



Annual Report 2020



UMC Utrecht

Contents

A word from the Executive Board	3	5. Our staff	34
A word from the Supervisory Board	5	5.1 The impact of COVID-19 on our staff	34
Value-creation model	7	5.2 Appreciation by our staff	34
1. Our strategy	8	5.3 General developments	35
1.1 Utrecht in society: our core tasks	8	5.4 Leadership development: Connecting Leaders	35
1.2 Our strategy: Connecting Worlds	8	5.5 Vitality and sustainable deployment	36
1.2.1 Our foundation	9	5.6 Diversity & inclusion	37
1.2.2 Our six focal points	9	5.7 Being a good employer	38
1.2.3 Our care profile	10	5.8 Recruiting new staff members	38
1.2.4 Our education profile	10	6. Our organization	40
1.3 What we are going to do: speed up on content	11	6.1 Together for the Patient	40
1.4 What we need for this: reinforcing the organization	11	6.2 Modernization of Business Operations	40
1.5 The world around us	12	6.3 Improving care registration and reducing the registration workload	41
1.5.1 The COVID-19 pandemic	12	6.3.1 Horizontal Supervision of Care	42
1.5.2 Developments in society	13	6.4 Sustainability	42
1.6 Measurable goals	14	6.5 Accommodation	45
1.7 Cooperation in the chain	15	6.6 Digitalization	45
2. Health Care	18	7. Our finances	48
2.1 The impact of COVID-19 on our health care	18	7.1 The impact of COVID-19 on our financial situation	48
2.2 Appreciation by our patients	18	7.2 Key figures	48
2.3 Unique care	19	7.3 Financial results	48
2.4 Quality & safety	20	7.4 Risk management	49
2.4.1 Incidents, major incidents, complaints	21	7.5 View on financial situation in 2021	52
2.5 Dialog with patients	22	8. Our governance	54
2.6 Digitalization and personalization of health care, e-Health and applied data-analytics	23	8.1 Management and structure	54
3. Research	25	8.1.1 Legal structure	54
3.1 The impact of COVID-19 on our research	25	8.1.2 Organization chart	54
3.2 Unique research	25	8.1.3 Management philosophy	55
3.3 Valorization of research	26	8.1.4 Executive Board	55
3.4 Funding of research	27	8.1.5 Supervisory Board	56
3.5 Open Science	28	8.2 Employee Representation	58
3.5.1 Dialog with patients in research	28	8.3 Integrity	59
3.6 Research Support	29	8.3.1 Ombudsman and confidential matters	60
3.7 Quality of research	29	8.3.2 Whistleblower procedures	60
4. Education	30	8.4 Codes of conduct	60
4.1 The impact of COVID-19 on our education	30	8.4.1 Health Care Governance Code	60
4.2 Appreciation of our education	30	8.4.2 Other codes of conduct	60
4.3 Fit for the Future education strategy	31	Summary of Financial Statement	61
4.3.1 Dialog with patients in education	31		
4.3.2 Inter-professional learning	31		
4.3.3 Diversity & inclusion	32		
4.3.4 Lifelong learning	33		
4.4 Quality of education	33		

A word from the Executive Board

'An intense and meaningful year, speeding up on important topics'

"In this annual report we look back on 2020. A year in which the COVID-19 pandemic had an enormous impact on society, our organization, and each individual. Not only on all our people in health care, but also in research, education, and all our support services. 2020 was an incredibly intense year for everyone. Everyone at UMC Utrecht as well as external support such as Defense Ministry employees have demonstrated tremendous solidarity, creativity and perseverance to help UMC Utrecht get through this challenging period. And they are still continuing. At the same time, we as UMC and employees have more than ever experienced our relevance and responsibility and created value for patients and society. 2020 was therefore also an extremely meaningful year.

Care for COVID-19 and regular patients

When at the end of February, beginning March, the COVID-19 virus broke out in full force in the Netherlands, all hands were on deck at UMC Utrecht. Since then, our health-care workers have made incredible efforts to provide medical care to COVID-19 patients from the region and other regions in the Netherlands. Much attention was also given to mental support for COVID-19 patients and their relatives, and to rehabilitation after admission. At the same time, we did everything to ensure that regular care could continue as usual. This required and still requires tremendous effort. If despite this we were nevertheless forced to scale down regular care, postpone operations and disappoint patients, it was a painful experience that caused uncertainty and anxiety for patients. Naturally we handled this with the utmost circumspection. We also ensured that acute care could continue at all times.

Acceleration on key issues

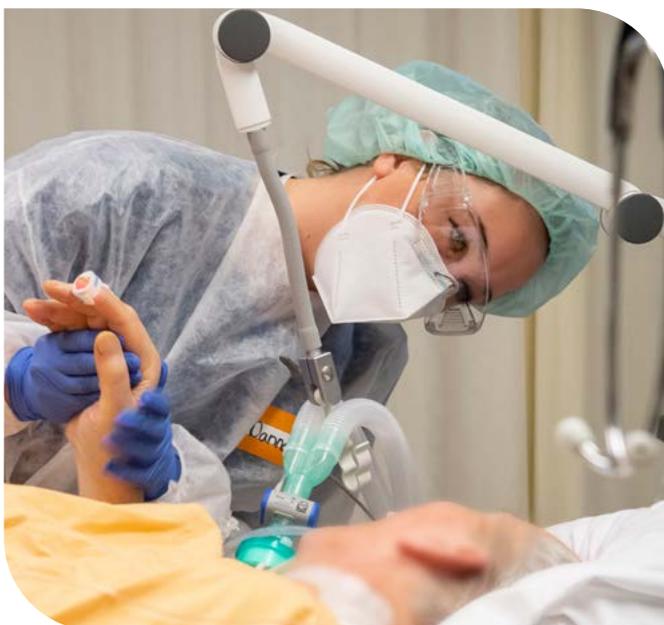
In parallel to the direct efforts deployed for COVID-19 in terms of health care and research, we adapted incisively to the situation and made use of it to accelerate on key issues from our Connecting Worlds strategy. This new strategy was launched in March 2020, and has been made even more relevant by the COVID-19 pandemic. On the one hand, it seems strange to decide on a long-term strategy amidst a crisis. On the other hand, we have seen great examples all around us of what our vision could be. The crisis has confirmed that we had in fact already started on our direction for the future.

Digitalization of health care

The COVID-19 pandemic has sped up the digitalization of health care. The need for and the added value of remote monitoring for instance have become even more apparent. This means that patients need to come to the hospital less often, and can go home sooner after admission, with greater autonomy. The quality of care has also improved as we are now more able to customize the care offer. In addition, scalable, digital solutions have led to more effective, affordable care. In 2020 for example, remote monitoring of patients with cystic fibrosis was intensified, a smart patch for monitoring COVID-19 patients was introduced, and a medical control center was opened, from where our medical health workers can monitor patients from a distance and provide customized care.

Research accelerated

COVID-19 has not only delayed and hindered a lot of research, it has also accelerated research. Think of the worldwide REMAP-CAP study that UMC Utrecht coordinated in Europe. Under this umbrella, four interacting studies were performed for the pandemic in about fifty hospitals worldwide. Thirteen such studies are now underway in some three hundred hospitals around the world. REMAP-CAP has yielded valuable results, whereby seriously ill COVID-19



patients taken up in IC can now receive better treatment, risk of mortality has decreased considerably, and patients spend one week less on average in IC.

Intensified cooperation

In the past year, we have also started to cooperate more intensively and in a more multidisciplinary way. Departments and staff that normally had no or little contact with each other, have been sharing knowledge and capacity to be able to provide COVID care, continue regular care as much as possible, and create the necessary conditions to do so. Cooperation was also intensified at a regional and national level, for instance through ROAZ (regional consultation on acute care), and together with other UMCs and the Dutch Defense Ministry to provide supra-regional assistance to COVID-19 patients at UMC Utrecht. In the field of research, we have also intensified cooperation successfully in the Netherlands, in Europe, and worldwide. Good, intensive cooperation with health insurance companies has contributed to the stable continuation of our operations.

“The overall satisfaction of our patients in these eventful times has even increased.”

Appreciation of patients, students and staff

In this eventful time filled with challenges and change, our patients and students appreciated the experience they had with us. For this we are very grateful. The overall satisfaction of patients even rose somewhat to 8.6 for the outpatient clinic, and 8.5 for the clinic. Among other things, it appears that patients appreciate the new experience of remote consultations. For our students too, we have switched extensively to digital teaching, which has also received a very good rating from our students. At the same time, we have ensured that internships and practical training, which couldn't be done online, could continue insofar as possible. Always in line with government guidelines of course. In 2020, there were also more employees than in 2019 who rated the working experience at UMC Utrecht with a score of 8 or higher. The extra emphasis on the meaningfulness of our work possibly contributed to this.

However, work pressure and difficult conditions have also taken their toll. Absence due to sick leave rose sharply in 2020. People gave their utmost and became

exhausted. We have therefore given, and are still continuing to give, extra attention to psychological support, and have reinforced and expanded our communication through digital channels. Regular webinars and digital newsletters are examples of this. In addition, colleagues have helped and supported each other tremendously. Although we saw each other much less or not at all, there was more mutual connection and solidarity at UMC Utrecht in 2020 than ever before.

“Together we have given it our all, and together we have succeeded!”

We are continuing in 2021

Whatever the challenge we were faced with, we put our shoulders to the wheel and overcame it together. Almost 12.000 people at UMC Utrecht, each in their own field, have shown tremendous resilience, responsibility and creativity. We are incredibly proud of this.

In 2021 too, the community will be able to count on us. We hope that through vaccination, COVID-19 infections and hospitalizations will rapidly slow down, that the pressure on our care workers will decrease, and that we will once more be able to provide regular care to its full extent. And we expect that after the summer, the new reality will become clearly apparent. Naturally we are asking ourselves questions in this respect, such as: what have we learned, what do we want to leave behind us, and on what are we going to build further? A welcome new development is for example our Program for future-proof nursing, with which we will respond to the changing demand for health care and among other things work on nurses' career development, the positioning of the nursing discipline, and innovations. In addition, the multi-year Patient Participation plan established in 2020 will ensure that we take further steps in conducting an ongoing dialog with patients.

We are continuing with the implementation of our new strategy, our long-term vision of health care, and our daily activities in education, research and care. Everything that is needed to improve people's health and create the health care of the future. Adding value to people's lives, because every human being counts.”

On behalf of the Executive Board
Margriet Schneider, Chair



A word from the Supervisory Board

‘Great admiration and appreciation’

“Looking back on 2020, it is obvious where our focus as supervisory body mainly went: to any developments at UMC Utrecht caused by COVID-19. And if something in particular stood out for us in 2020, it is the tremendous admiration and appreciation for UMC Utrecht as an organization, and for each individual worker. We therefore want to start with a huge thank you to each of them for their enormous input.

It has been a long time since we have been hit by a crisis of this scale in the Netherlands. A crisis that has impacted health care full on, and that is still continuing to affect it. UMC Utrecht in our opinion has managed it unbelievably well, and we are impressed by the way in which everyone at UMC Utrecht has tackled it and rolled up their sleeves. Think for instance of the crisis organization that was put in place and started up fast and in a professional manner, and everyone’s exceptional willingness to make an extra effort.

“We find it impressive how unbelievably well UMC Utrecht has managed the crisis and how everyone has pushed up their sleeves.”

It became more than apparent in the past year that UMC Utrecht staff feel a tremendous responsibility for patients and for each other. We saw some great initiatives from departments and staff to help one another. An example is a team that offered assistance to IC colleagues and called the families of hospitalized COVID-19 patients daily to keep them informed. In addition to the remarkable care provided to patients, they also took care of each other. This was wonderful to see.

Fantastic things also happened in the field of research. Scientists at UMC Utrecht made a huge contribution for instance to research on how COVID-19 patients could be treated better and how we could test faster and more effectively for COVID-19. UMC Utrecht also plays an important role here in the Netherlands and in Europe. Naturally we are proud when we see or read about one of our scientists as an expert in the media.

And if we look at education, we find it awesome how UMC Utrecht was able to create distance teaching fast

and effectively, and made sure that students could continue with their training and internships as much as possible. This was a huge job. Great admiration and appreciation for this too. And also for the fact that many staff members worked from home for a large part of the year, and made significant efforts from a distance. This requires a great sense of responsibility and perseverance.



In a year like 2020, we saw even more than usual how extremely relevant we are as a UMC. In addition the COVID-19 pandemic has sped up significant developments in all areas, in other words health care, research and education. For example in e-Health, with the remote monitoring of patients. This was not only a solution for COVID-19 patients, but also for other patients – often high-risk groups – who thus needed to come to UMC Utrecht less frequently. These are extremely positive and welcome developments that form an essential part of UMC Utrecht’s strategy.

We also find it excellent that UMC Utrecht, amidst the commotion, made an effort together with a large group of stakeholders to finalize and launch the new Connecting Worlds strategy. We noted that employees were happy about this. The new strategy provides a long-term outlook for health care in the future. It gives inspiration and guidance. And current events have shown that we have paved a good road towards the future with this new strategy. >

> We are thrilled with everything that was done in 2020. We did not need to ask ourselves whether UMC Utrecht would be able to hold up in this crisis. Operations also stayed completely on track and financial results were in line with the budget, which in this particular year was a tremendous feat. What did worry us was: how would people keep it up? In 2020, we therefore put extra focus on the wellbeing of staff members. It was good to note that the Executive Board and everyone in the house paid particular attention to this. As a large organization in a time of great crisis, it is important also to zoom in on individual people and colleagues. Even though we can alas not prevent individuals from dropping out, we do get the impression that this has been managed effectively all in all. Attention is given to the human aspect and relations, and the contact is professional and warm.

As Supervisory Board, in 2020 we were also obliged to perform most of our tasks remotely. We regularly asked ourselves in this regard: do we hear enough from our staff and what more can we do? Of course most of our regular contact opportunities took place online rather than physically. We further had regular digital meetings with staff from various departments to keep in touch. We were also able to have a number of physical encounters with staff. For example in the test street of UMC Utrecht and in the capacity center.

All in all we believe that we were able to get a good idea of what was going on in the organization.

Business operations stayed on track and financial results were in line with the budget, which is a huge achievement in this particular year.

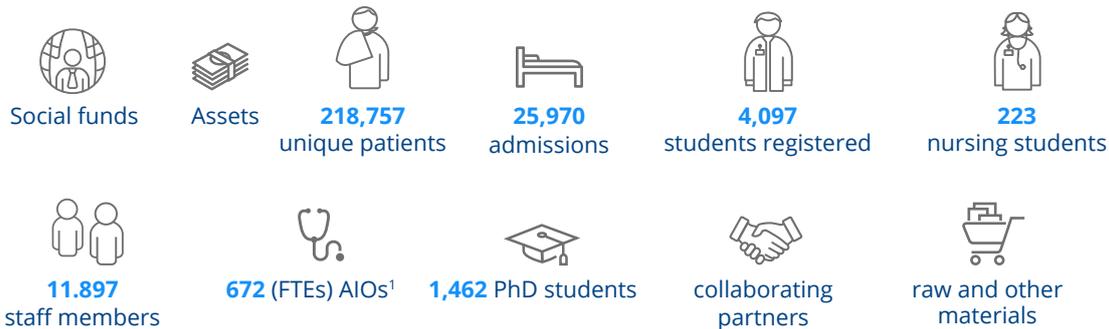
It is clear that the house can handle a crisis like this and that good things can come of it despite everything. Let us take the positive with us and build on it in 2021. And see where we can do better still. We are confident that UMC Utrecht can do this in the right way and in 2021 continue to take the necessary steps to create the health care of the future.

On behalf of the Supervisory Board
Caroline Princen, Chairperson



Value-creation model

Input



What we stand for, our mission:

Together we improve human health and create the health care of tomorrow

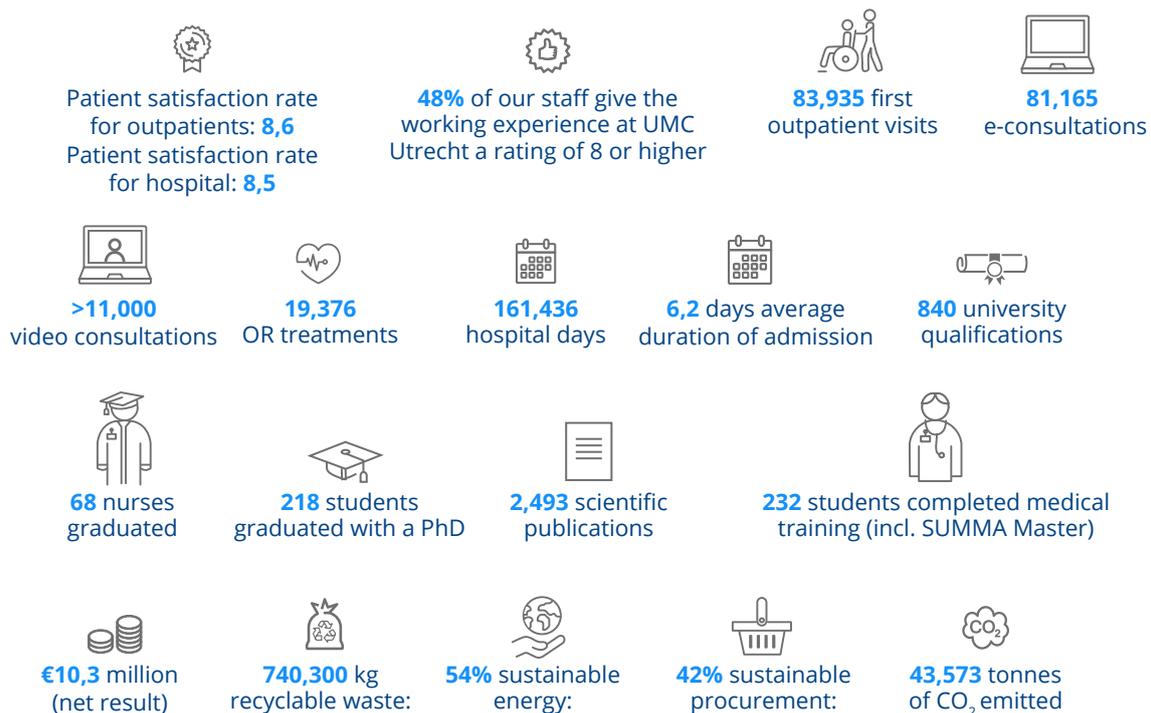
What we are striving for, our vision:

Together we create more value, because every human being counts

Our strategy

Connecting Worlds, because every human being counts

Output



¹The number of AIOs in medical follow-up training at UMC Utrecht is 372 FTE, and the number of AIOs in general practice, 300 FTE.

1. Our strategy

1.1 Utrecht in society: our core tasks

Our joint mission is to improve people's health and create the health care of the future. For this we focus on three core tasks:

Patient care

We offer patients effective quality care according to the most recent insights, and in line with our care profile. This involves health care that is our statutory task, such as level 1 trauma care and expertise centers, care within our six focal points, and complex care (e.g. multi-specialists or multi-diagnostics). Our viewpoint is that a patient should get the treatment that is best for them. Our patients have a management role in their own treatment and experience of our people-centric commitment.

Research

We perform scientific research, with close links between our fundamental research and more applicable clinical profiles. Our research focuses on six multi-disciplinary programs (focal points), which also included care, in order to establish the health care of the future. In this way we ensure that new discoveries and knowledge can be applied fast to the benefit of patients and citizens. An important point of departure for our research are questions from our patients and society.

Education

We provide education to our students and (bio)medical visitors, and other health-care workers. In this way we train top professionals who contribute to knowledge development in and for health care; for the health care of today and tomorrow. Our students and patients are involved in the development of our education. We offer deployment possibilities and a climate of constant renewal.

1.2 Our strategy: Connecting Worlds

Our three core tasks have been translated in our strategy. At the end of March 2020 we adopted our new strategy earlier than planned: Connecting Worlds, because every human being counts. Until 2020 we worked with the strategy Connecting U. 2020 was therefore a transitional year for us in terms of strategy.



Connecting Worlds is going further and becomes Connecting U. In this annual report, we shall define the terms in our new strategy. COVID-19 has led us to accelerate in a number of areas that we had previously named in our strategy. The crisis has confirmed that our direction for the future is already laid out. In 2020, we saw an acceleration in digitalization both in care, with remote care and video consultations, and in teaching and our way of working. There was also an acceleration in research that had not been visible before.

Connecting Worlds, because every human being counts.

We believe in connecting worlds that are often still separated. This brings unexpected insights and breakthrough innovations. At UMC Utrecht we bring the worlds of research, care and education – our core tasks – together with multidisciplinary teaching and inter-professional training. We connect the worlds of hospitals, general practitioners, and other health-care workers. Of research institutions, laboratories and businesses. Regional, national and international. Of patients, employees, students, and citizens. We connect worlds to create an environment where patients, colleagues and students are seen and heard. Because every human being counts.

What we stand for, our mission:

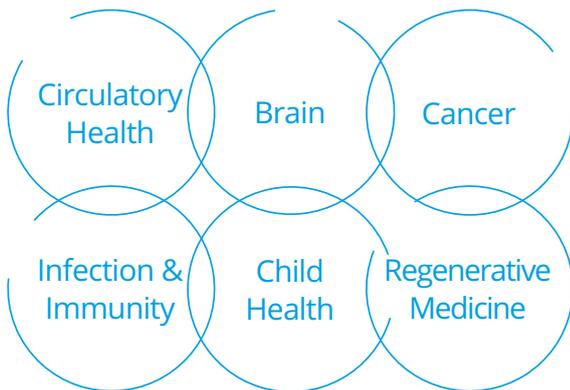
Together we improve human health and create the health care of tomorrow.

What we are striving for, our vision:

Together we create more value, because every human being counts.

1.2.1 Our foundation

For us, every human being counts. By really listening, we can help each patient even further to improve their health. Because the better we understand what care means for the patient, the more personalized we can make our advice to them on their treatment strategy. And this in turn leads to better care for the patient. Our goal: optimal care, and preferably as close to home as possible. Our foundation lies in our six focal points, our care profile, and the Utrecht approach.



1.2.2 Our six focal points

With regard to knowledge innovation, UMC Utrecht works with six key focal points. These enable us to build further in the direction that we have taken with our Connecting U strategy (2015-2020).

Our six focal points are:

Brain

Within the [UMC Utrecht Brain Center](#) we work on health-care innovation (fundamental, translational and clinical), research and education to ensure that patients with brain-related diseases get the best treatment. Now and in the future. We focus on the following priority areas: stroke, neuromuscular diseases, epilepsy, precision psychiatry, brain tumors, and developmental disorders. Read more about activities within the [Brain focal point in 2020](#).

Cancer

In the [Cancer](#) focal point, we work on cancer prevention and improving the lives of people with cancer: curing people or, if that is no longer possible, adding years to their lives with the best possible quality of life. Improving the lives of people with cancer requires early diagnosis and suitable treatment, which is not only aimed at increasing effectiveness but also reducing side effects. Innovative research, broad multidisciplinary cooperation, and talented

professionals form the basis of our work. Read more about activities within the [Cancer focal point in 2020](#).

Child Health

Within the [Child Health](#) focal point, we want to create a better future for children with chronic diseases and their families. We are targeting four patient groups here: children with ante- or perinatal damage, congenital and hereditary disorders (of the heart, liver, kidneys or metabolism), severe inflammatory disorders (rheumatism, cystic fibrosis, and bowel diseases), and children receiving treatment for cancer. In our interdisciplinary approach we take account of the consequences and effects of treatment now and in the long term. We refer to this as lifespan medicine. In this we not only look at physical health, but also psychological wellbeing. Read more about activities within the [Child Health focal point in 2020](#).

