.





**Universal prevention**  
 Focuses on the general population, which is not characterised by an increased risk of disease. The aim is to reduce the chance of disease or risk factors developing.

**Selective prevention**  
 Focuses on high and other risk groups in the population. The aim is to promote health in risk groups by implementing specific local, regional or national prevention programmes. This type of programme would include identifying potential patients and guiding them towards suitable healthcare options.

**Indicated prevention**  
 Focuses on individuals that often do not yet have a diagnosed condition, but do have risk factors or symptoms. The aim is preventing disease or further damage to health, through interventions such as treatment.

**Care-related prevention**  
 Focuses on individuals with a condition or one or more health problems. The aim here is to support individuals with regard to self-reliance, to reduce the impact of disease, and to prevent complications.

Figure is based on information from: [www.volksgezondheidszorg.info](http://www.volksgezondheidszorg.info)

**Increasing possibilities to focus on health promotion**

Increased insight into the risk factors for chronic and other diseases, for example through DNA research and Big Data, provides possibilities for organising healthcare in a more preventative manner. (12) This will mean a shift in disease management focused on treatment, to risk and behaviour modification with a focus on preventing disease and strengthening health. It will also lead to new interventions or combinations of interventions that can lower health risks.

**The medical specialist as lifestyle coach**

The medical specialist already has a role in prevention, as referred to in the Hippocratic Oath 'I will take care of the ill, promote health and relieve suffering'. Medical specialists take their responsibility in this respect by bringing the risks of a certain lifestyle up for discussion. This type of discussion, however, does not take place as a matter of course. Although medical specialists consider it highly important to discuss lifestyle in the consulting room in order to achieve optimum treatment results, prevention and health promotion are still inadequately integrated into daily practice. (13) Dutch healthcare, organised as it is in the distinctive branches of public, corporate and curative health, does not support integrated thinking. It is not clear to all medical specialists what significance they can have in the field of prevention and which of the ideas or products being developed in other disciplines could be used effectively.

IV. Big data is defined as: high-volume, high-velocity and/or high-variety information assets that demand cost-effective, innovative forms of information processing that enable enhanced insight, decision making, and process automation.

Opgenomen vanuit <http://www.gartner.com/>



## Prevention in 2025

### Universal prevention

The target group for universal prevention (the healthy citizen) is not in direct contact with the medical specialist, whose degree of involvement within the scope of universal prevention is therefore limited. Responsibility for this lies primarily with other parties such as the GGD (Community Health Services), the Dutch Youth Health Centre (NCJ), the Netherlands Nutrition Centre Foundation (Dutch: het Voedingscentrum), general practitioners and occupational health services. In the period leading up to 2025, the focus for the medical specialists will be on signalling risks and disseminating specialised knowledge.

### Selective prevention

This type of prevention focuses primarily on detecting individuals with a certain risk profile. The medical specialist's degree of involvement here is greater than with universal prevention because the target group's risk factors are relevant to their specialisation. The role of the medical specialist focuses primarily on knowledge dissemination in the field of risk factors and research. By better evaluating the challenges with regard to health in the hospital's catchment area (e.g. health risks due to agricultural or industry), medical specialists can disseminate knowledge in that area with regard to lifestyle, health and disease.

### Indicated prevention

The medical specialist's degree of involvement for indicated prevention is greater than for universal and selective prevention since they are in direct contact with the individuals that make up this target group. In 2025, indicated prevention will be an active theme, both in the specialist's consulting room and at the patient's bedside, with the aim of controlling disease progress or the development of chronic illnesses and the problems associated with these. The medical specialists will discuss the consequences of lifestyle factors with the patient. This means that in 2025 the medical specialist will act on the basis of Positive Health and a holistic view of mankind.

### Care-related prevention

This is the type of prevention with which the medical specialist is primarily involved. The role of the medical specialist in care-related prevention is currently embodied in regulations. In 2025, the medical specialist will examine, together with the patient, how best to recover, maintain or improve the patient's functioning.

## PROPOSED AGENDA IN THE PERIOD LEADING UP TO 2025:

- Over the coming years, the patient's and the medical specialist's knowledge and awareness of the relationship between lifestyle, health and disease and functioning will increase. The currently available knowledge will be disseminated in an accessible manner. The medical specialist will also focus on positive health, with the patient's functioning and well-being (physical and mental) taking priority.

