

Self-evaluation NIVEL 2004 - 2009



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Executive Summary

Objectives and research area

NIVEL – the Netherlands Institute for Health Services Research – is the national institute for health services research in the Netherlands. It is an independent organisation. Its domain is health services research. NIVEL has a dual mission: scientific and societal. It distinguishes itself from many academic groups in the importance of its societal mission and at the same time from consultancy firms and commercial research in its emphasis on scientific quality. These characteristics determine the terms of reference for our self-evaluation: NIVEL wants to be assessed on the quality of its research from both a scientific and societal perspective. More specifically, NIVEL wants to be evaluated on its national role in the domain of applied health services research, on its role as an independent organisation with broad-based support in policy, health care institutions, professional organisations, insurance organisations and patient organisations, on its policy and research network, and as a national centre of expertise with an international orientation. We consider NIVEL's research as one programme, albeit with distinct programme lines. The previous assessment of NIVEL research, covering 1997-2003, rated NIVEL research overall as excellent (mark 5); both scientific quality and productivity as very good (mark 4) and both relevance and vitality as excellent (mark 5).

Composition of the institute and earning capacity

NIVEL is a stable institute in terms of staff size and funding. Its size is increasing slightly, as is its annual turnover. NIVEL is a multidisciplinary research institute, and about half of the researchers hold a PhD degree. Given the funding structure of NIVEL, partly with a subsidy from the MoH and partly with project grants, its earning capacity is an important parameter in the assessment. Our self-evaluation shows that NIVEL has a sound earning capacity, with a high success rate of grant proposals.

The unbalanced funding structure, identified as a problem in the previous assessment, has improved. The covenant with the MoH provides earmarked funding for strategic research as well as the possibility of allocating matching funds to scientific and EU-projects. The MoH has shown confidence in NIVEL by shifting project grants to the MoH subsidy and entering a 4-year covenant and an intended 6-year covenant for the next period. From 2009 a special grant from the MoE provides additional funding to strengthen NIVEL's scientific mission. NIVEL's European orientation has resulted in a rich portfolio of international projects. Although considerable effort has been made with the MoH, separate funding for developing an international programme was not realised. As a consequence, the investment required to prepare EU grant proposals and comply with matching requirements for EU projects is still a problem. This problem has recently been addressed by the Advisory Council on Health Research, with special reference to the position of organisations such as NIVEL.

Research environment

NIVEL has a well-developed quality system that governs the research processes. The core of our quality system is peer review. The internal governance of research processes aims at high quality and timely research. The pre-requisites for this are good communication, co-operation and support within NIVEL. NIVEL has acquired and kept ISO-certification. This has helped to improve research processes continuously, leading to a research environment that combines a helpful and challenging atmosphere with adequate guidance and direction. The quality goals as formulated in the quality system, refer to both societal and scientific quality. Research support is at an adequate level.

In the external environment it is important to connect both to policy makers and the health care field *and* to the scientific world. In connecting to the policy and health care fields, two elements are important: the

Societal Advisory Board and a yearly round of consultations among stakeholders. At project level, linkage is made via advisory committees. Embedding in the scientific world is reflected in numerous network links. It is especially important in international projects where we use the link with NIVEL based organisations, such as EUPHA, EACH and EFPC. The scientific network has benefited greatly from participation in national research schools and from hosting international (network) organisations. The scientific network has been strengthened by installing special chairs at several universities.

Output

Given the size of its staff and funding, NIVEL has a considerable output, and given its dual mission this is both scientific and policy oriented. In both categories total output is large. For the scientific side of our mission we publish articles in peer reviewed journals with an Impact Factor. We encourage our researchers to work on a PhD thesis. Some of these are intended as PhD projects from the start; others are based on scientific publications of commissioned research that are combined to form a PhD thesis.

A sizeable proportion of our output is based on the large NIVEL national information systems that are used for answering policy questions and for our own research, and shared with research groups all over the Netherlands. The previous institutional review emphasized the importance of more intensive use of the databases. The LINH database (that uses data from electronic medical records kept in general practice), for example, has provided data to many internal and external research projects. In this way the national infrastructure contributes to nationwide collaboration and to our overall research output.

National and international scientific collaboration is reflected in co-authored publications. Furthermore, NIVEL's role in the scientific world is evidenced by staff participation in scientific activities as editors and reviewers. Societal participation is reflected in committee memberships, boards and advisory groups and many dissemination activities.

Scientific quality

In our view, NIVEL's scientific mission and societal mission reinforce each other. High scientific quality is important for applied research; only sound research deserves to be used in health care policy and practice. Moreover, high quality research contributes to confidence among potential users. NIVEL's ambition for scientific quality is to perform at or above world level. To test this we used standard bibliometric indicators (although the applicability of these indicators is not optimal for our research field; in particular, the coverage of standard bibliometric analysis is relatively low for areas such as nursing). Overall, NIVEL's scientific output has increased, but its impact has tended to decrease in recent years. Two fifths of our international articles are in three subfields, the most important of which is Public, Environmental and Occupational Health. In this subfield our impact is above world average. However, we lag behind in impact in a core subfield, Health Care Sciences and Services. Increasing the impact in this subfield is an important target for the next period, although the US orientation of most top journals presents a challenge. Open access publishing has become important for NIVEL and facilitates rapid dissemination of research results. Now that we have managed to increase the number of international publications, we need to improve impact by aiming at highly rated journals.

Societal relevance

The societal relevance of NIVEL research is high. NIVEL invests in making its research responsive to problems in the health care sector – problems faced by policy makers as well as other stakeholders. This requires considerable investment in time and energy, but in our view it pays off in terms of the impact of our research. Throughout this self-evaluation, we show the impact of our research by brief narratives on utilization in national government policies, professional guidelines, advisory bodies etc. NIVEL invests in interaction with policy makers and other stakeholders at project, programme, and institutional level. The Internet is very helpful for disseminating research. Apart from that, more focused ways of dissemination

are used, such as feedback reports and invitational conferences. Interaction between policy makers and researchers, at individual and institutional level, is a key element in research utilization. A challenge for the future is to make these interactions even more productive.

A further challenge is to develop a system of monitoring research uptake in policy in a more quantitative way. Up to now, the best we have is the use of narratives of actual research utilization.

Viability of the institute

NIVEL is an organisation of professionals led by professionals. At the end of 2008 the management structure of NIVEL changed, with the introduction of a new director and governance structure.

Management of the institute was handed over smoothly. The new structure of governance appears to work well; the supervisory function and the network function are separated, with a Supervisory Board at arm's length supervising the management, and the Societal Advisory Board providing the link with the health care field.