Circulatory Health

The purpose of the [Circulatory Health](#) focal point is to reduce cardiovascular diseases worldwide. This is why we created the Circulatory Health Center, where integrated, state-of-the-art cardiovascular care, research and teaching takes place. In this way we improve cardiovascular care within UMC Utrecht and outside, and ensure a societal impact with and for patients. Read more about activities within the [Circulatory Health focal point in 2020](#).

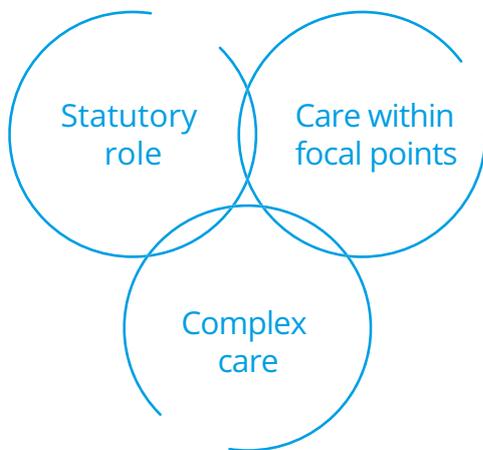
Infection & Immunity

The [Infection & Immunity](#) focal point strives to fill a leading role in the country and worldwide in the building and spreading of knowledge and innovation in the field of inflammatory and infectious diseases. We make an effort to provide people with treatment-resistant infections or immunity diseases with faster and better treatment. Our doctors and researchers cooperate intensively on high-value care and pioneering research. Insofar as possible, we do this together with patients. We safeguard our knowledge and skills by training talented people for the next generation of experts. In this way we contribute to the effective renewal and improvement of patient care, now and in the future.

With the corona pandemic, the Infection & Immunity focal point was caught up in the eye of the storm. Professionals working in this focal point contributed to the treatment of COVID-19 and the development of vaccines against COVID-19 through a variety of research. At the same time, they contributed actively to information on corona with numerous interviews for radio, television and the written press. Read more about activities within the [Infection & Immunity focal point in 2020](#).

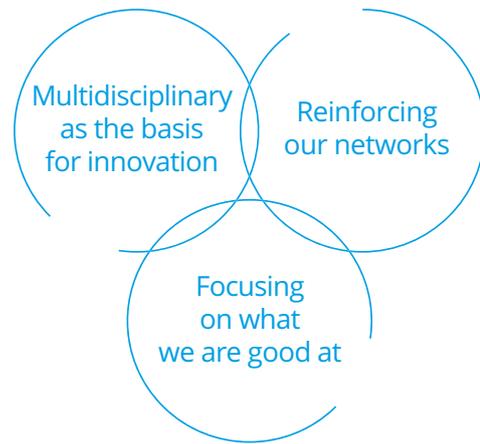
Regenerative Medicine & Stem Cells

Within the [Regenerative Medicine & Stem Cells](#) focal point (RMSC) we develop new methods for repairing or replacing damaged tissue and organs. For this, we make use of the self-healing power of the body. We focus on curing diseases that are still incurable today. Our three main topics are: the regeneration of cardiovascular and renal tissue (in cooperation with the Circulatory Health center), regeneration of bones and cartilage (in cooperation with the Mobility Clinic), and stem-cell and organoid biology and stem-cell therapy. The Regenerative Medicine Center Utrecht houses the largest group of research in the Netherlands in the field of regenerative medicine. Read more about activities within the [Regenerative Medicine & Stem Cells](#) focal point in 2020.



1.2.3 Our care profile

Our six focal points are also present in our care profile. We apply innovations and acquired knowledge in practice, which in turn leads to new forms of learning and questions for research. In this way we pursue our knowledge and skills. In addition, our care profile includes care that is our statutory task, for example 'level-1 trauma' care. Complex care that requires the infrastructure and multidisciplinary structure of an academic hospital fits in naturally with our care profile. Our view is that patients should get the treatment that is best for them.



1.2.4 Our education profile

In recent years, we have invested in educational innovation and renewal of programs to prepare our students for the health care of the future. This strategy is called 'Fit for the future', and is given shape through the unique Utrecht approach. The Utrecht approach consists of three components:

Multidisciplinary

As we believe that breakthrough innovations can be expected at the interfaces between areas of knowledge, we follow an entirely multidisciplinary approach in research, care and teaching. We actively look for areas of knowledge outside of health care that can be applied to care.

Focus

We apply focus by making clear choices. In the past, this led us to establish our focal points and care profile. In the coming years, we shall apply more focus by concentrating on specific areas where we can make a significant contribution to health care and the society of the future.

Strong networks

We expand our networks to do groundbreaking research, to keep innovating in health care, and to provide even better training. We innovate together with our partners – regional, national and international. In line with our multidisciplinary approach, we look for partners in sectors other than those we are accustomed to.

1.3 What we are going to do: speed up on content

We accelerate on our focal points by focusing on content. In the coming year, we are going to speed up in the following areas:

Healthy Living

We address the desires and needs of the individual by focusing on the individualization of diagnostics, prediction, treatment, disease prevention, and the promoting of individual health.

Biofabrication & disease modeling

We design (regenerative) treatment strategies that facilitate self-healing with a combination of technology and biology. We do this by looking at the underlying mechanisms of various chronic diseases and neurological disorders.

Molecular science & therapy

Developing targeted therapies for diseases through a better understanding of their molecular and cellular aspects. Through fundamental research, we create innovative disease models and measurement methods (in combination with artificial intelligence).

Image-guided interventions

Optical-, roentgen-, and especially MRI-guided interventions (operating without incision) play an increasingly prominent role in our focal points.

Integrated complex care for children

Together with the Wilhelmina Children's Hospital and in cooperation with the Princess Máxima Center, we use integrated complex care for children to understand complex diseases and improve treatment and prevention.

Acute complex care

UMC Utrecht as trauma center with the Major Incident Hospital (Calamiteitenhospitaal) which we manage together with the Central Military Hospital, holds a unique position in large-scale care for the sick and wounded. To speed up, we are striving towards state-of-the-art urgent aid, operation facilities, and intensive care.

The New Utrecht School

In recent years, we have invested in educational innovation and renewal of programs to prepare our students for the health care of the future. This strategy ('Fit for the future') will be continued and we are going to pay extra attention in our courses and further training to inter-professional learning and multidisciplinary teaching with an inclusive and diverse learning environment. We call this the New Utrecht School.



1.4 What we need for this: reinforcing the organization

In recent years we have laid a solid foundation with strategic alliances and innovative care ICT projects. And with programs like Together for the Patient, Connecting Leaders, Patient Participation and Modernization of Business Operations. We are steadily pursuing this reinforcement in the following areas:

Dialog with the patient

Continue learning from the patient in order to advise them optimally on a personal treatment strategy and to answer patients' needs and questions.

A great place to work

An organization where everyone is heard and appreciated. Because everyone has a talent, we stimulate personal development with training possibilities. We focus on talent management and career paths.

Solid networks

A stimulating partner is one that brings different worlds together and creates solid cooperation at a regional, national and international level.

Data science and e-health

Use data, artificial intelligence and digital technology to provide the right care in the right place, making our digital offer more innovative. So that any care that *can* be provided at home, is in fact provided at home.

Affordable and sustainable care

Aim for socially acceptable costs for the performance to be delivered in care, teaching, research and support. And reduce the negative impact on the climate and environment.

Agile organization

Stimulate an open culture of appreciation, work on further development of leadership, and work in multidisciplinary teams with joint responsibility where every voice counts. We are increasing our result

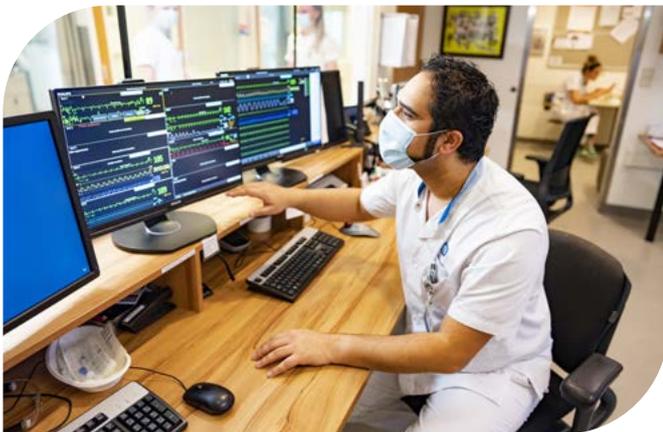
orientation by transposing our strategy to all teams and employees.

Good accommodation

In cooperation with partners at Utrecht Science Park, the province and the community, we are building a UMC Utrecht that moves along with our ambitions and the health care of the future. The new Health Campus that we are going to create will be aimed at a healthy lifestyle where the body gets the chance to heal itself. This major overhaul will take about 10 years.

1.5 The world around us

The world around us is changing fast. The COVID-19 pandemic has only reinforced this in certain areas. The crisis has confirmed that our direction for the future is already defined in our Connecting Worlds strategy. Everywhere around us we see great examples of what is awaiting us. We see how a certain proportion of care now takes place digitally. We see that in the intensive cooperation within the care network, renewal continuously takes place. We see multidisciplinary cooperation between scientists in the search for solutions and use of knowledge partners outside their own fields. And we see how our lecturers, together with students and other UMCs and knowledge institutions, adapt their teaching methods at a fast pace to make more and other forms of online teaching possible.



1.5.1 The COVID-19 pandemic

Since the COVID-19 virus was first discovered in China in December 2019, there has been a worldwide pandemic with vast numbers of patients and victims. In February 2020, the first COVID-19 infections were noted in the Netherlands, after which the virus rapidly spread here as well. Consequently, at the beginning of March 2020, the government took a number of drastic measures, including the virtual standstill of public life in the Netherlands. Hospitals and UMCs are faced with the task, together with chain partners

involved in ROAZ (regional consultation on acute care), to provide the necessary acute and intensive care to a large group of COVID-19 patients. Seen the high contagiousness of the virus, this has led to drastic hygiene and safety measures that currently still apply. Due to the great influx of corona patients, the required safety measures, and the essential upscaling to more IC beds, in March 2020 UMC Utrecht at the request of the Minister of Health, Science and Sport was also forced to scale down and postpone a large proportion of regular care. UMC Utrecht in cooperation with the Ministry of Defense moreover increased the number of beds in the clinic to provide supra-regional COVID-19 care to patients who could not be hospitalized in their own region due to a shortage of capacity.

In June 2020, the government eased COVID-19 measures, anyone with ailments could be tested, and hospitals and UMCs once again scaled up care. However, in September the number of people testing positive once more increased sharply. On September 22, 2020, RIVM evoked the beginning of a second wave, after which the government in October 2020 called out an essential second (partial) lockdown. In hospitals and UMCs there was once again considerable pressure on clinical and emergency aid, but the number of IC intakes remained lower than in the first wave. During the second wave, UMC Utrecht in cooperation with the Ministry of Defense once again provided extra capacity for supra-regional COVID-19 care.

In December 2020, the situation once more became alarming due to a sharp rise in infections, and due to mutations of the virus (British and South African variants). Halfway through December, this resulted in a second complete lockdown. Hospitals and UMCs once again filled up and ICs were creaking under the load. At UMC Utrecht, this wave also led to the necessary downscaling of regular patient care in December 2020 and January 2021. Vaccinations kicked off in the Netherlands at the start of January 2021, starting with groups of health-care workers among others. This was to be the start of gaining complete control over the effects of the virus.

All the measures taken by hospitals and UMCs in 2020, including choices in the range of care and, as of October, the necessary redistribution of patients, were done by order of the Minister of Health, Science and Sport, and fell within the scope of agreements made in the context of ROAZ (regional consultation on acute care).

Educational and research activities at hospitals and UMCs have also been faced with challenges due to COVID-19. Especially during the first lockdown for

instance, research to a large extent came to a standstill, and educational facilities had to make a fast transition to remote teaching.



The COVID-19 pandemic has placed great pressure on our employees. In the first instance of course, it required the utmost effort from our care workers to ensure that we could provide the necessary COVID-19 care, and at the same time maintain the same standard in our regular care insofar as possible. Although a lot of research stood still for a large part of 2020, our scientists made a significant contribution also to research on the treatment of seriously ill COVID-19 patients as well as virus tests. Employees who do not necessarily need to work on site at UMC Utrecht worked from home for a large part of the year. They too have been considerably impacted by the pandemic. Lastly the pandemic has also had considerable consequences for our students. We were able to ensure that teaching could mostly take place online and that internships, practical training and skill training could still continue under strict conditions. This has prevented study delays for many students, but alas not for internships. There has also been a negative impact on employees' and students' wellbeing and absenteeism has increased.

At the same time, COVID-19 has also had some positive effects. Employees have experienced more solidarity, and there has been an acceleration for instance in the digitalization and personalization of care, including remote care and home monitoring.

1.5.2 Developments in society

Apart from the start of the COVID-19 pandemic in 2020, other developments had already been impacting society for longer:

The changing demand for health care

The population is growing and aging, and the number of people with various chronic diseases is increasing. Health disparities between people are also growing. Patients want to be seen as human beings with possibilities and expect a personal approach aimed at health and quality of life. And people want to control this themselves.

Rising health costs and a tight labor market

On the one hand, the demand for health care is increasing and health-care costs are rising. On the other hand, we see the tightness on the labor market increasing, with a scarcity of good care workers. In 2018, parties from the specialized medical sector signed a Mainlines agreement. The aim of the agreement is to further promote the quality and effectiveness of specialized medical care and to guarantee accessible and affordable health care in the long term. It was agreed that in 2020 there should be 0% growth in specialized medical care costs countrywide. In the Mainlines agreement, commitments have also been made that should contribute to solving the labor market problem and reducing financial pressure.

The right care in the right place

An important move that is necessary to carry out the commitments in the agreement and to address patients' needs is: the right care in the right place, by the right professional, at the right time and at the right price. Where possible, care must take place closer to the patient – at home if possible, or in concentrated centers if necessary. And, if it results in equal or better quality care, physical care should also be replaced by other forms of care, such as e-Health. The COVID-19 pandemic has accelerated the development of e-Health solutions. Possibilities for digital transformation are increasing. Society is changing and becoming increasingly digital. Citizens are becoming more and more connected through online networks, and services are becoming less and less linked to place and time: consumers themselves determine what they need when and from whom. This development has also spread to health care. COVID-19 has made this trend even more visible. Moreover, the demand for health care is changing: the focus is shifting from cure to promoting health through lifestyle, prevention and self-care, with specific attention to quality of life and meaningfulness. The patient becomes in charge of their own care. Digitalization has brought remote care, the forming of networks, the right care at the

right time, and personalized care at one's fingertips. COVID-19 has brought accelerations in digitalization and remote care.

UMCs have a growing social responsibility

Society looks at UMCs in the Netherlands to innovate to the maximum and to act on current health-care issues through quality care and prevention. And to do this to the maximum and fast, at acceptable costs and in a sustainable way. COVID-19 has made this social responsibility even more obvious. Research and education are the driving factor here. UMCs must also assume their role in regional, national and international networks. Here too, the COVID-19 pandemic has brought acceleration and intensification.

Impact on UMC Utrecht

UMC Utrecht sees any development as an opportunity: these developments help us to provide health care to patients where it can be done the most effectively, and to continue personalizing health care more and more. Technological input and intensive cooperation with other stakeholders in the care chain are essential in order to make this move. The necessary changes require an efficient dialog between patients and professionals regarding meaningful care and meaningful work. Of course this not only changes the content of our work, but also of our research and teaching.

Any developments therefore also require changes in our management. Issues such as privacy and safety are even more important than before, and we are asking more and more skills from our employees. In addition, risk management as well as responsible cost management and working efficiently, for example by reducing registration charges and Horizontal Supervision of Care, continue to be high on our agenda. By working efficiently we can not only save costs, but also spend more time on our core tasks. It also remains a challenge to reduce our impact on the environment, and therefore ultimately also on people's health, and to achieve sustainable care.

Much is happening in the worlds of patients and of our employees and students. But also in the worlds of our partners. This is why we believe in Connecting Worlds, because every human being counts.

1.6 Measurable goals

To work tangibly on our mission and measure whether what we are doing has the desired impact, we define measurable goals for ourselves each year.

In September 2020, we established our annual plans for 2021 based on our new Connecting Worlds strategy (2020-2025). In 2020, our measurable goals were still related to our Connecting U strategy (2015-2020).

Patient experience

Our patients rated our care in 2020 with a score of 8.6 for outpatient care and 8.5 for the hospital. This is a good result, whereby we reached our goal of 8.4. Naturally we will continue to make an effort to improve where necessary and where possible. To have good insight in patients' experience and be able to make adjustments fast, starting from June 2020 we will be measuring our patients' experience twice a year.

Our patients in a large proportion of our outpatient centers could obtain a first consultation with our specialists within 28 days of referral. Our KPI Waiting time at outpatients shows that during the year, for an average 80% of our patients, the 28-days standard was attained. We thereby meet the so-called Treek standard, but we would prefer to ensure that 95% of our patients can have a consultation fast. Of course the COVID-19 pandemic impacted our waiting times. This meant that we were able to receive fewer 'regular' patients. The urgency of the need for care was in all cases determining for the speed with which patients actually received a consultation. The percentage of canceled operations was also higher in 2020 than our target of 2.5%, namely 3.4%. Of course we believe that it is important to inform our patients properly about waiting times. We therefore gave attention in 2020 to keeping waiting-time information updated on our website, Samples have shown that there is sometimes outdated information on the website. In the future we shall continue to perform regular sample tests to stay on our toes in this respect.

Quality & safety

To have access to current medication data, it is essential to map the medication that patients are taking, both during admission and transfer of our patients. In 2020, we were able to map this for 91% of our patients during admission. When our patients are transferred to their homes or another institution, it appears that we are able to do this for nearly 60% of our patients in accordance with our own standards. We want to improve this to 90%.

In the next three years, we shall be working on various improvement initiatives via our [Medication Safety](#) plan. We want to improve the timeliness of communication to general practitioners, when patients are transferred back home or elsewhere. Our goal is to send the general practitioner/referrer a discharge report within 24 hours, and a complete discharge letter within 14 days, for 90% of patients transferred to their homes or elsewhere. In 2020, we reached 60%. To improve this in 2020, we investigated causes that led to delays in the desired transfer information. In 2021, we shall be launching improvement actions.



Employee satisfaction

The corona pandemic of course had a tremendous impact on our work and our employees. In 2020, absenteeism reached an average of 5.31%. This is 0.4% up from 2019 (4.91% in 2019) and higher than our target of 4.5%. Although we did not record what proportion of absenteeism was corona-related, we can assume with some certainty that our absenteeism rate rose due to COVID-19. Either directly due to infection by the COVID-19 virus or because people had to stay home in quarantine, or indirectly due to the work pressure and strain on our people, both at work and in private life. Nevertheless, overall employee satisfaction went up in 2020. According to the fall assessment of our work-experience survey, 48% of our staff rated working at UMC Utrecht with a score of 8 or higher. In the fall of 2019, it was 44%. The added experience of the social relevance of our work due to the corona crisis possibly played a role here. Our aim however is for 85% of our employees to rate working at UMC Utrecht at 8 or higher, and we are going to make an effort to increase employee satisfaction. In 2020, also due to the attention that the COVID-19 pandemic required from us, fewer appraisal interviews could be completed than in 2019 and than our target figure (39% in 2020 and 44% in 2019). This is also far from our target of 90% and therefore also requires our attention.

Productivity and impact

In terms of productivity and impact, we performed well in 2020. We delivered care as agreed with health insurance companies, and took in many COVID-19 patients. We also reached our target of 92% in providing care to patients outside our care profile. Furthermore, we performed 92.3% of our research within our focal points (84% in 2019), which is more than our target of 85%. It is important to have a clear focus on research. We can still improve on the KPI of professional development of teaching staff, whereby we can further increase our impact in education. In 2020, 71% of our lecturers had an initial teaching qualification (Basiskwalificatie Onderwijs or BKO). Partly due to the focus on COVID-19-related activities, for example switching to online teaching, this was lower than in 2019 (78%). Our target here is 85%. Finally, as in previous years, we were also a financially sound organization. Our operating income was higher in 2020 than in 2019, but due to COVID-19 we did have to deal with considerably higher costs. In total, our result was in line with the budget for 2020.

1.7 Cooperation in the chain

We address the desires and needs of the individual by focusing on the individualization of diagnostics, prediction, treatment, disease prevention, and the promoting of individual health. In many cases this requires a joint approach with other institutions, such as other hospitals, care and knowledge institutions and companies in the region, at a national and international level, and ICT solutions that also allow data-exchange between care institutions. Through building links and collaborations, we transform scientific results into products and services with added value for society.

On our website you will find an overview of our [collaborations](#). Some great examples of collaboration in 2020 include:

Defense collaboration on supra-regional COVID-19 care

With the support and extra input of the Ministry of Defense, we were able to provide additional supra-regional capacity for COVID-19 patients in 2020. In total we had about 150 military health-care workers from the Army and Air Force with us who were active in the cohort nursing wards and IC. The Ministry of Defense in this way doubled our own capacity: for each Defense worker, there was one UMC Utrecht worker. This meant that we had twice as many hospital beds available for COVID-19 patients, and that we were able to open IC beds in two locations: at UMC Utrecht in regular IC, and at the Major Incident Hospital (Calamiteitenhospitaal). In this way we could scale up COVID-19 care fast when needed, and had sufficient IC backup facilities for supra-regional COVID-19

patients in cohort nursing wards if they still needed IC. To equip Defense staff sufficiently for their supra-regional care duties, they followed a special training program at UMC Utrecht. The final medical responsibility rested with UMC Utrecht. The collaboration with the Ministry of Defense for supra-regional COVID-19 care will continue in 2021.



Knowledge alliance with UU and TU Eindhoven & Wageningen

In 2019 we intensified our collaboration with Utrecht University, Eindhoven University of Technology, and Wageningen University & Research. In 2020, the budget and year plan were approved and the first initiatives kicked off. On December 2, 2020 this collaboration in the form of a Knowledge Alliance was officially launched by the Ministry of Education, Culture and Science. By building bridges across the borders of knowledge, institutions and programs, we want to contribute together to solving major societal challenges in the field of health and sustainability. The complementary expertise that is combined in the alliance is deployed especially in the fields of: artificial intelligence, prevention of health problems, and molecular life sciences. We also want to create more shared education and stimulate student mobility, to give students the chance to collaborate with other disciplines. For this we are defining new challenges and aligning teaching environments and systems with each other. Besides institutional academic cooperation, in order to create as much societal impact as possible, we shall also cooperate with a range of external partners.

Collaboration on pediatric allergy with Wilhelmina Children's Hospital and Diaconessenhuis

Preparations were made in 2020 for collaboration between the Wilhelmina Children's Hospital (WKZ), a section of UMC Utrecht, and Diaconessenhuis in the field of pediatric allergy. This pooling of knowledge and expertise makes it possible to deliver safe, quality care for patients suffering from pediatric allergies in the Utrecht region. An experienced, multidisciplinary team

of workers from WKZ and Diaconessenhuis together perform patient triage before the start of treatment. This ensures that children are sent faster to the right place of treatment. WKZ in particular provides complex care to children with allergy ailments. Diaconessenhuis offers secondary care via the specialized Allergy Center. The collaboration between WKZ and Diaconessenhuis applies the vision of 'the right care in the right place' for future-proof care and was officially launched on January 1st, 2020. Besides direct patient care, cooperation is also pursued in the field of teaching and in the longer term, research.

