Erasmus School of
Health Policy
& Management

Self-Assessment Research Review

Erasmus School of Health Policy & Management
2013-2018

Erasmus University Rotterdam
Make it happen.

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Colophon

November 2020

Circulation
300

Publisher
ESHPM

Design
PanArt communicatie en mediadesign

Print
De Bondt grafimedia

Zelfevaluatierapport

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Introduction

1 Introduction

This report presents a self-assessment of Erasmus School of Health Policy and Management (hereafter: ESHPM) of the Erasmus University Rotterdam (EUR) for the period of 2013-2018. The previous research assessment of ESHPM took place in 2013 as a collaborative cluster of 9 research departments within the Netherlands Institute for Health Sciences (NIHES).[1] In that assessment, ESHPM received the highest possible score in all four dimensions that were assessed (Quality, Productivity, Relevance, Vitality & Feasibility). The positive evaluation was illustrated by the following quote from the assessment panel "The research at this department is excellent and of the highest international level."

ESHPM has a dual aim with its health care research: academic excellence and societal relevance. That is, we aim to meet and set the highest standards in health care research, simultaneously creating an impact with our research and knowledge on actual health systems. A mix of policy measures was put in place to foster, stimulate, and facilitate reaching this dual aim, in a changing academic and health care environment. To maintain and improve our position, for the current evaluation, in good cooperation with Erasmus Medical Centre (Erasmus MC), it was decided by the executive board of Erasmus University Rotterdam to conduct a stand-alone research assessment. We are convinced that a stand-alone assessment of ESHPM allows a more in-depth assessment which can further strengthen the research conducted at ESHPM, by emphasizing and acknowledging our unique multidisciplinary constitution. Moreover, we strongly believe that our school will benefit from this stand-alone assessment by focusing on our new Strategic Plan 2020-2024: Leading & Connecting, as defined in May 2019.

1 In addition to ESHPM, NIHES contains the following departments: Biostatistics, Child and Adolescent Psychiatry, Epidemiology, General Practice, Medical Informatics, Medical Psychology and Psychotherapy (section of the department of Psychiatry) and Public Health. All departments are located at Erasmus Medical Centre.

This report has been prepared as part of the evaluation process. For the organisation of the report, we followed the guidelines in the Standard Evaluation Protocol for Research Assessments in the Netherlands 2015-2021. Thus, this report addresses three main assessment criteria, *i.e.* research quality, relevance to society, and viability as well as three additional issues: the PhD programme, research integrity, and diversity. The structure of this report is as follows. Chapter 2 of this report describes the organisation, governance, and financing of our School and the research conducted in it. Chapter 3 includes the current research policy, the PhD programme, research integrity, and diversity as well as research culture at ESHPM. Chapters 4 and 5 are concerned with research quality and relevance to society. Finally, we end with a chapter on viability which contains an analysis of the strengths, weaknesses, opportunities, and threats. Supplementary information can be found in the Appendices, of which Appendix B is an Excel file containing several detailed tables on research input and output.

2

Organisation, governance and financing

2 Organisation, governance and financing

2.1 History and Mission

Since its establishment more than three decades ago, Erasmus School of Health Policy & Management (ESHPM) has acquired a leading position in the healthcare sciences. Our School is proud of its strong worldwide reputation, which was confirmed in the previous research assessment. Until 1 September 2017, ESHPM was named the Institute of Health Policy & Management (in Dutch: Instituut Beleid en Management in de Gezondheidszorg, iBMG). Our current name emphasizes our strong connection with Erasmus University Rotterdam (EUR), and Erasmus Medical Centre (Erasmus MC). Furthermore, it underlines that, next to research and valorisation, education occupies a prominent place in our organisation (as we offer a Bachelor programme as well as four Master programmes). And finally, our School's name is now in English to reflect our increasingly international character.

ESHPM aims to contribute to high quality, accessible, affordable, efficient, equitable, and sustainable healthcare around the world. With a combination of high-quality education and research that meets the highest scientific standards and is socially relevant, ESHPM aligns with the university-wide strategy and aims to foster insight into the inner workings of healthcare and healthcare systems and how these can be improved to meet current and future challenges. Coinciding with our practical involvement in policy and management in healthcare, ESHPM helps to improve health, healthcare, and health care systems around the globe.

Our multidisciplinary approach to health care research is one of the main characteristics of our organisation. The following main disciplines are present within our School: policy sciences, sociology, economics, management, and law. This enables us to provide an important contribution to the shaping of healthcare systems in terms of competition, regulation, quality, and efficiency, as well as their organisation and management.[2]

Our ambition for the period 2020-2024 is to continue setting high standards in healthcare research by developing and applying theories, tools, and methods that facilitate a better understanding of healthcare systems, policies, management, and organisations. Finally, we aim to contribute to the decision-making process at all levels in healthcare, nationally and internationally.[3]

2.2 Organisational Structure

ESHPM has a unique administrative position. While it is part of the Faculty of Medicine and Health Sciences of the Erasmus University Rotterdam, ESHPM is the only organisational unit within that faculty that is not part of the Erasmus MC. ESHPM is part of, and its personnel employed by Erasmus University Rotterdam. As such, ESHPM functions similarly to independent schools within the university.[4]

ESHPM is managed by the **Daily Board**, consisting of the Dean, Director of Education, Director of Research, and the Director of Operations. The **Dean of ESHPM**[5] is mandated by the Dean of the Faculty of Medicine and has the final responsibility for the functioning of the School. The Dean of ESHPM is accountable to the EUR Executive Board. Support staff (professional services) falls under the responsibility of the Director of Operations and cover aspects like finance and control, marketing and communication, educational support, and policy support. The academic staff is organisationally divided into seven sections, which all have their own financial responsibility (see Appendix A for an organisational chart and see Appendix B for more information on the permanent staff of the different sections). The sections work on three overarching research themes

2 See also ESHPM Strategic Plan 2020-2024 "Leading & Connecting," May 2019

3 Idem

4 Currently, EUR consists of seven schools, two institutes and a university college with their own administration

5 Due to the unique organisational structure at ESHPM, the official name of the dean is "vice-dean" (in Dutch: prodecaan). Also note that during the period 2012-2018, Professor Werner Brouwer was the Dean at ESHPM.

(see Chapter 3), but vary in size[6], disciplinary backgrounds, and research focus (see next Chapter):

- **Health Care Governance (HCG)**:This section explores the roles, position, and identities of practitioners, patients, and regulators as well as the manner of interaction and steering of healthcare. By specializing in ethnographic and discursive research methods, this section gains insight into governance "from within."
- **Health Economics (HE)**: This section researches from an economic perspective on the following themes: behavioural and experimental health economics, the methodology of health economic evaluations, inequality in health(care), priority setting in the distribution of health and healthcare, health econometrics, and global health economics.
- **Health Systems and Insurance (HSI)**: This section performs theoretical and empirical research on the structure and performance of health systems and health insurance markets as well as the role of health insurers as purchasers of health care.
- **Health Services Management & Organisation (HSMO)**: The focus of this section is placed on the improvement of the management and organisation of health services, in order to provide the best value for patients/clients and professionals in healthcare.
- **Health Technology Assessment (HTA)**: This section specializes in health technology assessment in various disease areas such as oncology, respiratory diseases, and cardiovascular disease. The main goal of HTA is to provide a bridge between research and policy.
- **Law & Health Care (LHC)**: This section does legal research on the following topics: right to health care, health care systems, and health law from an international perspective, development, and implementation of patient rights, and managing complaints and errors.
- **Socio-Medical Sciences (SMS)**: This section uses insights from (medical) sociology, health psychology, and public health to explore well-being across the life-course and quality and effectiveness of care for various vulnerable groups in society. There is a strong emphasis on theory development, the development of measurement instruments, and practice implications.

6 Permanent staff after the reorganization in 2014 was set at 5.6 FTE for HE, 10.0 FTE for HSMO, 9.9 FTE for HTA, 5.5 FTE for HSI, 3.5 FTE for LHC, 10.0 FTE for HCG and 4.5 FTE for SMS. However, the size of the different sections has varied over the years mainly due to temporary staff.

The Daily Board and the heads of the seven different sections form the **Management Team** (MT) of ESHPM. The MT is the primary body for discussions on research strategy, educational strategy, and coordination of activities. There are monthly meetings of the MT during which important issues are discussed in the fields of education, research, and operations that affect all sections. By stimulating institute-wide discussions and activities, the MT emphasizes the need to ensure research coherence and to reap the benefits of a multidisciplinary research environment.

Three private limited liability companies (owned by the EUR holding company) are linked to ESHPM:

- **Institute for Medical Technology Assessment (iMTA)**: This renowned institute is well-positioned to carry out applied and commercial health technology assessments. It is closely linked to the HTA section.
- **Erasmus Centre for Health Care Management (ECHCM)**: This centre offers up-to-date post-academic degree programmes for leaders in the health care sector.
- **Academy for Medical Specialists (AMS)**: This organisation offers interdisciplinary courses for medical specialists and other members of medical staff. It is owned together with the Federation of Medical Specialists and the VvAA, an association providing professional support to physicians.

An important change since the last research assessment is that there is now a stricter separation between research activities and personnel within ESHPM (especially the HTA section) and iMTA. As of 2014, the commercial activities have been transferred to iMTA and clear working arrangements have been made. Additionally, iMTA now employs its own personnel. It remains an important vehicle for creating societal impact, also by utilizing methods and tools developed at ESHPM (see for instance https://www.imta.nl/tools/) and using ESHPM research findings in general. Moreover, the profits of the companies are partly transferred to ESHPM (as a dividend) and used to stimulate new research activities.

2.3 Funding and Staff

Table 2.1 displays an overview of the staff at ESHPM in different years. From this table, we can see a stable amount of research staff for the years 2013 to 2016 with an increase in the years 2017 and 2018. In the composition of research staff, we can see a shift from postdocs to scientific staff after 2014, related to the reorganisation in 2014 (see below). The increase in research staff in 2017 and 2018 is to a large extent due to an increase in the number of PhD students.

The changes in research staff divulge only a part of the underlying dynamics of the workforce at ESHPM. Because of budget deficits following the economic crisis in 2008, ESHPM was forced to carry out a reorganization process in 2014, which led to a decrease in permanent staff. In order to avoid a structural reliance on external, temporary funding to fund permanent academic positions, the overall number of permanent staff after the reorganization was based on university ("first stream") income, mainly related to the number of students enrolled in the ESHPM bachelor's and master's programmes and completed PhD theses. In Table 2.1, there is no distinction between temporary and permanent scientific staff. However, due to reorganisation there was a decrease in permanent scientific staff as well as support staff (NB: all postdocs and PhD students are temporary staff). Permanent staff is allocated to each section based on their teaching load (including room for so-called education-related research) and by their research output (see paragraph 3.3). Note that the allocation of permanent staff to the different sections is reconsidered every 4 to 6 years. Potential reallocations and changes are implemented gradually. By attracting external funding for research, sections can attract temporary staff (often in the form

Table 2.1 **Staff at ESHPM in different years in full-time equivalents (FTE) and number of persons (#)**

	2013		2014		2015	
Funding	**FTE**	**#**	**FTE**	**#**	**FTE**	**#**
Scientific staff (1)	21.66	51.00	26.44	62.00	30.34	68.00
Postdocs (2)	34.84	45.00	23.92	32.00	22.86	30.00
PhD students (3)	20.59	35.00	26.57	40.00	26.38	41.00
Total research staff	77.09	131.00	76.93	134.00	79.59	139.00
Support staff	35.95	43.00	37.00	52.00	31.02	35.00

	2016		2017		2018	
Funding	**FTE**	**#**	**FTE**	**#**	**FTE**	**#**
Scientific staff (1)	30.79	71.00	31.63	78.00	33.15	84.00
Postdocs (2)	21.24	30.00	18.03	26.00	16.79	23.00
PhD students (3)	28.37	43.00	37.96	58.00	40.69	62.00
Total research staff	80.40	144.00	87.61	162.00	90.63	169.00
Support staff	33.37	37.00	39.48	46.00	36.44	42.00

Note 1: Comparable with WOPI categories HGL, UHD, and UD; tenured and non-tenured staff
Note 2: Comparable with WOPI category Onderzoeker
Note 3: Internal PhDs only.

of PhDs or postdocs). The reorganisation also had an impact on the size of support staff which reached its minimal level in 2015.

Table 2.2 displays an overview of the funding of research activities in different years. From this Table, we can also see the impact of the reorganisation. Direct funding of research consists of a part that is mainly determined by the number of students in the bachelor and master programmes which is relatively stable over the years 2013-2018. The strong growth in direct funding in 2017 is due to attracting funding from Erasmus University for large research projects such as "Smarter Choices for Better Health." The decline in research grants is because some funds from The Netherlands Organisation for Health Research and Development (ZonMW), specifically aimed at research on health services, ended (as a result of budget cuts). The growth in contract research is to a large extent due to attracting contract research such as EU-funded research (see Chapter 5 for more details on projects). The category "Other" is relatively stable from 2015 onwards and includes, for instance, funding from iMTA, ECHMC, and AMS and secondments of ESHPM researchers.

