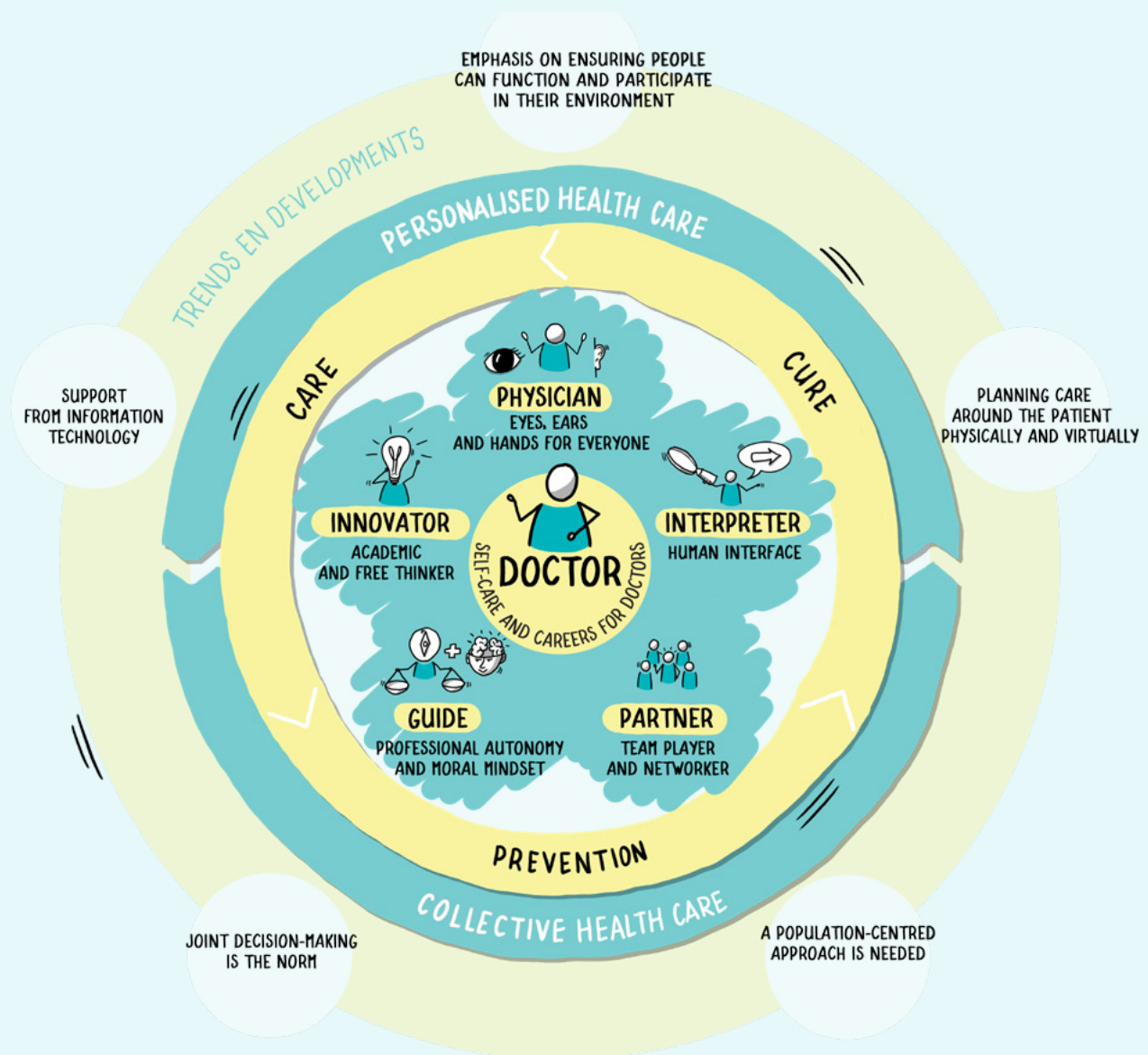


The roles of doctors in 2040

Core values and relationship with society

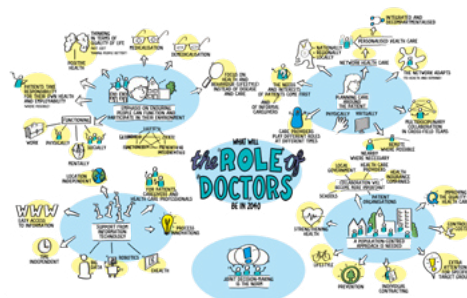


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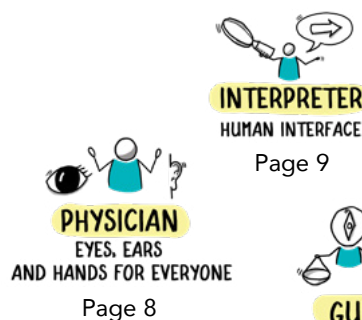
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The roles of doctors in 2040. Why now?

Over the next few decades, a lot will change in society and health care. COVID-19 and its social impact have shown us that it is essential for us to carefully examine the trends and developments heading our way, so we can understand and prepare for them as early as possible.



Over the next few decades, a lot will change in society and health care. COVID-19 and its social impact have shown us that it is essential for us to carefully examine the trends and developments heading our way, so we can understand and prepare for them as early as possible.



Many trends in society and anticipated developments in health care will have an impact on the future role of doctors and their relationship with society. The question is whether that impact will be good or bad.

What we do know is that all of the changes facing doctors and society require action to be taken now. They require

a reconsideration of values, norms, traditions and rules.

As the voice, support and conscience of doctors, the medical association KNMG (Royal Dutch Medical Association) is ideally suited to begin this work. We chose 2040 to give us some distance from current issues and allow us to focus on the role of doctors. As an initial step, we discussed: What will make a doctor a doctor in 2040? What will you need a doctor for? What will our society and health care landscape look like in 2040, if the social trends we are seeing now and the developments we envisage in health care actually play out? What will look, feel and be noticeably different? And what will that mean for the role of doctors?

Obviously, we cannot predict exactly what things will be like in 2040. But we



can get a general idea. To do that, we formed a highly diverse group of doctors, including young doctors and medical students, and asked questions like: What do technological innovations such as big data, artificial intelligence, automation and eHealth mean for the role of doctors? How can doctors place a greater emphasis on ensuring people can function and participate in their environment? What is the role of doctors in planning care around the patient? How can doctors play a role in a population-centred approach? How do we make joint decision-making the norm? What competencies will we need?