Oncomid: collaboration for cancer care

To offer people with cancer the best care in the right place, cancer experts from UMC Utrecht joined forces with cancer experts from five other hospitals in Midden-Nederland. The five other hospitals in the regional oncology network Oncomid are:

Diaconessenhuis, Rivierenland Hospital, St. Antonius Hospital, Meander Medical Center, and Tergooi. The core of the oncology network consists of twelve regional working groups for the various forms of cancer. The specialists in these working groups come from the entire region and work together so that each patient can be treated according to the latest scientific developments, regardless of the hospital where they are treated. Oncomid supports and facilitates cooperation between specialists for example by allowing the safe exchange of patient data between the various hospitals.

For a number of years already, UMC Utrecht has been working with five other hospitals in the region. Each year we talk with more than 6,000 patients in regional oncological, multidisciplinary discussions. And regularly, patients are treated by a care team of doctors from different hospitals. Cooperation in Oncomid ensures that knowledge and expertise are not limited to one hospital and that the quality of cancer care will increase throughout the region.

In September 2020, we closed an agreement with the hospitals in Oncomid for the automated exchange of patient data for multidisciplinary oncological discussion. The health insurance company Zilveren Kruis signed the agreement. By linking up electronic patient records (EPR), we can see earlier and real-time data exchange and real-time data of each other's patient risks. Until now, data have been exchanged via a portal or protected mail. It was time-consuming and brought an unnecessary workload for doctors and support staff, could lead to delays in care for a patient, and was prone to errors. We expect that we shall also be able to use the infrastructure of the project for other patient groups in the future.

Health Hub

To maintain the quality and affordability of the Dutch health-care system, fundamental changes are needed in the organization of health, care and wellbeing. This can only be done by adapting the entire system. The best and quickest way to do this, is to pool all knowledge, expertise, creativity and drive in one broad 'think-and-do movement'. The Health Hub Utrecht is such a 'think-and-do movement' and UMC Utrecht forms an active part of it.

In 2020 the Health Hub continued to grow into a network organization in the field of health, care and wellbeing. Health-care professionals, researchers, policy makers, designers and subcontractors from the entire chain are brought together here. Together we have one goal, which is to make it accessible for everyone in the Utrecht region to grow up healthy, live

a balanced life, grow old happily, and die with dignity. And to give all inhabitants an equal chance to benefit from the growing prosperity in our region. To do this, there are three coalitions within the Health Hub: District-oriented Prevention, Digital Transformation, and an Attractive Labor Market.

In 2020, the network expanded with new partners, and a design & support lab was set up to give better support to the Health Hub coalitions. In the summer of 2020, the Health Hub set out its strategy in the Health Hub Utrecht Whitepaper, focusing on further professional development, the governance model, and the drawing up of a budget for the years until 2022. The chairperson of our Executive Board, Margriet Schneider, together with the Utrecht Public Health councilor, Eelco Eerenberg, is the managerial sponsor of the Health Hub.

2. Health Care

Providing patients with care is one of our three core tasks. We continuously try to innovate this care. We do this on the basis of research findings, by continuously assessing what we can do better, and by listening to the needs of patients and employees. And by coordinating intensively with chain partners in the network around patients, such as general practitioners, regional hospitals and other treatment centers.



2.1 The impact of COVID-19 on our health care

It goes without saying that the corona pandemic has had an enormous impact on the care that we provide at UMC Utrecht. To cope properly with COVID-19 patients and expose other patients as little as possible to the risk of infection with the virus, we have set up special cohort and IC units. Among other places, on the premises of the Major Incident Hospital (Calamiteitenhospitaal). On February 27, 2020, the first patient was hospitalized at UMC Utrecht who on March 2nd appeared to have COVID-19. In total, we admitted and treated 744 COVID-19 patients in 2020.

In the first wave that started in March, and the second wave that started in September, the influx of COVID-19 patients unfortunately forced us gradually to scale down regular care. To be able to do this in a judicious and nuanced way, we created a system where the impact of postponed care on a patient stood central. In this way we ensured that acute regular care as well as COVID-19 care could continue insofar as possible. We looked daily at capacity, scaling down our regular care when necessary, and scaling it up again as soon as we could.

Besides the reception of COVID-19 patients from the Utrecht region, we also managed the supra-regional admission of COVID-19 patients who could not be admitted in their own region. As patients admitted in IC often need an intensive rehabilitation process, and sometimes only notice symptoms some time after they are back at their home, we opened a special aftercare outpatient clinic in June 2020 for people with COVID-19 who had been admitted in IC.

UMC Utrecht also played a role in monitoring people in the Utrecht region who might have had COVID-19 and testing people for COVID-19 in the Utrecht region. In November 2020 for instance, the XL test street was opened at the Exhibition Center, with the cooperation of UMC Utrecht. And on November 17 we opened a speed booth where people could get a fast PCR test.

Of course in addition to providing COVID-19 care we also continue to keep an eye on patients with other diseases, such as cancer.

2.2 Appreciation by our patients

Patient satisfaction is one of the measurable targets that we aim for, as we want to continue improving our care. Care is only good if people experience it as such. Listening to patients and their experiences is an important condition for this. We can only improve care if we do it together. To continue gaining insight in the perceived quality of care, we started measuring it in June 2020 using the ongoing Patient Experience Monitor (PEM) measurement tool. In 2020, 11,259 adults who came to the outpatient clinic filled in the questionnaire. And 2,455 adults who were admitted to the hospital filled in the questionnaire.

Patient Experience Monitor 2020

Outpatient clinic: 8 Clinic: 8.5

Appreciation of video consultations

In 2020, the COVID-19 pandemic brought an acceleration in the digitalization of care and remote care. In 2020, over 11,000 video consultations were conducted with patients. Patients rated video consultations with an average score of 8.4. 46% of the patients indicate that in future, after corona, they would also want to have outpatient appointments insofar as possible in the form of a video consultation. Telephone consultations were rated at an average score of 8.4. And 38% of the surveyed patients indicated that they would also want to have outpatient appointments in the form of telephone consultations as much as possible after corona.

2.3 Unique care

We offer patients effective quality care according to the most recent insights, in line with our care profile. This involves care that is our statutory task, such as level 1 trauma care and expertise centers, care within our six focal points, and complex care (e.g. multi-specialists or multi-diagnostics), which fit in with the infrastructure and multidisciplinary composition of an academic hospital in the region. Our viewpoint is that a patient should get the treatment that is best for them. Our patients have control over their own treatment and experience of our people-centric commitment and safety in care.

Collaboration for cancer care

To offer people with cancer the best care in the right place, cancer experts from UMC Utrecht joined forces with cancer experts from five other hospitals in Midden-Nederland. The five other hospitals in the regional oncology network Oncomid are: Diakonessenhuis, Rivierenland Hospital, St. Antonius Hospital, Meander Medical Center, and Tergooi. The core of the oncology network consists of twelve regional working groups for the various forms of cancer. The specialists in these working groups come from the entire region and work together so that each patient can be treated according to the latest scientific developments, regardless of the hospital where they are treated. Oncomid supports and facilitates cooperation between specialists for example by allowing the safe exchange of patient data between the various hospitals. Cooperation in Oncomid ensures that knowledge and expertise are not limited to one hospital and that the quality of cancer care will increase throughout the region.

International registration of COVID-19 cardiovascular diseases

Cardiovascular patients can become seriously ill due to the COVID-19 virus. COVID-19 can also lead to cardiovascular complications in people who were previously healthy. To ensure better treatment, it is necessary to exchange information as fast as possible between hospitals, both in- and outside the Netherlands. To do this, UMC Utrecht together with partners of the Dutch Cardiovascular Alliance set up CAPACITY-COVID registration. In addition, within CAPACITY-COVID, we initiated the STROCORONA sub-study to investigate how often cerebral strokes occurred in corona patients. From the CAPACITY-COVID registration it appeared in October 2020 that in almost 12% of corona patients who had to be admitted to hospital, heart problems occurred during hospitalization. Serious cardiac complications, for example inflammation of the heart muscle or heart failure, is observed in less than 2% of all patients. According to the first findings of the STROCORONA sub-study, cerebral strokes also appear to be relatively rare: these occur in less than 1.8% of corona patients admitted.

3D printing of living tissue

A new technology was developed at UMC Utrecht called volumetric bioprinting. This method uses light-sensitive gels and laser beams to print 3D objects with live cells faster than ever. A huge step forward: cells maintain their functionality and scalability increases, which means that it will become possible to print clinically relevant structures such as tissue and perhaps even whole organs. To develop this promising technology, various subsidies were obtained, including an NWO Idea Generator Grant, a Horizon2020 FET Open grant and a European Research Council (ERC) starting grant. 3D (printing) technology is also applied increasingly in the hospital. It is for example used with complex operations, both during preparation (making cutting templates) and during the operation itself (patient-specific implants). Implants are supplied with a coating to treat infection and/or boost bone regeneration. Recently the first patient was treated with a technology of this kind. In 2020, our 3D LAB was also opened. Specific treatment solutions are made here in close collaboration with the existing 3D Facelab (oral surgery) patient based on 3D technology.

Monitoring the safety of COVID-19 vaccines

In 2020, UMC Utrecht coordinated preparations to monitor the safety of [COVID-19 vaccines](#) in the Netherlands and eight other European countries, by order of the European Medicines Agency (EMA). UMC Utrecht now coordinates and monitors all data streams concerning possible adverse effects and assembles all of it in a dashboard so that the safety of vaccines can be monitored effectively. The EEA publishes all manufacturer studies and the EEA monitoring survey on its website.

An inspiring evening on artificial intelligence and brain disease

In January 2020, the UMC Utrecht Brain Center and New Scientist co-organized an inspiring evening in a sold-out room in [TivoliVredenburg](#) with the theme: Brain disease – can data save your life? Experts inspired some 400 audience members and set them thinking about what artificial intelligence and data could mean for care and research on brain disease.

2.4 Quality & safety

Of course our patients count on safe, quality care. Care is however the work of people.

To help health-care workers provide safe, quality care, we work uninterruptedly to maintain a high level of care. We learn from what is going well, improve prospective, and learn from care that did not go according to what we had intended. In our safety-management system, we keep an eye on risks, learn what could be better, and based on this, undertake actions to make improvements. Yet there are [patients who have an unpleasant experience](#). We do our best to discuss this, learn from it, and remove dissatisfaction.

In the event of an incident or major incident, we perform a thorough investigation to find out what factors contributed to the fact that the care did not go according to plan. We also look at how to prevent this from happening again in the future, and how we can further improve the quality of our care and patients' safety. Complication discussions are held in all care units, and reflection meetings and listen-and-learn meetings take place various times throughout the year. Read more about our [quality indicators](#).

Survey on quality indicators

During the COVID-19 pandemic, our staff have been providing care in exceptional circumstances. Were our quality standards maintained in this unusual situation? To be able to assess this, we conducted a survey in the fall and winter of 2020 using tracers. The survey showed that our health-care workers have also been providing good care under these circumstances.

After the survey, we discussed it with care workers and managerial staff, exchanged good practices, and where appropriate, offered more help. We made an extra effort to explain arrangements regarding personal protective measures even better to patients, visitors and colleagues. For example by optimizing information on the website and in letters to patients, and by making information clearer at the entrance.

Efficacy of improvement measures

In 2020 we investigated the efficacy of improvement measures that were put in place subsequent to incidents and major incidents. For example, we used tracers to assess whether and how recommendations had been implemented. We also checked to see what kind of improvement measure was the most sustainable and effective to genuinely improve care for our patients. Because the proper execution of improvement measures requires energy and we want to apply the available resources to achieve the maximum possible impact on patient care. The recommendations from the survey provided us with leads to formulate improvement measures more specifically in accordance with a SIRE (Systematic Incident Reconstruction and Evaluation) study, bring them more in line with the basic causes, and follow up even more regularly with a tracer.



Medication safety

One of our priority areas in which we want to improve, is medication safety. In 2020 we drew up a plan with improvement initiatives for this priority area, which we are going to implement throughout UMC Utrecht in the next three years in order to increase medication safety. Medication safety is a wide field. Since analyses show that prescriptions and administering of medication leave the most room for errors and oversights (34% for prescriptions, and 47% for administering), we are focusing on that to make the biggest impact. We are going to standardize medication prescriptions across UMC Utrecht and set up technological support for (double-)checking the administering of medication. We shall also develop educational material on the correct procedures for

prescribing and administering, and optimize training for nursing staff and doctors in this respect. We shall further optimize the use of the various medication-related ICT systems.

Meaningful accreditation

We cooperate with the Joint Commission International (JCI) for the accreditation of our quality system. Together with the Dutch hospital network that cooperates with this accreditation body, we initiated discussions with JCI in 2020 on a more meaningful form of accreditation, suited to a changing society, and insights into quality of care. What interventions and resources contribute concretely to gaining insight and improvements in quality of care? Parallel to this, in relation to NFU, we are investigating new ways of reflecting on the quality of care together with patients. In 2021 we shall decide which route is most suited to our ambition of providing quality care.

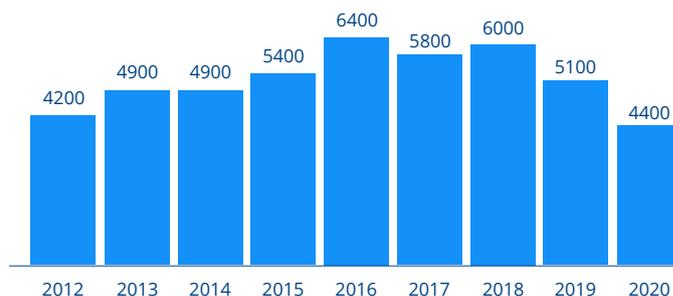
Timely diagnosis results

As part of their treatment, laboratory, roentgen or pathological analyses are requested for many patients. To ensure that medical specialists assess the results of such diagnostic examinations in time, and discuss them with a patient if necessary, we conducted an in-depth analysis in 2020 on the procedures for following up requested diagnostics in an adequate manner. The analysis led to guidelines for methods and the training of care workers, and to the deployment of resources offered by electronic patient records for communicating results to a patient, so that the care worker can have the best possible support to fulfill their duties with precision.

2.4.1 Incidents, major incidents, complaints

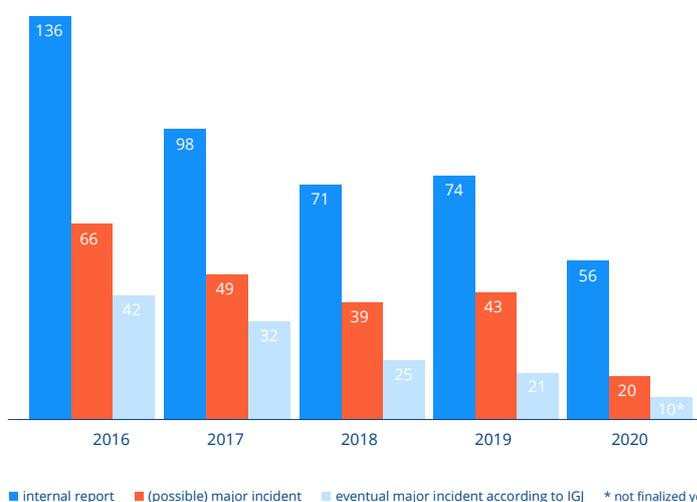
Our professionals work daily with passion to provide patients with the best possible care. Sometimes however, things do not go according to plan, and an incident or major incident may arise. A patient could also have an unpleasant experience and file a complaint. In any event, our policy is to try and help the patient and/or bereaved relatives to the best of our ability, and to learn actively from an incident, major incident or complaint in order to prevent a repetition in the future and to further improve the quality of our care and patients' safety.

Figure 1: Number of patient-care incident reports rounded off to the nearest hundred



The number of incident reports went down compared to other years. We suspect that the drop in regular care during the COVID-19 pandemic played a role in this.

Figure 2: Number of (possible) major incident reports



The number of (possible) major incidents was lower in 2020 than in 2018 and 2019, and relatively lower than in previous years. We suspect that the drop in regular care during the COVID-19 pandemic played a role in this. The number of (possible) major incidents is in the same order of magnitude than in other UMCS.

Figure 3: Number of complaints to Complaint Mediation



The total number of complaints went down considerably compared to 2019. One possibility is that care recipients toned down their complaints in reaction to the great media focus given to the pressure on care workers. It is noteworthy that all complaints were filed digitally. When care recipients report a complaint to us by telephone or in person, we mostly try to find a solution directly with them and the health-care workers. This mediation was not included in these figures.

Patient Support and Peer Support

A major incident, incident or other upsetting care-related event has a great impact on the patient in question and their relatives, as well as on health-care workers. We therefore offer patients and their relatives support from the Quality & Patient Safety department, for example via Patient Support. Colleagues support each other via a formal structure with a collegial scope (Peer Supporter network). In addition, colleagues also give each other informal support.

In 2020 we offered Patient Support on 20 occasions. That is considerably less than in 2019, when Patient Support was offered 45 times. This decrease is in line with the drop in the number of reports of possible major incidents to the Dutch Health Care and Youth Inspectorate (IGJ).

In 2020, as in 2019, the Peer Support team offered peer support to colleagues on 50 occasions. In addition, in view of the COVID-19 pandemic, we gave extra attention to socio-psychological support for our staff. Despite all the COVID-19 measures, we were able to dispense training for new Peer Supporters together with the Princess Máxima Center for Pediatric Oncology. In a neighborly spirit, we like to exchange experiences. There are currently 83 Peer Supporters active at UMC Utrecht.

Read more about how we handle incidents, major incidents and complaints at UMC Utrecht.



2.5 Dialog with patients

At UMC Utrecht, our goal is cooperate with our patients on a structural basis and to involve patients and relatives in everything that we do in terms of care, research and education. It's about making decisions together. So that we can meet patients' needs.

Patients therefore also play an important role regarding innovations in research and education. Our approach is to work closely with a network of patients and the client council of UMC Utrecht.

As in UMC Utrecht as a whole, due to COVID-19, for patient dialog too, 2020 was a year of moving and keeping pace with current events. Staff were asked specifically to pay attention to (chronically ill) patients' perception and experience of the corona pandemic, for example via blogs and patient stories on our intranet. In addition, in 2020 we conducted a number of other worthwhile activities to make the dialog with patients an even more integral part of the organization.

Quality of care from the patients' perspective

What do patients understand under good 'quality of care'? This is what we investigated via the UMC Utrecht patient panel. Over 460 respondents filled in a questionnaire about this. During the annual Patient Participation symposium, which took place online this year in November 2020, the topic was then discussed from various perspectives (patient, nurse, doctor, manager and student). In 2020, we expanded the gathered knowledge and insights further in a vision on quality of care seen from the perspective of a patient.

Dialog with the patient and deciding together

For UMC Utrecht, the patient is the starting point. That is why our strategy is called Connecting Worlds – because every human being counts. And because every human being counts for us, we want to listen and understand even better. The better we understand what health care means in someone's life and what is important to them, the better we can advise them on their lifestyle and treatments. At UMC Utrecht, we want to co-decide with the patient what treatment is the most appropriate and best suited to their life and their possibilities. A patient is an expert in their own situation, and we are experts in the medical aspects. We therefore see co-decision as much more than offering options and asking for permission.

To support patients and health-care workers in the co-decision process, in 2020 we launched a pilot study in which patients could fill in a short questionnaire in the Patient Portal to prepare for their conversation with the health-care worker. This included question like: What activities are important to you, now and in the future? What worries you when it comes to your health? And what do you expect from your treatment at UMC Utrecht? The health-care worker sees what the patient has entered in the HiX care information system.

Patient experience measurement

In 2020 we asked two specific questions regarding patient participation in the Patient Experience Monitor (PEM), namely: Did you feel that there was room to share your own knowledge and experience with your health-care providers? And were you able to co-decide on your treatment or examination? The average score for these questions showed more appreciation than in 2019.

Question to an adult patient:

Did you feel that there was room to share your own knowledge and experience with your health-care providers?

Appreciation: 8.3 outpatients (7.7 in 2019), 7.9 clinic (7.4 in 2019)

Question to an adult patient:

Were you able to co-decide on your treatment or examination?

Appreciation: 9.3 outpatients (9.1 in 2019), 8.8 clinic (8.7 in 2019)

(Scores for 2020 are average scores from the ongoing PEM measurement from June 1st, 2020 till December 31st, 2020 from the questionnaires filled in by adult patients)

Multi-year Patient Participation plan for 2021-2024

In 2020 we drew up a multi-year Patient Participation plan for 2021-2024 to give further shape to patient participation and make it an integral part of UMC Utrecht. In 2020 we started to execute this plan.

On our intranet, staff members can find more than 100 good examples of dialog with patients at UMC Utrecht.

Read more about the dialog with [patients at UMC Utrecht](#), in our [survey](#) and our [education](#).



2.6 Digitalization and personalization of health care, e-Health and applied data-analytics

UMC Utrecht wants to continue improving the quality of care and give more control to patients by personalizing the care offer. We do this for example by digitalizing care, via e-Health technology like apps and home-monitoring equipment, and Applied Data-Analytics in Medicine (ADAM). Besides improving care, we also provide more purposeful care by means of scalable digital solutions. In this way we create meaningful, accessible and affordable care for the future, in line with the needs of each individual patient. Guaranteeing privacy and safety are of course of the essence here.

We examine all digitalization initiatives so that we can also demonstrate the added value. We share this knowledge with other hospitals and relevant parties in the chain. In addition, knowledge gained through our educational activities will benefit tomorrow's health-care professionals.

In 2020, COVID-19 forced us to work faster on our goals in terms of digitalization and personalization of care, and to achieve our strategic targets in this respect faster.

Our solutions to monitor patients from a distance are deployed in various ways. We can for instance monitor patients in our hospital from a distance and patients can go home earlier thanks to home monitoring. We can also monitor patients with chronic diseases at their home. If we move care from the hospital to the home, we naturally do it in close coordination with health-care workers in the region, and in particular fist-line health-care workers.

Launching the Corona Check app

In cooperation with OLVG in Amsterdam, Luscii, and first- and second-line care institutions in the Utrecht region, we launched the [corona check app](#) in March 2020 in the Utrecht region. We thus wanted to fulfill our management role in the region and ensure that we provided the right care in the right place. Using the app, people in the region can monitor themselves for symptoms if they suspect that they have been infected with COVID-19. In addition, inhabitants of the area who have symptoms can also get free and quick advice from a medical team in UMC Utrecht. This lightens the burden on first-line aid in the region.



Monitoring COVID-19 patients with a smart patch

In 2020 we started with the remote monitoring of COVID-19 patients admitted to UMC Utrecht in the cohort unit. Using '[smart patches](#)' we continuously measure patients' vital functions. Nurses monitor this information at a central point and intervene if necessary. Thanks to the smart patch, nurses have more time left to provide other types of care. Besides, it was a good idea during COVID-19 to perform fewer physical checks, as fewer personal protection equipment could be used. In the future, UMC Utrecht will also use smart patches for other patients, for example for the continuous measurement of blood pressure.

Remote monitoring of cystic fibrosis

Due to COVID-19, we were able to scale up the remote monitoring of cystic fibrosis patients' lung function faster. Instead of regularly having cystic fibrosis patients, for whom COVID-19 is very dangerous, come to UMC Utrecht to have their lung function tested, patients can now do it themselves with a measuring device at home. The patient's pulmonologist can keep on eye on measurements from a distance and contact the patient if necessary. Home monitoring gives patients more control and – with fewer visits to UMC Utrecht – fewer risks of getting infected with COVID-19.