Table 2.2 **ESHPM funding in FTE and research expenditures (expressed in Euro) 2013-2018**

	2013*		2014		2015	
Funding	**FTE**	**%**	**FTE**	**%**	**FTE**	**%**
Direct Funding (1)	23.29	30%	27.13	35%	28.99	36%
Research Grants (2)	28.20	37%	18.80	24%	13.30	17%
Contract Research (3)	25.60	33%	15.50	20%	16.60	21%
Other (4)	0.00	0%	15.50	20%	20.70	26%
Total Funding	77.09	100%	76.93	100%	79.59	100%
Expenditure	**Euros**	**%**	**Euros**	**%**	**Euros**	**%**
Personnel Costs	€ 5,190,468	71%	€ 5,140,494	78%	€ 4,769,909	74%
Other Costs	€ 2,125,895	29%	€ 1,432,445	22%	€ 1,638,679	26%
Total Expenditure	€ 7,316,363	100%	€ 6,572,938	100%	€ 6,408,588	100%

	2016		2017		2018	
Funding	**FTE**	**%**	**FTE**	**%**	**FTE**	**%**
Direct Funding (1)	26.50	33%	33.91	39%	28.33	31%
Research Grants (2)	11.40	14%	7.90	9%	9.20	10%
Contract Research (3)	21.70	27%	25.00	29%	32.10	35%
Other (4)	20.80	26%	20.80	24%	21.00	23%
Total Funding	80.40	100%	87.61	100%	90.63	100%
Expenditure	**Euros**	**%**	**Euros**	**%**	**Euros**	**%**
Personnel Costs	€ 4,696,544	81%	€ 5,081,587	71%	€ 5,701,770	75%
Other Costs	€ 1,092,095	19%	€ 2,072,990	29%	€ 1,894,253	25%
Total Expenditure	€ 5,788,639	100%	7,154,577	100%	€ 7,596,023	100%

* In 2013, a different accounting scheme was in place at EUR which led to shifts in allocation to the four different funding categories. A distinction between "Direct Funding" and "Other" was not possible

Note 1: Direct Funding (basisfinanciering / lump-sum budget)
Note 2: Research Grants obtained in a national scientific competition (e.g. grants from the NWO and the Royal Academy)
Note 3: Research Contracts for specific research projects obtained from external organisations, such as industry, government ministries, European organisations, and charitable organisations
Note 4: Funds that do not fit into the other categories

3

Research policy and culture

3 Research policy and culture

3.1 Research Themes

Research at ESHPM has been organized around the following three major research themes:

- **Competition and Regulation in Health Care**. In this research theme, the focus lies in the relationship between the organisation, financing, and the performance of health care systems. From the economic, legal, and policy perspectives we explore the performance of health systems regarding quality, affordability, efficiency, solidarity, and accessibility of health care. An example of an important research topic is the influence of the model of regulated competition on the performance of the health care sector as well as the role of decentralization in healthcare. The research in this theme is primarily carried out by the sections: Health Care Governance, Health Economics, Health Systems & Insurance, and Law & Health Care.
- **Quality and Efficiency in Health Care**. Research within this theme focuses mainly on the quality, the relative effectiveness and the efficiency of health care, and health technologies. Primary objectives are quality assessment and evaluation of the cost-effectiveness of health care interventions. Our research provides health insurers, health care organisations, care providers, and patients with important information to support choice behaviour in the health care sector. The research in this theme is primarily carried out by the sections: Health Care Governance, Health Economics, Health Services Management & Organisation, Health Technology Assessment, Law & Health Care, and Socio-Medical Sciences.
- **Management and Organisation of Health Care Delivery**. All research on this theme is concerned with management and organisation in health care organisations and networks of health care organisations. Research topics include quality and safety, organisation of health processes, human resource management (HRM), medical and nursing leadership, team effectiveness, coproduction/design, integration of care, and community-based care. The main goal is to equip health care organisations with useful insights and instruments to help them perform well in an increasingly complicated environment. The research in this theme is primarily carried out by the sections Health Care Governance, Health Services Management & Organisation, and Socio-Medical Sciences.

These research themes were determined in strategy sessions in 2009 and have been successful in connecting and making research that takes place in the different sections visible. While each section has its own research topics and projects which are related to the research themes, overall coordination of the research activities on the research themes is achieved through the presentation of research plans/findings, joint projects, regular meetings of the heads of the sections, and the director of research and the dean assembling the seven sections. Moreover, it is stimulated through specific programmes, like investing in (joint) PhDs around themes. The three research themes have been proven to be sufficiently broad and responsive to trends in healthcare and healthcare research. Therefore, it was decided to maintain these research themes in the Strategic Plan 2020-2024.

3.2 Research Culture

Researchers at ESHPM have diverse backgrounds: some have a monodisciplinary background (e.g. economics, law, sociology) while others have a multidisciplinary background such as health sciences. While the different sections differ in focus regarding the research questions and research methods, most sections are comprised of researchers coming from different disciplines. Research at ESHPM aims to combine state-of-the-art methods from the various disciplines it houses. To accomplish this aim, researchers have ties with the various monodisciplinary schools at Erasmus University which is exemplified by joint appointments of ESHPM staff at other schools such as the Erasmus School of Economics, the Erasmus School of Law, and the Rotterdam School of Management and aim to publish in top (field) journals in their own respective fields. Furthermore, we are the link between the (bio)medical sciences at Erasmus MC and the body of knowledge from the social sciences and humanities at Erasmus University. This is exemplified by our long-standing cooperation between sections at ESHPM and the departments at Erasmus MC. Research at ESHPM is also firmly embedded in society, not only through contract research for various commissioners in the health care sector (e.g. Ministry of Health, supervisory bodies, health care providers, health insurers, and patient organisations), but also by expanding the research staff with researchers who are working in the field of health policy and management. Thus, we create a network of both scientific and societal partners around us, to ensure both state-of-the-art and academic rigor, as well as societal relevance and impact.

While some top research may be more monodisciplinary, other research is at the top of the cross-disciplinary fields. Additionally, research at ESHPM also reflects national and international collaborations. ESHPM has a long tradition of participating in (inter)national research consortia. A considerable amount of funding is acquired by a bottom-up approach, where the initiative lies with individual researchers. This is strengthened by criteria for internal promotions in which attracting external funding is an explicit criterion. The strong embeddedness of research in the health care sector and the focus on having a societal impact often requires a multidisciplinary approach. Additionally, there is a strong link between research and education at ESHPM, as research findings play an important role in courses in the bachelor and master programmes.

In addition to research seminars organised for all sections, each section individually organises internal seminars regularly in order to receive feedback during the early stages of research. Furthermore, different sections are also involved in organising seminars with external speakers. For example, the Health Economics section organises joint seminars and mini-conferences with the Erasmus School of Economics (ESE) in which external speakers present their draft papers. Meetings and seminars in which multiple sections participate are also organised around themes such as informal care and healthy aging. Finally, ESHPM researchers participate in research networks at Erasmus University in which multiple schools organise seminars and meetings such as the Erasmus Centre of Choice Modelling (ECMC), Rotterdam Global Health Initiative (RGHI), Erasmus Centre for Health Economics Rotterdam (EsCHER) and Erasmus Values in Economics Network (EVEN).

3.3 Research Policy: rewarding research and creating a positive societal impact

The dual aim of ESHPM research is to achieve academic excellence and societal impact. While this ultimately relates to the activities of research teams and individual researchers, we try to facilitate and stimulate achieving these dual aims with a combination of policy actions and measures at different levels. Being part of Erasmus University Rotterdam, ESHPM complies with regulations and standards set by the university, for instance when it comes to PhD promotions or appointments at the level of (full or endowed) professor. Moreover, in the bilateral meetings with the Executive Board, twice a year, specific goals and achievements are agreed upon, also in relation to research (e.g. number of completed PhD theses). In terms of facilitating research and impact, as a small School, ESHPM also relies on important facilities of the university, in terms of IT systems, data storage knowledge, specialized research support (e.g. grant-officers), and personal websites. Financial support related to grant acquisitions as well as projects are organised by ESHPM.

At the School level, several measures and incentives are in place to reward sections and researchers for achieving this dual aim. At the section level, ESHPM rewards research output. Specifically, publications are rewarded with so-called "publication points" based on the journal in which they are published, the number of authors, and the length of the publication. To incentivize quality research, the journals are divided into four categories based on quartile scores as defined in the Social Science Citation Index. Most points can be earned by publishing in journals that fall within the first quartile (of the relevant science area). This also allows for rewarding achievements in different scientific areas in a common fashion. With regard to encouraging societal impact, peer-reviewed publications in Dutch professional journals with a high policy impact are also rewarded. Appendix A displays the exact rules of this performance scheme. Sections that perform well in this respect receive more funds to perform research (in terms of money and capacity). This performance scheme allocates 50% of the budget available for research through direct funding. The other 50% of direct funding for research is allocated to sections based on the amount of teaching so that all sections can perform research, as expected in an academic environment.

ESHPM encourages and facilitates writing of grant proposals by freeing up time of researchers and ensuring that if proposals are awarded, the acquired funding can be allocated to the awarded proposal. On a yearly basis, the different sections indicate their expectations regarding PhD defences and acquisition. During bilateral meetings between the Dean / Daily Board and section leaders, the developments within the section are monitored and discussed, for education and research, also in relation to personnel (including talent development), finances, investments, acquisition, etc. Special attention is paid in these meetings to so-called 'high potentials' in the field of research. Candidates for an individual grant are encouraged and supported by ESHPM to submit a proposal.

On an individual level, in yearly Performance & Development meetings, the performance of individual staff members is monitored. For promotions to the level of (associate) professor clear criteria in terms of research

performance, supervision of PhD candidates, and attracting funds are in place (see Appendix A). At the Performance & Development interview, both teaching and research performance are discussed as well as activities related to societal impact. To stimulate young researchers, the "Frans Rutten Research Award" is awarded annually. This award is aimed at researchers who recently have obtained their PhD. The winner receives €2,500.00 to be used for research purposes. Table "Prizes" in Appendix B displays past winners of the Frans Rutten Award. Finally, central funds have been used to support academic visits abroad for ESHPM researchers and free-up time for talented researchers to write grants (see Appendix B for an overview of visits abroad of ESHPM staff). Thus, ESHPM actively tries to attract, stimulate, and reward talent.

Moreover, the central ESHPM funds are used to stimulate (methodologically) innovative, multidisciplinary, and strategic research for which no current funding is available and, through this, improve the future capacity to attract external funds. Around 25 new PhDs have been recruited this way since 2013. For instance, in 2014, 2016, and 2017, seven PhD positions were financed from the central ESHPM budget to foster innovative research aimed at scientific excellence and strategic goals. In 2017, several PhD positions were tied to the large Erasmus Initiative Smarter Choices for Better Health, which aims to address societal challenges in relation to health care using a multidisciplinary approach, combining expertise from several faculties. To stimulate cooperation between sections and different disciplines, some PhDs are supervised by staff from different sections and disciplines. To mention an example, the collaborative research project "Informal Care" in which two PhD students are currently working on different topics related to informal care, each supervised by a team from two sections, and all together as a member of a multi-disciplinary team involved in research, teaching, and valorisation in this topic area.

ESHPM has several policies in place to create societal impact with their research. One such policy is to appoint so-called network professors and network assistant/associate professors. These network professors are researchers that are employed part-time at ESHPM and work at policy-relevant organisations in the Netherlands such as regulatory agencies, hospitals, and governmental research institutes. These network professors collaborate on research projects but also ensure that policy-relevant research questions are being addressed, moreover can feed research findings back into (policy) practice. Hence, ESHPM contributes to public debates related to access, delivery, organisation, and efficiency of health care. Furthermore, ESHPM has set up strategic partnerships with the Dutch Health Care Institute (in Dutch: Zorginstituut) and the Dutch Health and Youth Care Inspectorate (in Dutch: Inspectie Gezondheidszorg en Jeugd) from which PhDs are funded. Also, the tenured staff at ESHPM participate in various councils in the Netherlands that advise the government. This broader societal impact plays a role in promotion criteria (see also Appendix A) and is part of yearly P&D interviews. Appendix B contains a list of permanent staff and the councils and advisory boards in which they participate.

Jointly, these policies aim to create an environment that stimulates researchers at different levels, to contribute to the strategic goals of ESHPM to be a front runner in the field of health care research, with a positive societal impact and a sound earning capacity.

3.4 PhD Policy and PhD Community

ESHPM aims to strengthen the position of PhDs. Between 2013 and 2018 the focus of ESHPM PhD policy has been on improving the supervision and training of PhDs.

PhD candidates can be either internal or external. The differences between the two groups are their terms of employment with ESHPM and, accordingly, their rights and obligations. There are no differences in terms of the requirements regarding the final PhD thesis. Internal candidates are either employed at EUR/ESHPM or have a scholarship while external PhD candidates do their PhD study in their own time and finance it themselves. At ESHPM most internal PhD candidates are employed at EUR/ESHPM. ESHPM usually accepts an internal PhD candidate for a period of four years unless otherwise agreed upon. Internal PhD candidates are also subject to the yearly P&D interviews and if PhD candidates are employed by ESHPM, they initially get a 1.5 year contract which can be extended another 2.5 years after an evaluation by the promotor(s), co-supervisor(s) and/or department manager. (EUR regulations now stipulate that at least two supervisors need to be involved in supervision.) This evaluation is a moment to discuss, among other things, the progress in research activities and the candidate's ability to perform research and write scientifically. Furthermore, the candidate's impression of the doctoral track and supervision will be discussed. The evaluation leads to an overall assessment of the candidate's ability to complete the doctoral track. If

the conclusion of the evaluation is negative, the EUR can terminate the employment; if the conclusion is positive, the employment contract of a PhD candidate will be extended.