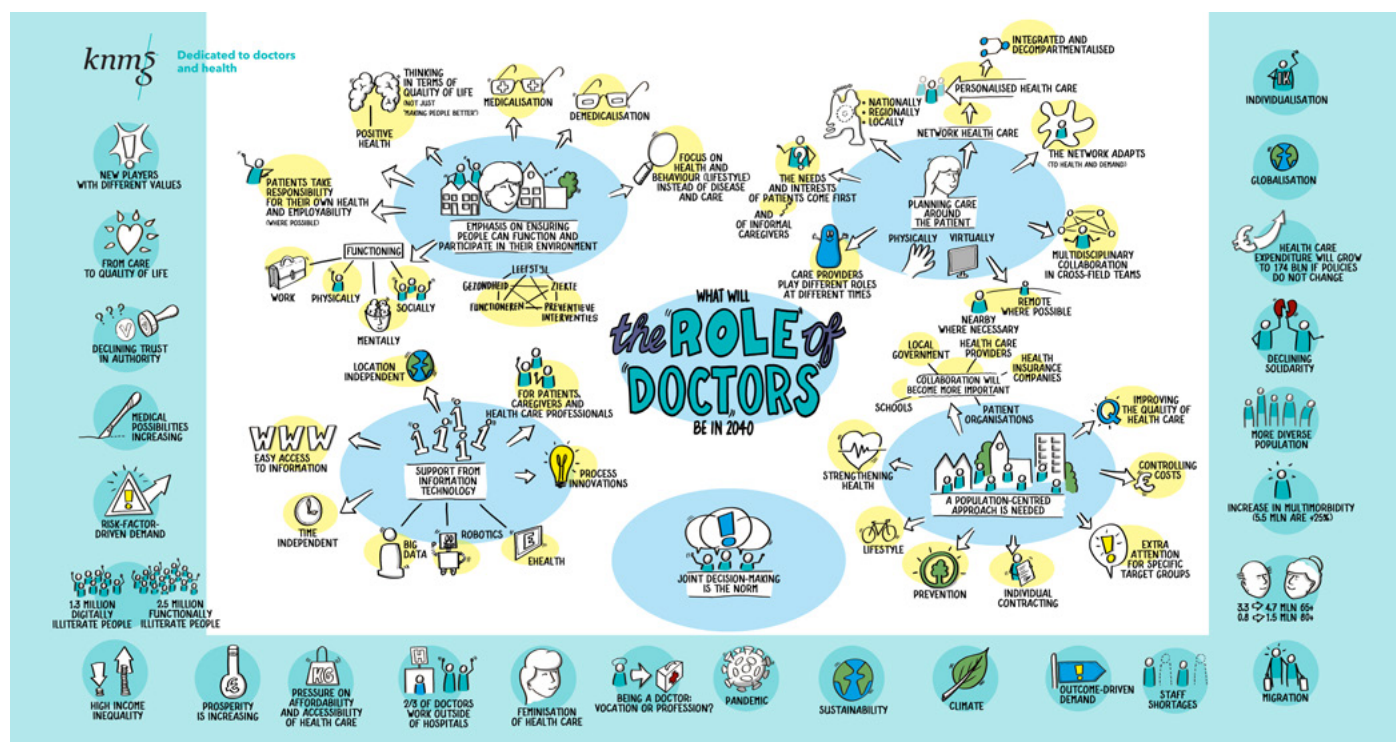
If we want to respond to the challenges facing us as doctors, we need to reassess 'what makes a doctor a doctor in 2040'. We are initiating a movement to ensure that doctors can find satisfaction in performing their work based on their oath, while also adding value and retaining society's trust.

The starting point: trends and developments in health care and society

Society is undergoing considerable changes. The Netherlands is becoming more diverse and more individual. Large groups are finding it harder to participate, for example, because they are digitally or functionally illiterate. We are living in our own homes for longer, and income inequality is growing.

Socioeconomic disparities in health are growing larger, rather than smaller. We are also ageing, and the number of vulnerable people is increasing, which goes hand in hand with growing and more complex health care demand.

The working population will shrink by 2040, and at the same time, we are going to need an additional 600,000 healthcare workers. In addition, due to ageing, the number of informal caregivers available will decrease. The growing expenditure on health care is putting pressure on solidarity and using funds that are needed for other public spending.



We have identified five dominant trends and developments in health care.

If we want to respond to the challenges facing us as doctors, we need to reassess 'what makes a doctor a doctor in 2040'. We are initiating a movement to ensure that doctors can find satisfaction in performing their work based on their oath, while also adding value and retaining society's trust.

Support from new technologies.

Including big data, robotics, eHealth, artificial intelligence and genetic engineering.

Greater emphasis on ensuring people can function and participate in their environment: physically, mentally and socially.

With a focus on health and behaviour instead of disease and care.

A population-centred approach

An approach that focuses on improving the health of the population and the quality of health care as well as controlling costs.

Joint decision-making as the norm.

As well as providing treatment, the doctor acts as the patient's coach. The patient and the health care provider decide together what care would be most suitable.

WHAT WILL the "ROLE" of "DOCTORS" BE IN 2040

Health care is planned around the patient, both physically and virtually (network health care).

This means the interests of patients and informal caregivers come first.

These trends and developments affect the extent to which individual and collective health care receive attention. The expectation is that individual health care will change to personalised health care and that the importance of population-centred preventative medicine will massively increase to deal with the social developments mentioned above. The number of chronic diseases and vulnerable people (particularly elderly people) will require new forms of health care and support to be delivered at home,

as well as solutions from outside of the health care sector. Prevention, cure, care and the social domain will merge seamlessly into each other.

Doctors will be at the service of people and society. The number of generalist practitioners is expected to increase. Specialists and super-specialists will work in global networks. These trends and other developments require the definition of the role of doctors to be reassessed. The basic principle is that people must

come first, with doctors becoming part of a network along with other professionals, health care professionals and informal caregivers.