The core of the scientific staff of NIVEL comprises the programme coordinators. They develop their own programme line, taking into account changes in policy, in the field of health care and scientific developments. Each of these has a strong position and a good reputation in research, with many having academic links. Within the programme lines, young researchers evolve into a new generation of research leaders. In particular, we have started to invest in the education of post-docs who are tomorrow's programme coordinators.

A clear HRM policy gives people opportunities to develop, and selects those who have potential. NIVEL's policy is 'up or out'. Given the large share of individual project funding in the organisation's finances, tenure is only available for a few. HRM policy aims at providing an environment of continuous learning. Writing a PhD thesis is part of this, but also learning to attract research funding, not only from scientific sources but from government and health care funds as well. Employees see NIVEL as a good place to work. Systematic and regular monitoring of employee satisfaction contributes to improvement.

NIVEL claims to be able to continuously innovate in the research areas covered, in research methods and in ways of relating to stakeholders. Its innovative capacity is evidenced by some strong examples at institute level and at project level.

Swot analysis and strategy

NIVEL has a dual mission and an important issue is the balance between the scientific and societal quality of our research. It is difficult to say exactly where the balance should lie. However, it seems appropriate that knowledge production tends to be dominated more by scientific work, and knowledge dissemination by societal efforts.

The main *strengths* of NIVEL are the national databases and panels that are used to address policy questions *and* scientific questions, the well controlled research processes with peer review as the core of the quality system, and good relations with stakeholders in policy, the health care field and academia. The main *weaknesses* of NIVEL are the tension between the broad expertise that is required in a project organisation in health services research and the need to specialize and deepen knowledge in scientific performance, the lack of visibility of NIVEL databases in important policy documents, and the 'in between position' of PhDs. We have started to invest in each of these areas.

Changes in health care policy and in society provide *opportunities* for NIVEL research in the form of 'new markets'. Further opportunities are seen in the area of international research and strategic cooperation with other research groups in areas where NIVEL is less strong. The first and main *threat* is the current financial crisis and its possible consequences for a new covenant with the MoH for the period 2012-2017. A second threat is related to a broader societal process that we observe: the value of research as a legitimate factor in policy making is decreasing, notwithstanding lip service to evidence-based policy making. Finally, competition in the applied and policy research arena is expected to become fiercer.

Our main goal for the years to come is related to quality: increasing scientific quality and keeping societal quality at its current high level (by making interactions with stakeholders more productive). With this in mind, we will look at the internal organisation to find a balance between broad expertise and the advantages of specialization. As in the past, we will contribute to the (inter)national debate on making research impact measurable.

For the financial stability of the organisation it is important to finalize the new covenant with the MoH for the period 2012-2017. We intend to invest in innovations and new research areas that are becoming more important as a result of changes in health policy and the health care field. An important innovation is the design of an integrated data infrastructure for primary care. This will be one of the building blocks of a new national study - this time not of general practice, but of integrated primary care. The challenge will be to give this as much mass as the two previous national studies, both of which had a large scientific and societal impact. In the area of human resources, we will continue to invest in continuous education and in career development and coaching trajectories. The key group here concerns the post-docs, who are the potential programme coordinators of the future.

In conclusion, NIVEL is a strong organisation that continuously adapts its strategy to the changing environment. Strengths and opportunities prevail over weaknesses and threats, and of course there is potential for improvement. As a learning organisation we meet the challenges ahead with confidence in NIVEL's future.

1 Objective(s) and research area

NIVEL – the Netherlands Institute for Health Services Research - is the national institute for health services research in the Netherlands. It is an independent organisation. Its domain is applied and applicable health services research. NIVEL has a dual mission: scientific and societal. Increasingly, NIVEL has an international orientation. These characteristics determine the terms of reference for this self-evaluation report: NIVEL wants to be assessed on the quality of its research from both a societal and scientific perspective.

Introduction

NIVEL's history dates from 1965 when the Netherlands Institute of General Practice was established. It gradually evolved from a research and development centre for the profession of general practitioners (GPs) into its current position as an independent, national research institute, conducting applied research. Its field of activity is health services research. Stakeholders are policy makers, patient organisations, health care organisations, professional associations, as well as the international scientific community.

On December 31 2009, 173 people were employed of whom 108 were researchers. The formal structure of NIVEL is a (not-for-profit) foundation. Its annual turnover is some 14 million euros of which almost 6 million euros consists of a subsidy (based on a 4-year covenant and mainly for specified activities) by the Dutch Ministry of Health, Welfare and Sport (MoH). Since 2009, an extra grant of 1.5 million euros per year for a four-year period is provided by the Dutch Ministry of Education, Culture and Science (MoE) for more fundamental scientific research. Other funding is acquired by project grants from a wide variety of national and international funding organisations.

NIVEL's formal mission is formulated in its Trust Deed:

“The foundation aims to acquire and disseminate knowledge of and insight into the structure and the functioning of the health care system and social services, also in connection with other sectors in society. It focuses on both people who need care and care providers, as well as on national policy makers.”

NIVEL is a national and independent institute

NIVEL is part of the knowledge infrastructure of the MoH. Its position as a national institute has been reinforced by participation in high level consultations of the MoH in its so-called Knowledge Chamber since 2007. This has been facilitated by a successfully renegotiated relationship between the MoH and NIVEL, which resulted in a four-year covenant (2008-2011).

The type of research questions that are typical for NIVEL's research programme often coincide with the (sometimes conflicting) interests of parties in the health care sector. To safeguard its independent position, NIVEL is not a state institute nor part of a university, but an independent foundation, financed in part by the MoH. NIVEL is headed by a director and is overseen by an independent Supervisory Board and is guided by a broad Societal Advisory Board. To safeguard independence NIVEL is obliged to publish all research results, as laid down in its Trust Deed.

As a national institute NIVEL occupies a unique position in the country's knowledge infrastructure, distinct from universities, commercial research and consultancy organisations, and separate from other national

institutes within the domain of the MoH, such as RIVM (the National Institute for Public Health and the Environment) and SCP (the Netherlands Institute for Social Research). Its national position is reflected in NIVEL's role in nationally representative research, such as studies on manpower planning, large-scale epidemiological and monitoring studies, studies on patient preferences, and evaluation studies on the effects of health care legislation. Another distinguishing characteristic of NIVEL as a national institute consists of the many national databases and information systems which are maintained, and are utilized not only by NIVEL itself but also by other research groups. These information systems are the source of many overview studies on the structure, organisation and functioning of the Dutch health care system, from the perspective of both health care providers and health care consumers.