A doctoral track at ESHPM generally includes three types of tasks: research, training, and teaching. At the start of the doctoral track, the promotor(s), co-supervisor(s) and PhD candidate should agree on how these tasks are combined in the trajectory of an individual PhD candidate. These agreements will be documented in the candidate's Training and Supervision Plan (TSP). As a rule of thumb, about 75% is devoted to research while 25 % of the time of (internal) PhD candidates is devoted to teaching and training. The TSP contains general information about the PhD candidate and their supervisors, information on training activities (e.g., courses, conferences), teaching tasks, the general outline of the thesis and information concerning the supervision of the PhD candidate. In addition to the official evaluation moments supervisors and PhD candidates meet regularly. In general, the co-supervisor meets on a weekly basis with the PhD candidate while the supervisor at least meets once a month with a PhD candidate. All information related to the PhD trajectory which included information related to research integrity is documented in the PhD handbook.

In the period 2013-2018, ESHPM joined the Graduate School of Social Sciences and the Humanities (EGSH) which has raised and further uniformized the quality of standards as every PhD is required to take part in several courses. Being part of a graduate school outside our faculty provides not only more opportunities for the PhDs but also networking opportunities for the School. EGSH provides research and training infrastructure as well as a social environment for young researchers. Training relates to skills such as presenting and planning work but also courses in qualitative and quantitative research methods. Internal PhD students at ESHPM are not limited to following training at EGSH and may also follow courses at other institutes such as, for example, the Tinbergen Institute (for economic courses), the Netherlands Graduate Research School of Science, Technology, and Modern Culture (WTMC) and the Netherlands Institute for Health Sciences (NIHES). Each internal PhD has a budget of at least € 7,500.00 that can be spent on following courses and attending conferences. If PhDs are working on projects that are externally funded, they can sometimes use part of the project budget to attend conferences as well.

Young ESHPM (yESHPM) is the PhD community of ESHPM. The goal of yESHPM is to create a space for PhD candidates from different sections to meet and interact. Through organizing regular activities, yESHPM functions as a platform for sharing experiences, difficulties, and questions related to being a PhD candidate at ESHPM. They discuss general affairs concerning PhD projects and the PhD trajectory with the Daily Board of ESHPM. Every 6 weeks the board of yESHPM and the director of research (and the dean on special occasions) meet to update each other on ongoing activities and emerging issues regarding the PhD-policy at ESHPM (e.g. open science, confidential advisor). The board of yESHPM consists of representatives from the different sections at ESHPM. Individual board members participate in yESHPM for 12 months before handing over their responsibilities to another PhD student. While yESHPM aspires to have members from all sections at ESHPM in their board, the differences in the number of PhD-students per section do not always allow for this. However, as a rule, the board consists of at least four PhD students from four different sections. yESHPM has organized a wide range of activities which can generally be divided into re-occurring events and activities organized similarly by the yESHPM boards such as lunch seminars and the yearly PhD-survey (see Appendix A for more information on yESHPM). In 2018, yESHPM organised an extensive focus-group interview with PhD students to gain in-depth insights into the wellbeing, experiences, and concerns of doctoral candidates. The resulting report was presented to the ESHPM Management Team and findings related to the supervision of PhDs were shared in the P&D interviews of PhD supervisors. Furthermore, the PhD survey is used to monitor topics that emerge from the focus group.

3.5 Diversity Policy

The EUR and the Executive Board have defined diversity as a "key strategic objective in pursuing a diverse workforce."[7] EUR wishes to create equal opportunities for everyone and a culture in which diverse talents feel at home and can excel.[8] A Diversity and Inclusion Office was established on campus in the spring of 2015 to further promote diversity and inclusion throughout the university. One of the initiatives was the creation of Faculty Diversity Officers that have been appointed in order to implement the

7 https://my.eur.nl/en/eur-employee/hr/diversity-and-inclusion-0

8 https://my.eur.nl/en/eur-employee/hr/diversity-and-inclusion-0

university's diversity and inclusion policies. The faculty diversity officer for ESHPM was prof. Antoinette de Bont. Prior to this, ESHPM demonstrated its commitment to diversity with a key element being the promotion of female talent. In 2014, ESHPM committed to the goal that 50% of new appointments at the level of professor must consist of females. This goal was set and achieved. Moreover, in the period 2013-2018, more than 50% of the newly appointed associate professors within ESHPM were female. For his commitment to encouraging female talent within ESHPM, Werner Brouwer (Vice-Dean ESHPM 2012-2018) was awarded the ENVH Athena Prize 2017 by the Erasmus Network of Female Professors (ENVH).

Table 3.1 displays the characteristics of ESHPM staff. In terms of age composition, the make-up of the staff is that roughly 1/3 is between 25-35 (mainly PhDs), 1/3 is between 36-45 (mainly assistant and associate professor) and 1/3 is older than 45. ESHPM will continue to stimulate and expand on diversity and inclusion by setting specific relevant goals. In terms of international staff, we see that the percentages are much lower, especially beyond the level of postdocs. This has several reasons. First, most of the teaching is in Dutch and many research projects take place within a Dutch setting which gives native Dutch speakers an advantage.

Table 3.1: **Proportion of female and international staff members (in percentage) of the total research capacity per staff category (October 2019)**

	Professor (%)	Associate professor (%)	Assistant professor (%)	Postdocs (%)	PhD (%)	Total (FTE)
Female	14	53	55	76	70	106
International	11	9	5	33	20	22

To better reflect the diversity within the Dutch population, we are enhancing university access to students with a migration background, who are invited to become a tutor. Tutors receive 0,2 FTE to enhance their career options and are actively encouraged to apply for PhD positions. Policies that are currently in place to encourage a diverse workforce are the following:[9]

- 25/25 initiative: provides support for all female academics who aspire to become an associate or full professor in the future;
- "Speak Up Dear!": training and workshop for all female associate professors to increase professional visibility and establish a strong network;
- Equality-Proof Selection: a toolkit for inclusive recruitment selection;
- Family Friendliness: facilities that allow employees to combine work and childcare;
- Exemption from teaching or research activities following pregnancy: pregnancy leave and support;
- "Banenafspraak": opportunities and work participation for those with a disadvantage to the job market.

3.6 Integrity Policy

The EUR complies with the Netherlands Code of Conduct for Research Integrity (2018) and applies the code for the university.[10] This code describes five principles of research integrity and 61 standards for good research practices and duties of care for the institutions. The principles that are implemented at the EUR in order to safeguard good research are honesty, scrupulousness, transparency, independence, and responsibility. Additionally, the EUR has a scientific research confidential advisor as well as a scientific integrity committee. As such, the EUR is dedicated to promoting the highest standards of integrity and perceives integrity as an essential and imperative value to professionalism and research. The EUR maintains its own integrity code which contains three key values: professionalism, teamwork, and fair play. The EUR has also created a dilemma game as a way of raising awareness and focusing on professionalism and integrity in research.[11]

9 https://my.eur.nl/en/eur-employee/hr/diversity-and-inclusion-0

10 https://www.vsnu.nl/files/documents/Netherlands%20Code%20of%20Conduct%20for%20Research%20Integrity%202018.pdf.

11 https://www.eur.nl/en/about-eur/strategy-and-policy/integrity.

Sections at ESHPM are strongly encouraged to play the game with their researchers in order to facilitate discussions. At the completion of the game, the researchers will be asked to take and sign an oath regarding scientific integrity. All internal PhD candidates play this game as part of the mandatory course "Professionalism and Integrity in Research" which is offered by EGSH. Note that the three private limited liability companies in which ESHPM has an interest have their own integrity policy that also includes the rules of behaviour as described in the Integrity Code of the Erasmus University Rotterdam (EUR), the Netherlands Code of Conduct for Research Integrity and the Declaration of Scientific Independence of the Royal Netherlands Academy of Arts and Sciences (KNAW).

As part of our integrity policy, ESHPM promotes open and transparent scientific practices at every stage of the research cycle; from the initial idea to the final product. Open science will become such an important asset in the future that young researchers may need to present their skills in this area in order to meet the requirements of funders. Aside from increasing the transparency and thereby the quality of research, open science practices facilitate new collaborations and increase the impact of research. ESHPM has a tradition in open science practice as exemplified by the development of several HTA tools and questionnaires that are freely available (PAID, ADVISHE, Burden of Disease Calculator, iPCQ, IMCQ, iVICQ, CarerQol). To stimulate open science practices and improve the quality of research, we have invested in the following policies:

- ESHPM has joined the "Open Data Infrastructure for Social Science and Economic Innovations" (ODISSEI) consortium. ODISSEI is a consortium which includes collaborating partners such as faculties/Schools, The Netherlands Organization for Scientific Research (in Dutch: Nederlandse Organisatie voor Wetenschappelijk Onderzoek, NWO), Statistics Netherlands (in Dutch: Centraal Bureau voor de Statistiek, CBS), research institutes, and other organizations aiming to create a common, national infrastructure for research. Its focal point is to make the best use of the available data by developing innovations in infrastructure in the handling of new forms of data and providing data and computer science expertise.
- Multiple seminars on Open Science have been organised in collaboration with yESHPM and several researchers have started piloting open science practices. Currently, we are planning to integrate open science in the yearly P&D interviews.
- ESHPM set up an institutional review board/ Research Ethics Review Committee (RERC) in order to ensure that all research that is carried out by faculty members complies with good practice in terms of protecting the privacy and security of research participants during the collection and dissemination of research data and utilizing the 5 principles of proper academic practice as set out in the NCCRI: honesty, scrupulousness, transparency, independence, and responsibility. As issues of ethics, privacy, and research data management are closely connected (for example, in the collection and storage of sensitive data), the Research Ethics Review Committee (RERC) of ESHPM asks researchers to submit a Data Management Plan (DMP) and a Privacy Questionnaire along with their application for ethical review. This RERC was established in 2019.
- Investment in research data management. Previously in 2016, our school formulated and adopted "Guidelines for Responsible Management of Research Data," focusing on the careful and responsible handling of research data in order to replicate research results. Jointly with Erasmus wide initiatives, ESHPM will be working on making data more accessible, searchable, and reusable.

4

Research performance

4 Research performance

4.1 Publications

Table 4.1 summarises key data regarding the research output produced by scientific staff during the reporting period. The table includes research products that were mainly produced for an academic audience ("peers" in the terminology of the Standard Evaluation Protocol). These are refereed articles, books, and book chapters as well as PhD theses. Further, Table 4.1 lists non-refereed publications, publications aimed at the general public, and other research output which can be viewed as research products for society.

Table 4.1: **Main categories of research output ESHPM for the years 2013 to 2018**

Categories	2013	2014	2015	2016	2017	2018
Refereed articles	181	190	183	182	149	173
Non-refereed articles (1)	53	37	46	42	59	35
Books	5	3	2	-	1	1
Book chapters	16	5	8	15	9	13
Ph.D. theses	12	12	22	16	4	8
Conference papers	2	1	0	0	1	3
Professional publications (2)	56	53	71	52	68	50
Publications aimed at the general public (3)	8	14	19	19	1	11
Other research output (4)	12	6	18	14	14	20
Total	**345**	**321**	**369**	**340**	**306**	**314**

Note 1: Articles in journals that are non-refereed, yet deemed important for the field
Note 2: Publications aimed at professionals in the public and private sector (professionele publicaties), including annotations (e.g. law)
Note 3: Also known as "populariserende artikelen"
Note 4: Other types of research output, such as reports, working papers and inaugural lectures.

In Table 4.1 we can see that most of the research output at ESHPM consists of refereed articles that are fairly stable over time but with a slight incidental decrease in the year 2017. This is possibly due to the impact lag from the reorganisation in 2014. The refereed articles/papers were cited more than 27,000 times in total by September 2019 according to Scopus and 40% was published in the first quartile. From Table 4.1 it can also be seen that many publications have appeared in professional journals. These publications are often based on research published in refereed articles and were written to create additional societal impact by explicitly targeting policy and/or a medical audience. For instance, findings from the paper "Estimating sign-dependent societal preferences for quality of life" published in the Journal of Health Economics, found its way in a paper published in a Dutch journal that is often read by policymakers (Tijdschrift voor Politieke Economie). Another paper concerns an analysis of "breaking the rules" initiatives in which the state along with field parties, try to reduce the regulatory burden of healthcare professionals and organizations. This was published in *Health Policy* but also in professional Dutch journals for quality managers (KiZ) and general managers (*Zorgvisie*). Another example is the survey study to investigate various uses of Performance Measurement Systems (PMSs) among hospital managers and their effects on hospital outcomes, including process quality, degree of patient-oriented care, operational performance, and work culture which was published in *Health Care Management Review* (Q1) and KiZ whose audience includes quality managers of healthcare and healthcare providers.