V. See: [www.richtlijnendatabase.nl](http://www.richtlijnendatabase.nl)





# 05 At the Forefront of Innovation

## Our ambition for 2025:

**Medical specialists will, together with patients, be involved with innovation. They will understand what society requires and what is really needed in order to improve healthcare.**

**Medical specialists will be open to innovation. Specialists concerned with innovation will receive the right support from their hospital or network, and within an inspiring culture of innovation. In 2025, there will preferably be a Chief Medical Information Officer (CMIO) in every organisation. This will create the link between patient, medical specialist and technology developer.**



## Assistive resources in 2025

*The medical practice assistant discusses with Mr Van Vlissingen what assistive resources he could use. They agree that he will at least try to take between 5000 and 10,000 steps a day using a pedometer. Every week, a balanced diet plan will be sent to him on his medical tablet. He will already have received the shopping list for this diet. On the same day that Mr Van Vlissingen receives his diet, the supplier's drone will arrive at his house with all the required ingredients. Mr Van Vlissingen cooks at home, and his wife is pleased with the diet as she also needs to lose a few kilos. If Mr Van Vlissingen fancies the occasional snack, he can check on his calorie app to see if this is possible or if he has already had too many calories.*

*In consultation with the internist and the GP, Mr Van Vlissingen has switched to an insulin pump that automatically measures his blood glucose levels and administers insulin if necessary. He no longer has anything to worry about and feels a lot better now that his diabetes is under control and he has lost some weight. Every day, his glucose levels are automatically sent to the Dutch diabetes centre at Schiphol and to the GP's surgery. He still finds it difficult to exercise more, but he does enjoy the walks together with the medical practice assistant and some other patients.*

## BACKGROUND

In the coming years, healthcare will be confronted with increasing healthcare demands, which will also become increasingly complex. In response to this, the supply of healthcare will also change. Innovation is the key to maintaining high quality and accessibility of healthcare, both now and in the future. It is therefore essential that the medical specialist has a clear vision of an active role in innovation.

Innovation is the development and application of new ideas and modernisation in practice. This will be seen in the form of products (medication medical technology), services (treatment methods), models (financing and corporation) or social change (culture). Modernisation will be everywhere, both within and beyond specialised medical care. This definition is based on different sources. (14,15,16)

## Technology is an opportunity to improve healthcare and increase capacity

Developments in technology are booming. A significant proportion of technology is developed by newcomers from outside of healthcare. They focus on the citizen/patient as a client rather than just on healthcare providers and healthcare professionals. This results in developments in the field of imaging, robotics, senses, pharmacology, data usage (Big Data), virtual reality, remote monitoring, 3D printing, personal health management and quantified self.

VI. *Quantified Self is a movement concerned with the phenomenon that humans are increasingly integrating technology into their lives, with the aim of gathering information about themselves and learning from this. See also <http://www.quantifiedself.com/>*



A great deal of new medical technology is coming our way. We are also seeing that the industry is increasingly making new technologies available for patients beyond the immediate environment of the healthcare sector and medical specialists. These technologies meet a social need but also raise the question among medical specialists and patients as to the added value of the new technology.

The innovations listed above will, to a greater or lesser extent, focus on gaining insight into risk factors, the prevention of medical conditions or incidents, and the facilitation of more personally-oriented treatments. They can also focus on making life easier for patients; such innovations may include those that could change the traditional idea of hospital doctors and their attending patients. Whilst much of this technology is already available, there are still many obstacles preventing its further implementation.

The book *The patient will see you now* describes how healthcare was first automated, but also how it is now becoming increasingly democratic with the aid of technology. (17) The wide general public will gain greater access to their own health information, making their role increasingly active. This will have a significant effect on the relationship between patients and healthcare professionals. Innovation, however, is not always successful, and does not always contribute towards concurrently realising the objectives of better-quality healthcare, better quality of life, and lower costs.

The biggest challenge will therefore also be to find a way, together with suppliers and designers, of putting the added value (medical and otherwise) of these technologies to optimum use, from the perspective of patient needs, but also within certain frameworks. What makes an innovation good and useful, and what requirements should we demand they meet on behalf of healthcare professionals and patients?

### **The three stages of the innovation cycle**

We can establish different stages in the innovation process. (18) The first stage is the innovation process in which scientific research and the development of new knowledge and insights is often the starting point. In the second stage of the applied research, these new insights and knowledge are translated and tested in clinical practice. In the third stage, successful innovations are converted to business models, potentially followed by their being scaled up and rolled out (social embedding). These three stages are linked together in a cycle. Innovations build on existing innovations, ideas create new concepts, successes create new challenges, and failures result in new insights.