NIVEL's domain is applied and applicable health services research

NIVEL's core business is health services research. Health services research is the multidisciplinary field of scientific investigation that examines how social factors, financing systems, organisational structures and processes, health technologies, and personal behaviours affect access to health care, the quality and costs of health care, and ultimately our health and well-being.¹

NIVEL's research is characterized as *applied and applicable* research. By this statement two different things are meant:

- 1 NIVEL's research draws on theories and methods from several disciplines, including epidemiology, medical sociology, psychology, human geography, health economics, medicine, nursing and physiotherapy. This has consequences both for NIVEL's recruitment policy and for collaboration with other research institutes.
- 2 NIVEL's research focuses on research questions which address issues that are relevant to the actors in health care and policy. Its potential use in policy-making processes is continuously borne in mind. NIVEL's research aims to contribute to evidence-informed policy.

Figure 1.1 Structure of NIVEL's research programme 

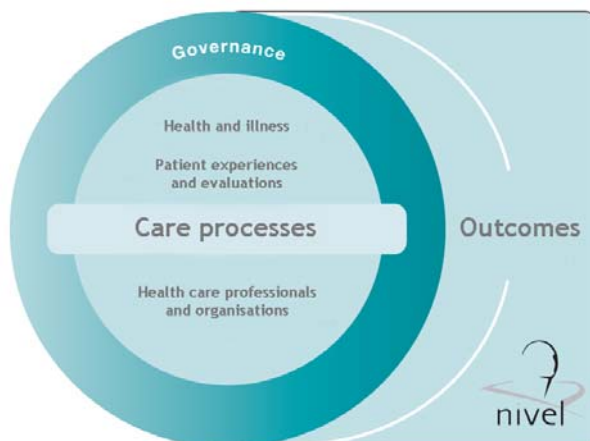


Figure 1.1 depicts the six domains of the NIVEL research programme. Central to our approach to health services research is the interaction between patients and care professionals and organisations. We study this interaction and its outcomes in relation to governance structures, whilst also investigating characteristics of patients, care professionals and organisations.

NIVEL has a dual mission: scientific and societal

NIVEL's research has to be performed (and assessed) according to the prevailing scientific standards. High scientific quality is a relevant value in its own right, but academic reputation is also important because it fosters society's acceptance of research results and because it affects the recruitment and retention of talented researchers.

NIVEL invests in the scientific quality of its research by internal peer review (as part of the quality assurance system), by facilitating continuous education, by encouraging researchers to attend international

¹ Academy for Health Services Research and Health Policy, 2000.

conferences, by participating in the wider scientific community (e.g. as reviewers or editorial board members of scientific journals) and by stimulating young researchers to work on a PhD. NIVEL participates in two inter-university research schools, and in 2009, eight senior staff members held a (special) chair in five different universities.

The societal quality of NIVEL's research is equally important, as a direct consequence of NIVEL's mission as a national institute for health services research. In the assessment of the societal quality of health services research, three aspects are primarily relevant: (a) the way research questions are formulated in relation to societal needs and in interaction with societal stakeholders, (b) the interaction with stakeholders in the course of the research process, and (c) the way research results are disseminated to actors who are in a position to use these results in decision making.

NIVEL invests in societal quality by internal and external quality assurance, by yearly consultations with stakeholders, by contributing to research agenda setting, by establishing multiparty-committees for externally funded research, by taking an active part in advisory boards, by encouraging researchers to attend national conferences, publish in professional journals and network within the health care and health policy community, by disseminating research results, and by an explicit human resource policy in which performance in the acquisition of research projects is one of the relevant criteria for granting tenure. Consequently, we have opted to be evaluated on the quality of our research from both a societal and scientific perspective. It is the art of applied health services research to balance the demands of scientific quality and societal relevance.

NIVEL has an international orientation

The international orientation is the result of deliberate policy to increase the societal impact of national research and to provide information and advice to other countries, especially transitional countries (cross border learning); to enhance the scientific quality of research (international comparative research has a greater scientific impact), and to obtain international funding (changing landscape of research funding, with diminishing budgets at national level and growing budgets at the level of the European Union). This policy entails:

- active participation as a WHO-collaborating centre for primary health care since 1987. In 2006, this status was confirmed in a re-certification procedure, extending the collaborative status for another four years (recently it was again extended until 2014);
- investment in the relationships with DG Sanco of the EU (in the recent past through project activities in the area of scientific programme support);
- investing in international network organisations, such as EUPHA (the European Public Health Association) [↗](#), EACH (the European Association for Communication in Health Care) [↗](#) and EFPC (the European Forum for Primary Care) [↗](#), who all have their home base at NIVEL;
- facilitating other scientific networks, visiting scholars etc.;
- setting priorities for research areas to be developed internationally.

By the end of 2009, NIVEL was the principal executor of four EU funded studies and partner in another six studies (see table 1.1).

Table 1.1 Overview of EU funded studies at NIVEL in 2009 

NIVEL as principal executor	NIVEL as partner
<ul style="list-style-type: none"> • EURHOMAP: Mapping professional home care in Europe (DG Sanco) • PHAMEU: Primary health care activity monitor for Europe (DG Sanco) • HSREPP: Health services research on European policy and practice (DG Research) • APRES: appropriateness of prescribing antibiotics in primary health care (DG Research) 	<ul style="list-style-type: none"> • DUQuE: Deepening our understanding of quality improvement in Europe (DG Research) • EUGATE: European best practices for improving access, quality and appropriateness of migrant health care (DG Sanco) • SENPERFORTE: prevention of sexual and gender-based violence against and among young refugees and asylum seekers (DG Justice) • TRANSFoRm: Translational Medicine and Patient Safety in Europe (DG Infso) • MEHO: Migrant and ethnic health observatory (DG Sanco) • RDTF scientific support: Scientific support to the Rare Disease Task Force activities (DG Sanco)


A framework to assess the societal impact and scientific quality of research

NIVEL has developed a framework to assess our impact and quality based on two dimensions. The first consists of four domains of quality and the second consists of two main target groups. The domains are: knowledge production, dissemination, cooperation, and funding. The target groups distinguished are policy makers and the scientific community, reflecting our dual mission.