Most variations over time can be seen in the number of PhD theses which decreased in the years 2017 and 2018. This is a direct result of the budget deficits which led to the reorganisation in 2014. The budget deficits resulted in a reduction in the number of PhDs that were hired (see also Table 4.2). In 2014, despite budget constraints, deliberate action was taken to hire seven centrally funded PhD students (one for each section), in order to stimulate innovation and new ideas during that period. To get a better understanding of the dynamics in the number of PhD defences, Table 4.2 displays the enrolment and success rates of PhD candidates. From this table we can see that the success rates within 4 and 5 years are not very high. This is partially due to the fact that PhD trajectories were often interrupted by doing contract research (resulting in contract extensions for PhDs) not related to the PhD thesis. Furthermore, we expect to have a positive impact on these success rates by having joined the graduate school and ensuring that all PhDs have at least two supervisors.

Table 4.2: **enrolment and success rates of PhD candidates 2011-2018**

Enrolment			Success rate					
Start date	Gender F / M	Total	< 4 years	< 5 years	< 6 years	< 7 years	> 7 years	Discon-tinued
2010 internal	11/4	15	3	6	5		1	
external	0 / 2	2				2		
2011 internal	9/1	10	7	3				
external	5/-	5	1	1		1	2	
2012 internal	1/1	2	2					
external	5/4	9	1	1	3	2	1	1
2013 internal	2/0	2	1	1				
external	4/0	4			2		1	1
2014 internal	8/3	11	1				10	
external	8/3	11	2	3			4	2
2015 internal	11/-	11	2				9	
external	3/5	8	3				5	
2016 internal	12/5	17						
external	5/9	14						
2017 internal	12/8	20						
external	4/4	8						
2018 internal	7/3	10						
external	2/2/	4						

Appendix B contains a complete overview of publications in which publications can be selected by research theme and section. From Appendix B it can be derived that about 50% is published on the research theme Quality and Efficiency in health care, 20% on the research theme Competition and Regulation in Health Care, and 30% on the research theme Management and Organisation of Health Care Delivery. Note that these differences in terms of research output correlate with differences in research output between sections which, besides differences in section size, also partly reflect different publication possibilities, cultures, and differences in relative involvement in teaching programmes. Table 4.3 displays several key papers related to the three research themes that demonstrate the diversity of research conducted at ESHPM.

Table 4.3 **Key papers per research theme**

Competition and Regulation in Health Care
Buijsen, M., 2018. A Life Fulfilled: Should There Be Assisted Suicide for Those Who Are Done with Living? Cambridge Quarterly of Healthcare Ethics, 27(3), pp.366-375.
Eijkenaar, F., van Vliet, R. and van Kleef, R., 2018. Diagnosis-based Cost Groups in the Dutch Risk-equalization Model. Medical Care, 56(1), pp.91-96.
McGuire, T. and van Kleef, R., 2018. Risk Adjustment, Risk Sharing and Premium Regulation in Health Insurance Markets. London, United Kingdom: Academic Press, an imprint of Elsevier.
van de Bovenkamp, H., Stoopendaal, A. and Bal, R., 2017. Working with layers: The governance and regulation of healthcare quality in an institutionally layered system. Public Policy and Administration, 32(1), pp.45-65.
Wubulihasimu, P., Brouwer, W. and van Baal, P., 2016. The Impact of Hospital Payment Schemes on Healthcare and Mortality: Evidence from Hospital Payment Reforms in OECD Countries. Health Economics, 25(8), pp.1005-1019.

Quality and Efficiency in Health Care

Attema, A., Bleichrodt, H., Gao, Y., Huang, Z. and Wakker, P., 2016. Measuring Discounting without Measuring Utility. American Economic Review, 106(6), pp.1476-1494.

de Bekker-Grob, E., Donkers, B., Jonker, M. and Stolk, E., 2015. Sample Size Requirements for Discrete-Choice Experiments in Healthcare: a Practical Guide. The Patient - Patient-Centered Outcomes Research, 8(5), pp.373-384.

Garrison, L., Towse, A., Briggs, A., de Pouvourville, G., Grueger, J., Mohr, P., Severens, J., Siviero, P. and Sleeper, M., 2013. Performance-Based Risk-Sharing Arrangements—Good Practices for Design, Implementation, and Evaluation: Report of the ISPOR Good Practices for Performance-Based Risk-Sharing Arrangements Task Force. Value in Health, 16(5), pp.703-719.

Makai, P., Brouwer, W., Koopmanschap, M., Stolk, E. and Nieboer, A., 2014. Quality of life instruments for economic evaluations in health and social care for older people: A systematic review. Social Science & Medicine, 102, pp.83-93.

Uyl-de Groot, C. and Löwenberg, B., 2018. Sustainability and affordability of cancer drugs: a novel pricing model. Nature Reviews Clinical Oncology, 15(7), pp.405-406.

van Exel, J., Baker, R., Mason, H., Donaldson, C., Brouwer, W. and Team, E., 2015. Public views on principles for health care priority setting: Findings of a European cross-country study using Q methodology. Social Science & Medicine, 126, pp.128-137.

Management and Organisation of Health Care Delivery

Bakx, P., de Meijer, C., Schut, F. and van Doorslaer, E., 2014. Going Formal or Informal, Who Cares? The Influence of Public Long-Term Care Insurance. Health Economics, 24(6), pp.631-643.

Berghout, M., Oldenhof, L., Fabbricotti, I. and Hilders, C., 2018. Discursively framing physicians as leaders: Institutional work to reconfigure medical professionalism. Social Science & Medicine, 212, pp.68-75.

Cramm, J., van Dijk, H. and Nieboer, A., 2012. The Importance of Neighborhood Social Cohesion and Social Capital for the Well Being of Older Adults in the Community. The Gerontologist, 53(1), pp.142-152.

Management and Organisation of Health Care Delivery

Kuntz, L., Scholtes, S. and Sülz, S., 2019. Separate and Concentrate: Accounting for Patient Complexity in General Hospitals. Management Science, 65(6), pp.2482-2501.

Liu, Y., Zhong, L., Yuan, S. and van de Klundert, J., 2018. Why patients prefer high-level healthcare facilities: a qualitative study using focus groups in rural and urban China. BMJ Global Health, 3(5), p.e000854.

Oldenhof, L., Postma, J. and Putters, K., 2013. On Justification Work: How Compromising Enables Public Managers to Deal with Conflicting Values. Public Administration Review, 74(1), pp.52-63.

From Table 4.3 we can see that ESHPM publishes in top multidisciplinary journals (*e.g. Medical Care, Social Science & Medicine*) as well as monodisciplinary journals (*e.g. American Economic Review, Public Administration Review*). Some papers have had a direct impact on policy by, for example, influencing the risk equalization scheme used in the Dutch Health Care System (Eijkenaar et al.). Others have had a high scientific impact, as measured by the number of citations, for example, the methodological publication on choice-modelling (de Bekker-Grob et al.). This publication has been cited more than 180 times and was the most downloaded paper from the journal *The Patient* in the years 2016, 2017, and 2018. The paper by Carin Uyl-de Groot in *Nature Reviews Clinical Oncology* is a good example of a paper that attracted considerable media attention and policymakers in the Netherlands and abroad fuelled the debate regarding the pricing of pharmaceutical innovation. An in-depth evaluation concerning the effectiveness of an integrated neighborhood approach called "Let's Talk" created both scientific and societal impact and resulted in a Pearl Award from ZonMw. In addition to many international papers, there was also a national interest that led to publications in Tijdschrift voor Gerontologie en Geriatrie and Nederlands Tijdschrift voor

Geneeskunde.[12] The paper of the ISPOR Task Force of Garrison et al. shows that ESHPM researchers are part of an international network that sets methodological standards in healthcare research.

4.2 Grants and Projects

An important indicator of academic strength is the success that ESHPM researchers have demonstrated in obtaining external research funding. This funding comes from various sources; such as the Dutch Research Council (NWO) and The Netherlands Organisation for Health Research and Development (ZonMW), as well as a range of EU-funded research schemes. Over the period 2013-2018, ESHPM has been able to fund its research-related expenditures to a large extent from external sources (see Table 2.2). During the reporting period, ESHPM researchers were successful in receiving research funding for a great number of important research projects from research councils (see Appendix B for a complete overview of projects during the period 2013-2018).

One of ESHPM's strengths lies in its collaborations, exemplified by the many Horizon 2020 project consortia in which we participate in. One Horizon 2020 project called SELFIE (Sustainable intEgrated care modeLs for multi-morbidity: delivery, FInancing and performancE) was led by ESHPM's Prof. Maureen Rutten-van Molken. The work in SELFIE was divided over seven work packages with partners coming from eight different EU countries. The research at ESHPM for SELFIE was done by researchers from the sections Healthcare Governance and Health Technology Assessment. For many other EU funded projects, ESHPM leads work packages. One example of a Horizon 2020 project in which ESHPM is actively involved as a consortium member is the European Training Network – Improving Quality of Care in Europe (ETN IQCE). This project is organised by six European Universities with the University of Hamburg acting as the coordinator. Another project worth mentioning is MUNROS- an initiative coordinated by the University of Aberdeen and actively worked on by experts of two different research teams from ESHPM. Collaborative grants are mainly acquired by senior staff at ESHPM, while individual grants are mainly acquired by young talent to establish their own line of research. In the period 2013-2018, five different ESHPM researchers (Ana Bobinac, Ellen van de Poel, Ties Hoomans, Lieke Oldenhof, and Esther de Bekker-Grob) received a VENI grant and one researcher received a Marie-Curie grant (Marianne Tenand).

ESHPM research combines academic strength with societal relevance as research has traditionally been inspired by the needs and demands of societal groups and health care decision-makers. Large projects at ESHPM have been funded by e.g. the Ministry of Health, the Dutch Health Care Institute, NETSPAR (a network on aging and pensions funded by pension funds) but also international institutions like NICE and funders like the Gates Foundation. In the Top Care project, researchers from the Healthcare Governance and Health Technology Assessment groups evaluated a programme of the Dutch government to fund research and specialized care in hospitals other than academic medical centres. This was a highly contentious policy that not only needed independent assessment but a "feel" for the policy issues at stake. Our research has led to a clear understanding of the need for a broader research agenda as well as a new programme funded by the Ministry. In his letter to Parliament, the Minister remarked that the ESHPM research project has greatly contributed to the new policies.

ESHPM has also been successful in acquiring direct research funding that Erasmus University Rotterdam allocates using competitive research schemes. Between 2013-2018, several large ESHPM research projects have been awarded a grant under the "Research Excellence Initiative" (REI) from the EUR. Additionally, ESHPM leads one of the three main research themes of Erasmus University titled "Smarter Choices for Better Health" in which the Erasmus MC and the Erasmus School of Economics also participate as core faculties. The research in Smarter Choices for Better Health is organised in four action lines: Prevention, Value-Based Healthcare, Evaluation of Healthcare, and Health Equity. Several PhDs and postdocs are funded through this initiative and PhDs are supervised by ESHPM staff jointly with staff from Erasmus MC, Erasmus School of Economics, and Erasmus School of Social and Behavioural Sciences. Also, four ESHPM researchers have received a so-called EUR-fellowship which aims to motivate talented researchers and facilitate them in writing grant proposals, executing their research, and evolving in their academic career.

12 van Dijk, H., Cramm, J., Birnie, E. and Nieboer, A., 2018. Effecten van een integrale wijkaanpak genaamd 'Even Buurten' op de (gezondheidsgerelateerde) kwaliteit van leven en welzijn van ouderen. Tijdschrift voor Gerontologie en Geriatrie, 49(3), pp.117-126.
van Dijk, H., Cramm, J., Goumans, M., Brix, A., Bakker, S. and Nieboer, A., 2013. Belang van ondersteunende netwerken voor ouderen. Bijblijven, 29(4), pp.53-57.
Cramm, J., van Dijk, H. and Nieboer, A., 2013. Het belang van sociale cohesie en sociaal kapitaal in de buurt voor het welzijn van ouderen. Tijdschrift voor Gerontologie en Geriatrie, 44(2), pp.50-58.

4.3 Other Recognitions by Peers

ESHPM researchers occupy a solid number of editorial positions at leading journals in the field and as editors of book series. In the field of health economics and health technology assessment, ESHPM researchers occupy important editorial positions at all top journals in these fields (*Journal of Health Economics, Health Economics, European Journal of Health Economics, Pharmacoeconomics, Value in Health* and *Medical Decision Making*) and serve on editorial boards (see Appendix B). Editorial positions in multidisciplinary journals (such as *BMC Geriatrics, BMC Health Services Research,* and *PLoS One*) reflect our influence on multidisciplinary healthcare research. The recognition of health economics research at ESHPM is also reflected in the bibliometric analysis on health economics research that appeared in the Journal of Health Economics where Erasmus University occupied the 11th position worldwide and the second position in Europe. In the Netherlands, health economics and HTA researchers are also prominent as reflected, for example, by their impact on health policy (see next chapter) but also by the fact that the NVTAG prizes for best young HTA researchers are won most years by ESHPM researchers (see Appendix B).

Researchers at ESHPM are sought after as reviewers for manuscripts submitted to academic journals or publishers, as well as guest lecturers at other universities or keynote speakers at international conferences and events. Several of our staff have occupied positions as visiting fellow or visiting professor, and they serve frequently as invited members of scientific committees, including roles such as a reviewer of research grant applications for research funding agencies. Such agencies include the Dutch Research Council (NWO), the European Commission, other European funding agencies, and the US National Science Foundation. They are also frequently asked to assess professorial positions or research programmes at universities throughout Europe.