The medical specialist plays a different role at each stage, for which different types of knowledge and competencies are required. The medical specialist does not need to have all this knowledge or all these competencies himself, but must have easy access to them.

### **Clinical leadership**

The medical specialist can contribute towards reinforcing healthcare's power to innovate by way of an expertise role in the field of his specialisation, but also through collaborations with patients, healthcare providers, health insurers and technology suppliers. Clinical leadership in and between all stages of the innovation cycle is needed in order to realise this. (19)

Clinical leadership refers to the conduct of medical specialists, who, driven by their own insight and professional integrity, wish to contribute towards the care they provide. It is the conduct of healthcare professionals who take responsibility and give guidance with respect to the direct and indirect provision of excellent patient care. This means that in the period leading up to 2025, medical specialists will take responsibility for creating frameworks within which to monitor the quality of innovations, and where these have clearly added value, show leadership with respect to the scaling up and rolling out of these innovations.

Collaboration with patients will enable us to initiate greater innovation, driven by patient needs. In addition to optimising the quality of patient care, both in medical terms and in terms of client friendliness, we will also pursue efficiency and innovation based on education, research and science. Moreover, in addition to an evidence-based attitude, opportunities for exploration and innovation with regard to education and scientific research will become increasingly important.





### **Roll-out and scale-up**

Many innovations remain unknown, and are not rolled out and scaled up. One of the reasons for this is funding. The ability of healthcare professionals to adapt also plays an important role in the transition from applied research to roll-out and scale-up.

In the coming years, the main focus will be on creating an innovative culture in healthcare organisations. We recognise the various characteristics of this innovative culture in which the focus lies primarily on organising the innovation process in a professional manner. Important factors in this respect are the structured collection of new ideas, both internally and externally, and interaction with those involved in innovation in the field.

The characteristics of healthcare organisations that successfully innovate include having current insight into developments in technological and other innovations, devoting attention to cooperation with patients, and making room for creativity. The focus also lies increasingly on sharing experiences. Medical specialists are an important part of this innovation culture. It is exactly for this reason that they can make a difference and contribute towards healthcare organisations' capacity to innovate.

In the period leading up to 2025, the medical specialist can make an important contribution to healthcare's capacity to innovate by stimulating an innovative culture and infrastructure within professional groups, staff units, and hospital network organisations. Medical specialists play an important role in implementing innovations and evaluating the safety and added value of new techniques and applications. Organisations must free up time and money in order to facilitate an innovative and inspiring culture.

In order to reinforce the medical specialist's capacity for innovation, special attention must be devoted to innovation during their training, but learning and improving after completion of training must remain an inherent characteristic of the profession. A new aspect of the medical specialist's training and continuing professional education in the years leading up to 2025 is to develop and encourage innovation competen-



cies. These include, for example, competencies relating to the development and use of business models and change management. Adequate attention should also be paid during training to technology and the organisation and funding of healthcare in order to heighten the specialist's awareness of the related innovations.

**New training courses and professions**

One way to give competencies in innovation a greater role within organisations is to encourage collaborations with new training courses such as Technical Medicine. These new training courses often combine facets of technology and specialised medical care.

In order to be able to evaluate new technologies, services (treatment methods) and models (financing and cooperation), and to show suppliers the specialists' professional commissioning skills, more attention will have to be paid to these new training courses and new professions in the run up to 2025. These professionals will be able to combine knowledge from both professional areas and build a bridge between problems and technological/organisational solutions. Moreover, they will be able to support current medical specialists in evaluating innovations and in creating solutions.