Table 1.2 NIVEL's framework for assessing the societal and scientific quality of research

Domain	Policy makers	Scientific community
Knowledge production	<ul style="list-style-type: none"> - policy reports - publications in policy or professional journals 	<ul style="list-style-type: none"> - articles in peer-reviewed journals - dissertations - (chapters in) academic books
Dissemination	<ul style="list-style-type: none"> - presentations - website - invitational conferences - citations in government documents - newspaper clippings 	<ul style="list-style-type: none"> - presentations (published abstracts) - key note lectures - citations in research articles
Cooperation	<ul style="list-style-type: none"> - membership of policy committees - providing feedback information - editorial board policy/ professional journals - official requests for advice - mobility of researchers 	<ul style="list-style-type: none"> - membership of scientific committees - participation in external research groups - editorial board of scientific journal - membership of research school - dissertation supervisor
Funding	<ul style="list-style-type: none"> - funding from policy sources 	<ul style="list-style-type: none"> - funding from scientific sources

Previous assessment of NIVEL

The previous assessment covered the period 1997-2003. The international committee – based on the Self-Evaluation and a site visit – came to an overall assessment  of NIVEL as ‘excellent’ (scientific quality ‘very good’ and societal impact ‘excellent’). Issues addressed by the international committee in their assessment report were:


- the place of NIVEL in the knowledge infrastructure of the MoH needs to be clarified (this has been realized: from 2008 on there is a 4-year covenant for strategic research and for matching funds for scientific and EU-projects; from 2009 on, NIVEL receives a special grant from MoE for more fundamental research);
- NIVEL needs to invest in an European orientation (NIVEL has (unsuccessfully) attempted to get separate MoH funding for developing an international programme; however, we have invested

successfully in getting EU funding; finding matching funds will remain a problem when the amount of EU-funded research increases);

- National databases can be more fully utilized (this has been at least partly realized: large numbers of scientific and policy publications; many external research groups use the infrastructure);
- NIVEL was advised to conduct more research on new professions, especially in the care for chronically ill (this was partly realized: reports on practice nurses; task delegation and substitution as parameters in human resource planning models);
- NIVEL staff have a lot of knowledge and experience that could be the basis for policy oriented review studies (realisation: first review study (on primary care) started in 2009);
- NIVEL should reinforce its relations with the universities (realisation: 6 more staff have a special chair).

Outline of the Self-Evaluation report

Our report follows the Standard Evaluation Protocol (SEP). Chapter 2 describes the research staff and the funding of NIVEL. In chapter 3 we have described the research environment, both the internal research environment and external collaborative relationships. Chapter 4 describes the total output of NIVEL and utilization (by internal and external projects) of the national databases and panels. Chapters 5 and 6 are core chapters that deal with NIVEL's dual mission; they respectively describe scientific quality and societal relevance. Chapter 7 describes the management structure and human resource policies and associated issues. Finally, chapter 8 weighs the results of the previous chapters, analyses the strengths, weaknesses, opportunities and threats, and the strategy of the institute for the coming years.

To liven up the report, we start each chapter with a brief narrative of the societal impact of a piece of NIVEL research. Additional information is provided on our self-evaluation website. This mark  indicates that more information about this subject can be found on the website.

Conclusions

NIVEL is a typically national institute, aiming to produce knowledge that is both scientifically sound and relevant to policy makers. It distinguishes itself from many academic groups in the importance of its societal mission and at the same time it distinguishes itself from consultancy firms and commercial research in the emphasis on scientific quality. The position of NIVEL as described in this chapter has implications for the terms of reference for this Self-Evaluation. NIVEL wants to be evaluated on its national role, its domain of applied and applicable health services research, both its scientific quality and societal relevance, on its role as an independent organisation with broad-based support in policy, health care institutions, professional organisations, insurance organisations and patient organisations, on its network in policy and research, and as a national centre of expertise with an international orientation.

Societal impact: International and Migrant Health

Case: Assessment of primary care in Central and Eastern Europe and Central Asia

Brief description of the research:

Aspects of primary care are studied in Member States of the WHO European Region by means of research instruments developed by NIVEL. The focus of the research is primarily at national level (legislation; regulation; decentralisation; medical education for primary care; continuing education; organisation of patients and professionals); the provision of services by primary care physicians / GPs (by means of survey); and experiences of patients with primary care services (also by survey).

Policy level:

National/international. NIVEL's assessments of primary care systems in Central and Eastern Europe and Central Asia examine and compare national policy within these countries as well as in the WHO European region, consisting of 53 Member States.

Policy area:

Primary health care. The assessments result from consultations between the WHO Regional Office for Europe and the Ministry of Health in Member States. NIVEL is responsible for the technical implementation of the assessments, including analyses, reporting and contributions to the dissemination and advice process. The results of the assessments are intended to raise awareness of primary care issues, to help setting priorities for future policy development and to strengthen the evidence base for primary health care policy making.

Impact of the research on policy:

Member States and the WHO agree to conduct an evaluative study of the primary care system in the context of Biennial Collaborative Agreements (BCA). Stakeholders in the countries are usually involved and routinely informed about the results of the study. Reports are published by WHO Europe in English as well as in the national language. Reports are launched at a policy round table or conference with stakeholder representation. Recommended policy actions are discussed on that occasion. Follow up can be organised in the ongoing or next BCA.


NIVEL's role in policy networks:


NIVEL has been a WHO Collaborating Centre with the WHO Regional Office for Europe since 1987. In that position NIVEL has contributed to numerous health policy events and has undertaken many studies that have resulted in policy reports and articles. Furthermore, NIVEL's fruitful collaboration with the European Observatory on Health Systems and Policies has resulted in contributions to book chapters and editorship of books published by the Observatory. NIVEL has been co-author of the Health System Review 2008 of Belarus. As a National Lead Institution (NLI), NIVEL has co-produced the Health System Review 2010 of the Netherlands. Recently, the Observatory and NIVEL have agreed to publish a book on home care in Europe.

Kringos, D.S., Boerma, W.G.W., Hutchinson, A., Zee, J. van der, Groenewegen, P.P. The breadth of primary care: a systematic literature review of its core dimensions. BMC Health Services Research, 2010, 10(1).

Kringos, D.S., Boerma, W.G.W., Pellny, M. Measuring primary care quality management in health systems in transition: Pilot application of a new instrument in Slovenia and Uzbekistan. Quality in Primary Care, 2009, 17(3), p165-177.

Wiegers, T.A., Boerma, W.G.W., Haan, O. de. Maternity care and birth preparedness in rural Kyrgyzstan and Tajikistan. Accepted for publication in Sexual and Reproductive Healthcare, 11 August 2010.

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

2 Composition of the institute and earning capacity

To be able to realize its mission, NIVEL should be stable or growing slightly in terms of staff size and funding. Given the funding structure of NIVEL, partly with subsidy by the MoH and partly with project grants, its earning capacity is an important parameter in the assessment, as is the success rate in grant proposals.