5

Societal relevance

5 Societal relevance

5.1 Science Communication

Societal relevance is a starting point for all our work at ESHPM and Erasmus University as a whole. At ESHPM we aim to contribute to high quality, accessible, affordable, efficient, equitable and sustainable healthcare. Consequently, our research and educational activities are focused on contributing to these aims. We educate the leading healthcare players of the future, providing them with the analytical framework, methods, and moral sensitivities that will help solve complex problems in the field at large. To have an impact on healthcare policies through our research we critically reflect on and contribute to health policy debates, both nationally and internationally. We do this by being active on both traditional and digital media outlets including social media, and we actively publish press releases and organize events with and for policymakers.

The Marketing & Communication department (M&C) at ESHPM supports researchers by putting their work in the spotlight to increase their societal impact. We profile our researchers as thought leaders in several ways. We are more and more actively generating research content, for example, blogs, research stories, tweets, videos, and podcasts. M&C supports researchers in organizing events such as symposia or conferences (see Appendix B for an overview of major events). Usually events are organized around inaugural lectures, but sometimes also around PhD defenses or specifically for a project to promote interaction between researchers and policymakers. An example of this was the event "When is it too expensive" in which ESHPM researchers and researchers from the UK (Professor Karl Claxton) presented their work on the cost-effectiveness threshold, but also policymakers and pharmaceutical companies presented their views on the use of cost-effectiveness thresholds. Events like this usually draw a large audience varying from 100 to 200 attendees. M&C has close ties with the press: we provide the media with blogs, research stories, press releases, and answer questions from journalists. M&C sends out approximately ten press releases a year. These are mainly published in (digital) magazines on healthcare such as *Skipr, ZorgVisie, Nursing, Qruxx* and *Medisch Contact*, which are read by healthcare professionals, managers and policymakers. Regional and national newspapers, radio and television, respond to our press releases when it concerns national healthcare issues, for instance, keeping healthcare affordable. The press often approaches M&C for interviews on healthcare topics. M&C then matches the journalist in question with the right researcher. By doing so, a lot of our researchers have become thought leaders in the media on important healthcare issues. For example, Carin Uyl-de Groot on cost-effectiveness analyses of cancer treatments, Kim Putters on the decentralization of healthcare, Pauline Meurs on healthcare governance, Maureen Rutten on integrated care for multimorbidity, Martin Buijsen on legal aspects related to health care, and Marco Varkevisser on hospital competition.

5.2 Societal Impact of ESHPM Staff

ESHPM employees take part in many committees and advisory boards and bring their academic, evidence-based perspective to produce a positive societal impact. For instance, Prof. dr. Hans Severens was vice-chairman of the Health Council in the Netherlands and Prof. dr. Werner Brouwer was a member of the subsidy programme committee of the Netherlands Organisation for Health Research and Development (ZonMW) and of the European Commission's Expert Panel on Effective Ways of Investing in Health. Prof. dr. Pauline Meurs was chair of the board of ZonMw (in which Prof. Richard Janssen was also a member) and later she was chair of the Council for Health & Society, one of the strategic advisory boards to the Dutch government. Meurs is also chair or member of many committees for government, including influential committees around issues such as the governance of healthcare organisations, the development of the profession of nursing and the organisation of mental healthcare. For many years she has been mentioned as one of the most influential persons in Dutch health policy. Another influencer is Prof. dr. Kim Putters, currently heading the Netherlands Institute for Social Research (in Dutch: Sociaal Cultureel Planbureau or SCP), an organisation that advises the government on issues in society. Putters was named by one of the leading newspapers as the most influential person in the Netherlands in 2019. Prof. mr. dr. drs. Martin Buijsen has been invited numerous times by parliamentary committees to shed light on the legal aspects of health care. Recently, his writings have been instrumental in changing the Dutch Organ Donation Act. He is sought after by journalists as an expert on patients' rights, medical liability and end-of-life decision-making and has appeared on radio and television on many occasions. A complete overview of tenured ESHPM staff and their role in committees and advisory boards can be found in Appendix B. Another way of demonstrating our positive societal impact is by looking at the current

employment positions of our former PhDs who now work at places like the Dutch Ministry of Health, NZA, NICE, SCP, several patient organisations, and the World Bank.

5.3 Impact Related to the Research Themes

As stated in Chapter 3, research at ESHPM has been organized around three major research themes. For each of these research themes, we present a narrative on how ESHPM has worked on creating an impact on health care policy. Note that for each narrative, the involved sections have been working on these topics for a long period and on the basis of scientific research have influenced policy. In all cases, researchers from ESHPM have worked together with people from governmental healthcare institutes. Furthermore, it shows that in some cases influencing Dutch policy may be a stepping stone towards influencing health policy in other countries.

Impact narrative related to the research theme "Competition and Regulation in Health Care: Risk Adjustment" [13]

More and more countries rely on risk adjustment to compensate competing health insurers for predictable variation in healthcare expenses between healthy individuals and the chronically ill. Researchers at ESHPM have participated for twenty years in the "Working Group on Risk Adjustment" which advises the Minister of Health on the design and evaluation of the Dutch risk adjustment model. For ESHPM, this has been a very effective platform to inform policymakers and to lead improvements to the Dutch risk adjustment model. In parallel with the introduction and subsequent refinement of risk adjustment in the Netherlands, researchers within ESHPM developed various sets of risk adjustor variables including the Pharmacy-based Cost Groups (PCGs) and indicators based on multiple-year high spending.

In the period 2013-2018, ESHPM developed new risk adjustor classifications based on outpatient diagnoses (Van Kleef, Van Vliet & Van Rooijen, 2014) and diagnoses from the physiotherapist (Eijkenaar & Van Vliet, 2017), both of which have been implemented in the Dutch risk adjustment model. In addition to the development of risk adjustor variables, ESHPM also made important methodological innovations regarding the evaluation of risk adjustment. During the period 2013-2018, ESHPM developed and implemented a method to examine the performance of risk adjustment for selected groups of people in either good or poor health (e.g. Van Kleef, Van Vliet & Van de Ven, 2013). Major outcomes of international collaborations in the field of risk adjustment in the period 2013-2018 include a special issue for the *Journal of Health Economics* on "Health Plan Payment in Managed Competition" (2017), and the publication of an edited volume for *Elsevier* on "Risk adjustment, risk-sharing and premium regulation in health insurance markets: Theory and Practice" (2018). This volume fulfills a key role in translating scientific insights from risk adjustment research into practice guidelines for policymakers and other stakeholders. The editors of the book – Thomas McGuire (Harvard University) and Richard van Kleef (ESHPM) – recently started local collaborations on healthcare reform in Ireland and Chile.

13 Eijkenaar, F. and van Vliet, R., 2017. Improving risk equalization using information on physiotherapy diagnoses. The European Journal of Health Economics, 19(2), pp.203-211.
McGuire, T. and van Kleef, R., 2018. Risk Adjustment, Risk Sharing And Premium Regulation In Health Insurance Markets. London, United Kingdom: Academic Press, an imprint of Elsevier.
McGuire, T. and van Kleef, R., 2017. Introduction to the special section health plan payment in regulated competition. Journal of Health Economics, 56, pp.234-236.
van Kleef, R., van Vliet, R. and van Rooijen, E., 2014. Diagnoses-based cost groups in the Dutch risk-equalization model: The effects of including outpatient diagnoses. Health Policy, 115(1), pp.52-59.
van Kleef, R., Van Vliet, R. and Van de Ven, W., 2013. Risk equalization in The Netherlands: an empirical evaluation. Expert Review of Pharmacoeconomics & Outcomes Research, 13(6), pp.829-839.

Impact narrative related to the research theme "Quality and Efficiency in Health Care: Future Costs in Economic Evaluations"[14]

The role of economic evaluations in health policy has become more prominent over the years. ESHPM has a long tradition of methodological research on economic evaluations and has had a large impact on how economic evaluations are conducted in practice. For instance, the cost-effectiveness acceptability curve and the friction cost method are used worldwide and have become part of official guidance on economic evaluation in several countries. A controversial topic in economic evaluation is the inclusion of future medical costs (i.e. medical costs that are purely the result of living longer). ESHMP research has shown that economic evaluations including future costs improve efficiency and are required to make efficiency-equity trade-offs. Furthermore, tools have been developed that facilitate the inclusion of future costs in practice. This research has been at the root of the most important change in the guidelines for economic evaluations in the Netherlands in 2016, specifically the guideline to include future medical costs in all economic evaluations. A project funded by the Dutch Health Care Institute (ZIN), in which ESHPM researchers worked together with ZIN personnel as part of the scientific advisory committee, contributed to this change in the guidelines. In turn, the change in the Dutch guidelines triggered several publications that argued that the NICE guidelines for economic evaluations should also change. Research has been presented at NICE and tools are currently being developed to facilitate the inclusion of future medical countries in several countries including the UK.

14 Morton, A., Adler, A., Bell, D., Briggs, A., Brouwer, W., Claxton, K., Craig, N., Fischer, A., McGregor, P. and van Baal, P., 2016. Unrelated Future Costs and Unrelated Future Benefits: Reflections on NICE Guide to the Methods of Technology Appraisal. Health Economics, 25(8), pp.933-938.
van Baal, P., Morton, A., Brouwer, W., Meltzer, D. and Davis, S., 2017. Should cost effectiveness analyses for NICE always consider future unrelated medical costs?. BMJ, p.j5096.
van Baal, P., Meltzer, D. and Brouwer, W., 2014. Future Costs, Fixed Healthcare Budgets, and the Decision Rules of Cost-Effectiveness Analysis. Health Economics, 25(2), pp.237-248.
van Baal, P., Wong, A., Slobbe, L., Polder, J., Brouwer, W. and de Wit, G., 2011. Standardizing the Inclusion of Indirect Medical Costs in Economic Evaluations. PharmacoEconomics, 29(3), pp.175-187.
van Baal, P., Feenstra, T., Polder, J., Hoogenveen, R. and Brouwer, W., 2011. Economic evaluation and the postponement of health care costs. Health Economics, 20(4), pp.432-445.
Versteegh, M., Knies, S. and Brouwer, W., 2016. From Good to Better: New Dutch Guidelines for Economic Evaluations in Healthcare. PharmacoEconomics, 34(11), pp.1071-1074.
Zorginstituut Nederland, 2016. Guideline For Economic Evaluations In Healthcare.

Impact narrative related to the research theme "Management and Organisation of Health Care Delivery: Academic Collaborative with Health and Youth Care Inspectorate" [15]

The role of supervision in healthcare has changed in many countries over the years, including the Netherlands. As of 2011, the section HCG participates in the Academic collaborative with the Inspectorate for Health and Youth Care (further: Inspectorate). Three strategic research programmes are defined in collaboration with the Inspectorate: the development and effects of supervision of calamities in healthcare; the participation of patients and citizens in supervision; and the development of methods for the supervision of the governance of healthcare organizations. A fourth theme—the supervision of networks in health and social care—is in development. Within these themes, specific projects are done in close collaboration with the Inspectorate. Also, cross-cutting themes are sometimes researched, e.g. the role of uncertainty in supervision and regulation. The intensive collaboration between the section and the Inspectorate results in projects that align well

15 Adams, S., van de Bovenkamp, H. and Robben, P., 2013. Including citizens in institutional reviews: expectations and experiences from the Dutch Healthcare Inspectorate. Health Expectations, 18(5), pp.1463-1473.
Behr, L., Grit, K., Bal, R. and Robben, P., 2015. Framing and reframing critical incidents in hospitals. Health, Risk & Society, 17(1), pp.81-97
de Bree, M. and Stoopendaal, A., 2018. De- and Recoupling and Public Regulation. Organization Studies, p.017084061880011.
de Kam, D., Grit, K. and Bal, R., 2019. Shared learning from incidents: A qualitative study into the perceived value of an external chair on incident investigation committees. Safety Science, 120, pp.57-66.
Kok, J., Leistikow, I. and Bal, R., 2018. Patient and family engagement in incident investigations: exploring hospital manager and incident investigators' experiences and challenges. Journal of Health Services Research & Policy, 23(4), pp.252-261.
Leistikow, I., Mulder, S., Vesseur, J. and Robben, P., 2016. Learning from incidents in healthcare: the journey, not the arrival, matters. BMJ Quality & Safety, 26(3), pp.252-256.
Rutz, S., Mathew, D., Robben, P., & Bont, A. D. (2015). Enhancing responsiveness and consistency: Comparing the collective use of discretion and discretionary room at inspectorates in England and the Netherlands. Regulation & Governance, 11(1), 81–94. doi: 10.1111/rego.12101.

with the strategic priorities of the Inspectorate and ensures that the research results are spread within a supervisory practice. Our research on incident investigations, for example, has led to new ways in which the inspectorate supervises incidents related to healthcare safety. Our intensive involvement in researching ways to supervise the governance of healthcare organizations has resulted in many new instruments and practices regarding supervision. Moreover, the collaboration ensures that there is a critical mass of expertise on regulation and supervision within the group (i.e. around eight researchers from the group participate in the collaborative), which also leads to international recognition. The group regularly collaborates with researchers from Norway and England and publications find their way to internationally acclaimed journals in public administration, health services research, medical and organizational sociology, and health policy. National recognition is expressed for example by the VIDE (the association of supervisory organisations in the Netherlands) paper prize which is regularly won by researchers from this group.