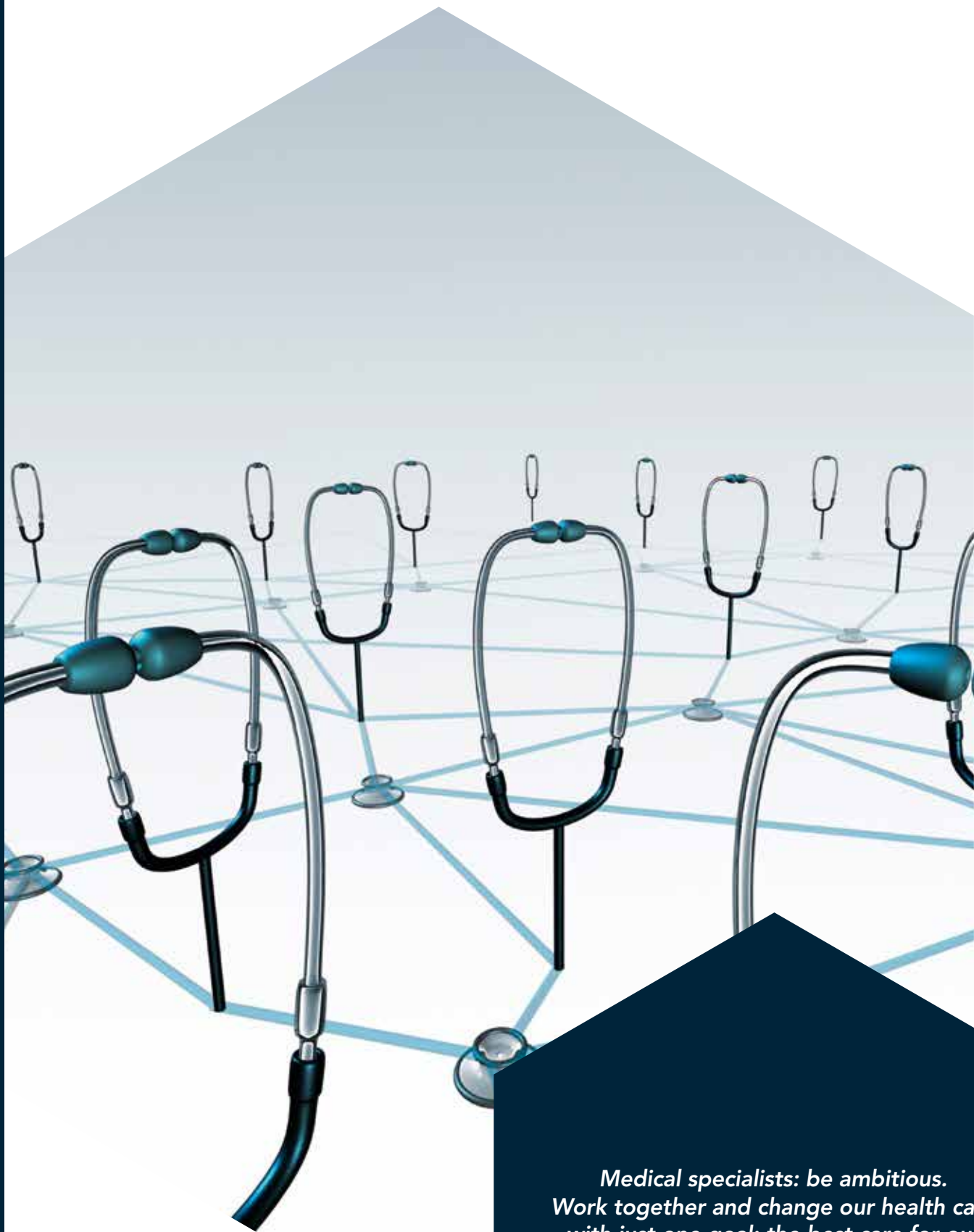


**PROPOSED AGENDA IN THE PERIOD UP TO 2025**

- Make investments in creating and/or strengthening the innovation culture in hospitals and networks in order to support healthcare professionals in the innovation process. In addition to developing knowledge and competencies, this will mean that both time and money will be made available to give healthcare professionals (and not only medical professionals) the opportunity for healthcare innovation that contributes to efficiency and improving quality.
- In the period leading up to 2025, a great deal of new technology will be developed that may or may not be incorporated into healthcare by suppliers and patients. The challenge will be to encourage medical specialists and patients to develop methods with which to determine whether these new technologies are reliable, safe and efficient. What types of technology fulfil the needs of the patient?
- Not all medical specialists and patients are focused on commissioning technology through suppliers. One possibility could be to appoint a representative of the medical staff in each hospital or in every network organisation and to further develop and support this role. The Chief Medical Information Officer (CMIO) will serve as a link between the medical specialist, the patient and the technology supplier.







*Medical specialists: be ambitious.  
Work together and change our health care  
with just one goal: the best care for our  
patients. Towards the best health care in  
the world in 2025!*



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More information:

[www.demedischspecialist.nl/visie2025](http://www.demedischspecialist.nl/visie2025)



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## Post Adress

P.O. Box 20057  
3502 LB Utrecht  
The Netherlands  
T 0031 88 505 34 34  
E [visie@demedischspecialist.nl](mailto:visie@demedischspecialist.nl)

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