Roles of doctors in 2040

The actions of doctors are underpinned by our oath:

I swear/promise that I will practise medicine to the best of my ability and in the service of my fellow human beings.
I will care for the sick, promote health and relieve suffering.

I will put my patients' interests first and respect their opinions.
I will do no harm to my patients. I will listen to my patients and properly inform them. I will keep confidential all information entrusted to me.

I will foster my medical knowledge and that of others.
I acknowledge the limits of my capabilities. I will act openly,

be willing to undergo review and recognise my responsibility to society. I will promote the availability and accessibility of health care. I will not misuse my medical knowledge, even if pressured to do so.

In this way, I will honour the medical profession.

This I promise.

Or
So help me God.

This oath is in the DNA of every doctor and drives their thoughts and actions. Doctors fulfil five roles:



Doctors are already fulfilling these roles in 2021, but they have never been explicitly defined in this way until now. Looking ahead to 2040 helped us to bring these roles into sharper focus. The expectation was that the roles of doctors in 2040 would change, but that is not the case. What will change is the interpretation of their roles. The interpretation of doctors' roles is not static.

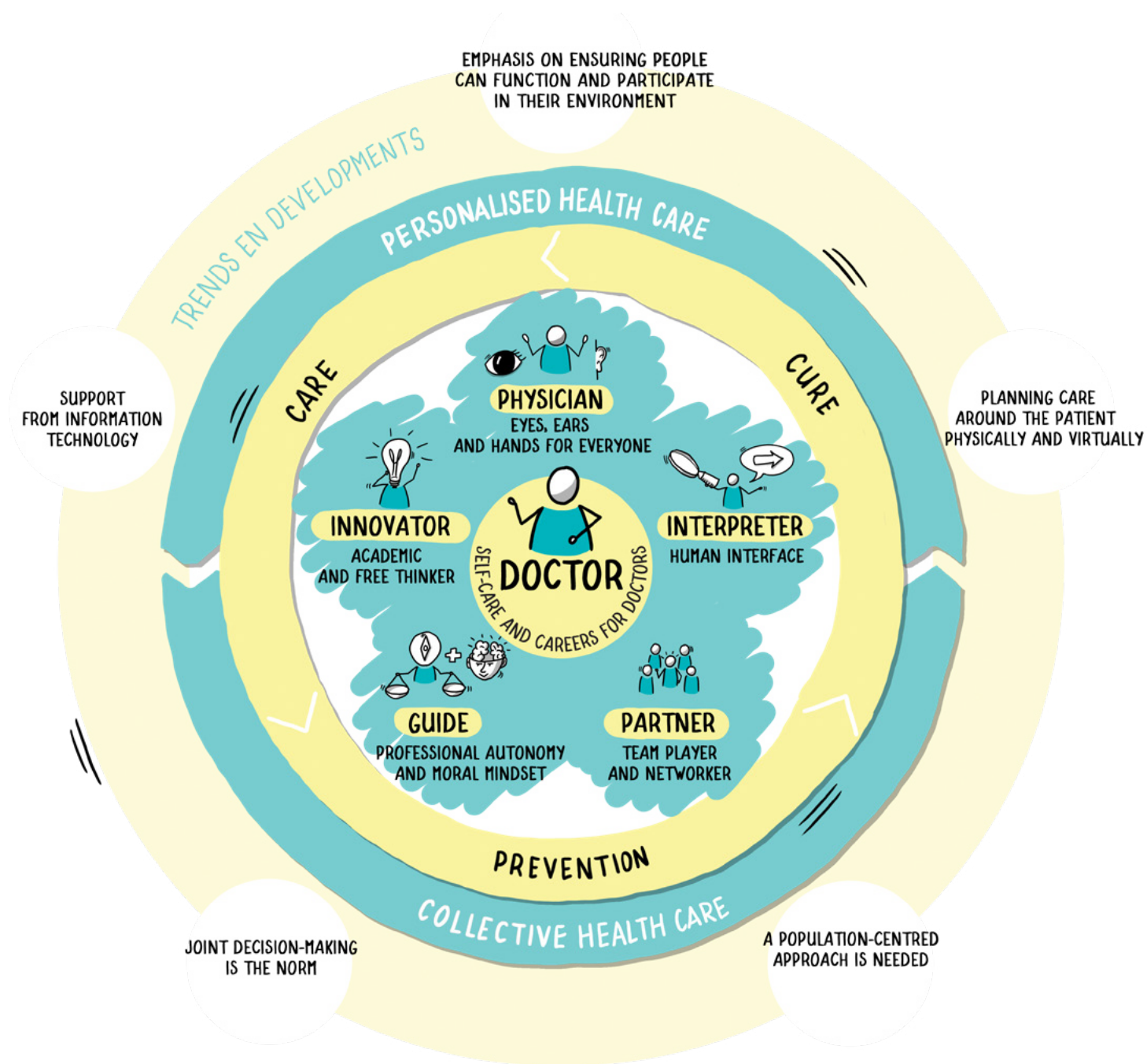
In our model, we show the connections between the different roles and dimensions. The model shows that doctors (and medical students), depending on their life stage or career phase, interests, specialisation and context, can take on or fulfil a variety of different roles.