SAFE@Home

In 2020 we developed the [SAFE@Home platform](#). With SAFE@home, pregnant women at risk of complications during pregnancy can measure their blood pressure at home. Home-monitoring in this way leads to fewer outpatient visits, ultrasounds, and hospital admissions.

Opening of a medical control center

In 2020 we opened a medical control center. This is a physical center at UMC Utrecht where our medical health workers can monitor patients from a distance and provide customized care. Initially we will use it to monitor for the corona check app, corona pregnancy check, and an online eye test. In 2020, this will be expanded to other (regional) monitoring services.

€1 million for apps for chronically sick children

Apps can support chronically sick children and young people in their development and (online) play behavior, whereby psychological problems can be prevented more effectively. The Wilhelmina Children's Hospital received a €1 million grant [to develop apps of this kind](#). The grant forms part of a total grant of €4.9 million for the e-Health Junior consortium which includes UMC Utrecht, from NWA (Dutch Research Council) via the funding round for 'Research along Routes by Consortia'.



3. Research

To improve and renew health care and establish the health care of the future, we carry out multidisciplinary research. Our research is organized in six key programs (focal points). At UMC Utrecht we apply the principles of Open Science and strive to achieve the highest possible quality in research and its impact on society. Patients' needs are an important starting point for us.



1,462 PhD students



1,397 scientific research staff members



Funds raised for research: €123 million



Number of PhD degrees obtained: 218



Number of professors: 211
(150 men and 61 women)



Number of scientific publications: 2,493

3.1 The impact of COVID-19 on our research

With the outbreak of COVID-19, we were forced to stop much of our scientific research in March 2020. At the beginning of July 2020, we were once again able to scale up our scientific research on human subjects. By middle May, we were able to scale up our laboratory research to thirty percent, and by the end of June, to fifty percent. From September 1st onwards, most research was on track again, insofar as it could be done in a 1.5 meter society. We succeeded in arranging the laboratories so that everyone could keep a safe 1.5 meter distance. Researchers were also mostly able to do computer work and data analysis from home. Research on human subjects is now continuing once more, as long as it can be done in a way that is safe for patients and for staff.

Due to COVID-19, our research has built up a considerable backlog. And given that most research is funded for a specific period, much of it could unfortunately not be completed within the agreed time frame. This has had a considerable impact for starting researchers as well as for society. Because research that is not completed – even if 80% is done – is of no use. Naturally we have been in discussion with funding partners to extend the funding. At UMC Utrecht we also released extra funds to be able to continue research insofar as possible. This enabled for example PhD students and post-docs to complete research projects despite the circumstances.

3.2 Unique research

At UMC Utrecht, we do unique and groundbreaking research. Examples of this in 2020 are:

The REMAP-CAP study

The international REMAP-CAP study, an ongoing global study to improve pneumonia treatment, is coordinated in Europe by UMC Utrecht. The research is organized in such a way that drugs can be tested rapidly for effectiveness during a pandemic. In 2020, the REMAP-CAP study tested various – already existing – drugs in the treatment of COVID-19 patients.

It thus appeared that the use of inexpensive, generally available corticosteroid hydrocortisone increase the chances of survival of seriously ill COVID-19 patients treated in IC. These results confirm those of a previous study by the University of Oxford: number of deaths reduced by a third with corticosteroid dexamethasone treatment.

In addition, two existing drugs against rheumatoid arthritis (tocilizumab and sarilumab) were studied in the treatment of seriously ill COVID-19 patients admitted with respiratory support in intensive care. Almost all patients were also treated with corticosteroids (see above). The addition of the two new drugs ensure an even better outcome for these patients: the risk of death is reduced by almost a quarter and patients need to stay one week less in IC. This reduces the pressure on ICs in Dutch hospitals. It further appears from the REMAP-CAP study that treatment with high doses of blood thinners is effective for COVID-19 patients admitted to hospital, but who are not in IC. The treatment can prevent these patients from becoming seriously ill, and can also improve patients' recovery. Previously it appeared that blood thinners do not work with seriously ill COVID-19 patients who are treated in IC. Administering plasma antibodies to COVID-19 patients produced no improvement in these patients.

The BCG-PRIME study

In September 2020, the BCG-PRIME study was launched in 22 hospitals, including all UMCs as well as Santeon specialized hospitals. UMC Utrecht is coordinating this study. The study investigated whether the vaccine against tuberculosis (the BCG vaccine) offered protection against the consequences of a coronavirus infection among vulnerable elderly patients. Previous research has already shown that the BCG vaccine not only protects against tuberculosis, but can also increase resistance against other pathogens by giving the immune system a temporary boost. In January 2021, it appeared that BCG vaccination unfortunately did not offer vulnerable elderly people any protection against disease symptoms caused by COVID-19.



Organoid models in COVID-19 research

Organoid models are also used in COVID-19 research. In 2020, UMC Utrecht received financial support of over €1.6 million for two projects with organoid models to study SARS-CoV-2 pathogens and treatments. The 'Clear COVID-19' project received €1.2 million to study SARS-CoV-2 infection in people with mild and serious COVID-19. The Ex vivo model project to study tissue-specific characteristics of SARS-CoV-2 infection and to search for drugs on a large scale received €465,000. Through these projects, UMC Utrecht hopes to bring new antiviral products to the market faster by using clinically validated models.

Genetic disease repaired in a human cell

Research with cystic fibrosis organoids, segments of tissue made from a patient's stem cells at UMC Utrecht, shows that these organoids can be cured effectively and safely with a new CRISPR-Cas technique. The new CRISPR-Cas technique detects the pathogenic segment of DNA and repairs it on the spot, without cutting and replacing the DNA. Traditional CRISPR-Cas cuts a specific segment of DNA, which forces the cell to repair itself by hopefully using the 'correct' segment of DNA produced in a laboratory. With these new results, we are taking a big step towards the future genetic repairing of a disease in a patient. The cystic fibrosis organoids study was published in Cell Stem Cell in February 2020.

Immunotherapy for cancer

Immunotherapy treatment works well with certain forms of cancer. In other forms, results have not yet been seen. T cells play a role in the immune system and the treatment of cancer. T cells can kill cancer cells by pumping a toxic substance into the cancer cells. Certain cancer cells however have inhibitors that prevent this. At UMC Utrecht, research is done on how to provide T cells with a more powerful mechanisms: an even more toxic molecule for which cancer cells have no inhibitors. To be able to use this as a basis to develop new immunotherapies for both solid tumors and blood cancers, UMC Utrecht in 2020 received a €581,000 grant from the Dutch Cancer Society (KWF).

3.3 Valorization of research

Turning scientific knowledge into impacting solutions for patients and society is an important objective for UMC Utrecht. To meet this goal, we support researchers and other professionals with valorization and funding via the Research Support Office (RSO), Utrecht Holdings, Pontes Medical, THINC, UtrechtInc and a number of programs like the Ureka Mega Challenge.

Despite the pressure that the coronavirus outbreak in 2020 put on research and the translation thereof into solutions for patients, interesting research-valorization initiatives were funded and started at UMC Utrecht.

TKI subsidy from Health Holland

The Top consortium for Knowledge and Innovation (TKI) grant is a financial incentive from the Ministry of Economic Affairs (EZ) for researchers to set up innovation projects together with companies. In 2020 for the first time we selected the projects for this ourselves. The top sector Health Holland released €2.5 million for projects initiated at UMC Utrecht.

UMC Utrecht researchers submitted some thirty ideas for the TKI grant. Finally, based on our strategy, we chose five projects for the grant, namely:

- Developing a drug against knee osteoarthritis via the UMC [Utrecht spin-off Synerkine Pharma](#).
- Developing a tool to predict the effectiveness of antiatherosclerotics, together with [Corvidane / BNN Cardio Therapeutics](#).
- Developing a personalized drug for cystic fibrosis, together with [PTI Therapeutics](#).
- Research on the applicability of antibody therapy – as used in neuroblastoma – for breast and skin cancer, and further development of this therapy in the start-up TigaTx.
- Development of the protein compound ‘Microlyse’ against blood clots in thrombosis and strokes, in collaboration with [TargED Biopharmaceuticals](#).

Besides the €2.5 million subsidy available through Health Holland, the various companies together are investing nearly €1 million (in cash) to carry out these projects at UMC Utrecht. Total investments in these projects, including the subsidy from Health Holland, therefore amount to more than €3.5 million.

Utrecht Health Seed Fund (UHSF)

In 2018, together with the Economic Board Utrecht (EBU), we requested a subsidy for a Gap Finance Fund from the European Regional Development Fund. In response to the request, €5.4 million was granted, so that in March 2020 we were able to start with the [Utrecht Health Seed Fund \(UHSF\)](#). The purpose of the fund is to close the gap between where research funding stops, and where business funding begins, so that better, faster and more ideas can be developed into health-care products for patients. In 2020, UHSF invested in [TargED Biopharmaceuticals](#). TargED developed the protein compound ‘Microlyse’ against blood clots in thrombosis and strokes.

As of January 1st, 2021, ROM (Dutch regional development company) in Utrecht took over all executive activities of EBU.

UMC Utrecht is one of the founding fathers of ROM Utrecht.

Utrecht Holdings

In 2020, Utrecht Holdings handled 43 new intakes for innovations from UMC Utrecht. 5 new patent applications were filed. Based on knowledge from UMC Utrecht, 2 startups were launched and 9 licenses were issued for the marketing of innovations from UMC Utrecht. One of these licenses pertained to an innovation from a potential biopharmaceutical for the removal of blood clots such as might occur in a stroke.

4 new startups UtrechtInc

Startup incubator UtrechtInc in 2020 helped to launch 4 new startups from UMC Utrecht, namely [MeTeX](#), [aiAOKI Medical](#), [TargED Biopharmaceuticals](#) and [Patientenbegrijpen](#).

3.4 Funding of research

In 2020 we raised a total of €123 million in funds (€111 million in 2019) to continue doing research.

Veni, vidi and vici times four

In 2020, researchers at UMC Utrecht in total received four Veni, Vidi and Vici grants.

The Dutch organization for Scientific Research (NWO) in 2020 awarded Veni funding of maximum €250,000 to four highly promising young scientists at UMC Utrecht. With this grant, the recipients can continue to develop their own research ideas for three years. In addition, four experienced UMC Utrecht scientists received a [Vidi subsidy from NWO](#) of €800,000, with which they can develop their own innovative line of research and set up a research group over the next five years. Four experienced UMC Utrecht researchers also received a Vici grant of €1.5 million with which they can do innovative research for five years, and continue to build out their research group.

Five Marie Curie grants

UMC Utrecht received five [Marie Curie grants](#) in 2020 for research on: the health of city dwellers, communication in our immune system, the growth of cartilage, cell metabolism in metabolic disorders, and the muscle disease SMA. In total, UMC Utrecht received €1.6 million, which meant that six international PhD students could be appointed.

KWF subsidy awarded five times

In September 2020, five UMC Utrecht research projects received a [KWF subsidy](#). The research includes: removing gastric outlet obstruction (for example with pancreatic cancer), faster, more accurate diagnosis of neuroendocrine tumors, a new form of immunotherapy for bowel cancer, the modifying of immune cells

to improve immunotherapy, and the role of DNA mutations in the start of bowel cancer.



Horizon 2020

At the end of 2020, the last European Horizon 2020 subsidies were announced. UMC Utrecht received subsidies for four studies that it coordinates. This includes research on: better peritoneal dialysis, radiotherapy against dangerously fast heartbeat, the risk of micro- en nano-plastics in children's development, and a new bioprinting method to make a model of the pancreas. UMC Utrecht is also partner to six other studies, of which one has received a Horizon 2020 subsidy. In total, UMC Utrecht received €7.7 million.

ERC subsidy for research on alternative antibiotics

How can we use antibodies to fight bacteria? UMC Utrecht received a subsidy of €2 million from the European Research Council (ERC) for research on antibody therapy and the use of the body's own immune system to fight bacteria. The aim is eventually to find an alternative to antibiotics in this way.

3.5 Open Science

Open Science is a transition to a new way of doing science that is characterized by transparency. Research data is thereby made as accessible as possible, scientific publications are preferably published with Open Access, and society is involved in all research phases insofar as possible. A new way of acknowledging and appreciating researchers is stimulating this transition. UMC Utrecht is working on this in a variety of ways. Through ICT infrastructure and support, we make it easier for researchers to store their data in a FAIR (Findable, Accessible, Interoperable and Reusable) way. In 2020, a basic training program in Research Data Management for researchers was

launched, practical work guidelines for researchers were developed, and we made preparations for a 'digital research environment', a UMC Utrecht-wide research data archive, and a digital competence center.

The transition to Open Science can only happen through a new way of acknowledgment and appreciation where researchers are rewarded for Open Science practices. At UMC Utrecht, we gave shape to this in 2020 with a new UMC Utrecht-wide talent policy, whereby we do not only define talent and quality based on measurable research output, but also for instance on the grounds of the contribution to Open Science, leadership and (social) impact. With this, we furthermore responded to the recommendation of the SEP commission in 2019 to set up a UMC Utrecht-wide talent policy for researchers. Young researchers too made their voice heard in 2020 in the debate around the talent policy in online symposiums on Open Science and team science. Young Science in Transition, a think tank for young scientists, also developed a new evaluation form for PhD students that looks at wider competencies. For example organizing a dialog with patients on research questions, contributing to (the development of) education, or making data available in a FAIR way.

3.5.1 Dialog with patients in research

Involving patients in research is an important part of Open Science. Our strategic program Patient Participation helps researchers to involve patients and patient associations in research. In 2020, a long-term plan for Patient Participation was established, which focuses for example on training for researchers and advisory patients in this area. In 2019, the SEP commission was under great pressure from the parallel evaluation of UMC Utrecht research by a commission of social stakeholders, in particular representatives of patient associations. The SEP commission found that UMC Utrecht was an example for other institutions in this respect.

Another great example of involving patients in research is the research agenda for juvenile arthritis that we drew up in 2020 together with patient, parent and practitioner organizations. In the fall of 2020, this research agenda received the PGO Support Impact prize for patient participation. The jury praised the way in which young children in particular were actively involved.



3.6 Research Support

One of the comments from the commission that performed the SEP evaluation in 2019 was that the matrix structure at UMC Utrecht made research management relatively time- and attention-consuming. This was also an issue with regard to research funding. In 2020, we therefore also reinforced our internal capacity to support research grant applications to the European Union. We furthermore reinforced project-management activities in our Research Support Office to back these large EU-funded research projects. In addition, we developed a matrix for a Dutch funding team that could offer support in requests for individual subsidies and grants (Veni-Vidi-Vici and grants from the European Research Council or ERC) as well as national subsidies. The aim is to get the funding team off the ground in 2021.

To further implement the recommendations of the SEP commission, we also drew up a plan in 2020 for the use of funds from the European Research regulation (SEO) in 2021. The plan is aimed at reinforcing the UMC Utrecht strategy in the field of research within focal points and amplifiers, the talent policy (individual grants), fund-raising capacities, and reducing risks in the execution of large externally subsidized projects in particular. The installation of the Dutch funding team also forms part of this, and a Research & Innovation Support Office will be set up.

3.7 Quality of research

At UMC Utrecht, we strive for the highest possible quality when it comes to research, and make sure that all our research complies with laws and regulations.

Development of our quality system

In 2019, we started to set up a new quality system for all research on human subjects carried out at UMC Utrecht. In 2020, we worked on the further development of this. With this quality manual, we want to make support for researchers more demand-driven by means of the research cycle: planning, setting up, execution and conclusion. These stages were summarized in 2020 in the form of short and concise Standard Operating Procedures (SOPs), with various process steps, core actions, and where necessary, work instructions. It also describes the various roles and responsibilities (governance). This gives researchers and research staff clear guidelines to ensure quality in research. The quality manual will be finalized and implemented in 2021.

Implementation of the Research Management System

In 2020, we implemented the new Research Information System VIDATUM in three divisions. This system helps researchers to prepare and perform their research more efficiently and in accordance with laws and regulations, get through the necessary approval processes faster, and keep a sharper eye on their progress. It also provides management information for us as organization to keep improving and maintain control in the field of research. In 2021, we shall implement this system in all our divisions.

Remote tracers

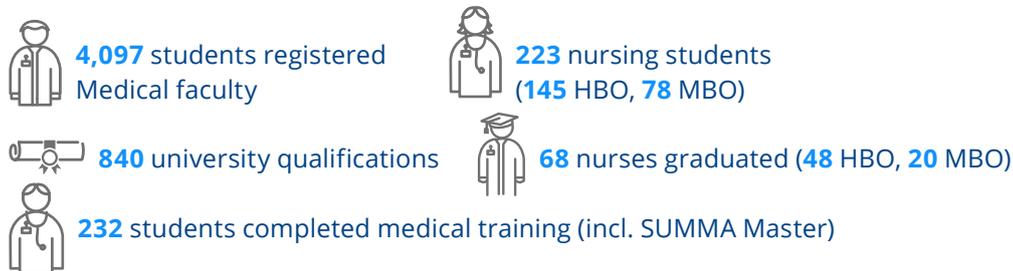
At UMC Utrecht, we evaluate the quality of research on human subjects randomly through tracers. We check to see to what extent we are complying with the UMC-wide research-quality policy, and with the relevant laws and regulations. Besides research tracers, we also use leadership tracers. Here we look at the quality of research management and support. Tracers enable us to continue improving. In the past, such tracers were performed on site. In 2020, we ensured that tracers could also be executed remotely in a qualitative way.

Preparing for new regulations

In 2021, new requirements will be imposed in Europe on research with medical tools through the Medical Device Regulation (MDR), and on drug research through the European Clinical Trial Regulation (ECTR). In 2020, we started with preparations to make UMC Utrecht 'MDR- and ECTR-proof'.

4. Education

Besides health care and research, education is one of our three core tasks. Besides teaching, we also handle the setting up, organization, coordination and evaluation of various forms of education. We furthermore do scientific research in the educational field.



4.1 The impact of COVID-19 on our education

Everything was different this year due to corona, also in terms of education. We naturally did our utmost to ensure the continuation of teaching as effectively as possible.

Many forms of teaching had to be done digitally. To ensure quality online teaching for our students, in addition to providing the necessary IT software and hardware, we supported our lecturers in their digital teaching. Despite circumstances, we were able to ensure that our students could do many of their internships and other training under strict conditions. Many tests, practical sessions and skill training could also take place on site. Fortunately this prevented study delays for many students, but it was alas not the case for internships. To maintain a good level of quality in care, we provided additional training to care workers, for which COVID-19 learning pathways were developed.

Not only did we switch from physical to online teaching. Open days for our Master and Bachelor programs, selection for the SUMMA Master course, and induction days for new first-year students also took place digitally in 2020. In addition, we developed a digital induction program for our new colleagues, which was well received.

Despite the fact that teaching could mostly continue during the corona pandemic, the lack of personal contact unfortunately for many students had a negative impact on their wellbeing. To support students in this respect, we created for example

training sessions and workshops on dealing with stress, mindfulness, and meditation. We also appointed coaches and tutors to support students. Besides that, we screened students' progress data and registered absences to have timely conversations with them and prevent drop-out.

4.2 Appreciation of our education

Like every year, our courses were evaluated by the Keuzegids. The Keuzegids guide helps young people make the right study choice and evaluates almost all Bachelor courses in scientific education. The guide is compiled by an independent editorial team and contains a systematic quality comparison of related courses in higher education.

Our Bachelor's course on Biomedical Sciences in 2020 once more scored a 'Top Training' predicate, which makes it one of two Top Training biomedical sciences programs in the Netherlands. Our Bachelor program in Medicine only just missed the predicate in 2020 and is now second on the podium of best Medicine programs in the Netherlands.

Certification of medical follow-up courses.

As an educational institute with 35 medical follow-up courses, UMC Utrecht in 2020 received a quality certification for an indeterminate period from the Dutch Registration Commission for Medical Specialists (RGS). RGS thus expressed its confidence that UMC Utrecht had a well-functioning quality system to provide adequate supervision and guarantee for medical specialist follow-up courses.

4.3 Fit for the Future education strategy

Due to the corona pandemic, in 2020 a lot of energy went into ensuring the continuation of quality education. In addition, we were fortunately also able to carry out projects within our education strategy [Fit for the Future](#), to work towards our goal: in 2020, all professionals at UMC Utrecht were trained according to the new Utrecht profile. In our new [Connecting Worlds](#) strategy, this was done in particular with the New Utrecht School accelerator.



The New Utrecht School

Within our new [Connecting Worlds](#) strategy, to prepare (future) professionals for the future, we are accelerating on multidisciplinary and inter-professional education with an inclusive, diverse learning environment. We want to optimally prepare professionals and students for the future of health care and give them the best baggage to solve the social and scientific challenges of tomorrow. The New Utrecht School enables students and professionals to excel in training with a combination of knowledge and skills. They are trained to take responsibility, make the patient perspective central, be critical, and think creatively. We established the New Utrecht School together with Utrecht University, Utrecht colleges for Art and Applied Sciences, Eindhoven University of Technology, and Wageningen University & Research.

4.3.1 Dialog with patients in education

To give shape to our education and evaluate it in order to increase the quality of care and efficiency of research, we make use of patients' unique hands-on expertise.

Patient focus group

In 2019 we started to actively involve a patient focus group to give shape to our education and evaluate it in order to improve the quality of our teaching. Due to corona measures, this focus group could alas not get together in 2020. However, we made an effort to let as many education initiatives involving patients as possible continue in an online version. We were for example able to turn the Medical Humanities teaching component for third-year Medical students into a digital lecture. Three patients, each in a 'break-out room', shared their experiences of participating in research. The students rated this teaching component with an above-average score. For the teaching component on Parental Advisory Education, sixth-year Medical students first watched a film with a personal account, and could then chat with two parents about the impact of hospitalization on their household.

Seven CLICKS knowledge clips

In the multidisciplinary education project [CLICKS](#), students from various programs together created online patient information in the form of a knowledge clip. In 2020 a group of sixth-year Medical students together with kidney patients developed six knowledge clips on the topic of kidney diseases. A knowledge clip on muscle diseases was also developed. [All CLICKS knowledge clips](#) can be seen online.

4.3.2 Inter-professional learning

Changes in health care, such as the growing complexity of care needs, and questions regarding inter-professional collaboration. In our education, we also make sure that students from different disciplines meet each other and (learn to) collaborate.

Inter-professional clinical debate and communication.

In March 2020, together with the Utrecht University of Applied Sciences, we started with inter-professional simulation teaching for fifth-year Medical and fourth-year Nursing students. Following a live pilot in the Major Incidents Hospital in March, we changed tack due to COVID-19 and developed a full-digital teaching program for the students.

Every six weeks, about 100 Medical and Nursing students come together to learn through interactive, digital lectures and small-scale workgroup teaching. Based on case histories, they are challenged to debate and communicate with each other, and to practice doing feedback discussions to prepare them for real-life health-care situations. Students say that they learn a lot from others' perspective, and that they find it fun and informative to be in touch with students from the other profession.

New optional course: Covid & Society

For Masters' Medical students who could not do (all of) their internships due to corona, we developed the optional course 'COVID & Society'. In it, experts from various fields talk about the possible consequences of the virus. Students can do a six-week optional scientific apprenticeship by following a part of the plenary lectures of the Bachelor course COVID & Society on line, and supplementing it with a literature review on a COVID-19-related research question that they formulate themselves. There was a lot of enthusiasm: more than 70 students took part. COVID & Society was also accessible for anyone who wanted to know more about corona. More than 7,000 watched the lectures.