Past policy should be reflected in good and clear relations with the MoH and increased international funding. International funding poses a problem with matching requirements in respect of EU funding.

Staff and composition

The current numbers of researchers and support staff are expressed in full time equivalents (FTEs). This is a measure of the size of NIVEL over the years and places output, e.g. in terms of numbers of publications (see later chapters), in perspective. Because of the large share of commissioned research at NIVEL, most researchers enter as temporary staff. Tenured staff include all those with a permanent contract. They nearly all hold a PhD and comprise mainly senior researchers, programme coordinators and scientific management. Support staff consists of two subgroups: research support staff (including NIVEL's Centre for Knowledge Exchange [CKE]), and other support staff, such as financial and personnel departments.

Table 2.1 Research staff in full time equivalents between 2004 and 2009


	2004	2005	2006	2007	2008	2009
Tenured staff	32.0	34.5	32.9	30.5	32.0	32.0
Non-tenured staff	43.3	47.8	50.0	46.2	49.3	54.5
Of which PhD-students*	7.2	7.1	4.8	5.3	5.4	5.3
Total research staff	75.3	82.3	82.9	76.7	81.3	86.5
Research support staff	30.7	29.5	32.0	28.8	27.9	29.9
Other support staff	16.9	16.8	15.6	16.9	17.2	19.0
Total staff	122.9	128.6	130.5	122.4	126.4	135.4
Share of scientific staff	61%	64%	64%	63%	64%	64%

* As PhD-students we count those working on a project that was intended from the start as a PhD project.

The staff numbers fluctuate somewhat over the years. In the period 2004-2009 total numbers increased slightly. The share of scientific staff as a percentage of total staff is stable over the current period. This reflects the primacy of the core process of research as well as the aim of containing overhead costs.

NIVEL is a multidisciplinary research institute. This is mirrored in the disciplinary background of the researchers. Many researchers are trained in two disciplines, for instance a profession, such as medicine, nursing or physiotherapy, and another discipline, such as psychology, sociology or health sciences. About half of the researchers hold a PhD degree.

PhD students at NIVEL


The scientific aspirations of NIVEL are reflected inter alia in PhD dissertations. Twenty-three dissertations were defended in 2004-2009 , averaging nearly four (3.8) dissertations per year. By comparison, during the period 1997 to 2003, 22 dissertations by NIVEL researchers were defended (3.1 per year on average).

2009 was an exceptionally good year with 9 PhD theses defended. We expect the number to gradually increase during the coming years as a result of MoE funding.

Table 2.2 Educational background and share of PhDs among NIVEL researchers

Educational background	2004	2005	2006	2007	2008	2009
Medicine	6%	6%	7%	7%	6%	3%
Nursing	8%	8%	6%	3%	2%	3%
Allied health professions	13%	10%	10%	9%	11%	15%
Health Sciences	21%	25%	19%	21%	19%	21%
Psychology	28%	30%	27%	26%	27%	26%
Social Science	28%	26%	30%	31%	30%	26%
Other	25%	26%	34%	32%	30%	32%
No. holding a PhD	43	45	52	47	48	49
% holding a PhD	49%	49%	54%	52%	54%	47%

Researchers who complete their dissertation at NIVEL can follow one of two paths. Some work on commissioned research and base their PhD on scientific articles arising from these projects. The projects in themselves were not intended as PhD projects, but gradually a PhD thesis emerges. NIVEL stimulates these trajectories by giving people a time-out from other project duties in the final stage or by finding other funding to finalise the PhD thesis. The second trajectory is comparable to PhD students at university: a long-term research project, usually funded by ZonMw, NWO or charity funds, is the basis for a PhD project from the start.

NIVEL's staff members are also involved as (co)supervisors in PhD projects at other institutes: in the 2004-2009 period, seventeen of these external dissertations  were defended. Finally, NIVEL attracts young researchers who defend their PhD thesis (mainly written at another institute) while working at NIVEL (18 in 2004-2009).

Scientific versus societal research staff

Given NIVEL's dual mission, we also present the *estimated* breakdown in FTEs for scientific research as well as societal (policy oriented) production. We adapted the categories of time allocation, as used in university settings, to NIVEL's specific situation. Apart from administration, we distinguish – in line with NIVEL's two-fold mission – scientific research input and societal research input. The allocation of inputs to each of these categories (see table 2.3) is broadly based on our experience with actual use of time. As of 2009 the percentage of scientific research for tenured staff has increased to 30%, and the percentage of policy oriented research has declined to 40%, as a consequence of the allocation of a MoE grant.

Table 2.3 Estimated breakdown of working time

	Scientific research	Societal research	Administration
Tenured staff	20%	50%	30%
Non-tenured staff	25%	65%	10%
PhD students	65%	25%	10%

Using these fixed percentages and the total numbers of FTEs for each of the three categories, we have estimated the scientific input and the input for societal production (table 2.4). Based on this, the available time for scientific as well as societal products has remained quite stable since 2004, but is slightly higher in 2009 for the reasons explained above.

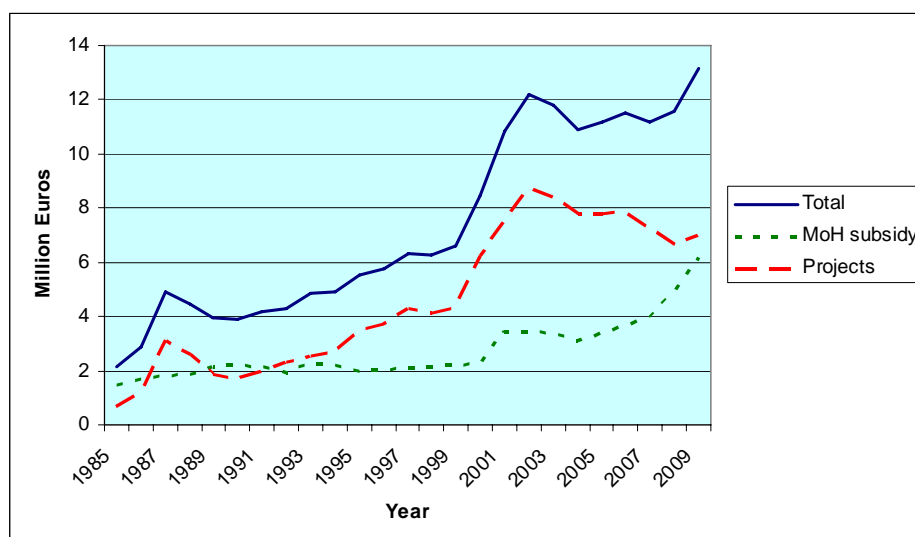
Table 2.4 Scientific input, input for societal products and research support staff, in full-time equivalents, 2004-2009