6
Viability

6 Viability

6.1 Viability of ESHPM research

An important first element of viability is the financial stability of the organisation. During the period this evaluation covers, ESHPM had to undergo a rather fundamental reorganisation, in which permanent staff had to be reduced by about 25%. This was necessary to reduce the reliance on external (temporary) funds to cover the costs of permanent positions in a period of reduced external funding. This reorganisation laid the foundation for a viable and strong School, which is now flourishing again. There is a good balance between first and other money streams, and the reserve position of the School is strong. This helps with investing in an even stronger future. The different sections are funded from both research and educational activities, all with their own profile, with staff who can perform all required activities. The combination of activities allows us to perform research with both societal relevance and scientific excellence, also because part of the research is funded from "first stream" money.

The topics covered by ESHPM contribute to its viability. Health and health care are of growing importance both nationally and internationally, emphasizing the importance and relevance of the knowledge of ESHPM researchers. Although one may expect that the current situation with the Coronavirus may lead to new pressures on national and international research budgets, at the same time it underlines the importance of some of the work performed at ESHPM. The fact that the Erasmus University Rotterdam has chosen "Smarter Choices for Better Health" as one of its profiling themes, with a central role for ESHPM, also adds to the viability of the research lines of ESHPM. ESHPM and its researchers are well-connected, nationally and internationally, which is an important asset in terms of future viability. Connections through previous and current (inter)national collaborations and consortia can help to ensure future funding and relevant research. ESHPM's emphasis on societally relevant research is an important asset in that context.

Despite the reorganisation, research output and funding has remained strong, and ESHPM is now larger than ever before. Our staff performs well in education and research, funding, and societal impact. This provides a great basis for the future. However, viability requires constant attention. Hence, in the next section, we provide an overview of some of the important strengths, weaknesses, opportunities and threats for ESHPM.

6.2 Strengths, Weaknesses, Opportunities, and Threats (SWOT)

The following table presents a SWOT for ESHPM, which is not meant to be exhaustive but to highlight some of the important elements in the different categories.

Strengths	Weaknesses
• Combination of disciplines which offer a unique perspective on health care systems • Strong mono- and multidisciplinary research, all health-focused • Impact on health policy in the Netherlands and long-standing relationship with health policy actors • Strong international research reputation; methodological frontrunners in some areas • Strong track record and expertise in acquiring grants and contract research from many different funders	• Health policy impact focusses on the Netherlands • Limited size of some research groups • Restricted number of permanent staff positions • Limited diversity of staff • Dependence on some support facilities from EUR
Opportunities	**Threats**
• Exporting healthcare research methods to other countries and settings • Increased demand for multi-disciplinary research • Increased attention for health care research • Linking pin at Erasmus University between medical faculty and faculties of social sciences, law, management, and economics. • Profiling EUR in the area of health care research	• More competition not only from multi-disciplinary schools/institutes but also monodisciplinary schools and faculties • Remaining an attractive employer for (temporary) staff, given restrictions on permanent positions • Uncertainty related to funding for educational programmes

Strengths

Due to its multidisciplinary staff, ESHPM has contributed to a substantial amount of collaborative research projects and publications. There is a growing awareness that working on the same topic from different perspectives and disciplines will strengthen our school, stimulate close collaborations among research groups, and benefit research quality. ESHPM's national reputation spans all related disciplines; we have a proven track record regarding the impact on Dutch health policy. Abroad, ESHPM is visible in fields such as health economics, health technology assessment, medical sociology, and science & technology studies. ESHPM values mixing methodological, innovative, and applied research. The presence of iMTA, for instance, allows ESHPM to directly impact methodological standards in applied research and indirectly results in additional funding. Ensuring state-of-the-art research requires strong links with monodisciplinary fields such as economics and sociology. To address this, we have implemented policies to facilitate joint appointments for tenured staff, collaborate on joint projects, and either educate PhDs in monodisciplinary research methods or attract PhDs with a mono-disciplinary background. The School is the largest of its kind in the Netherlands and one of the largest of its kind in Europe. We have been able to increase our successes and establish a strong network outside of the faculty and into national policymaking organs as well as international research groups and as experts in various parts of the healthcare sector. An important strength lies in acquiring international collaborative funding and national funding from diverse funding bodies, where the emphasis is on acquiring methodologically challenging, academic, and impactful research projects.

Weaknesses

Though our (methodological) academic impact may be international and we regularly participate in relevant international research projects and consortia, national policy impact remains the strongest, and thus a focus point. Furthermore, not all research sections are equally strong in all aspects (e.g. academic output and funding). This is related to differences in sizes between sections, the balance between educational and research activities, and funding (possibilities). ESHPM's restricted number of permanent staff positions implies that growth normally takes place in terms of temporary staff, while growth in and reallocations of permanent positions in principle are considered on a 4 to 6-year basis. Differences in sizes and research focus between sections also lead to different challenges at the level of sections. Though ESHPM is increasingly international, the permanent staff is predominantly Dutch, and partnerships are often related to projects, programmes, or persons. Thus, one of the concerns is a restricted number of permanent staff positions. Having a greater pool of staff from different cultures and backgrounds, in turn, provides ESHPM with the strength to further grow abroad as well as in the Netherlands. The need to further increase the proportion of female professors is another aspect for which ESHPM has set an ambitious target. Regarding research support, ESHPM is not only dependent on its own support system, but also the expertise of the EUR as a whole. It is useful for ESHPM that the EUR is expanding its research support facilities, which can facilitate future success. Our aim is two-folded; (i) to ensure strong research support within the school in strategic areas so we do not miss opportunities in terms of funding, and (ii) to invest in a strong work relationship between the research support services of ESHPM and the EUR.

Opportunities

As the global healthcare sector is experiencing rapid growth, there is an increase in demand for healthcare research that can create opportunities for ESHPM. Globalisation, increasing chronic diseases, and technology pose difficult questions about the way health care provision is organised. ESHPM's existing pool of experts (with their current and upcoming projects and networks) can greatly contribute to the changing demands and challenges for the health sector. For ESHPM, maintaining a position as a front runner in some of its expertise areas requires continuous attention and depends on attracting and keeping key researchers in an internationally competitive environment. There is more overlap and dependency between fields of expertise, meaning some issues may best be solved by a multidisciplinary approach. ESHPM thus sees an opportunity in strengthening its cooperation both within and outside the faculty. Locally, ESHPM functions as a link between the medical faculty, the social sciences faculty, the faculty of law, and the faculty of economics. ESHPM plays a central role in the Erasmus Initiative "Smarter Choices for Better Health," which was launched by Erasmus University as one of its three central research themes (flagships). This initiative strengthens the collaboration of ESHPM, ESE, and Erasmus MC. Upcoming strategic plans such as the convergence with Erasmus MC and TU Delft allows ESHPM to expand existing collaborations and set up innovative research networks aimed at addressing societal and health care challenges and attract new funding. With the increasing global demands and opportunities to work in multidisciplinary settings, relevant partners abroad provide useful opportunities for ESHPM to join.

Threats

Monodisciplinary faculties/schools are increasingly interested in research on health and healthcare, which increases competition for research grants,

good students, and highly qualified staff. For other expertise areas, there may be opportunities to grow further. For smaller sections or research topics addressed by smaller groups, continuity is an important attention point, as this can pose a threat in terms of viability for those areas. Training and maintaining new staff in those areas, also by creatively using overlap in appointments, may help but this remains an important issue. The tight labour market and the restricted number of permanent positions affect career opportunities for assistant professors and post-docs positions. An important focus and challenge for ESHPM in the coming years will be attracting a diverse, international staff as well as investing in the talent development of young researchers due to these restrictions. While ESHPM is certainly not unique in having to deal with these restrictions, given the mix of funding it attracts, it does raise questions on how to organise all activities (e.g. acquisition and PhD supervision) with a limited number of permanent staff. Our funding is currently based on self-initiated projects, but it also depends on collaboration with externally initiated projects in which we participate as a partner. While this is a good diversification, it also poses a threat if partnering requests are reduced. In the context of the EUR, this implies ESHPM has a very diversified mix of income streams since other faculties rely much more on income through education. Still, we note that there have been discussions about restructuring the funding of educational programmes in the Netherlands. This could result in less money per student, which is a threat also to ESHPM. In the studied period, ESHPM has made great efforts to diversify its streams of income as the past has taught us that relying too strongly on specific forms of funding can carry risks.

6.3 Benchmark

As part of our self-evaluation, we opted to perform a benchmark of ESHPM against a strong, relevant international School. We chose to visit the London School of Hygiene & Tropical Medicine (LSHTM) as they have a nearly identical mix of disciplines and have a strong reputation worldwide in terms of research as well as societal impact. Rather than comparing output in terms of productivity (such as types and numbers of publications), ESHPM reflects on what can be learned from LSHTM's approach to generic trade-offs in research strategy, policy and management, and aims and objectives. The benchmark at hand thus focusses on how a comparable research organisation deals with potentially similar dilemmas in research strategy and policies. ESHPM conducted a one-day working visit to get more insight into the strategy and policy regarding the current and future plans of LSHTM, specifically the faculty of Public Health and Policy. During the working visit, it was possible to identify and openly discuss current dilemmas at both organisations, as well as share our best practices[16].

LSHTM's strengths are, like ESHPM, in the area of conducting multidisciplinary research, acquiring external funding, and achieving a positive societal impact. Also, research management at LSHTM faces the same dilemmas as ESHPM: how to balance mono-disciplinarity and multi-disciplinarity, and how to ensure sufficient external funding. Given the similarities in the composition of research disciplines and a strong reliance on external funding between ESHPM and LSHTM, there are also many similarities in the policies and research culture. However, there are also differences. Generally speaking, at LSHTM policies are more targeted at individual researchers while at ESHPM these are more targeted at research teams (the different sections). Furthermore, at LSHTM there is a more structured top-down management of grant acquisition. PhDs, on the other hand, have more opportunities for following courses and attending conferences at ESHPM compared to LSHTM which is probably due to the different positions of PhDs in the United Kingdom.

Regarding LSHTM's well-structured management of grant acquisitions: all applications must be reviewed by each of the faculty departments, and then finally approved by the Faculty Board. This process is facilitated by strong research support facilities which leads to effective strategic planning. With regard to promoting multidisciplinarity, LSHTM's Faculty Board shifted its strategy from top-down to bottom-up. During our visit, it became clear that faculty management expressed concerns that the "mother" discipline has come to play a (more) subordinate role than before. In order to retain the expertise within the "mother" discipline, researchers need to publish within their specific discipline, as well as in applied sciences (*i.e.* medical journals). Notably, this stimulus has been formulated in employee promotion policy. Each section is encouraged to cooperate with at least one other discipline and, if possible, strive for a joint publication. Sections are stimulated to collaborate within the department, as well as across faculties; by organizing e.g. lunch meetings and seminars. Research performance is assessed at the national level according to the Research Excellence Framework (REF); an assessment over a 6-year period. LSHTM currently does not have measuring instruments and thus does not assess its societal impact on a systematic

16 Report of the site visit is available and can be requested.

basis. In practice, however, the impact of the research school is measured indirectly; i.e. through funding, teaching activities, the evaluation process of the research school, and alumni achievements. An interesting aspect of comparison between LSHTM and ESHPM regards the PhD-trajectories. Both research schools have flexible PhD-programmes with tailor-made educational programmes, providing supervision on an individual level (depending on the needs of the PhD-student). The significant difference lies in the funding model. At LSHTM, most PhDs are not employees and are thus not funded by the faculty or the organisation at large. PhDs pay an annual fee (often financed through a grant) to make use of facilities (such as the library, desk access), supervision and courses.

The visit to LSHTM made it clear that ESHPM and LSHTM have more similarities than differences. Both schools are multidisciplinary in nature, acquire a lot of external funding and have a positive societal impact. A subtle difference between the two schools is that ESHPM puts emphasis on making (policy) agreements at the section level (group level) while LSHTM does this at the level of individual researchers. However, the type of agreements are comparable: publish in journals in your own core discipline and in applied journals. If possible, publish in collaboration with researchers within and outside of your own faculty. Our group approach enables us to attract strong monodisciplinary (methodologically oriented) researchers as well as researchers who specialize in multidisciplinary research in complex networks. Partly because of this, we are flexible in recruiting different types of subsidies and in anticipating new developments in the subsidy landscape. In recent years, this has resulted in ESHPM acquiring a relatively large number of collaborative grants (such as Horizon 2020 EU grants). We are convinced that our substantive group approach is a suitable approach for us and that we can therefore continue to anticipate future changes in the field of research funding. The most important learning point from the visit to LSHTM is to further strengthen research support and to find a good balance between faculty and university-wide support.

6.4 2020 and Onwards

ESHPM's research contributes to current issues in health care and how ESHPM researchers have responded to the COVID-19 outbreak is illustrative of this. Although the COVID-19 outbreak has put a heavy burden on ESHPM staff due to, among others, an increased teaching load because of an unforeseen move to online teaching, many ESHPM researchers have managed to find the time to write grant proposals and have been actively involved in much research into the corona crisis. Examples include research into corona app preferences, hospital crisis decision-making, hesitations about COVID-19 vaccinations in Europe, societal responses to (measures against) Covid-19, and who should pay the COVID-19 outbreak bill. For the coming academic year 2020-2021, the teaching pressure is unlikely to reduce soon, given the increase in enrolled students (~30% increase). ESHPM is investing in additional teaching staff to reduce the workload and preserve time for research. At this moment, the complete (long and short term) impacts of the COVID-19 crisis are difficult to oversee. In line with the previous crisis, we have lowered our expectations for future external funding due to expected budget cuts both nationally and in Europe.