What will make a doctor a doctor in 2040?

What will you need a doctor for?

AN OVERALL DESCRIPTION

We have described the roles of doctors below.
The context a doctor is in determines their role
at that moment.



Physician

eyes, ears and hands for everyone



PHYSICIAN

**EYES, EARS
AND HANDS FOR EVERYONE**

In 2040, doctors will provide care. They will use their medical expertise and skills (including technology skills) to meet the needs of their patients and public health.

In 2040, doctors will be focused on prevention, cure and care, including the interrelationship between them. The environment in which doctors provide medical care and the technological means they use to do so will be different. Care will be organised differently, to ensure that the right care is provided in the right place. That place might be a patient's living room, thanks to developments in diagnostic instruments, robotics and other treatment and support options such as eHealth. Patients can visit a separate care centre for more specialist care and treatments. For extremely complex medical treatments, there will be a national and global network of super medical specialists. In spite of everything, medical knowledge will still be a must for all doctors. Not only because this knowledge gives people trust in doctors, but also because, as a generalist or

specialist, you need this knowledge to be able to interpret data and to engage in discussion based on those data. And sometimes, the Internet will go down, with all your saved files and medical knowledge, and you will be entirely reliant on your own knowledge to make a diagnosis and prescribe treatment.

In 2040, the demographic composition of the society in which doctors work will be different. In addition to ageing and living in our own homes for longer, society is becoming more culturally diverse. Doctors relate to the cultural backgrounds and perceptions of disease of their patients. For doctors, a positive approach to health is the standard by which they operate. They observe people in their entirety, from cradle to grave. They see, listen to, advise and treat based on the specific context, dignity and level of self-

sufficiency of the person to whom they are providing care.

This means they deliver customised care, including chronic and palliative care. In their role as director, doctors ensure consistency and coordination in the care their patients need. Where possible, doctors play a coaching role towards patients in terms of helping them take control of their health, personalised medical treatment and advance care planning.

Other roles of doctors in 2040



INTERPRETER
HUMAN INTERFACE



PARTNER
TEAM PLAYER
AND NETWORKER



GUIDE
PROFESSIONAL AUTONOMY
AND MORAL MINDSET



INNOVATOR
ACADEMIC
AND FREE THINKER

Interpreter

human interface



INTERPRETER HUMAN INTERFACE

In 2040, automation, artificial intelligence and big data have really taken off. This has made the role of doctors both easier and harder.

Establishing a diagnosis is no longer always transparent. However, patients need transparency and certainty. Doctors have made a conscious choice in recent years to maintain their role as physicians and confidential advisers in society. They are alert to the use of big data in the digitalisation of health care.

Doctors have taken seriously the increasingly dominant aspects of technology (high tech) and the human need for genuine connection (high touch) in health care. They are actively present on online platforms where information and data about your health can be found. In this way, you can have direct contact with a doctor (or sometimes an avatar) to get answers to the questions you have or to reduce the uncertainty you are feeling. You can do this without having to explain your full medical history, because you can

make that available directly online. Giving serious attention to the 'high-touch' aspect has also strengthened the role of doctors as a human interface in respect of their patients.