Interdisciplinary cooperation

In 2020, three groups of students worked on the pilot project BITT: Bio-Tech-Med Interdisciplinary Team Training. SUMMA students (Medicine) as well as Biomedical Sciences and Biomedical Engineering students (TU Eindhoven) worked together on concrete solutions for three patients. The pilot let the students look beyond their own borders, both at the patient and at the other disciplines with which they were cooperating. The BITT project started with presentations of three patients talking with their doctor. The three groups of students then took their turn to develop ideas. By middle May, they were allowed to pitch before a jury, who chose the most innovative and feasible solution.

4.3.3 Diversity & inclusion

UMC Utrecht's ambition is to be a diverse and inclusive organization. We therefore also strive to have a diverse student, lecturer and staff population. We look at aspects like: gender, origin, religion, sexual orientation, and physical and/or psychological impairments.

Research project on inclusive education

In 2020, the inter-faculty project 'Designing an inclusive curriculum and learning environment' kicked off. In this three-year project, we are first of all investigating what is already being done in courses to offer inclusive education, and what challenges people are experiencing in this area. To do this, in cooperation with lecturers, researchers and students, the project group is developing a course and curriculum scan aimed at inclusiveness for our Bachelor and Master programs. In the project's second year, a toolbox will

be developed with instruments and guidelines to make teaching inclusive. The project is a joint effort between the three faculties of Social Sciences, Law, Economics and Governance, and Organization and Medicine, and is facilitated by a subsidy from the Utrecht Stimulation Fund for Education.

Bias training

Since November 2020, teaching staff at UMC Utrecht monthly have the opportunity to follow the bias training on 'Becoming aware of your subconscious associations'. The training explains what bias is, what forms of bias there can be, and how it can affect our teaching. Everyone has subconscious associations, and by becoming aware of it, we can turn our associations around. We will also share thoughts and ideas with each other on possible changes. Our goal is to have 30% of all staff members at UMC Utrecht who are involved in education (whether in a lecture hall or as supervisor of a research apprenticeship or internship) follow an awareness training session before the end of the 2020-2021 academic year.



Purple Friday

Friday, December 11 was Purple Friday. On that day, we supported sex and gender diversity as the norm. Many of our students and staff wore purple.

Students on the Diversity & Inclusion Platform

Besides staff members, UMC Utrecht's Diversity & Inclusion Platform since 2020 also has a student branch with students from all programs at UMC Utrecht. Students can report situations in education and student life pertaining to diversity and inclusion. And, together with staff members of the platform, students are working on an inclusive educational environment at UMC Utrecht.

4.3.4 Lifelong learning

For staff, including care workers, it is essential to continue developing.

Master course in Health Sciences for Care Workers

To give an even wider group of care workers the opportunity to get scientific training, the Master course in Clinical Health Sciences and the Speech Therapy program has been extended to Health Sciences for Care Workers. In the 2019-2020 academic year, the first year of the Master program was launched and evaluated. The evaluations were very positive, and the interest in the program is promising.

Minor in Medical Humanities

The minor course in Medical Humanities developed in 2020 pertains to interdisciplinary and inter-faculty teaching, and looks at complex issues for professionals combining biomedical sciences with humanities. The minor course will in the future be opened to professionals for lifelong learning.



4.4 Quality of education

Training program on job-differentiation testbeds for nurses

Subsequent to the job-differentiation testbeds that we started in 2018, we set up a training program for job differentiation of nurses and directors of nursing. It was launched in 2020 and has had positive feedback. In the program, we looked for instance at the role of the director of nursing, nursing leadership, evidence-based practice, self-management, and the positioning of the nursing population. How the job of director of nursing can best be introduced at UMC Utrecht forms part of the Future-proof Nursing Program that was established in the fall of 2020. The training program for nurses and directors of nursing is being expanded to bring the teaching in line with the patient's need for care in the chain, the positioning, and career development and career pathways for nurses.

Progress in quality funding

Through conversion of the basic grant for students, an additional approximately €1.2 million has been made available for UMC Utrecht's Medical faculty each year from 2020 until 2024 to further improve the quality of education. In 2019, together with students and lecturers, we drew up a long-term plan on how to spend this quality funding. At the beginning of 2020, we got off to a good start by establishing the year plan for 2020, but in March we came up against the corona pandemic. This situation on the one hand brought an acceleration in a number of projects, and on the other hand caused delays, since the priority was to give shape to education and study progress for students.

An example of a project that was accelerated is 'Scalable and Flexible Online Education' in the Biomedical Sciences program. The project focuses on educational developments, technological innovations and economic challenges in the field of scalable and flexible online teaching. The relevance of offering training (online due to COVID-19) on well-being and appointing a coach at a time when student welfare demands extra attention, seems all the more relevant.

5. Our staff

Our core tasks of health care, research and education can only be performed thanks to the input of our staff. We therefore consider it important to take care of our staff, for example in terms of health, job satisfaction, and development opportunities. At the same time, like many health-care institutions, we are faced with a shortage in the labor market. In addition to staff retention, the recruiting of new staff also receives our ongoing attention.



11.897 staff members



3.375 men (28,4%)



8.522 women (71,6%)

5.1 The impact of COVID-19 on our staff

It goes without saying that COVID-19 has had a significant impact on all our staff. First of course on our staff members who are directly involved in COVID-19 care, and also on our staff members who have to keep regular care going insofar as possible. Sorting out schedules was a continuous challenge in 2020. On the one hand due to the increased workload caused by the influx of COVID-19 patients, and on the other hand, due to absenteeism that was higher in 2020 than in 2019. Many staff members made an extra effort to fill gaps in timetables. But also for staff members in supporting fields, it was a busy, challenging and sometimes difficult year. Many of them worked from home for a big part of the year.



As there was a clear risk of seeing a negative impact on wellbeing, we paid extra attention in 2020 to socio-psychological support for our staff.

To keep staff members updated on developments, and to keep them on board from a distance, we continuously informed them via digital newsletters, our intranet, and webinars by the Executive Council and in-house experts at UMC Utrecht. And to boost everyone's morale, our staff regularly received small presents and greeting cards at home. We also set

up a corona test street for our staff in our car park to limit the risk of spreading the virus as much as possible.

It was heartwarming to see how many people from outside expressed their support for UMC Utrecht staff members and offered their help. Besides the nearly 3,800 own colleagues who by middle March offered to help out where necessary, many externals also joined our corona flex pool. The input from the Ministry of Defense furthermore helped us to provide supra-regional COVID-19 care, in addition to care provided to COVID-19 patients from our region.

Despite everything, COVID-19 also brought positive developments to UMC Utrecht, such as an increased sense of connectedness, more multidisciplinary cooperation, and more mutual trust.

UMC Utrecht was naturally happy about the recognition from the cabinet for the exceptional performance delivered by care workers in the form of a care bonus. UMC Utrecht however continues to plead for a structural improvement in the remuneration and career prospects of nursing and medical auxiliary staff in order to do justice to their input and professionalism. Structural improvements like these reinforce the trade, contribute to the attraction of the labor market, and is a prerequisite for delivering the health care of the future.

5.2 Appreciation by our staff

UMC Utrecht carries out three surveys a year on the work experience of staff members. With these surveys, we want to establish whether staff members are applying their strengths for (the strategic goals of) UMC Utrecht and how they rate the work experience at UMC Utrecht. Since 2019, we have been combining our work-experience survey (WBO) with the continuous improvement survey (CVS) of our work method Together for the Patient.

According to the assessment in fall 2020, 48% of our staff rated working at UMC Utrecht with a score of 8 or higher. In 2019, it was 44%. This rise could indicate a greater sense of belonging and involvement, and the focus on UMC-wide cooperation stimulated by corona.

5.3 General developments

Program for future-proof nursing

In 2020, we established a four-year program for future-proof nursing. With this, we are focusing on the changing demand for care and our changing role as an academic center in the health-care chain. These changes offer opportunities and challenges for our nurses. To respond to this in a timely manner, a repositioning of the nursing profession is essential: in line with nurses' wishes, the demands of health care, and the possibilities of innovation. This is how we ensure that our nursing care is future-proof.

The four-year program is based on four tracks:

- Track I: Future-proof nursing job description: organizing nursing care is seen in the light of patients' need for care and the position of UMC Utrecht in the chain.
- Track II: Future-proof nursing career paths and career development.
- Track III: The future-proof positioning of nursing: the expert input of nurses in our multidisciplinary organization is well invested.
- Track IV: Science and innovation based on future nursing care.



WNRA implemented

The Civil Servants (Normalization of Legal Status) Act (WNRA) came in force on January 1, 2020.

This means that UMC Utrecht staff members on January 1st, 2020 ceased to be civil servants and are now subject to standard labor law. Our staff therefore have the same rights and duties as employees of private companies. This implies a number of changes for our staff members. Unilateral appointment has thereby been transformed into a bilateral employment contract, rules regarding dismissal have been modified, and the period in which an employee can take holiday hours has changed. In 2019, UMC Utrecht informed all staff members of the changes due to the fact that their appointment had become an employment contract, by means of a persona letter, news releases, and a special intranet page. The UMC CLA was also adapted with the implementation of the WNRA.

VWS bonus

As a token of appreciation for the exceptional performance of care workers during the first COVID-19 wave, the Ministry of Health, Science and Sport (VWS) released a care bonus for health-care workers. UMCs translated the arrangement of the Ministry in relation to NFU. Based on this, UMC Utrecht in November 2020 requested the health-care bonus for eligible staff members and externals from the Ministry of Health, Science and Sport, and subsequently paid it out.

5.4 Leadership development: Connecting Leaders

We offer all our managerial staff the opportunity to follow the Connecting Leaders program in which they can develop the desired key competencies: people- and result-oriented leadership, cooperation and renewal. This has led to increasing exchange between managerial staff, and a common language for talking about management and leadership.

In 2020, we started with an overhauled Connecting Leaders program. It consists of various subprograms that are aligned with the different phases in the development of a manager. The subprograms are: an Onboarding program for new managers, the Professionals program for managers who have already exercised managerial functions at UMC Utrecht for a while, and the Advanced program for all managers who have followed the Connecting Leaders program in the past few years.

In 2020, 64 managers completed the entire Connecting Leaders program. 112 managers have followed parts of the new Connecting Leaders program.

5.5 Vitality and sustainable deployment

We consider it important for our staff to be healthy and in good shape. Because healthy employees make for a healthy organization. The more vitality employees have, the more energetic, creative, motivated, productive and resilient they will be. And healthy employees work better together, enjoy their work more, are more resistant to disease, make fewer mistakes, and deliver the best quality care.

Attention to psychological strain

In 2020, we paid extra attention to the health of our staff members. We set up a 'Take care of each other' desk to answer any questions and address challenges regarding psychological strain. Via this desk, a multidisciplinary team of professionals help staff members to cope as well as possible with stress, anxiety, uncertainty, or other issues that might be bothering them. It may pertain to work-related stress, or stress that someone experiences due to a new work situation or changes in their private life. Staff members can also make use of the 'Work in Balance' program to ask a company councilor for help to maintain or retrieve balance in their work and not drop out (further) due to illness. In 2020, company councilors conducted a total of 901 conversations with staff members. We also offered all managers a training course in 'Recognizing psychological complaints'.

Besides this support that was accessible to everyone, a special socio-psychological team was also set up for staff in COVID-19 care in IC and cohort units. The people in the team, which included social workers, Life-orientation and psychological-care staff members and psychologists, were continuously present in the units in question. This was an approachable way for staff members to disconnect or get things off their chest, and thereby avoid finding themselves in a deadlock.

LEV for career development and vitality

Our digital portal LEV (Loopbaanontwikkeling en Vitaliteit, or career development and vitality) offers staff members tools to increase their vitality and consciousness regarding sustainable deployment. LEV includes tests, exercises and online training on personal and professional growth, with topics like: career development, vitality & health, and happiness at work. Employees can also talk with an e-coach. In addition, there is a wide offer of online training courses from Goodhabitiz on personal strength, productivity, communication, and digital skills. Training courses are short, to-the-point and hands-on, and can easily be applied to everyday situations.

LEV was updated in 2020. The content was adapted to be more in line with employees' wishes and needs. Goodscan was also introduced, which shows employees what their characteristics are, where there is room for personal growth, and which training would suit them. Goodhabitiz introduced online master classes with top local and foreign experts who share their vision on relevant management skills.

In 2020, 2,618 staff members made use of LEV (2,182 in 2019), and 9,712 staff members used Goodhabitiz.

2020 flu-shot campaign

During our flu-vaccination campaign from Monday, October 5 to Friday, October 23, 2020, over 41% of our staff and students received a flu shot. In 2019, about 36% of the staff and students got vaccinated. Not only was a higher vaccination coverage achieved, but more health-care workers also got vaccinated.



Absenteeism

Absenteeism went up in 2020 compared to 2019. In 2020, the average absenteeism rate was 5.32% compared to 4.91% in 2019. Both in 2019 and in 2020, these percentages were however lower than the average absence rate in the health-care and welfare sectors (5.8% in 2019 and 6.8% in 2020, source CBS). There was a peak in absenteeism at UMC Utrecht in March 2020 with 6.58%. Although we did not record what proportion of absenteeism was corona-related, we can assume with some certainty that our absenteeism rate rose due to COVID-19. We note that the pandemic has had a very big impact on our staff, in various ways. Think of those who work directly and indirectly with COVID-19 patients, those who were sick (for long periods) due to the virus itself, an increase

in workload in certain units, the challenge to work out timetables, less contact with peers, or telecommuters who had to work isolated from home, or coordinate their work with temporarily home-schooled children. We expect that the impact for our staff, both colleagues in direct care and those working from home, is even greater than what we are able to observe in our statistics. This will continue before the proverbial camel's back breaks. A team of P&O advisers, company doctors, labor experts and company councilors offer help and coaching to managers and staff.

Redeployment

In 2020, we followed redeployment procedures with 136 staff members. 94 of them found a new job inside the organization, and 19 outside. In total, 11 employees took WW, and 9 took WIA. For 3 employees we found another solution.

Energiek@UMC

Energiek@UMC is the vitality program of and for all staff members at UMC Utrecht. In 2020, various activities were organized within Energiek@UMC. Free company fruit was for example provided weekly, and we organized webinars on finding a (from-home) work balance and coping with social distancing and isolation. We also organized STEPtember, a challenge to walk 10,000 steps each day in September 447 staff members took part in it. In STOPtober we supported colleagues who gave up smoking.

5.6 Diversity & inclusion

We consider it important that our staff base should reflect the society in which we operate. Diversity and inclusion are therefore a priority for us.

Reflection on equal opportunities, equal rights

For UMC Utrecht, it goes without saying that racism and discrimination are inadmissible. In June 2020, after the societal developments around Black Lives Matter, we published a reflection on 'Equal opportunities, equal rights' on our website and intranet. In it we clearly express our viewpoint and explain what we are doing to increase diversity and inclusion at UMC Utrecht, and what staff members can do if they nevertheless do witness or are faced with unacceptable behavior.

Bias training

In 2020 we provided several bias training courses to groups of staff members, including the Works Council. Fifty staff members in total followed this training. The training explains what bias is, what forms

of bias there could be, and how it can affect our teaching. Everyone has subconscious associations, and by becoming aware of it, we can turn our associations around. During the training we also share ideas with each other on possible changes.

Diversity Day

In October 2020 we celebrated our second Diversity Day with the digital theater play 'Hoor jij erbij'. The performance looks with humor at the question of who you are and who the other is, and what unconscious biases you sometimes might have. *Diversity Day* is an opportunity to celebrate diversity in our society and focus on the strength that could come with it.



Female talent

UMC Utrecht applies an actively policy on female talent, both in health care and in research and teaching. The total number of female staff in 2020 remained stable at a high level. 72% of our staff members are women (70% in 2019).

In 2020 the percentage of women in management positions and in diversity management (including the Executive Board) rose to 38% (36% in 2019). At 29%, the number of female professors remained the same as in 2019.

Staff Participation Act

At the end of 2020, 67 people worked for us who fell under the Participation Act target group. Together these staff members did 64.8 jobs. In 2019 this was 56.6 jobs, done by 62 staff members. Each job represents 25.5 hours a week.

5.7 Being a good employer

In 2019 an improvement team implemented concrete actions to retain staff and increase employee satisfaction. For example in terms of flexible scheduling, public transport options, and tools to help managers and staff engage in discussions on job satisfaction.

Flexible scheduling

The flexible scheduling project was started in line with projects for alternative and self-scheduling. This gives staff members more control options in timetables, to optimize their work/life balance. The project introduces different types of shifts: shifts with a service duration that varies between 4 and 12 hours and that can start and end at any time of the day. This means that staff capacity can be deployed at peak times, which reduces work pressure. In 2020, despite the corona crisis, 14 teams started with the flexible scheduling project in 11 units. The most important initial results are that each schedule has room to plan differently, which directly reduces workload.

The flexible scheduling project won UMC Utrecht the PlanMen WFM Award for the highest non-profit client value. The expert jury mentioned the excellent results that were achieved in this way, and the crucial role of ambassadors in self-scheduling. Staff satisfaction is also higher in the various components: sense of control in scheduling, a better work-life balance, and satisfaction with the quality of the schedule.

New way of working

COVID-19 triggered a digitalization movement and accelerated the implementation of a 'new way of working'. Due to the corona crisis, approximately 1,700 staff members worked from home for a large part of 2020 (>80%). Many staff members also worked partly from home. Teaching mostly had to be done remotely as well. For this we offered the necessary support and installed facilities. For instance, we helped staff members to arrange their workspace at home in an optimal way, and gave staff and managers information on co-working from a distance and how to coordinate it. We also issued laptops and telephones to all staff members who worked from home 80% of the time or more. We would like to stay on this road to innovation and new ways of working. In 2021, we shall therefore look at the successes in this acceleration that we achieved together, and how we can continue to renew.



Talent policy

'A great place to work' is one of the amplifiers of our new Connecting Worlds strategy. In 2020, we made a start in setting up a Talent policy to implement this.

5.8 Recruiting new staff members

In 2020, as in 2019, we had about 100 unfilled job vacancies. Each year we fill approximately 1,200 vacancies.

New recruitment strategy

In 2020, the werken@umcutrecht team focused on agility through a new recruitment strategy. Agility helps to address current recruitment issues even more effectively. We also started a collaboration with the Princess Máxima Center for the joint recruitment and appointment of staff, sharing of knowledge and networks, and referral of applicants. Due to COVID-19, the emphasis on recruitment activities shifted even more to online recruitment.

Corona flex pool

In 2020 we organized a Corona flex pool at UMC Utrecht for people who wanted to come and help us. During the first wave we were able to deploy 190 externals with health-care experience via the flex pool. 35 of them remained active for the rest of the year as on-call workers for UMC Utrecht (and still are). These are people with regular jobs outside UMC Utrecht. Flex workers helped both in care for COVID-19 patients and in regular care, so that we could continue with the latter insofar as possible. Medical students also enlisted through the flex pool. While they are studying they can already make a valuable contribution to care, and at the same time orient themselves

towards the possibilities that are available in a hospital. Nurses from the regular nursing flex pool (workshop) also helped out in 2020, both in COVID-19 and in regular care.



Recruiting of nurses

To optimize the recruitment of nurses, it is important always to be visible and easy to find. That is why UMC Utrecht has been conducting an 'always on' campaign on Google and social media. We thereby continuously reach specialized nurses and other focus target groups. The more a possible candidate moves in the direction of an actual application, the more relevant the information becomes that we offer. In 2020, more and more colleagues shared their own story, which immediately contributed to the recruitment of new colleagues. In 2020 we recruited over 350 new nurses. Our slogan 'Are you made for UMC Utrecht?' was replaced by 'Are we made for you?' Because the better we explain to potential nurses who we are, the more likely we are to find the right match.

Scarce/hard-to-fill jobs

To fill vacancies for scarce/hard-to-fill jobs more efficiently, we developed a catalog in 2020 with the recruitment methods that work the best for scarce/hard-to-fill jobs for all units with vacancies and recruiters at UMC Utrecht. Data play an important role in reaching these target groups more effectively. In 2020 we developed a data-driven candidate journey. This enables us to measure even more results and to adjust our actions accurately and continuously.

Online recruitment

In 2020 we worked on increasing and improving our online reach. For example through an intensive collaboration with LinkedIn and LIVE@, the online version of Meet & Greet, we have seen an increase in qualitative applications. In 2020, a total of 12,713 candidates applied online to UMC Utrecht.

6. Our organization

To respond effectively to the changing demands from society and perform our core tasks of health care, research and education efficiently, we must ensure that we are and remain agile and financially sound. This means: flexible and efficient cooperation, ongoing improvement and innovation, developing our human capital, and organizing in an incisive, sustainable way. Our guiding principle here is modern, efficient and sustainable business operations. For this, we work according to our strategic programs **Together for the Patient**, **Patient Participation**, **Connecting Leaders** and **Modernization of Business Operations**.

6.1 Together For the Patient

In 2016 we started with a new work method in our organization. 'Together for the Patient' is our guiding principle in this work method: what can we do better for our patients? Multidisciplinary cooperation and ongoing improvement are central to this method. We do this by means of daily and weekly starts. Ideas to improve care or our way of working are tested in our daily work. And we measure the effectiveness thereof. This enables us to sustainably increase patient and staff satisfaction, the quality and safety of our health care, and our productivity.

Support for COVID-19

In the past year, the importance of multidisciplinary cooperation became even clearer than before. The COVID-19 pandemic has accelerated this at UMC Utrecht and the Together for the Patient program gave the necessary support to take on the challenges of COVID-19 for UMC Utrecht. The work method was implemented with the crisis team, the efficient adjustment of capacity to treat COVID-19 patients, and the procurement of masks and other resources.

10,000 employees

In 2020 we introduced the work method in 7 sections at UMC Utrecht. In total, 85 sections and more than 10,000 staff members are now working according to this method. In 2021 we finalized the implementation of Together for the Patient (SVP).

From program to method

In 2020 we worked towards the completion of the Together for the Patient program. The aim is to achieve a new way of working, which will eventually require sustainable attention. We continue to work according to the Together for the Patient method and keep improving it. This is the role of our new section: Strategy & Transformation, and is the responsibility of all staff members at UMC Utrecht.

Support for LCH (National Tools Consortium for Resources)

Not only have we implemented the SVP method in our own organization to cooperate properly in a multidisciplinary way during the COVID pandemic and provide the necessary care. We also supported the National Tools Consortium (LCH) to let people cooperate effectively using the method, and to achieve goals together. LCH was set up in 2020 to get equipment, such as masks and other protective gear for health care, to care workers as quickly as possible. LCH consists of representatives in hospitals, equipment providers, and government. To get these three parties in a short time to work together efficiently and to ensure that the right equipment is available throughout the Netherlands, UMC Utrecht staff members introduced the continuous improvement method with day starts, contributed to the shopping and trading process, and contributed to the setting up of a call-center team.

6.2 Modernization of Business Operations

To give optimal support to our primary processes (care, research and education) at the lowest possible costs and risks, we are modernizing our business operations. This enables us to keep health care accessible and affordable for everyone. Because every human being counts. In our Modernization of Business Operations program we work on the basis of three cornerstones. We also made good progress in these different areas in 2020.

UMC-wide steering and management information

Via a strategic dashboard we can follow the progress and consistency of our strategic goals. In 2020 we adapted the strategic dashboard to our new strategy of Connecting Worlds. Based on the input from this strategic dashboard we choose our target goals and KPIs each year. These target goals and KPIs form part of the performance dialog that we conduct within our organization to ensure optimum control.

Results are discussed in week starts at all levels of our organization. Furthermore in 2020 we made more steering information available to managers, for example the financial dashboard. This helps them to align activities and results even more effectively with our joint strategic goals.