As is mentioned in the SWOT, ESHPM's core subsidy from the Ministry of Education, Culture, and Science may decrease over time (at least per student). This threat brings intensified motivation for ESHPM to increase its efforts on subjects such as internationalisation and societal policy impact. Financial viability for ESHPM comes mostly from strategic alliances along with increasingly relevant health issues, as well as its vital role within the EUR as a whole. Internal as well as external efforts are made to ensure a continuation in our flow of funds. Within ESHPM, we identify and invest in promising research topics that can be worked on collaboratively by different ESHPM disciplines on a yearly basis. Next to these collaborative research topics, a funding programme for visiting professors will be set up with the aim to strengthen ties with prestigious universities abroad. Within the EUR, our faculty represents a vital role as a link between medical sciences, technical sciences, and social sciences. We work closely with Erasmus MC, but also with the Schools of Economics, Social Sciences, Philosophy, and Law to ensure relevant expertise is brought in on the thematic research done in health. We aim to broaden our role by intensifying collaborations with Technical University Delft (TU Delft) which is in line with the convergence strategy adopted by Erasmus University. To address the major social challenges in the fields of health, sustainability, urbanisation and digitalisation, Erasmus University Rotterdam, Erasmus MC, and TU Delft plan to bridge the divides between arts and humanities, the natural, social, and behavioural sciences and medical technology. The universities are to substantively expand their academic cooperation in the field of health & technology as well as in vital cities. Erasmus University and TU Delft aim to create an ecosystem together with Erasmus MC in which top-level scientists from various disciplines integrate their knowledge, expertise, and research methods in order to arrive at new discoveries and smart

solutions. Being a vital player in health and policy, ESHPM can represent the EUR in joining projects with teams from the other two organisations. During the COVID-19 outbreak, ESHPM already decided to strategically invest 1.5 million euros in the convergence between the Erasmus University Rotterdam, the Erasmus MC and the Technical University of Delft. ESHPM will fund six PhD positions, in an interdisciplinary environment, all working in collaboration with Erasmus MC and/or TU Delft. The six PhD students will contribute on a broad range of topics related to the societal challenges related to health and health care, including on the issues of value-based health care, preference measurement, concentration and competition, artificial intelligence in cancer care, and person- centred care. Jointly, this will stimulate new collaborations, strengthen the convergence, contribute to innovative scientific knowledge and ultimately aim to improve future health and health care. Intensifying collaborations with TU Delft and Erasmus MC may also offer new opportunities for funding by broadening our research portfolio and starting new collaborations. Next to this, our long-standing relations with external partners in healthcare, e.g. in the form of academic collaboratives, also provides for financial stability. Such partnerships could be further intensified in the future.

Supportive leadership, diverse teams, and fruitful cooperation are essential aspects of ESHPM's current successes and will, therefore, remain important focus points for future growth. ESHPM wants to provide a stimulating, safe and pleasant workspace for staff that promotes mutual respect, equal opportunities, and diversity; an employment culture that encourages everyone to achieve their full potential. To grow as an inspiring, inclusive, transparent, and flexible working environment, we believe that supportive leadership is essential, meaning ESHPM management staff should act as a role model in all these areas. An extensive programme on social safety is starting within ESHPM to further invest in this area, of which a leadership programme is an integral part to ensure that staff and leadership are properly trained and stimulate a motivating workplace climate for employees.

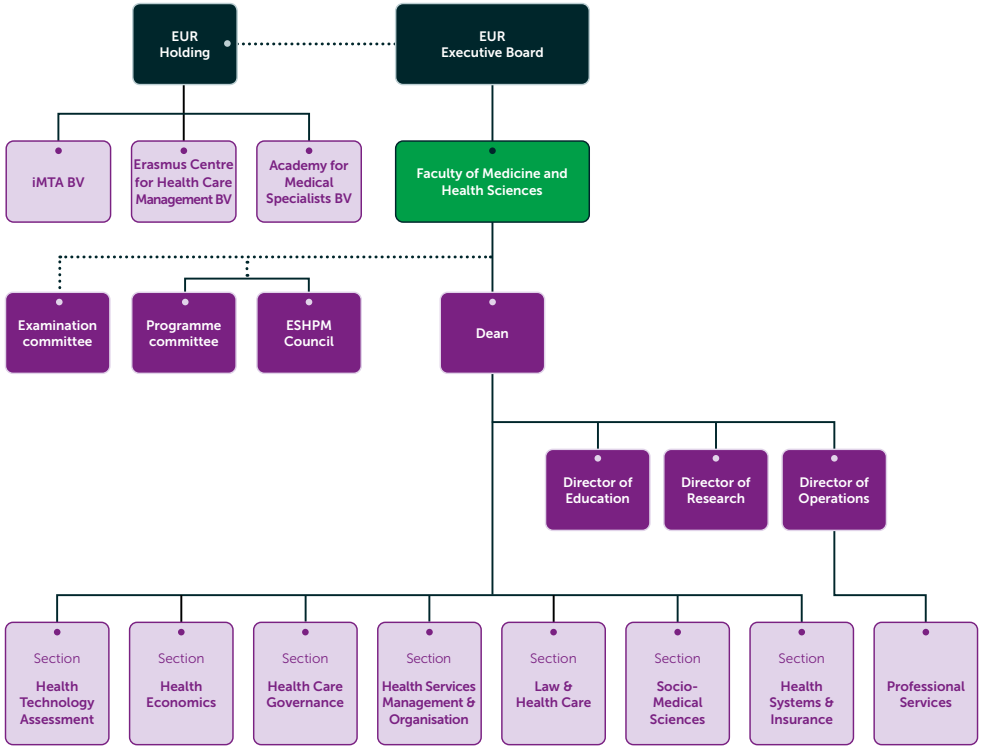
We will support researchers to embark on promising new research themes, set up international consortia, and coordinate international proposals. ESHPM also plans to continue to invest in talent management and facilitate the mobility and internationalization of its staff. By giving staff experiences outside of the faculty and bringing in new staff from different areas, we not only increase the diversity in the workplace but also benefit from an increased exchange of information and knowledge. In terms of research support, Research Data Management (RDM) is high on the ESHPM agenda. This is partly due to recent developments at several important funding agencies, but more importantly, because proper RDM contributes to better and more open science. Starting at the end of 2020 ESHPM will, in collaboration with Erasmus Research Services, staff a data steward who will help researchers to collect, store, and archive data according to the FAIR principles.

Current developments in healthcare systems such as digitalisation, fast-moving technological innovation, increasing citizen empowerment, aging populations and other demographic developments as well as the search for new governance arrangements "beyond the market" affect the roles of patients, care providers, and third-party payers. Furthermore, it may require multi-disciplinarity and inter-organisational cooperation, differentiated care, and de-institutionalisation of care delivery. By ensuring that our research efforts are related to these changes and by continuously setting scientific standards, we will strive to maximize our global health policy impact. To this end, we will build on our experience in accomplishing global health impact through research. For instance, our involvement in the Horizon 2020 BigMedilytics project resulted in law amendments in Spain, and we have contributed to international standards as part of the International Society for Health Economics and Outcomes Research (ISPOR). Lastly, ESHPM will join global partners, such as the World Health Organisation (WHO) or the World Bank, to work on relevant issues and further impact global health policy. The ambition to maximize our global health policy impact will be realized through conducting research, providing education, and engaging with healthcare practice from a local to a global level. For this reason, it is essential to build on our national and international networks in both research and healthcare policy and practice. At ESHPM, we have longstanding relationships with partners abroad and are involved in many different global consortia to work on projects concerning healthcare. The fact that experts from ESHPM are involved and continue to be invited in such projects represents our strength as an international partner, but it also shows dependency on the network of our expert staff and partner universities initiating projects. Therefore, it is our aim to become sustainable in our reputation as a faculty in its entirety and increase our contributions to collaborated projects abroad. This requires ESHPM to increase its investments in key projects as well as initiate more projects ourselves as a coordinating university in new consortia. Our longstanding relationships abroad and close cooperation with foreign researchers, as well as focus on future-oriented research, can contribute to our efforts in reaching this aim.

Appendix A

Organisational Structure

Figure A.1: **organisational structure ESHPM**



Performance-Based Financing Research

In addition to external funding that is gathered by the different sections, ESHPM finances are divided among the sections based on how their researchers contribute to the different educational programmes, as well as their relative share of publications. For this latter part, publications are rewarded with so-called publication points where a distinction is made between:

- publication in an international journal with impact factor
- publication in an international journal without impact factor
- publication in Dutch peer-reviewed journal
- publication of annotation legal research
- publication of books and chapters

Publication in international journal with impact factor:

The journals in this category are divided into four categories, the so-called "quartile scores." At ESHPM the international quartile scores (QS) are used, as defined in the Social Science Citation and Science Citation Index.
Category A = QS 1: 6 points
Category B = QS 2: 4 points
Category C = QS 3: 2 points
Category D = QS 4: 1 point

Publication in an international journal without impact factor:

Within this category the distinction is made between journals: i) up to 10 years that are classified under category C and ii) journals older than ten years, category D.

Dutch peer-reviewed journals:

At ESHPM an overview list is made with all the journals. Though the list is annually updated by the research director, after consultation with the heads of the sections. In addition, another type of publication is **annotation**, which belongs to category D. And finally, **books and chapters**, that generally are not included in the current financing model. However, an exemption can be made if a certain publication meets the following criteria:

1. The publication has been reviewed by at least one, though preferably two, independent peers affiliated with the university and/or research institution.
2. It concerns a publication in a renowned scientific publishing company.
3. It concerns the first, original, publication, i.e. not being previously published and/or slightly edited publication.
4. The language of publishing is English and/or Dutch.
5. It concerns a substantial contribution by an author, i.e. authorship, and not editing.

The rewarding is as follows: the number of points is multiplied by 0.01 per 1 word. English publications are rewarded with 6 points (category A); Dutch publications are rewarded with 2 points and fall into the category C. The number of words is set to a maximum of 9,000 words. Furthermore, the total number of points is divided by the number of authors concerned.

Promotion Criteria

Here, we describe ESHPM appointment criteria for the positions of Associate Professor and Professor. The appointment criteria apply to internal as well as external candidates. Criteria that regard performance within ESHPM, however, only apply to internal candidates. For external candidates, expectations regarding their ability to fulfil certain criteria will be considered. For the position of Professor, the starting point of focus is that the intended candidate meets the Associate Professor criteria yet greatly exceeds these in a qualitative sense. When assessing the suitability of a candidate for the position of Professor, the complete set of criteria is considered, whereby a candidate cannot be expected to excel on all criteria. In addition to the criteria, when appointing a Professor, the added value for ESHPM will be considered as much as possible, and a link will be sought with the EUR Strategy as well as issues in the area of diversity (in gender, background, etc.).

	Associate Professor	Professor
Education	Develops, coordinates, and / or improves the design, content and didactics for a substantial part of the ESHPM educational programme. This involves a contribution that transcends the level of a single subject and discipline (e.g. a study, track, skills over the years, etc.) Throughout at least 3 years and comprising at least 0.2 FTE, the candidate is given consistently good evaluations from students (at least 7 out of 10 or equivalent), and is otherwise positively assessed in teaching skills (according to, amongst others, R&D interview reports) Successfully completes at least 1-2 (as expected) co-promotorships within a period of 2-4 years, of which at least 1 is done within 2 years.	Provides postgraduate education. Applies educational innovation. Assumes an ESHPM-wide educational function that transcends their own discipline[17] Takes a leading role in shaping bachelor's and master's education Is the coordinator of a bachelor and/or master subject that is positively assessed Proven to inspire and properly supervise students and PhD students
Research	Coordinates and takes care of the realization of a research programme or is responsible for the planning and realization of a multi-year specialist research project. Substantively supervises scientific staff in conducting research (own research group consisting of at least 3-4 scientific staff) Acquisition: frequent new subsidies for PhD students or postdocs with an average value of approximately 100,000 - 150,000 euros per year. At least half of the external subsidy should be realized as a Principal Investigator. A substantial part of the force must have been recruited through open competition. Publications: large and regular production of international articles in the "first quartile" of the scientific field in which publishing takes place. For several ESHPM components, international publishing is quite possible; where this is less possible, up to 50% of the minimum required number of articles may consist of publications in leading Dutch-language professional journals. With regard to the minimum required number of articles, at least two international (1st quartile) articles or 1 international (1st quartile) article and 2 articles in (inter) national (peer-reviewed) scientific journals per year as 1st, 2nd or last author (indicating the status of the relevant researcher) must be assumed over a period of at least 4-5 years.	Membership to the subsidy committee, external advisory committee, editorial board Invitations as a keynote (invited) speaker Large international network, international mobility Above-average recruitment capacities in national and international projects Leading scientific publications in top journals, as reflected in the H-index, that make an innovative contribution to the field

17 In education, a professor is expected to focus more on: i) qualities as leadership, i.e. being able to properly fulfill a managerial role, and ii) providing a broader range of education, or scope of education.