Having contact with a doctor about the diagnosis made and the course of the disease process thus remains an important aspect in the relationship between doctors and their patients.

They are interpreters and trusted advisers who help patients understand data and information and also that pain and suffering are part of life. Doctors do this using their medical knowledge and skill, compassion, empathy and intuition. Their work is always guided by the personal circumstances and emotional experience of the patient. Their central focus is on enabling patients to continue to function

and participate in society.

Doctors make intensive use of artificial intelligence and robotics but continue to exercise supervision over this technology. They maintain final responsibility for the diagnosis made and the treatment provided. In making joint decisions about the desirable treatment, doctors are responsive and have become accustomed to adapting to the language skills, information literacy and level of self-sufficiency of patients and their families. As such, as well as being a physician, they are also simultaneously a touchstone, and a coach or guide.

Other roles of doctors in 2040



PHYSICIAN

EYES, EARS
AND HANDS FOR EVERYONE



PARTNER

TEAM PLAYER
AND NETWORKER



GUIDE

PROFESSIONAL AUTONOMY
AND MORAL MINDSET



INNOVATOR

ACADEMIC
AND FREE THINKER

Partner

team player and networker



PARTNER

TEAM PLAYER AND NETWORKER

In 2040, you will receive the right care in the right place. Patients, their families and doctors will work closely together as equal partners, each with their own role, responsibilities, knowledge and experience.

To provide complex and other medical care, doctors will work in multidisciplinary teams, often across multiple fields. They will collaborate with nurses, technicians, paramedic professionals, social support providers and their generalist and specialist colleagues. Specialists and super-specialists will collaborate at a national and global level. In the area of population-centred preventative medicine, doctors will work in multidisciplinary, cross-field teams and networks.

In 2040, doctors will be team players contributing to network and integrated care. Within their own practice, at a local or regional level, in care networks and care centres. In the face of an ageing society and increasing multimorbidity, doctors will think and act holistically in teams, chains and networks. They will focus on quality of life, participation, well-being and end-of-life care. The way in which patients and their doctors reach joint decisions depends on the desires and situation of the patients. The guiding

factor is the degree of control that people are able to have over their own lives.

Other roles of doctors in 2040



PHYSICIAN

EYES, EARS
AND HANDS FOR EVERYONE



INTERPRETER

HUMAN INTERFACE



GUIDE

PROFESSIONAL AUTONOMY
AND MORAL MINDSET



INNOVATOR

ACADEMIC
AND FREE THINKER

Guide

professional autonomy and moral mindset



INTERPRETER HUMAN INTERFACE

In 2040, as now, doctors naturally put the interests of their patients first. Their actions are based on their medical professionalism, with professional autonomy being a key part of that. They also stand up for the vulnerable and excluded.

Good social skills to deal with a wide range of situations and people's needs and desires will also be essential qualities for doctors in 2040. They will continue to act as sounding boards and confidential advisers for their patients.

However, the context in which they play this role will change, because of the multitude of technological developments. It is precisely because of the numerous well-being and health gadgets, the effect

of their use on people's privacy and the commercialisation of medical data that doctor-patient confidentiality will be a valuable asset. In 2040, as now, doctors will see preserving and handling this confidentiality as a social responsibility and one of their highest priorities.

Doctors act as guides on medical ethics issues and in the debate about the possibilities presented by these new technologies, as well as on issues relating

to accessibility and solidarity. They place limits on what doctors are and what they are not. They also show leadership with regard to the relationship between well-being and health, the advancement of a healthy population, sustainability and quality of health care, and the risks and opportunities posed by technological developments.

Other roles of doctors in 2040



PHYSICIAN

EYES, EARS
AND HANDS FOR EVERYONE



PARTNER

TEAM PLAYER
AND NETWORKER



GUIDE

PROFESSIONAL AUTONOMY
AND MORAL MINDSET



INNOVATOR

ACADEMIC
AND FREE THINKER

Innovator

academic and pioneer



INNOVATOR

ACADEMIC
AND FREE THINKER

In 2040, as now, doctors will receive academic training. They will possess appropriate medical knowledge, social skills and the technological knowledge and skills required to perform their roles.