Harmonizing business operations

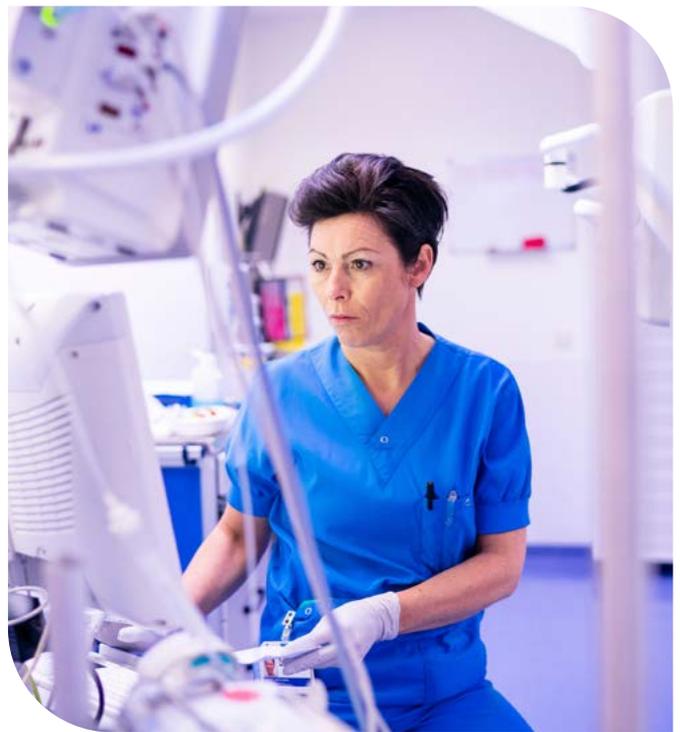
We want to harmonize work methods throughout UMC Utrecht as much as we can. This will ensure efficiency, fewer risks, and the best results. In this way we can be of the best use to our patients, researchers and students. In 2020 for example we centralized the registration of patients in one place in the entrance area, rather than per section. This also made it possible sooner than planned to let patients register themselves digitally when the coronavirus broke out in the Netherlands.

In addition we started with the centralized procurement, management and maintenance of medical equipment. Previously this was organized separately by each section. Care units are thereby relieved of the task to look for medical equipment that we already have. This enabled us to set up COVID units fast with all the necessary equipment, such as infusion pumps and other breathing apparatus. In total, 2,400 pieces of equipment were exchanged between care units. This also applies to the centralization of hardware (laptops and desktops), which also used to be purchased and maintained per section. This meant that we could rapidly switch to more laptops instead of desktops, so that staff members whose presence was not mandatory at UMC Utrecht could work from home.

In 2020 we also prepared for the renewal and harmonization of the three fields of marketing & communication, personnel & organization, and project control. The actual implementation will take place in 2021.

Internal funding and charging

In 2020 we developed a new model for internal funding and charging of care. This system enables us to work more effectively, encourage cooperation, facilitate innovation, and keep control over the organization. Services delivered in health care are central here. Finances, in other words what these services may cost, are a derivative thereof. The new model became effective in 2020. Due to the outbreak of COVID-19 however, we were faced with a strongly deviant health-care situation in 2020. The results of our new funding system are therefore not directly visible yet. In 2020 we also laid the foundation for a new funding structure for education.



6.3 Improving care registration and reducing the registration workload

It is important to properly register the care that we provide. For our patients it is important that the data in the record are correct, and for our business operations it is important that we get paid for what we do. In addition, quality data are a prerequisite for quality research.

From 2018 until the fall of 2020, we made an extra effort to improve the quality of our care registration. In total we conducted about forty improvement projects to ensure that we register correctly in one go. In 2020 for example we focused on our registration culture and established a registration code in which our core values apply to our attitude and behavior with regard to registration. Our efforts to improve our registration of care should eventually also lead to a reduction in the registration workload for our care workers so that they will have more time to spend on patient care. Naturally we continue to improve, and the topic is also on the agenda for 2021.

In addition, the new diagnoses and activities through COVID-19 and the increase in phone and video consultations in 2020 had the necessary impact on our care registration. To sort this out fast, in accordance with and with the permission of the Dutch Health Authority, we have had a lot of close alignment with other UMCs, the Dutch Hospital Data (DHD) foundations, the organization that delivers events and diagnosis terms, and of course the Dutch Health Authority.

6.3.1 Horizontal Supervision of Care

All the efforts to improve our care registration and be demonstrably in control have led to the fact that we shall be able to switch to Horizontal Supervision of Care on January 1st, 2020.

Horizontal Supervision of Care is a narrow cooperation between health-care providers and health insurers, based on trust, mutual understanding, and transparency in all dealings. On the one hand, this pertains to the correct registration and declaration of care, and on the other hand, to the appropriate use of care. To switch to Horizontal Supervision of Care, we have organized our registration processes in such a way that the risk of faulty registration and therefore erroneous declaration will be as little as possible. This has increased the quality of our declarations to health insurance companies, and enables us to avoid time-consuming checks and the need to correct mistakes afterwards.

6.4 Sustainability

UMC Utrecht aims to contribute to a healthy lifestyle and a healthy society, not only for ourselves, but also for all future generations. We want to increase our positive impact on health by reducing our negative impact on the environment and climate. We do this by offering future-proof health care, education and research, both in an economical and social, and in an environmental respect.

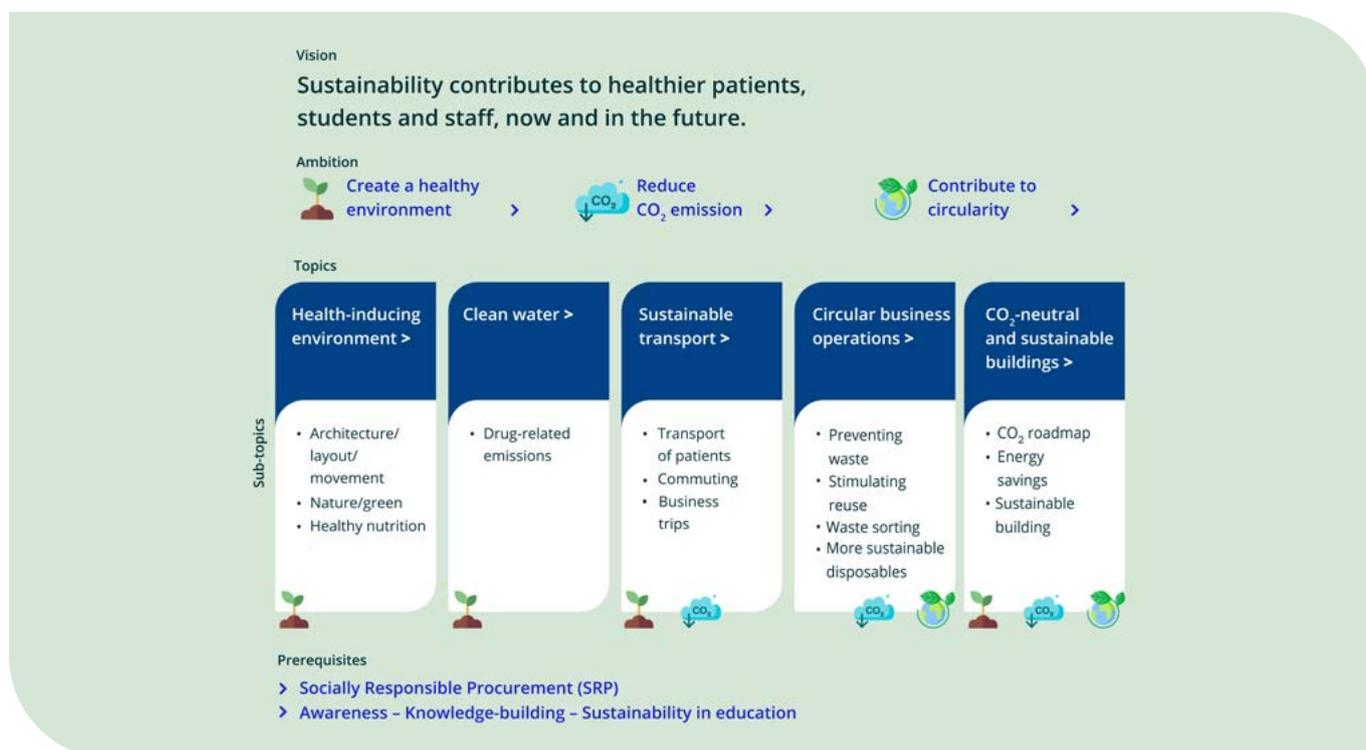
In 2020 we developed a new sustainability policy in coordination with health-care professionals, environmental coordinators, experts and managers at UMC Utrecht. This policy is in line with our new Connecting Worlds strategy in which Sustainable Care is one of the reinforcing factors. With our policy we want to:

- Reduce our CO₂ emissions
- Contribute to circularity
- Create a healthy environment

In addition we continue to focus on raising awareness so that sustainable action will become natural in everything we do. We want to achieve our goals by working on five topics:

- A health-promoting environment
- Clean water
- Sustainable transport
- Circular business operations
- CO₂-neutral and sustainable buildings.

These topics are in line with the Green Deal for Sustainable Care.



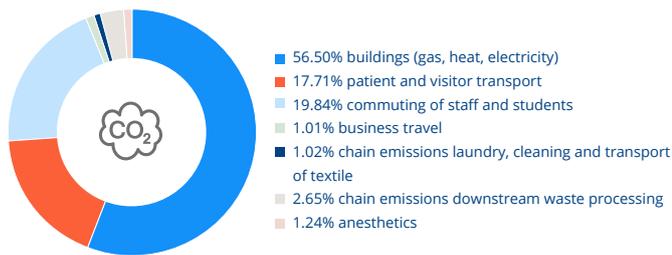
 CO₂ footprint: **43,573** tonnes of CO₂ emitted

 recyclable waste: **740,300** kg  non-recyclable waste: **1,374,800** kg

 gas procurement: **12,663,111** m³  green power procurement: **17,286,996** kWh (NederlandseWind)

 Percentage sustainable procurement: **54%** (of expenses)  Percentage sustainable energy: **42%**

CO₂ footprint 2020

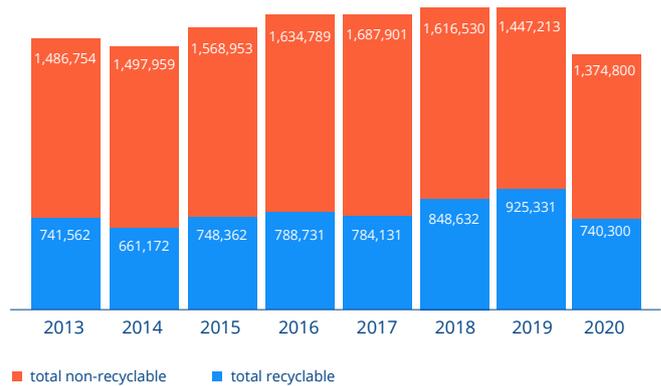


Our CO₂ footprint was 5.6% smaller in 2020 than in 2019.

Changes to the calculation for 2019: we adjusted the emission factors in accordance with [CO₂emissiefactoren.nl](https://co2.emissiefactoren.nl) for natural gas, cars, buses, public transport overall and refrigerants. We also included anesthetics (equivalent 542 tonnes of CO₂). With regard to transport, we made the following assumptions: since middle March, all staff members, patients and visitors have been coming to UMC by car. since March, 30% of the FTE worked 1 day per week at UMC Utrecht, and the rest of the time from home. This footprint does not include the CO₂ emissions caused by the production and transporting of products used at UMC Utrecht (estimated by CE Delft at 158,000 tonnes of CO₂).

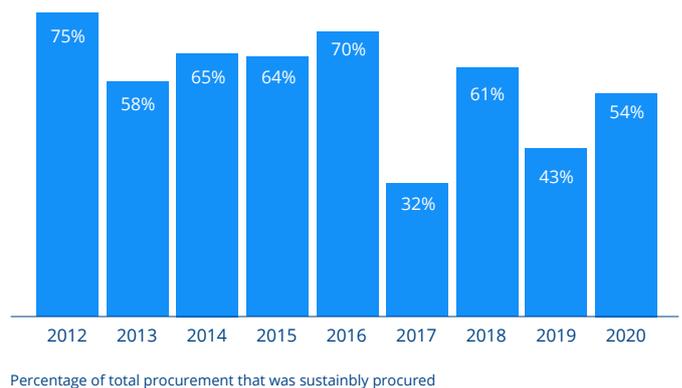
Our CO₂ footprint in 2020 was 43,573 tonnes of CO₂, which is 5.6% smaller than in 2019. This reduction partly has to do with the COVID-19 pandemic and can in particular be attributed to lower emissions from transport, especially business trips. Although we assumed an increased use of cars, CO₂ emissions related to commuting and patient transport have decreased due to less traveling (telecommuting and remote consultations) and lower emission factors. We furthermore produced less waste and used less textile, and the CO₂ emissions from textile transport were considerably reduced since we switched to a laundry that is closer to UMC Utrecht.

Waste



The total amount of waste went down in 2020, because the number of hospital days and physical outpatient visits was lower than in 2019, and because a percentage of the staff worked from home. Due to the COVID pandemic however, more specific hospital waste was generated, which meant that in 2020 a smaller percentage of waste was recycled than in 2019.

Sustainable procurement



The percentage of sustainable acquisitions based on procurement spending went up in 2020 compared to 2019. In an increasing amount of procurement, we take sustainability into account in the selection and/or award process.

In 2020, we achieved sustainability through a variety of projects and activities.

Smaller environmental footprint from specific hospital waste

One of our waste flows is specific hospital waste such as bandages, laboratory waste, human tissue, and OR waste. Since this type of waste is potentially infectious, it is packed in plastic drums and incinerated as a whole at a specific waste processing plant. This amounts to approximately 8,000 plastic drums per year. To reduce our environmental footprint, we did a trial in 2020 with the so-called Sterilwave installation. In this machine, infectious waste is ground at our hospital and disinfected with microwaves. The trial demonstrated that the use of the machine is safe and justified, and directly leads to an environmental benefit. As the waste is ground, the volume is reduced by about 40%. This also reduces CO₂ emissions related to the transport of the waste to the processing plant. As the trial appears to have been successful, we have asked for permission to continue using the machine. The machine will initially continue to be used for specific hospital waste from the laboratories. We are now investigating how we can also use the machine for specific hospital waste from other sections. If it appears that waste may be reused after sterilization, the Sterilwave will also contribute to our goal of recycling more and more waste.

From disposable to reusable

Due to COVID-19 the use of disposable articles in care has increased tremendously. This generates a lot of waste. Moreover, it became clear in 2020 that for the availability of these articles, we are dependent on production in countries like China. More and more health-care professionals are looking for alternatives. A number of health-care professionals at UMC Utrecht joined chain partners Dorc (ophthalmologic toolbox) and Nelipak (plastic containers) to investigate how frequently used vitrectomy sets (instruments for eye operations) could be used in a more circular way. The insights were included in the current tendering for vitrectomy sets. At the initiative of another health-care professional, a study was launched on the difference in environmental impact of disposable and reusable partus and suturing sets for delivery. The environmental damage for the life cycle of these sets (extraction of raw materials, manufacturing, use/sterilization and waste processing) is calculated. Depending on the results, it will be decided whether or not UMC Utrecht will continue to use these disposable sets.

Green Team Students

At UMC Utrecht, staff members work in Green Teams to improve sustainability. In 2020, nine Medical and SUMMA students started the student Green Team to work towards sustainability in the Medical curriculum. The aim is to provide insight into the interaction between the climate crisis and medicine, and to accelerate the implementation of education on the climate crisis. In a [short film](#), Green Team students tell more about it. The students also set up a [national CO₂ platform assistant](#).

Green OR

In 2020, various care providers working in OR started the 'Green OR' Green Team to make the OR sustainable. They look at energy-saving in OR ventilation, switching from inhalational to intravenous anesthetics, reducing waste by adapting operation sets and waste separation in the OR.

Manifesto for sustainable care

A health-care professional at UMC Utrecht was one of the initiators of the [manifesto for sustainable care](#), which calls upon health-care professionals in the Netherlands to join forces and actively strive for sustainability in their organization, and upon all managers of health-care institutions to accelerate [sustainability within their organization](#). By January 2021, approximately 1,000 medical practitioners had signed the manifesto.

Read more about what we are doing with regard to [sustainability](#) and check out the achievement of our goals in 2020 on our [Sustainability Dashboard](#).



6.5 Accommodation

UMC Utrecht was built over thirty years ago. Since then, developments in health care, education, research and technology have been moving fast. Our physical environment, the Utrecht Science Park, has also changed significantly. In view of the future, adjustments to our building and our environment has become essential. We are therefore building the hospital of the future: a place that brings together the best care for our patients, a pleasant work environment for our staff, and an optimum training climate for our students. Topics like sustainability, effectiveness and flexibility are of course high on the agenda.

Our comprehensive vision for the future of our accommodation was drawn up in 2018. Users' needs are our guiding principle here. This strategic vision for the development of accommodation consists of seven programs, namely: outdoor areas, public areas, outpatient clinics, clinics, offices, Wilhelmina Children's Hospital (WKZ), and the Central Sterilization Area (CSA). These programs will be executed in six phases over the following fifteen years. COVID-19 has obliged us to find a new way of working. For example with regard to office duties. We shall of course take this new way of working into account in our plans for office facilities.

In the process of executing our plans, we shall continue to ask for input and consult with users, such as staff, patients and cooperation parties. During renovation, some inconvenience for patients, visitors and staff will be unavoidable. Through this phasing, we will ensure that primary processes remain fully operational throughout the renovation.

Patients' views on public areas

In developing the plans for the layout of outdoor spaces and public areas at UMC Utrecht, we actively involved patients in 2020. In October, we sent out a questionnaire to the UMC Utrecht patient panel. In total, 464 of the approximately 1,600 patients filled in the questionnaire. The participating patients gave their input for example on: accessibility, parking possibilities, the atmosphere in and around UMC Utrecht, signposting, and available facilities at UMC Utrecht (like stores, catering, and places to relax). This valuable input was processed in our plans for the layout of public areas in and around UMC Utrecht.



Renovation of the Wilhelmina Children's Hospital

The Wilhelmina Children's Hospital (WKZ) is also being renovated and modernized, in cooperation with patients, their relatives, and health-care workers. For the definitive design of rooms for the young patients and public areas, the WKZ Children's Council also gave their input. The main question here was: How will you feel comfortable and safe in our hospital? The children went to work with Pinterest, pictures from magazines, and drawings. We discussed all the input from the Children's Council with the children in an online session. This generated lots of attractive and valuable ideas.

Central Sterilization Area (CSA)

Our new Central Sterilization Area (CSA) was commissioned in 2020. This is where all medical equipment at UMC Utrecht are sterilized. This new, innovative section is driven by robot technology. It is a first in Europe. The new section will officially be opened in 2021.

6.6 Digitalization

Digitalization can no longer be ignored in our society. Also within UMC Utrecht, digitalization plays a key role in the care we provide to patients, how staff at UMC Utrecht interact, and how we interact with the world around us. Think of the sharing of data with hospitals in the region, so that we can help patients even better. Digitalization enables us to keep improving patient care, offer the right care at the right place, be adaptable, cooperate more effectively, and keep care affordable. Data safety and the privacy of our patients are of course central here.

COVID-19 care and IT

Also in terms of IT facilities, COVID-19 has led to extra efforts to give health-care professionals maximum support in the treatment of COVID-19 patients. For

example, HiX, the central ICT system for health care, was implemented for all cohort and IC units. We also developed an IT 'harmonica' model so that we can rapidly expand or reduce the necessary IT facilities in cohort and IC units, depending on the up- and down-scaling of corona care.

The mijnumcutrecht.nl patient portal

The online patient portal mijnumcutrecht.nl gives patients a fast and safe way to check their medical data. For example examination results, consultation reports from health-care workers, and medication overview. The patient portal gives patients the opportunity to have control over the care they receive. During an e-consultation on the portal, patients can therefore ask their doctor a (non-urgent) question or request a repeat prescription.

Due to COVID-19, we provided more health care from a distance, and the number of patients who logged in to the patient portal rose impressively. In 2019, 191,172 patients logged in to the portal (unique logins). In 2020, the number increased to 282,697. The number of e-consultations or emails from patients to practitioners via mijnumcutrecht.nl more than doubled. A total of 81,165 e-consultations were sent to us by patients in 2020. In 2019 there were 36,608.

The patient portal receives a very positive rating. In the Patient Experience Monitor (PEM) of September 2020, patients gave the patient portal a 8.9 score.



Video consultations

Due to the corona pandemic, our practitioners had to provide more remote care. Video consulting is an important channel for this. The number of video consultations in 2020 also rose sharply. In 2019, only

a few video consultations took place. In 2020, practitioners conducted more than 11,000 video consultations with patients.

Our patients appreciate the possibility of video consultations and this form of consultations. It prevents (long) trips and patients can avoid the risk of being infected with corona. In the PEM, patients rate video consultations with an average score of 8.4.

Working from home

Not only did contact with our patients take place remotely in 2020. Many staff members also worked mostly from home in 2020. To make it easier for them, we offered to help them arrange their work space at home, provided laptops and cellphones, and accelerated the introduction of video calls and meetings. With a fixed telephone solution at home, help-desk staff and phone operators can work effectively from home and interact with colleagues in different locations. We also did an accelerated roll-out of MS Teams so that in addition to video meetings, staff members could chat safely and work together on documents online. Through regular online webinars by members of the Executive Board and other UMC Utrecht colleagues, we can send all staff members fast and accessible updates on corona developments and other relevant topics.

Infotainment on tablet

To make their hospital stay as pleasant as possible for patients, we offer infotainment at UMC Utrecht. In 2020, 600 of the 900 former infotainment systems were replaced by infotainment on tablets. Patients can use tablets to order meals, watch television, use the Internet, and log in to the patient portal mijnumcutrecht.nl. Via apps on the tablet, people can log into their own accounts to watch films and series, listen to music, and check their social media. When a patient is released from hospital, we remove all their data and clean the tablet. The next patient can then safely use the same tablet. In 2021 we will replace all the remaining old infotainment systems with tablets.

Integral capacity management

In 2020 we opened a Capacity Coordination Center. From this center, UMC Utrecht coordinates bed and staff capacity 365 days a year. An important step before the Capacity Coordination Center opened, was the implementation of the capacity-management system HOTflo. Thanks to this system, we can see at a glance what the total bed capacity at UMC Utrecht is, and make occupation forecasts. During the corona pandemic, this was of course more important than ever.

Wi-Fi traffic meter

To ensure that UMC Utrecht does not get too busy and that there is enough space to keep a distance of 1.5 meters between each other, we implemented a system in September that measures human traffic through Wi-Fi signals. It is then easy to intervene in areas where it gets too busy. The system only measures Wi-Fi signals from mobile devices of patients, visitors and staff. UMC Utrecht cannot trace these signals back to the users. No-one therefore knows who the devices belong to and who is in the hospital.



7. Our finances

What are the financial results for 2020 and how have we dealt with the (financial) risks to safeguard our reputation and continuity?

7.1 The impact of COVID-19 on our financial situation

COVID-19 has had a big impact on our entire organization, also in financial terms. Although our operating income was higher in 2020 than in 2019, due to COVID-19 we had to deal with considerably higher costs. All three our core tasks – care, education and research – have been significantly impacted.