	Associate Professor	Professor
Organisation/ Management	Proven qualities in managing at least their own research group or performing mandated management tasks from the Professor, for example conducting assessment interviews. Proven qualities in performing tasks in the field of educational management (coordination of substantial parts of the curriculum);	Proven abilities to properly manage (inter) national research consortia Proven abilities to lead ESHPM-transcending national and international projects Proven managerial skills for the department, division, or research group Takes responsibility for creating a pleasant, inspiring, stimulating and safe research- and education environment Strong communicator, connecting, entrepreneurial
Societal impact		Contribution to social debate through trade publications, presentations, media appearances, etc. Research with (major) positive societal impact Fulfilling other socially relevant positions
Values ESHPM		Contribution to national and international stature and prestige of ESHPM Innovative and distinctive line of research that adds to existing profiles Multidisciplinarity: proven ability to work jointly with other disciplines relevant to ESHPM Open-minded (diversity and inclusivity)

yESHPM

Young ESHPM (yESHPM) is the PhD community of ESHPM. The goal of yESHPM is to create a space for PhD candidates from different sections to meet and interact. Through organising regular activities, yESHPM functions as a platform for sharing experiences, difficulties, and questions related to being a PhD candidate at ESHPM. They discuss general affairs concerning PhD projects and the PhD trajectory with the management team of ESHPM. The board of yESHPM consists of representatives from the different sections at ESHPM. Individual board members participate in yESHPM for a period of 12 months before handing over their responsibilities to another PhD student from their own section. While yESHPM aspires to have members from all sections at ESHPM on their board, the differences in the number of PhD-students per section do not always allow for this. However, as a rule, the board consists of at least four PhD students from four different sections. yESHPM has organised a wide range of activities which can generally be divided into re-occurring activities organised in a similar fashion by the yESHPM boards every year and special "one-off" events are often organised within the framework of other activities conducted at ESHPM. Re-occurring activities organised by the yESHPM board include:

- 6-weekly lunch seminars: Topics often relate to activities of interest to PhD students and related to their research activity and other duties at ESHPM, career planning and general scientific conduct in general. Some examples from past seminars are "Having Social Impact as a PhD Student" (external speaker: Pauline Meurs), "Science Communication" (external speaker: Steven Flipse), "How to Fail and How to Learn From It" (internal speakers: ESHPM junior faculty) and "Open Science" (external speaker: Antonio Schettino, EUR Open Science Team);
- Annual PhD-Dinner: Organised dinner for all ESHPM PhD students to get to know other members of the ESHPM community from outside their own section in an informal setting;
- PhD-Survey: Organising and conducting a re-occurring survey among the ESHPM PhD students to monitor the overall level of satisfaction of PhD students with regards to the overall working environment at ESHPM. Additionally, every year some topic-specific questions are included to flexibly react to emerging issues (e.g. open science).

yESHPM also participates in organising ESHPM-wide activities. For example, in 2018 ESHPM and yESHPM co-organised the PhD-Day. The first half was devoted to a workshop on Pecha-Kucha, an innovative way to present research in an accessible manner. The second half was devoted to various presentations by participating PhD-candidates and an award ceremony for the best Pecha-Kucha presentation. Furthermore, in 2018 yESHPM organised an extensive focus-group interview with PhD students to gain in-depth insights into the wellbeing, experiences, and concerns of doctoral candidates. The resulting report was presented to the ESHPM Management Team and subsequently, the PhD survey is used to monitor topics that emerged from the focus group. Every 6 weeks the ESHPM Board and the Director of Research (and the Dean on special occasions) meet to update each other on ongoing activities and emerging issues regarding the PhD-policy at ESHPM (e.g. Hora Finita, confidential advisor).

Five Key Publications per Section 2013-2018

Here, we report five key publications from 7 different sections in addition to the key papers for the three different research themes in Table 4.3.

Health Care Governance (HCG)

- van de Bovenkamp, H., de Mul, M., Quartz, J., Weggelaar-Jansen, A., & Bal, R. (2014). Institutional Layering in Governing Healthcare Quality. Public Policy and Administration, 92(1), 208–223.
- van de Bovenkamp, H. M., & Zuiderent-Jerak, T. (2013). An empirical study of patient participation in guideline development: exploring the potential for articulating patient knowledge in evidence-based epistemic settings. Health Expectations, 18(5), 942–955. doi: 10.1111/hex.12067.
- de Bree, M., & Stoopendaal, A. (2018). De- and Recoupling and Public Regulation. Organization Studies, 017084061880011. doi: 10.1177/0170840618800115.
- Ivanova, D., Wallenburg, I., & Bal, R. (2016). Care in place: A case study of assembling a carescape. Sociology of Health & Illness, 38(8), 1336–1349. doi: 10.1111/1467-9566.12477.
- Otte-Trojel, T., de Bont, A., Rundall, T. G., & van de Klundert, J. (2014). How outcomes are achieved through patient portals: a realist review. Journal of the American Medical Informatics Association, 21(4), 751–757. doi: 10.1136/amiajnl-2013-002501.

Health Economics (HE)

- Attema, A. E., Brouwer, W. B., L'Haridon, O., & Pinto, J. L. (2016). An elicitation of utility for quality of life under prospect theory. Journal of Health Economics, 48, 121–134. doi: 10.1016/j.jhealeco.2016.04.002.
- Baeten, S., van Ourti, T., & van Doorslaer, E. (2013). Rising inequalities in income and health in China: Who is left behind? Journal of Health Economics, 32(6), 1214–1229. doi: 10.1016/j.jhealeco.2013.10.002.
- Bonfrer, I., Figueroa, J. F., Zheng, J., Orav, E. J., & Jha, A. K. (2018). Impact of Financial Incentives on Early and Late Adopters among US Hospitals: observational study. Bmj. doi: 10.1136/bmj.j5622.

- Gheorghe, M., Picavet, S., Verschuren, M., Brouwer, W. B. F., & van Baal, P. H. M. (2016). Health losses at the end of life: a Bayesian mixed beta regression approach. Journal of the Royal Statistical Society: Series A (Statistics in Society), 180(3), 723–749. doi: 10.1111/rssa.12230.
- Hoefman, R. J., van Exel, J., & Brouwer, W. (2013). How to Include Informal Care in Economic Evaluations. PharmacoEconomics, 31(12), 1105–1119. doi: 10.1007/s40273-013-0104-z.

Health Systems and Insurance (HSI)

- Cattel, D., Eijkenaar, F., & Schut, F. T. (2018). Value-based provider payment: towards a theoretically preferred design. Health Economics, Policy and Law, 15(1), 94–112. doi: 10.1017/s1744133118000397.
- Eijkenaar, F., & René C. J. A. van Vliet. (2013). Profiling Individual Physicians Using Administrative Data From a Single Insurer. Medical Care, 51(8), 731–739. doi: 10.1097/mlr.0b013e3182992bc1.
- Schut, F. T., & Varkevisser, M. (2017). Competition policy for health care provision in the Netherlands. Health Policy, 121(2), 126–133. doi: 10.1016/j.healthpol.2016.11.002.
- van Veen, S. H. C. , van Kleef, R. C.., W. P. M. M. van de Ven, & R. C. J. A. van Vliet. (2017). Exploring the predictive power of interaction terms in a sophisticated risk equalization model using regression trees. Health Economics, 27(2). doi: 10.1002/hec.3523.
- Wynand P. M. M. van de Ven, Kleef, R. C. V., & Rene C. J. A. Van Vliet. (2015). Risk Selection Threatens Quality Of Care For Certain Patients: Lessons From Europe's Health Insurance Exchanges. Health Affairs, 34(10), 1713–1720. doi: 10.1377/hlthaff.2014.1456.
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Health Services Management & Organisation (HSMO)

- Looman, W. M., Fabbricotti, I. N., Blom, J. W., Jansen, A. P. D., Lutomski, J. E., Metzelthin, S. F., & Huijsman, R. (2018). The frail older person does not exist: development of frailty profiles with latent class analysis. BMC Geriatrics, 18(1). doi: 10.1186/s12877-018-0776-5.
- Looman, W. M., Fabbricotti, I. N., Kuyper, R. D., & Huijsman, R. (2016). The effects of a pro-active integrated care intervention for frail community-dwelling older people: a quasi-experimental study with the GP-practice as single entry point. BMC Geriatrics, 16(1). doi: 10.1186/s12877-016-0214-5.

- Buljac-Samardžić, M., & van Woerkom, M. (2018). Improving quality and safety of care in nursing homes by team support for strengths use: A survey study. Plos One, 13(7). doi: 10.1371/journal.pone.0200065.
- van Ineveld, M. , Oostrum, J. V., Vermeulen, R., Steenhoek, A., & van de Klundert, J. (2015). Productivity and quality of Dutch hospitals during system reform. Health Care Management Science, 19(3), 279–290. doi: 10.1007/s10729-015-9321-7.
- Doekhie, K. D., Strating, M. M. H., Buljac-Samardzic, M., van de Bovenkamp, H. M., & Paauwe, J. (2018). The different perspectives of patients, informal caregivers and professionals on patient involvement in primary care teams. A qualitative study. Health Expectations, 21(6), 1171–1182. doi: 10.1111/hex.12824.

Health Technology Assessment (HTA)

- Blommestein, H. M., Verelst, S. G. R., de Groot, S. ., Huijgens, P. C., Sonneveld, P., & Uyl-de Groot, C. A. (2015). A cost-effectiveness analysis of real-world treatment for elderly patients with multiple myeloma using a full disease model. European Journal of Haematology, 96(2), 198–208. doi: 10.1111/ejh.12571.
- Rutten- van Mölken, M., Leijten F, Hoedemakers M, Tsicahristas A, Verbeek N, Bal R, et al.. (2018). Strengthening the evidence-base of integrated care for people with multi-morbidity in Europe using Multi-Criteria Decision Analyses MCDA. International Journal of Integrated Care, 18(s2), 315. doi: 10.5334/ijic.s2315.
- Hoogendoorn, M., Feenstra, T. L., Asukai, Y., Briggs, A. H., Borg, S., Negro, R. W. D., … Rutten- van Mölken, M. (2016). Patient Heterogeneity in Health Economic Decision Models for Chronic Obstructive Pulmonary Disease: Are Current Models Suitable to Evaluate Personalized Medicine? Value in Health, 19(6), 800–810. doi: 10.1016/j.jval.2016.04.002.
- Vemer, P., Ramos, I. C., Voorn, G. A. K. V., Al, M. J., & Feenstra, T. L. (2015). AdViSHE: A Validation-Assessment Tool of Health-Economic Models for Decision Makers and Model Users. PharmacoEconomics, 34(4), 349–361. doi: 10.1007/s40273-015-0327-2.
- Kanters, T. A., Bouwmans, C. A. M., van de Linden, N., Tan, S. S., & Hakkaart-van Roijen, L. (2017). Update of the Dutch manual for costing studies in health care. Plos One, 12(11). doi: 10.1371/journal.pone.0187477.

Law & Health Care (LHC)

- den Exter, A. (2014). Health Care Access in the Netherlands. The Right to Health at the Public/Private Divide, 188–207. doi: 10.1017/cbo9781139814768.010.
- den Exter, A., Santuari, A., & Sokol, T. (2015). One Year after the EU Patient Mobility Directive: A Three-Country Analysis. European Law Review, 40(2), 279–293.
- Buijsen, M. (2016). Communicating Concerns. Cambridge Quarterly of Healthcare Ethics, 25(3), 395–403. doi: 10.1017/s0963180116000049.
- Den Exter A. (2017). European Health Law. Antwerpen: Maklu.
- van den Hooff, S., & Buijsen, M. (2014). Healthcare professionals' dilemmas: judging patient's decision making competence in day-to-day care of patients suffering from Korsakoff's syndrome. Medicine, Health Care and Philosophy, 17(4), 633–640. doi: 10.1007/s11019-014-9564-y.

Socio-Medical Sciences (SMS)

- Cramm, J. M., & Nieboer, A. P. (2014). Short and long term improvements in quality of chronic care delivery predict program sustainability. Social Science & Medicine, 101, 148–154. doi:10.1016/j.socscimed.2013.11.035.
- Labree, W., Mheen, D. V. D., Rutten, F., Rodenburg, G., Koopmans, G., & Foets, M. (2015). Differences in Overweight and Obesity among Children from Migrant and Native Origin: The Role of Physical Activity, Dietary Intake, and Sleep Duration. Plos One, 10(6). doi: 10.1371/journal.pone.0123672.
- Cramm, J. M., & Nieboer, A. P. (2014). The importance of productive patient–professional interaction for the well-being of chronically ill patients. Quality of Life Research, 24(4), 897–903. doi: 10.1007/s11136-014-0813-6.
- Nieboer, A. P., & Cramm, J. M. (2018). How do older people achieve well-being? Validation of the Social Production Function Instrument for the level of well-being–short (SPF-ILs). Social Science & Medicine, 211, 304–313. doi: 10.1016/j.socscimed.2018.06.036.
- Hartgerink, J., Cramm, J., Bakker, T., Eijsden, A. V., Mackenbach, J., & Nieboer, A. (2013). The importance of multidisciplinary teamwork and team climate for relational coordination among teams delivering care to older patients. Journal of Advanced Nursing, 70(4), 791–799. doi: 10.1111/jan.12233.

6 November 2020

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