In the context of lifelong learning and development, doctors will ensure they keep their own knowledge up to date and help others to do the same. As academics, doctors are obviously committed to continuous improvement of the quality of their profession, their actions and the various roles they take on as doctors. Like

everyone else, doctors will increasingly have to deal with new developments.

They will play a pioneering role in devising, researching and applying innovations. They will become used to deploying and strengthening their flexibility, ability to adapt and capacity for

innovative thinking on a daily basis, in the service of patients and society. This will require self-care, resilience, curiosity, the capacity to think outside the box and the ability to maintain a steady course.

Other roles of doctors in 2040



PHYSICIAN

EYES, EARS
AND HANDS FOR EVERYONE



INTERPRETER

HUMAN INTERFACE



PARTNER

TEAM PLAYER
AND NETWORKER



GUIDE

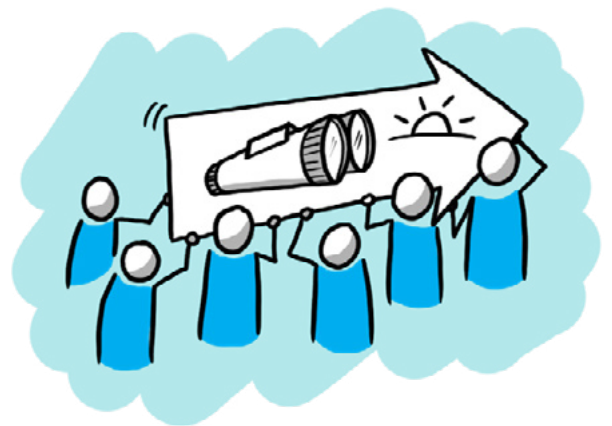
PROFESSIONAL AUTONOMY
AND MORAL MINDSET

What's next?

We have enjoyed working on the roles of doctors in 2040 in collaboration with many others, both within and outside of the health care sector.

We hope that this vision of future doctors will inspire educators, administrators, managers, partners, politicians and policymakers, make them aware of the decisions facing us all and generate support for those decisions. This is a first step on the path to a changing interpretation of the role of doctors in 2040.

We will continue the debate that we have set in motion. Everyone is welcome to contribute. We warmly invite you to join us at www.arts2040.nl



This picture formed the starting point for the process of joint creation, in which more than 300 people from within and outside of the health care sector ultimately took part, including new doctors, experienced doctors, doctors-in-training, academics, educators, health care administrators and managers, patient organisations, nurses, paramedic professionals, businesses and local government.

During the conference celebrating 170 years of the KNMG in 2019, participants were offered an opportunity to share their vision for the future role of doctors, and many of them did so.

It was intended that the process would continue in early 2020. However, the COVID-19 pandemic forced a postponement. In the autumn of 2020, a second, online workshop was organised, and participants representing a wide range of disciplines from within and outside of the health care sector reflected and built on the initial draft vision. This resulted in further tightening and deepening of the vision.

The vision was fleshed out even more in discussions during a KNMG away day in 2020, three Transition Cafés in the KNMG districts, discussions with the Medical Specialists Board and discussions with the

2025 Administrative Advisory Committee on Education of the Dutch Association of Medical Specialists. The vision set out in this document is the cumulative result of all of these sessions.

We organised the process of joint creation in conjunction with a steering group. They made an enormous effort to help us ask the right questions and ensure that a diverse group of people, from within and outside of the health care sector, were involved in the process. Consequently, they played a key role in shaping the broad perspective from which we could examine the role of doctors, and all of the insights we drew from that.



The steering group comprised the following people: Amir Abdelmoumen, Astraia Rühl, Carla Coenders, Edin Hajder, Eric van Wijlick, Fenne de Kok, Henk Bakker, Illya Soffer, Inèz de Beaufort, Kèren Zaccai, Lisette Keppel, Mike Rozijn, Nieske Heerema, René Héman, Ruud van Gilst and Sanne Kox.

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