Despite the fact that due to COVID-19 we have had to deal with higher costs, the financial impact was to a large extent mitigated through additional agreements with health insurance companies (in particular CB regulation) and subsidies from the Ministry of Health, Welfare and Sport. For education and research, there was only limited mention of accommodating our extra costs (which included the digitalization of teaching and restarting research projects that had come to a halt due to lockdown) and lost earnings (including the wind down of educational pathways). These effects also had a negative impact on results in 2020.

Besides our core tasks, underlying business operations and (strategic) programs were also affected by COVID-19. Due to the considerable pressure on our staff and organization, we have had to make choices and set priorities with regard to our programs/projects. Some programs/projects were partly able to continue in 2020, while others had to be postponed.

In order also to safeguard our healthy financial position in the long term and actively anticipate rising costs together with a limited growth in income, we pursued our strategic programs that are aimed at efficiency, effectiveness, and care in the right place. These include the programs Together for the Patient and Modernization of Business Operations. Programs like the elaboration of the Strategic Maintenance Vision for Accommodation had to be brought back to the drawing board, and will continue in the coming period based on new insights.

7.2 Key figures

Below we give a short summary of our financial developments and performances (in millions of €) based on indicator figures from the consolidated financial statements.

	Operating income	Staff expenses	Net result
2020	1,391.8	840.7	9.6
2019	1,273.5	784.8	11.9
2018	1,193.2	735.2	12.4
	Group equity	Provisions	Total assets
2020	408.2	36.2	906.7
2019	399.9*	34.8*	874.0
2018	319.7	101.8	897.5
	Return	Solvency	Liquidity
2020	0.7%	45.0%	1.63
2019	0.9%	45.8%*	1.67
2018	1.0%	35.6%	1.54

* Due to an accounting policy implemented in 2019, whereby the maintenance provision of €69.9 million as per January 1st, 2019 was lifted and added to the general reserves, the overview above shows a rise in group equity between 2018 and 2019, a drop in provisions between 2018 and 2019, and an improvement in solvency in 2019 compared to 2018.

7.3 Financial results

Internally we are aiming for a return of at least 1%. For this, we start out from operating incomes excluding expensive drugs and research projects funded by third parties, as these cash flows in essence have a deviating risk profile. For 2020, these cash flows amounted to more than €300 million. The consolidated return according to our in-house definition amounts to 0.9%. For external comparisons, we also present return compared to total external revenues. This amounts to 0.7%.

Our operating incomes were once again higher than in previous years (an increase of approximately €118 million, i.e. 9%). This increase in particular pertains to revenues from care services and can be attributed to the higher turnover (and costs) of (expensive) drugs (increase of about €60 million) combined with additional compensations from health insurance companies to cover additional COVID-19 costs and lost incomes (impact of approximately €15 million), and amounts received from the Ministry of Health, Welfare and Sport to cover the health-care bonuses paid out to health-care workers (€15 million). Incomes from other activities also increased, including through the indexing of availability amounts from the Ministries of Health, Welfare and Sport and of Education, Culture and Welfare, and through revenues from COVID-19 testing activities.

Against the increased operating income, there were also higher costs. Our staff expenses rose sharply by more than 7% compared to the previous year (increase of approximately €56 million). The health-care bonus that was paid out to health-care workers in 2020 and CLA developments contributed to this increase. This increase was however also partly the result of COVID-19, which for example caused an increase in absenteeism and the appointment of extra medical staff. Our staff also had fewer holidays in 2020.

Patient-related costs were also higher than in 2019 (increase of about €70 million), in particular due to higher expenses caused by expensive drugs (cost increase of about €60 million) and COVID-19.

On balance, these developments led to a result of approximately €9.6 million. This is €2.3 million less than the result for 2019. The result to a large extent however matched the budgeted result for 2020 of €10 million. The entire result has been set aside as equity capital. This contributed to strengthening our financial position. Our main financial ratios dropped somewhat compared to the previous year, but remain sound. The proportion of expensive drugs in our expenses and incomes rises each year. This has no impact on results, but does partly put pressure on returns. We have met the minimum requirements agreed upon with our banks for solvency and Debt-Service Coverage Ratio (DSCR).

Consolidated participating interests negatively impacted our result on balance with approximately €0.7 million.



7.4 Risk management

UMC Utrecht is a comprehensive, open organization in a dynamic environment. This entails risks. Due partly to our social role and the financing of our core activities with public funds, we are forced to manage these risks adequately and to be conservative in terms of risk management.

We are a decentralized organization. Risk management starts in the workplace, and is the task of our divisions, departments and sections. In the analysis and management of risks, they are assisted by disciplines in fields such as patient safety, labor conditions, overall safety, information security, infection prevention, and financial continuity.

Risk-management and -control system

To perform our core tasks in a responsible manner and make decisions, we use an internal risk-management and -control system. Important aspects of it are:

The performance dialog	We conduct weekly discussions on performance with each other. On these occasions, the state of affairs in the focal areas of patient experience, staff satisfaction, productivity, quality and safety, and impact, are discussed at all levels of the organization, based on 17 KPIs. Visual dashboards give us a clear understanding of the state of affairs in each focal area and for each KPI, at central as well as section level, and facilitate efficient monitoring and steering.
Scheduling & control cycle	The scheduling & control cycle starts with an update on the main internal and external opportunities and threats, including those that flow from our strategy. Management contracts and budgets based on these are the starting point for the monthly monitoring of performance and serve as guideline for corrective measures. Each quarter, we establish forecasts for the rest of the year and discuss the implementation thereof with the Executive Board and the Supervisory Board. Divisions and departments have included performance indicators in their monthly reports on topics such as quality and safety, staff and finance.
Policy and guidelines	Risks regarding expenses and duties are curbed by formally adopted authority limits. In addition, we have formal policies and guidelines for a variety of focal areas such as scientific research, quality and safety in care, data protection, and automated systems and finances. Wherever possible, we have embedded the policy in our systems in order to guarantee optimum compliance by means of IT applications.
Targeted management tools	We use SAFER (Scenario Analysis of Failures, Effects and Risks) to manage quality and patient safety. SAFER is a method for proactive (or predicative) risk analysis. Guidelines and protocols regarding quality and patient safety have overall been brought together in one place, where each staff member can access them. The reporting of incidents is extremely relevant and is supported in various ways. For the purpose of risk analysis at care registration, we conduct an annual dialog with health insurance companies based on Horizontal Supervision to jointly establish an overview of risky care processes. For these risks, we set up control measures and, following a test by the external accountant, justify our decisions to the health insurance companies.
'Three lines of responsibility'	Within UMC Utrecht, we follow a 'three lines of responsibility' system for risk management. The Internal Audit section has been operational for a number of years already. This section works according to an annually updated group-wide risk analysis and an annual audit plan. Based on this risk analysis and the annual plan, the section performs audits and reports on these to the Executive Board and the Supervisory Board. Compliance and risk management is currently being structured in more detail.
Focus on soft controls	By recruiting the most suitable staff with the right educational background and experience, providing training and development throughout their career, and stimulating a safe work environment, we strive to limit risks and, where applicable, learn from our mistakes. Currently we are focusing explicitly on leadership. All managers at UMC Utrecht have followed an intensive leadership and culture pathway via the Connecting Leaders program. Upon completion of the pathway, there is a duty to have periodic follow-up training in the focus areas of culture and conduct.

At the end of 2020 we started with a pathway to raise risk management to a higher level of maturity. Focal points here are comprehensiveness and uniformity, and alignment with existing procedures as described above. In structuring these we seek alignment with the COSO-ERM framework. For this we started up two pathways.

The first pathway led to a revised strategic heat map of risks. According to our Executive Board, these risks, which are indicated in the next paragraph, are the main risks that form an obstacle to reaching UMC Utrecht's objectives. In 2021 we shall look more carefully at the management of these risks in order of priority, and where necessary start improving our management.

The second pathway concerns the setting up of a framework in which we will bring together all activities that pertain to risk management on a strategic, tactical and operational level. The decentralized nature will mostly be maintained, but will be supplemented with a central function to monitor and where necessary, adjust the process.

Risk overview

COVID-19 is a priority issue.

Naturally, in 2020 the impact of COVID-19 on our organization, including our financial situation, was our most important priority. In 2021 this will not change. Thanks to (sector) agreements with health insurance companies and the Ministry of Health, Welfare and Sport (including the CB regulation and hardship clause), the financial impact of COVID-19 on our financial position at the end of 2020 was relatively limited. In 2021 these agreements will continue to apply, as well as the financial safety nets included in them should the agreements and commitments eventually appear to be insufficient. For UMC Utrecht, the coming period therefore also holds no real financial continuity risk due to COVID-19.

Other risks

In the overview below, we give a summary of the main risks besides COVID-19. We have determined the risk acceptance by evaluating the chances that a risk will occur, the impact it will have on the organization, and the extent to which we can influence the risk.

Risk area	Risk	Category	Chances of occurring	Impact	Influence	Willingness to take the risk
Quality and safety in patient care	Incidents regarding quality and safety in patient care	Strategic	Average	High	High	Low
Financial continuity	Pressure on funding and pricing of health care, education and research	Strategic	High	Average	Low	Average
Strategic and governance	Change in profile through specialization and concentration of care	Strategic	High	High	Average	Average
Buildings and facilities	Impact and execution of large investments in accommodation and ICT	Strategic	High	Average	High	Low
Laws and regulations	Questions regarding the integrity of scientific research	Strategic	Average	Average	Average	Average
Sustainable organization	Scarcity on the labor market	Operational	Average	High	Low	Average
Quality and safety in patient care	Incidents and major incidents	Operational	Average	High	Average	Average
Data protection / Information and communication technology	Incidents regarding availability (continuity), integrity (accurate and complete), and confidentiality (data protection and privacy)	Operational	Average	High	High	Low
Laws and regulations	Abusive registration and invoicing of care	Compliance	Low	High	High	Low
Laws and regulations	Unlawful (financial) accountability towards third parties	Compliance	Average	High	High	Low

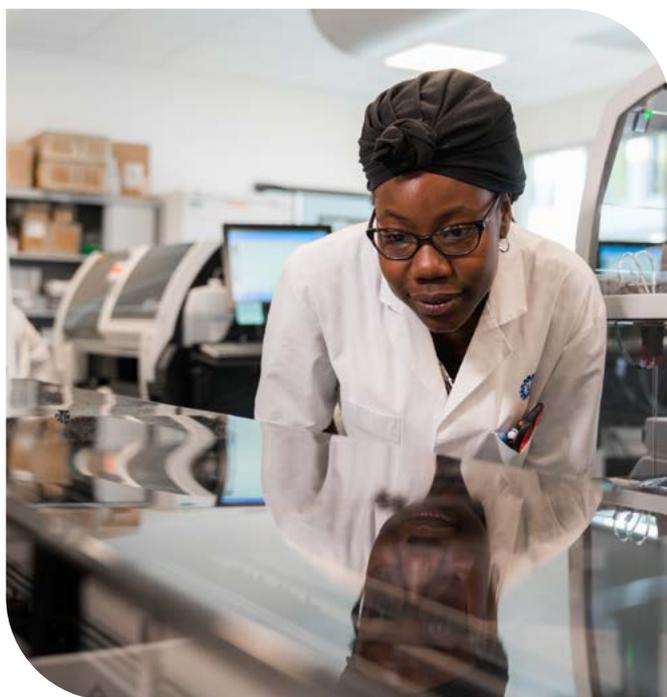
For all the indicated risks, we have set up a structure for preventative and repressive risk-management measures. The proper functioning of these measures is guaranteed in particular by the aspect of the aforementioned risk-management and guarantee system. Periodic reports are issued on the state of affairs regarding these risks. In addition, risks are periodically reassessed to stay in line with our strategy and the continuously changing world around us.

7.5 View on financial situation in 2021

Strong impact of COVID-19

Due to a large number of infections and subsequent essential government measures (lockdown and social distancing), like other hospitals and UMCs, we are starting off 2021 with an outlook of substantial decrease in turnover and higher costs. Extra costs in particular include:

- Extra input (including extended labor agreements), retraining and recruitment of health-care staff combined with very high absenteeism.
- Costs of testing patients and staff members.
- Investments and costs of freeing up hospital capacity.
- Organizing hospitals according to the 1.5 meter requirement.
- Creating extra spaces with building adjustments.
- Extra costs of personal protective equipment for staff, and purchasing of apparatus and protective equipment for the nursing of COVID-19 and other patients in strictly adapted conditions.



In the coming period, we shall be forced to follow the policy and advice of various national institutions and at the same time take on the challenge of continuing our care activities as efficiently and safely as possible, without jeopardizing the health of our staff members and patients in the process.

At the end of 2020, hospital and health-insurance umbrella organizations made joint agreements to offer hospitals and UMCs that provide care to COVID-19 patients the assurance at an early stage that COVID-19-related costs and lost income will be covered in 2021. This includes a framework in MSZ 2021 for health-care contracting in 2021 and a financial safety net. Contracts from 2020 thereby form the basis for agreements on 2021. Contracts will therefore still be in line with the specific hospital, local situation and individual procurement of the various health insurance companies. Health insurance companies and hospitals moreover agreed that they would continue to look for the best possible balance between care for COVID-19 patients and regular care. The aim is to avoid waiting times insofar as possible. All parties expressed the hope that 2022, following a successful vaccination campaign, in terms of health care, would insofar as possible resemble the years before the outbreak of corona, where contracts can be signed in the customary way.

In addition to the agreements with health insurance companies, agreements were made with the Ministry of Health, Welfare and Sport on health care for soldiers, refugees and detainees, among others. For revenues that are not covered by the health-care premium, the minister has undertaken to make every effort to prevent hospitals from falling into debt. The Ministry of Health, Welfare and Sport will in addition make an availability contribution to provide extra IC beds for 2021 and 2022.

In 2020 and in the first months of 2021, due to the corona crisis and by order of the Minister of Health, Welfare and Sport, we had to (considerably) postpone our regular care in a number of cases. The number of referrals to hospitals and UMCs also dropped significantly. For 2021, we are first of all faced with the challenge to restore a balance in our care services. Before we can have the capacity to catch up on this care, the impact of COVID-19 must first diminish sufficiently and (regular) care must be stabilized at the scheduled 100%. The challenge will then be to catch up on postponed care. Like all hospitals and UMCs, we are making plans and agreements with health insurance companies for backlog care. The 2021 MSZ regulation indicates how further agreements on backlog care can be compensated.

In 2020, our health care was heavily marked by COVID-19. Our hope is that with the arrival of vaccines, the impact of corona on our health care will be reduced in 2021, and that we shall be able to see 2021 as a year of transition to a normalized situation. The exact course that COVID-19 will take however remains hard to predict, partly due to mutations of the virus. Strict monitoring for example of mutations of the virus and the impact that could have on the efficacy of vaccines remains a priority.

With all the uncertainties regarding COVID-19, we can rely on the commitments of the Minister of Health, Welfare and Sport and the agreements made with the Association of Dutch Health Insurance Providers via the negotiation agreement on MSZ 2021, the continuity contribution (CB) for 2020, the safety-net value for 2021, and hardship clauses both for 2020 and 2021. In addition to these specific commitments by health insurance companies, we can rely on national regulations, including the subsidy to upscale IC and postpone the payment of tax levies. Based on the most current insights at the time of establishing our financial statements, we can absorb the financial consequences of COVID-19 within the signed agreements, keeping account of credit limit and the agreed ratios with banks, and there is no material uncertainty regarding the financial continuity of UMC Utrecht.

Impact on activities

Due to the high degree of urgency for corona patients and the strict safety requirements, our regular care production is below normal. Other activities, for example our research projects and training courses, are still experiencing negative consequences as well. Despite agreements with health insurance companies and the Ministry of Health, Welfare and Sport, we will have to delay or postpone certain large strategic projects and investments in 2021.

Other focal areas for the next few years

Besides COVID-19 challenges, other issues will also demand our attention in the coming period. These include:

Rate pressure together with limited growth

In view of the public debate on the affordability of care and the right care in the right place, we are taking account of pressure on our budgets and rates, knowing that our costs will for a variety of reasons rise in the coming years.



Significant investments in accommodation and ICT

Due to the age of our buildings, large-scale renovations in various places will be essential in the coming years. The major part of these renovation projects will take place in the next decade. To tackle these building and financial challenges in the right way, we have drawn up a comprehensive vision of accommodation. This vision has been validated externally and billed financially. The conclusion is that the overall series of renovation projects is financially feasible. We expect that the attraction of additional funding will only become a reality as of 2024 approximately.

In the next few years we must also invest in ICT with the continued digitalization of processes at UMC Utrecht, developments in e-health and Big Data, and scheduled replacement investments in IT components (hardware, system software, and applications).

Maintaining financial continuity

As indicated in this regard, the financial impact of COVID-19 has been relatively limited due to the CB regulation with the underlying hardship clause, and additional subsidizing on components. We reassess our liquidity budget weekly in order to respond directly to changes in our financial position if necessary.

As for other developments, we have billed them explicitly in the budget for 2021 and the long-term budget until 2024. These calculations show positive results, which means that we can maintain a sound equity capital in the longer term. We also have sufficient liquidity to meet all obligations in the coming years.

8. Our governance

8.1 Management and structure

The tasks and competencies of the Executive Board and the Supervisory Board are defined in the administrative regulations. Within the Executive Board, we have made a portfolio allocation.

8.1.1 Legal structure

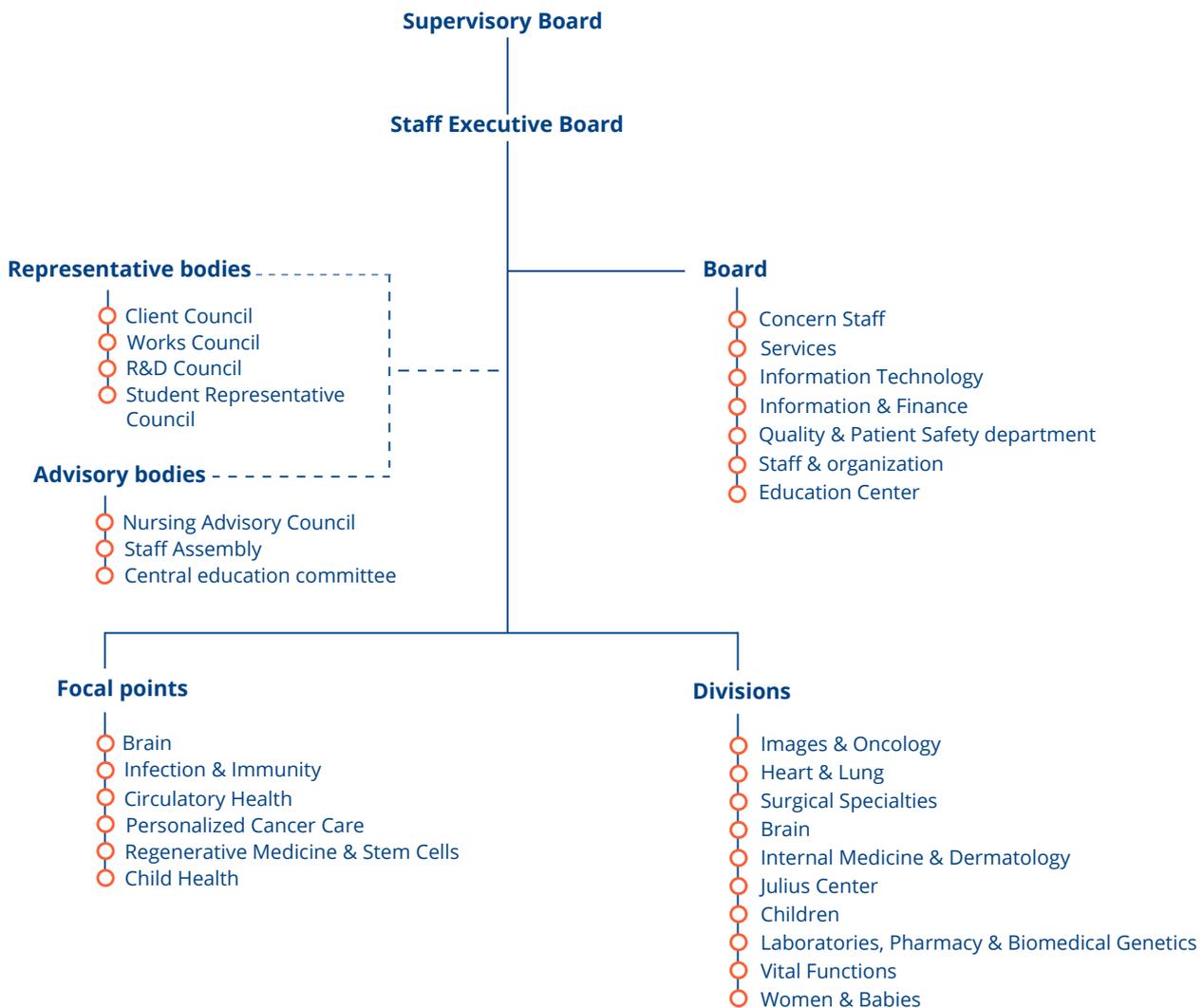
University Medical Center Utrecht (UMC Utrecht) is a legal entity governed by public law under the Act on Higher Education and Scientific Research (WHW).

All activities at UMC Utrecht related to the commercialization of patentable inventions and the creation of spin-off companies fall under UMC Utrecht Holding B.V. Under the Dutch Patents Act of 1995, UMC Utrecht is the owner of all patentable inventions by its staff members. The Executive Board has entrusted the management of these to Utrecht Holdings. This

includes the start and coordination of patent applications, the search for suitable commercial partners, and license negotiations. UMC Utrecht Holding B.V. pioneers innovation and knowledge valorization through patent control, the licensing of knowledge or participation in BVs where knowledge is developed further, and provides services (care-related innovations that do not involve any patents or licenses). UMC Utrecht is the sole owner of UMC Utrecht Holding B.V.

The public-law entity UMC Utrecht is accredited under the Care Institutions Accreditation Act (Wet toelating zorginstellingen, WTZi) and applies the Governance code for UMCs. UMC Utrecht is registered at the Chamber of Commerce under KvK number 30244197 and company number 000023527250.

8.1.2 Organization chart



8.1.3 Management philosophy

The management philosophy of UMC Utrecht is based on three lines of responsibility:

1. Divisions and departments are according to the first line wholly responsible for their own operational process and risk control. Through self-monitoring they supervise how effectively they are doing it with regard to policy and strategic frameworks.
2. Departments are in the second line responsible, together with health-care providers, for taking the strategic goals of UMC Utrecht, operational risks and laws and regulations that apply to their – content supporting – field, and translating it into policy. The focal points do this in the field of health care, research and education. In coordination with the divisions, they issue a supported proposal that is submitted to the Executive Board for decision. Departments and focal points advise/facilitate the first line in the implementation of policy and monitor the organization-wide execution thereof. The second line monitors implementation and reports this to the first line, including the Executive Board.
3. The Executive Board is responsible for the strategy of the organization and is wholly responsible for business operations, compliance with laws and regulations and standards, and the realization of the strategic goals. The Executive Board is supported in this by an internal audit section that, based on an annually drafted audit plan, tests whether risks in the organization are sufficiently controlled, and where there may be areas for improvement.

A number of UMC-wide consultation structures facilitate and structure the coordination between division managers, board members, focal-point chairs, and members of the Executive Board: Strategic Consultation, Operational UMC Utrecht Consultation, Business Operations Consultation, Education Consultation, and Research Consultation.