	2004	2005	2006	2007	2008	2009
Input for scientific products						
Tenured staff	6.2	6.1	5.9	6.1	6.4	9.6
Non-tenured staff	9.0	10.2	11.3	10.2	11.0	12.3
PhD students	4.7	4.6	3.1	3.4	3.5	3.4
Subtotal scientific input	19.9	20.9	20.3	19.7	20.9	25.3
Input for societal products						
Tenured staff	15.5	15.2	14.7	15.2	16.0	12.8
Non-tenured staff	23.5	26.5	29.4	26.6	28.5	32.0
PhD students	1.8	1.8	1.2	1.3	1.4	1.3
Subtotal societal input	40.8	43.5	45.3	43.1	45.9	46.1

Sources of funding

Total funding can be divided into MoH subsidy, currently based on a four-year covenant, and project funding. A historical overview of the turnover of NIVEL since the 1960s is presented in figure 2.1. NIVEL's annual turnover is around 14 million euros of which almost 6 million euros consisted of the MoH subsidy in 2009. Since 2009, an extra grant of 1.5 million euros is provided by the MoE, specifically for scientific research.

Figure 2.1 Financial development of NIVEL between 1985 and 2009: total funding, MoH subsidy and projects (research funds and contracts)



The rationale of a MoH subsidy for NIVEL is to provide support for our national function in the knowledge infrastructure of the MoH. The biggest part of NIVEL's MoH subsidy is earmarked for specified activities. Hence, it is not synonymous with a budget for free research. Only part of the subsidy is earmarked for

strategic knowledge development and can be termed ‘direct funding’ in analogy to its use in the Dutch university context. We will first outline the past situation of the MoH subsidy and then discuss the contents of the MoH subsidy in the current situation (=2008 and 2009). The reason is that the MoH subsidy has changed during the review period, as a result of strategic debates with the MoH after our previous external review.

The MoH subsidy: past situation

In a long term perspective, the relative share in total turnover of the MoH subsidy first decreased when the MoH subsidy remained more or less unchanged in absolute terms while revenues from temporary research funds and contracts increased. Previous reviews of NIVEL have defined this as an important and dangerous development, particularly in view of the need to have sufficient room for non-commissioned, free or strategic research. Following these reviews, much energy has been devoted to attempts to change this trend. As of 2004 the MoH introduced a new way of budgeting the institute’s subsidy, which limited the room for strategic research. From then on, the MoH subsidy was built up on the basis of concrete activities that needed approval by the MoH. The available budget for strategic research was approximately 1.25 million euros.

The MoH subsidy: current situation

The situation changed with the agreement on a four-year covenant between the MoH and NIVEL, covering the period 2008-2011. The covenant is based on activity-based budgeting (as introduced in 2004) but the activities are now clearly defined and divided into four categories: 1) strategic knowledge development (including matching funding for EU projects and scientific projects); 2) earmarked budgets for national databases and panels; 3) CKE (Centre for Knowledge Exchange); and 4) short term policy questions to be defined by the MoH. In terms of budget, the national databases and panels account for by far the biggest share: 3.2 million euros in 2009.

The amount of money available for strategic research was approximately 1.5 million euros in 2009, including 0.25 million euros for matching.

The covenant with the MoH was an improvement on the past situation:

- it resulted in a clear definition of the different parts included in the institute’s subsidy;
- it recognized that the available budget for strategic research may be used as matching funding for scientific and EU projects, although higher matching funding implies less room for strategic research;
- it avoids strong yearly fluctuations in funding, especially since many activities require a long time horizon;
- it provides continuity of databases and panels that used to be financed on a temporary project basis, but were made part of the institute’s subsidy.

As some databases and panels were shifted from contracts to the institute’s subsidy, the MoH subsidy increased, although without creating more room for strategic research.

MoE project grant

Starting in 2009 (for a four year period) the MoE provides a project grant of 1.5 million euros per year for the intensification of NIVEL’s scientific mission. This grant provides funding for four types of activity: 1) fundamental research through new PhD projects; 2) capacity building through additional funding for PhD trajectories based on commissioned projects; 3) international visibility of health services research through short research/writing periods for senior staff; 4) strengthening NIVEL’s academic position through special chairs, participation in the (international) scientific world and funding for conferences, courses etc. Ultimately, this is best seen as the equivalent of the direct funding of the universities. In figure 2.1 this MoE grant is included under projects.

Apart from facilitating these activities, MoE funding also released some of the MoH funding for strategic research. In 2009 it was decided to use this to start policy-oriented review studies; the first – on primary care – will be published in 2010.

Earning capacity

In this section we discuss the funding from research funds and subsidies, as well as contracts. Apart from the MoH subsidy we have split up project funding into scientific research funds, other temporary funding through subsidies and contracts, and international sources of funding.

Table 2.5 Funding of research in 2004-2009

	2004		2005		2006		2007		2008		2009	
	€	%	€	%	€	%	€	%	€	%	€	%
Funding:												
MoH subsidy	3,120,265	28%	4,588,526	37%	3,663,971	32%	3,941,943	35%	4,931,566	43%	6,164,142	47%
Scientific research grants*	1,121,718	10%	1,603,593	13%	1,881,667	16%	2,057,080	18%	2,218,179	19%	2,786,811	21%
Subsidies and contracts	5,696,035	52%	5,522,202	45%	5,192,613	45%	4,192,642	38%	3,514,796	30%	3,556,055	27%
International	1,079,739	10%	644,511	5%	757,595	7%	982,955	9%	905,901	8%	642,594	5%
Total funding	11,017,757	100%	12,358,832	100%	11,495,846	100%	11,174,620	100%	11,570,442	100%	13,149,602	100%

* Research grants include NWO, charities, ZonMw and for 2009 the MoE grant. 

Scientific research grants

For the scientific part of NIVEL's mission, the MoE grant and funds received in competition from charities and at least part of the funds from the Netherlands Organisation for Health Research and Development (ZonMw) are important. Grants received in competition from charities are often intended to result in a PhD thesis. Only part of the funds received from charities aim at direct societal impact. ZonMw also has a dual mission (like NIVEL). It finances fundamental and strategic research, as well as policy oriented research and implementation projects. Some of the projects are longer and – although still aiming at societal impact – can be organised as PhD projects. Other ZonMw projects are shorter and mainly aim at societal impact. It is therefore difficult to say which part of these funds really belongs to the category of research funds related to the scientific mission of NIVEL and which part belongs to the funding of the societal mission. The share of scientific research funds increased from 11 percent to 21 percent over this review period. This development illustrates the greater emphasis on scientific research within the earning capacity of NIVEL.