8.1.4 Executive Board

In 2020 there were no changes in the composition of the Executive Board. Members of the UMC Utrecht Executive Board in 2020:

Prof. M.M.E. Margriet Schneider, Chair

Margriet Schneider (1959) is Professor of Internal Medicine and a specialist in internal medicine and infectious diseases at Utrecht University (UU). She graduated in Medicine at UU in 1991 and in 1998 obtained her doctorate there. From 2004 to 2010, she held the position of Chair and Medical Manager of the new Intensive Care Center division, with the task to combine the four separate IC units at UMC and to innovate in a future-proof way and start up the Intensivist and IC nursing course. During this time, an international award-winning state-of-the-art intensive care unit was built on the roof of UMC Utrecht.

In 2010 she was appointed as Chair of the Internal Medicine & Dermatology department and Internal Medicine instructor, and Chief Instructor for the Utrecht region. In November 2015 Magriet became Chair of the Executive Board of UMC Utrecht and in this capacity gave shape to the renewal of the UMC.

Margriet Schneider holds the following additional positions:

- NFU Chair (non-remunerated)
- Member of the College Zorg Opleidingen (CZO) Supervisory Board (non-remunerated)
- Health Hub Utrecht Driver (non-remunerated) Health Hub Utrecht (non-remunerated)
- Chair of Bestuurstafel Gezond Utrecht (non-remunerated)
- Member of the Topspecialistische Zorg en Onderzoek (TZO) committee at ZonMw (allowance to UMC Utrecht)
- Member of the evaluation supervisory committee JZOJP (allowance to UMC Utrecht)

Prof. A.W. (Arno) Hoes, Dean and Vice-Chair

Prof. Arno Hoes (1958) has been Dean and Vice-Chair of the board of directors of UMC Utrecht since June 1, 2019. He is Professor of Clinical Epidemiology in General Practice at Utrecht University and was, until his appointment, Division Chair of the Julius Center for Health Sciences and Primary Care at UMC Utrecht. His research and teaching activities focus mainly on (early) diagnosis, prognosis and therapeutic interventions in cardiovascular disease and on clinical research methods. He has a wealth of experience in managing national and international scientific associations and was closely involved in drawing up a range of national and international clinical guidelines.

Arno Hoes holds the following additional positions:

- Member of the health council (non-remunerated, until 1-1-21)
- Member of the Nutrition and Health Council (allowance to UMC Utrecht, until 1-1-21)
- Member of the editorial board, European Journal of Heart Failure (non-remunerated)
- Member of the editorial board, ESC Heart Failure (non-remunerated)
- Member of the advice committee, Epidemiology Association (non-remunerated)
- Supervisory Board, DCVA (Dutch Cardiovascular Association) non-remunerated
- Member of Task Force Heart Failure guidelines European Society for Heart Failure (non-remunerated)
- Member of the Board of Supervision, Netherlands Center for One Health (non-remunerated)
- Member of the Supervisory Board, Utrecht Holdings (non-remunerated)
- Member of the general board of the Dutch Clinical Research Foundation (DCRF) (non-remunerated)

Ms M.H. (Mirjam) van Velthuisen-Lormans, member

Mirjam van Velthuisen-Lormans (1972) studied Health Care Policy and Management at the Erasmus University in Rotterdam. From 1996 until 1999 she was an external organizational consultant at the organization consulting firm Inter-Orga BV. In 2010 she joined UMC Utrecht, where she has filled various functions for the past decade: business operations manager, Peri-Operative care division and SEH, business operations manager and manager, Brain care division, business operations manager Heart-Lung Center Utrecht, member of Daily Management at the Major Incidents Hospital and member of University Management, Sports Medicine. In 2010 she was appointed as member of the Executive Board of the Rivas Health Care Group, focusing on the Beatrix Hospital. She was appointed as a member of the Executive Board (CFO) of UMC Utrecht in October 2013 and is portfolio manager of Finance, Business Operations, IT, Sustainability, Accommodation and Real Estate. As manager, Mirjam van Velthuisen-Lormans gives direction and content to these fields.

Mirjam van Velthuisen holds the following additional positions:

- Member of the Supervisory Board Friends of UMC Utrecht/WKZ (non-remunerated)
- Member of the Health-RI Supervisory Board (non-remunerated)
- Manager, Uithofbeheer partnerships (non-remunerated)
- Chair a.i. Board Cluster Gezond, EBU (non-remunerated)
- Member of the External Advisory Board Executive Master of Science Finance & Control (EMFC) program at Nyenrode Business University (non-remunerated)
- Member, Management Consultation, Regional Development Agency (ROM) Utrecht region (non-remunerated)
- Member of the Nictiz Supervisory Board (remunerated)

Ms A. (Anouk) Vermeer-de Boer, member

Anouk Vermeer-de Boer (1969) studied Technical Physics at HTS Eindhoven and General Business at Nyenrode University. She worked for 18 years (until 2013) in various positions at Philips Electronics B.V., in particular the Health Care division. She has built her career in export, new business development and innovation, and intellectual property licensing and sales. Her last position within Philips was General Manager of Philips Healthcare Solutions, overall responsible for multi-year partnership projects with health-care providers worldwide. From 2013 to 2015 she worked at DSM Biomedical as Business Unit Director Biomaterials. From 2005 until

October 1st, 2018, she was a health-care group manager at the Catharina Hospital in Eindhoven. Here she was responsible among other things for the Catharina Heart & Vascular Center. Anouk Vermeer joined the UMC Utrecht Executive Board on October 1st, 2018 as Chief Operations Officer. In this capacity, she is Chair of the Operational UMC Consulting and portfolio-holder of most of the (health-care) divisions and the department of Quality & Patient Safety at UMC Utrecht.

Anouk Vermeer-de Boer holds the following non-remunerated positions:

- Member of the Utrecht Science Park Supervisory Board (on behalf of UMC Utrecht)
- Administrative Chair NFU-Consortium
- Member of the general management of the Netherlands Study Center for Technology Trends (STT)

8.1.5 Supervisory Board

The Supervisory Board is in charge of continuously monitoring everything that happens at UMC Utrecht, which includes supervising compliance with laws, rules, guidelines, instructions and regulations that apply to UMC Utrecht. These tasks and competencies are described in more detail in the administrative regulations.

Members of the Supervisory Board are appointed by the Minister of Education, Culture and Science. The Supervisory Board draws up a general profile for its composition, with attention to expertise, skills and diversity. This profile was updated in 2020 with regard to a vacancy that arose for 2021. For this, the Supervisory Board called upon the Executive Board as well as the participation councils.

Five committees advise the Supervisory Board in their respective fields and helps the Board prepare for its decision-making. The Supervisory Board is responsible for decision-making. The five committees are:

- the Audit committee
- the Quality and Safety committee
- the Education and Research committee
- the Governance and HR committee
- the Defense committee

Composition of the Supervisory Board

The composition of the Supervisory Board was modified in 2020. As of July 1st, 2020 a vacancy arose when Mr Van den Nieuwenhuijzen's second term ended. Mr Van den Nieuwenhuijzen was appointed upon a nomination by the Minister of Defense.

The administrative regulations of UMC Utrecht stipulates that one member of the Supervisory Board

shall be appointed by the Minister of Education, Culture and Science (OC&W) upon a binding nomination from the Minister of Defense. This nomination is made on the grounds of the extremely close link between the Central Military Hospital and UMC Utrecht. The two entities also interact closely in the field of patient care. This link is stipulated in the 'Agreement on the governance of cooperation between UMC Utrecht and the State of the Netherlands to protect and promote the interests of the Ministry of Defense in the Central Military Hospital'.

Upon nomination by the Ministry of Defense, the Minister of Education, Culture and Science appointed Mr J.H. Van Gelder as member of the UMC Utrecht Supervisory Board on October 1st, 2020. In 2020, the Minister of Education, Culture and Science appointed both Ms De Visser and Mr Kregting for a second term.

The composition of the UMC Utrecht Supervisory Board in 2020 was as follows:

Ms C.E. (Caroline) Princen, Chair

Main function: CEO Nuts Group (previously Board member of ABN AMRO NV)

- UMC Utrecht Supervisory Board: second term, ending 2/28/2022
- Member of the Governance and HR committee
- Member of the Defense committee

Caroline Princen holds the following (additional) positions:

- Member of the Supervisory Board, Ordina
- Board member, VUMC Alzheimer Center
- Member of the Supervisory Board, EYE Film Institute)
- Chair, Talent to the Top Monitoring Committee
- Chair of the Supervisory Board, Perspectief

Dr. P.C.J. (Peter) Leijh, Vice-Chair

Previous main function: former Board member, Leiden University Medical Center

- UMC Utrecht Supervisory Board: second term, ending: 4/30/2022
- Chair of the Audit committee

Peter Leijh holds the following (additional) positions:

- Chair of the Supervisory Board, Holland PTC
- Chair of the Wilhelmina Children's Hospital Foundation fund
- Member of the Supervisory Board, Waarborgfonds voor de Zorgsector
- Member CHDR Supervisory Board

Mr L.A.M. (Leon) van den Nieuwenhuijzen, general member (until July 1st, 2020)

Main function: Chartered Accountant (formerly Head of Accountancy Department at Defense)

- UMC Utrecht Supervisory Board: second term, ending 7/1/2020
- Chair of the Defense committee

Leon van den Nieuwenhuijzen holds the following (additional) positions:

- Owner Public Serving, Management and Supervision, Public Sector, Bergen op Zoom
- Member of Loodslicht Foundation, The Hague

Prof. M. (Marianne) de Visser, general member

Previous main functions: neurologist and former Chair of the Outpatient Division of the Amsterdam University Medical Center, and Emiritus Professor of Neuromuscular Diseases at the University of Amsterdam

- UMC Utrecht Supervisory Board: second term, ending 7/1/2024
- Chair of the Quality and Safety committee
- Member of the Education and Research committee

Marianne de Visser holds the following (additional) positions:

- Member of the Scientific Council for Government Policy (WRR), The Hague
- Member of the Supervisory Board, Leyden Academy, Leiden
- Chair of the Supervisory Board, LifeLines, Groningen
- Member of the Supervisory Board, Center for Human Drug Research, Leiden
- Board member, Voeding Leeft, Amsterdam
- Chair of the Program committee Memorabel, ZonMw
- Chair of the Board, Interest Group for Chronic Respiratory Support (VSCA)
- Board member, Genetic Engineering Committee (Bilthoven)

Prof. G. (Gerrit) van der Wal, general member

Previous main function: former Inspector General, Health Care Inspectorate, and Emiritus Professor in Community Medicine at VUMC

- UMC Utrecht Supervisory Board: second term, ending 6/1/2021
- Chair of the Education and Research committee
- Member of the Quality and Safety committee

Gerrit van der Wal holds the following (additional) positions:

- Chair of the Supervisory Board, Groene Hart Hospital, Gouda

- Vice Chair of the Supervisory Board, Zorggroep Almere
- Chair of the Advisory Board, Princess Máxima Center and Shared Care UMCs
- Chair of the National Program for Palliative Care Palliantie ZonMW
- Chair of the ABS-physicians steering group
- Chair of Beleidscollege SCEN

Mr A.H.P. (Aloys) Kregting, general member

Main function: Chief Information Officer (CIO) at AkzoNobel NV

- UMC Utrecht Supervisory Board: second term, ending 12/1/2024
- Member of the Audit committee
- Chair of the Governance and HR committee

Aloys Kregting holds the following (additional) positions:

- Member of the Supervisory Board, De Volksbank
- Member of the Global Research Board

Mr J.H. van Gelder, general member (as of October 1st, 2020)

Main function: Deputy Secretary General, Ministry of Finance

- UMC Utrecht Supervisory Board: first term, ending 10/1/2024
- Chair of the Defense committee

Activities of the Supervisory Board

The Supervisory Board was briefed in 2020 on developments at UMC Utrecht and on the implementation of its policy. Unlike in the past, due to COVID-19 this mostly took place online. The act of supervising had to be reinvented: how do you supervise effectively if you cannot physically come to the premises? The question was asked repeatedly, also during self-appraisal. Webinars, digital consultations with the Executive Board and employee representatives, newsletters, individual work meetings and various reports enabled them to overcome this challenge as effectively as possible. The Chair of the Supervisory Board moreover participates in Chair discussions of the joint Supervisory Boards of UMCs.

In addition, the Supervisory Board undertook the following activities in 2020:

- Six regular (online) meetings with the Executive Board.
- Participation in (online) committee meetings.
- Two (online) consultations with the Works Council.
- One (online) consultation with the Client Council.
- One (online) self-appraisal.
- One (online) theme afternoon on risk management

Due to COVID-19, a number of normal activities did not take place in 2020:

- Team-building day
- Attendance at various internal gatherings, including the JCI audit and strategy.
- Participating in tracers and attending day and week starts in the organization.

8.2 Employee Representation

UMC Utrecht has the following formal Employee Representation bodies:

Works Council

UMC Utrecht staff members are represented in a Works Council. The Works Council meets weekly, and committee meetings take place every other week. Once every six weeks, a consultation takes place Executive Board representatives. The Works Council reports to UMC Utrecht staff members on activities and results in an annual report on the intranet.

Works Council members serve for a three-year term. An election was held in 2018. The Daily Management (chair, vice chair, secretary and deputy secretary) coordinates the activities of the Works Council, holds agenda meetings with the manager, and is responsible among other things for Works Council training. Three division committees and four theme committees prepare documents, hold informal meetings with managers, and consult staff members. Each Works Council member sits on at least one division committee and one theme committee. The Works Council is supported by a secretariat that consists of three staff members.

The three division committees are:

- Committee 1: Brain, Internal Medicine & Dermatology, Julius Center, Images & Oncology, Information & Finance, Information Technology and the Education Center
- Committee 2: Children, Laboratories, Pharmacy & Biomedical Genetics, Women & Babies, Concern Staff Executive Board, Staff & Organization department, and Quality & Patient Safety department
- Committee 3: Services, Heart & Lung, Surgical Specialties, Vital Functions

The four theme committees are:

- Finance and Strategic Policy
- Social Policy and Working Conditions
- Safety, Health, Welfare & Environment
- Education & Research

The Works Commission is furthermore represented in a number of forums by Works Council members or people with specific expertise. Examples include the Complaints Committee, the UMC Utrecht staff provident fund, and the National Meeting of UMC Works Councils.

The Education and Research Council (O&O council) and the Student Representative Council

The Education and Research Council (O&O council) is the employee-representative body for academic teaching and research at UMC Utrecht. The O&O council is a statutory body with rights based on the Dutch Higher Education and Scientific Research Act (WHW). The O&O council consists of students (who together also form the Student Representative Council) and UMC Utrecht staff members. Together, they monitor the UMC Utrecht policy on education and research. In 2020, the O&O council consulted at least five times with the Medical Faculty Dean and Vice-Dean on educational and research topics.

Client Council

UMC Utrecht has its own Client Council by virtue of the Law on client representation in health-care institutions (WMCZ). The Client Council advises the Executive Board on anything that affects the interests of patients at UMC Utrecht. The council has also been asked to help promote patient participation within UMC Utrecht. The aim is to involve hospital patients in a far broader sense than merely via the Client Council in anything that happens at UMC Utrecht.

In 2020, the Client Council had nine plenary meetings, as well as monthly discussions with the Executive Board. In addition, consultations took place in smaller groups (portfolios) on specific topics. The Chair of the Client Council together with the Chairs of the Nursing Advisory Council (VAR) and the Staff Assembly took part in fortnightly updates on capacity planning and the organization of corona care at UMC Utrecht. The Chair of the Client Council left in June 2020 after six years in service. The Vice-Chair has temporarily taken over the chair duties until a new Chair is appointed. The Client Council each year publishes an annual report on the UMC Utrecht website.

Staff Assembly

The Staff Assembly consists of medical specialists from all fields who come together to safeguard the quality of patient care. The Council of members, the representative consulting body of the Staff Assembly, gives the Executive Board solicited and unsolicited advice on developments in medical fields and administrative affairs that pertain thereto.

Nursing Advisory Council

The Nursing Advisory Council (VAR) is an advisory body appointed by the Executive Board to give advice – solicited or unsolicited – on matters that concern nursing care. The aim is to improve and guarantee the quality of care. The VAR liaises with all care divisions and informs nurses on current topics that are relevant for their profession. The VAR brings out an annual report on the UMC Utrecht intranet on activities and results.

Committees

Besides the aforementioned forums, the following committees are also active at UMC Utrecht: Medical Ethics Committee (CME), Medical Ethic Testing Committee (METC), Animal Experimentation Committee (DEC), Decision/Complaints Committee (external), Incident-Reports Committee (MIP), and Major Incidents Committee.

8.3 Integrity

Patients, students and other stakeholders rely on us. And we rely on each other. This means that we are honest, trustworthy, committed and involved in our work, thereby creating an open and pleasant work environment where we express ourselves, discuss matters with each other, make commitments, and call each other to account in this respect. This way of working is described in our Integrity code of conduct.

In 2019, we launched the UMC Utrecht Research Code. The code describes the standards for good research practices and refers, where applicable, to internal policy and procedures. It also specifies how and to whom any (suspected) violation of scientific integrity can be reported.

In 2020, there were only half as many integrity incident reports as in 2019. What the cause of this drop might have been, is not easy to say. Perhaps it had to do with the corona pandemic and the resulting focus on other issues.

8.3.1 Ombudsman and confidential matters

In 2020, 297 individual staff members approached the Ombudsman and Confidential Matters office. Most of these notifications had to do with queries and issues regarding legal position, undesirable behavior, conflict with managers, and co-working problems. Nearly 70% of the queries and issues could be resolved through advice, support or mediation.

The Ombudsman and Confidential Matters office also organized 34 presentations, information sessions and learning sessions for managers, staff members and students to prevent undesirable behavior. Some 300 staff members were reached through these preventative activities.

In 2019, a decentralized person of trust pilot was launched. The purpose of the pilot is to lower the threshold of broaching the topic of (possibly) undesirable behavior even further, and to be even more in touch with what is happening at UMC Utrecht in this respect. The pilot continued and was expanded in 2020. Besides the six decentralized persons of trust, an extra person of trust was appointed in the pilot to attend specifically to PhD students and AIOS. Specific knowledge of and focus on issues for these groups of students and staff appeared to be necessary and desirable.

8.3.2 Whistleblower procedures

No whistleblower reports were received in 2020.

8.4 Codes of conduct

8.4.1 Health Care Governance Code

A new governance code for all of health care was implemented in 2017. The UMC Utrecht Executive Board and Supervisory Board adhere to the principles of this [Health Care Governance Code](#), because in our view too, good management and good supervision are of great importance to guarantee good care.

The Health Care Governance Code is based on seven principles, which contribute to ensuring good care, reaching the community goals of health-care

institutions, and community trust. The principles furthermore serve as guidelines regarding rules, to leave more room for dialog rather than 'ticking off' little rules as in the past. The new code focuses in particular on culture and behavior, values and standards, and participation and dialog. These are all aspects that are moving and that therefore require ongoing attention. Culture and behavior especially remain important areas, where ongoing attention is important. This is why we have anchored our strategic program [Together for the Patient](#) in our organization. Our leadership program [Connecting Leaders](#) is another example of our ongoing attention in this respect. For example, through our [work-place-experience surveys](#) (three times a year) and continuous improvement surveys we ask our staff about their experiences also in this area.

8.4.2 Other codes of conduct

Besides the Health Care Governance Code, we also look at:

Internal codes of conduct:

- the Integrity Code of Conduct (see 8.3 Integrity)
- the UMC Utrecht Research Code (see 8.3 Integrity)
- the Code of Conduct for dealing with ICT and data
- the Code of Conduct for Dealing responsibly with body material for scientific research (Federa/UMC Utrecht)

Codes of Conduct in Health Care:

- [the Dutch Code of Conduct for Scientific Integrity of 2018](#)
- [the Code of diligent and honest scientific practices](#)
- [the Code of Conduct for Health Research](#)
- [the Code of Conduct for Electronic Data Exchange in Health Care](#)
- [the Code of Conduct for Transparency regarding Medical Incidents and Medical Accountability \(GOMA\)](#)
- [the European Code of Transparency \(EFPIA\)](#)
- [the Code of Conduct in Drug Advertising \(CGR\)](#)
- [The Code of Conduct for Medical Equipment \(CMH\)](#)

UNIVERSITY MEDICAL CENTER UTRECHT

(Universitair Medisch Centrum Utrecht)

SUMMARY OF CONSOLIDATED FINANCIAL STATEMENT 2020

1.1 CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2020

after appropriation of results (× € 1.000,-)

Assets

	<u>2020</u>		<u>2019</u>	
	€	€	€	€
Fixed assets				
Intangible fixed assets	2.396		1.877	
Tangible fixed assets	327.960		343.190	
Financial fixed assets	<u>16.317</u>		<u>15.973</u>	
Total fixed assets		346.673		361.040
Current assets				
Inventories	17.398		15.434	
Costs and estimated earnings on uncompleted care (DBC's)	25.486		23.299	
Receivables and accrued assets	269.908		257.713	
Cash and cash equivalents	<u>247.195</u>		<u>216.553</u>	
Total current assets		559.987		512.999
Total assets		<u><u>906.660</u></u>		<u><u>874.039</u></u>

1.1 CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2020

after appropriation of results (× € 1.000,-)

Liabilities and equity

	<u>2020</u>		<u>2019</u>	
	€	€	€	€
Group equity				
Equity		1		1
Collectively financed restricted capital		116.675		105.668
Other reserves		<u>289.735</u>		<u>291.083</u>
Total equity		406.411		396.752
Third party share in group equity		<u>1.759</u>		<u>3.179</u>
Total group equity		408.170		399.931
Provisions		36.196		34.846
Long-term liabilities		120.338		132.852
Current liabilities and accrued expenses				
Estimated net health insurance company settlements		27.951		37.728
Accounts payable and accrued expenses		<u>314.005</u>		<u>268.682</u>
Total current liabilities and accrued expenses		341.956		306.410
Total equity and liabilities		<u>906.660</u>		<u>874.039</u>

1.2 CONSOLIDATED PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED DECEMBER 31st, 2020

(x € 1.000,-)

	2020		2019	
	€	€	€	€
Operating income				
Income from care services	874.737		800.533	
Subsidy income	262.547		241.607	
Other operating income	254.510		231.354	
Total operating income		1.391.794		1.273.494
Operating expenses				
Personnel costs	840.738		784.846	
Amortization and depreciation respectively of intangible and tangible fixed assets	53.251		56.161	
Impairment of tangible fixed assets	3.447		0	
Other operating expenses	485.317		418.422	
Total operating expenses		1.382.753		1.259.429
Operating result		9.041		14.065
Financial income and expenditure		-856		-3.643
Group result on ordinary activities		8.185		10.422
Share third parties in group result		1.444		1.513
Result attributable to UMC Utrecht		9.629		11.935
Appropriation of results				
Movement special-purpose reserves		11.007		-14.668
Movement general reserves		-1.378		26.603

1.3 General Information

The summary of consolidated financial statements of the University Medical Center Utrecht (hereafter: UMC Utrecht) has been prepared in accordance with Dutch law and Dutch Accounting Standard RJ 655. This summary of the UMC Utrecht consolidated financial statements is based on the Dutch annual report (Jaardocument UMC Utrecht) for the year ended December 31st, 2020.

The annual report of UMC Utrecht has been signed by the Board of Management on April 23rd, 2021. The annual report has been approved by the Supervisory Board on April 28th, 2021. Ernst & Young Accountants LLP has issued an unqualified auditors' report on April 28th, 2021.

In accordance with Dutch Law, the annual report of UMC Utrecht for the year ended December 31st, 2020, including the consolidated and company financial statements and disclosures thereto, and including the independent auditors' report and other additional information, is freely available to the public. The annual report can be found on www.Jaarverslagenzorg.nl or on the public UMC Utrecht website www.UMCUtrecht.nl.