Subsidies and contracts

This category contains all other temporary funding. Historically, this category witnesses to the vitality of NIVEL and its ability to attract funds. In recent years the share of contracts has declined. The main reason is that the MoH has transferred databases and panels that used to be funded on a temporary, project basis to earmarked funding within the four year covenant in 2008. As a result, the share of contracts carrying other funding has decreased from 61% in 2004 to 27% in 2009.

International

The share of international funding fluctuates over time. It is still a modest share of total funding (5% in 2009). In the past number of years we have invested in getting more closely involved in DG Sanco (through

running the scientific secretariat of some of their programmes) and through explicit priority setting (priorities were primary care, patient safety and patient experiences). One big advantage of international (EU) funding is that projects are usually lengthy (generally three years).

Success rate of grant proposals

The success rate of grant proposals is an important indicator of the earning capacity of NIVEL. The success rate of proposals for scientific funds averages 50% but fluctuates from year to year (see figure 2.2). The success rate for policy oriented research is higher (65% on average) and first showed a decreasing trend, but more recently started to increase again. Overall, the success rate is very high. The number of submitted applications for scientific funds is on the increase, while the number of proposals for policy oriented grants first increased and is now declining again.

Figure 2.2 Success rate of grant proposals for scientific research funding (left scale: in numbers; right scale: success rate)

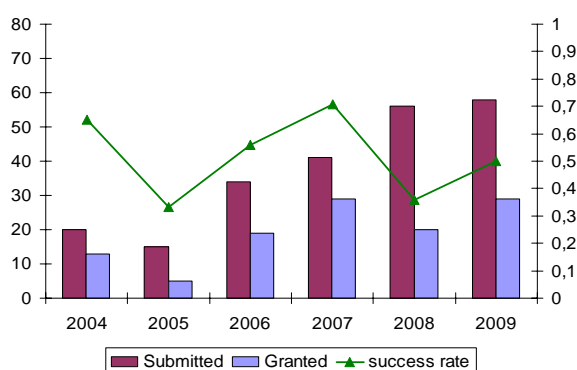
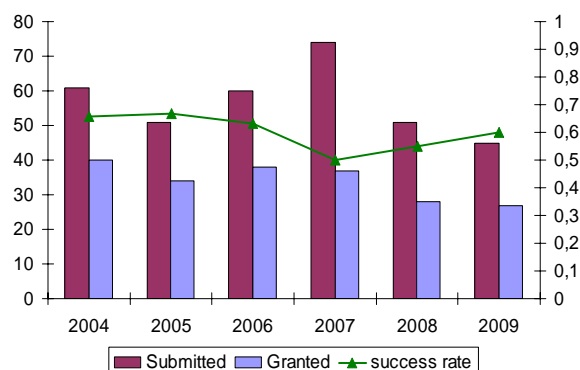


Figure 2.3 Success rate of grant proposals for policy oriented research funding (left scale: in numbers; right scale: success rate)



Conclusions

NIVEL is a stable institute in terms of staff size and funding. Its size is slightly increasing as is its annual turnover. NIVEL has a good earning capacity. The unbalanced funding structure, that was identified as a problem in the previous assessment of NIVEL, has improved. The covenant with the MoH provides earmarked funding for strategic research and the possibility of allocating matching funds to scientific and EU-projects. The MoH has shown confidence in NIVEL by shifting project grants to the MoH subsidy and entering a 4-year covenant and an intended 6-year covenant for the next period.

From 2009 the special grant from the MoE provides additional funding to strengthen NIVEL's scientific mission. The European orientation is borne out by project funding from the EU. There is as yet no clear increase in the share of international projects in total funding.

Although considerable effort has been made with the MoH, separate funding for developing an international programme was not realised. As a consequence, the investment in preparing EU grant proposals and complying with matching requirements for EU projects is still a problem. This problem has recently been addressed by the Advisory Council on Health Research (RGO), with special reference to the position of institutes, such as NIVEL.

The success rate of grant proposals is very good (although we don't have benchmark data from other research institutes).

Societal impact: Communication in Health Care

Case: VOICE - Communication with older cancer patients

Brief description of the research:

The project aimed at improving the way older patients with cancer are informed about chemotherapy by an oncology nurse. For this purpose, a total of 210 nursing encounters with cancer patients aged 65 years or more were video-taped at the oncology departments of ten hospitals. After the encounters, patients were asked what they remembered from the information given by the nurse. Their answers were compared with the information that was actually provided as observed in the video-recordings. In addition, we examined what factors facilitated or hindered the information recall. The results provided input for the development of a new educational model for nurses, which was subsequently tested in a randomized controlled trial. It transpired that nurses who worked according to the new educational model, provided significantly more tailored and affective communication and more information about the prognosis, compared to the nurses receiving education as usual.

Policy level:

Health care professionals and hospitals. The number of older patients with chronic diseases such as cancer is rapidly increasing, as is the complexity of the treatments they are prescribed. The results of our project have been translated into a new educational model for cancer nursing as well as in a training program for these health care professionals. This new educational model has been disseminated throughout the oncology departments of all hospitals in the Netherlands.

Policy area:

As more and more individuals with cancer are prescribed oral chemotherapy to be taken at home, patients need to receive clear and understandable treatment information even more. After all, these new types of treatment place high demands on patients' self-management, understanding of information and subsequent treatment adherence. The complex relationships between the content and process of the communication and patient recall warrants further research. Recall of information seems to depend more on the amount and the content of the information provided. Restricting the amount of information to the most important topics, and allowing the patients time to absorb the information, are therefore highly recommended.

Impact of the research on policy:

Increasingly used in Dutch hospitals. Our telephone survey among 54 hospitals revealed that, at the end of the project, 35 hospitals were already working with the newly developed educational nursing model, and most of the remainder intended to do so.


Use of national information systems:


This project has added new video-taped consultations to the Database of doctor-patient communication for use in future research. The Database of doctor-patient communication contains over 16,000 video registrations of contacts between patients and nurses, medical specialists and general practitioners recorded in the Netherlands as well as in other countries. The Database reflects the changes in health care interactions over the last 35 years and is, inter alia, used for developing lifestyle recommendations, measuring therapy compliance, and examining the impact of the (new) health care system and the influence of patient legislation.

Jansen, J. Communicating with older cancer patients: impact on information recall. PhD-thesis Universiteit Utrecht. Utrecht: NIVEL, 2009.

Jansen, J., Butow, Ph., Weert, J. van, Dulmen, S. van, Devine, Rh., Heeren, Th., Tattersall, M., Bensing, J. Does age really matter? Recall for medical information in cancer patients. Journal of Clinical Oncology, 2008, 26, p5450-5457.

Posma, E., Weert, J. van, Jansen, J., Bensing, J. Older cancer patients' information and support needs surrounding treatment: An evaluation through the eyes of patients, relatives and professionals. BMC Nursing, 2009, 8(1).

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

3 Research environment: internal structure and external relations

As far as the internal research environment is concerned, a well-developed quality system that governs the research processes is of vital importance. The core of a research quality system should be peer review. The internal governance of research processes aims at high quality and timely research. Conditions for that are good communication, co-operation and support within NIVEL. In the external environment it is important to connect both to policy makers and the health care field *and* to the scientific world. In connecting to the policy and health care fields, two elements are important: the Societal Advisory Board and a yearly round of consultations among stakeholders. At project level, linkage is made via advisory committees. Embedding in the scientific world is reflected in numerous network links. Networking is important, but time-consuming. It is especially important in international projects where we use the link with NIVEL based organisations, such as EUPHA, EACH and EFPC.

This chapter describes two important aspects of the research environment: the internal structure of quality assurance, cooperation and support, and external relationships and networks.


The internal research environment is intended to facilitate researchers to do their work in the best way possible, in a stimulating environment. It should combine a professional atmosphere (professional freedom, exchange of ideas, peer review) with enough guidance, depending on the type of research and stage of the researcher's career.

Quality assurance

The core of NIVEL's quality assurance consists in *peer review meetings*. All products of research (proposals, reports, articles, books) are peer reviewed. The peer review meetings focus on scientific quality. They are obligatory for all researchers, and are conducted on the basis of rotating participation. Currently the meetings are held twice weekly, in order to have frequent opportunities to bring in work for review and workable numbers of products to discuss. The current organisation of the peer review meetings resulted from an internal audit of the meetings.

All research proposals are also evaluated by the management team, with a focus on feasibility, the proposed budget and planning, as well as strategic considerations. The management team also monitors data protection rules, ethical review and formalisation of collaborative relations; moreover, potential risks are assessed.

Twice yearly the research output and the status of all projects are evaluated in a regular meeting of all programme coordinators. These meetings have contributed to developing a set of indicators to keep track of the scientific quality *and* the societal relevance of products. In so far as possible we follow agreed quality indicators. In the area of societal quality indicators, we have actively contributed to the national debate. NIVEL invests in the societal relevance of research by means of discussions with its Societal Advisory Board and via annual *consultations* with the relevant stakeholders (see also the section on national networks and collaboration, later in this chapter).

NIVEL's quality system is ISO certified. Central to our quality system is the primary process: conducting good research. The development of our quality system started in 1997 and ISO-certification was granted in 2000, with complete re-certification in 2002, 2005 and 2008. This development was triggered by previous external assessments of research. A team of two external auditors conducts an annual audit  of NIVEL. The fact that NIVEL has acquired the ISO-9001 certificate, shows that the processes and procedures

developed to guarantee good process quality are externally validated. Overall, the external auditors see NIVEL as a flexible organisation with a well-developed policy cycle.

Research processes

The quality of research processes is assured by a hierarchical order (programme coordinators are responsible for the projects which are under their supervision; the heads of the research departments are in turn responsible for the programme coordinators). Process quality assurance is facilitated by a Quality Handbook, developed as part of the ISO-9001 certification. Research processes can be divided into several stages, and for each stage procedures and work instructions need to be followed.

- *Research proposals*
Proposals are evaluated on scientific quality in the peer review meeting, and subsequently by the Management Team on feasibility, planning, proposed budget, staffing, and potential risks.
- *Staffing of new projects*
Rules for hiring and selecting personnel, introduction of new personnel into the organisation.
- *Continuous education*
Assessment of the need for continuous education, conference attendance.
- *Project implementation*
Regular project meetings of those working on the same project and the programme coordinator or senior researcher; logbooks: researchers have to keep an electronic logbook of their project to increase reproducibility and transferability of research (NIVEL is, as far as we know, one of the first research institutes to systematically apply logbooks); rules for data management and quality control of data (special control protocols have been devised for feedback information and for the disclosure of performance information to the wider public, as mistakes in this type of reporting may have serious consequences); internal rules for data protection.
- *External collaboration*
Rules for formalising relations in collaborative projects; evaluation of cooperation; peer review of cooperative products. Many research projects require external collaboration. Guiding principle is that there should be a clear task delineation in advance. One of the issues that have to be dealt with is quality control of joint products. ISO-certification implies that NIVEL is responsible for the quality of its work and for any part of the work done by others. The products of the external partners in a project have to be reviewed within the NIVEL peer review meeting.
- *Evaluation and implementation*
Rules for dissemination of results and arranging invitational conferences.

In 2006, a risk inventory was drawn up to determine at which stages of the research process errors could arise and which consequences they might have. Based on this inventory and on internal audits of parts of the process, the quality system is regularly evaluated and updated.

Internal communication and collaboration

Communication and exchange of information are increasingly important given NIVEL's size. As in every organisation there is a large amount of 'tacit knowledge' that is communicated in informal meetings between members of the organisation. Apart from that there are a number of formal communication structures. Intranet combines access to official information and informal messages. Intranet is used to update colleagues on relevant documents and information e.g. concerning quality and human resources procedures. Weekly information from the management team meetings is communicated through intranet. For each meeting of the Supervisory Board a chronicle of important events, developments and projects is made, which is available to all employees. The 'Employee satisfaction monitor' (chapter 7) shows that these are well-used sources of information.

All research projects are embedded within a programme line. This is the home base of the researchers where information is exchanged. Programme coordinators organise regular meetings of all their researchers. Special research topics that are relevant to several programme lines, are discussed in small, informal groups. An example is an informal group involved in research on people with a mental disability.

Most research projects are conducted on the basis of team work. Researchers often switch around between programmes. This has its pros and cons. Advantages are that they more easily develop a broad research competence and that they can participate in a wide range of different projects. This is an important asset in a research institute that is largely funded by grants. A negative side could be that they become less specialized in one topic. Usually, young researchers 'shop around' between several research lines, until they either leave NIVEL or settle within one of the programme lines.

Apart from collaboration within projects and programme lines, a number of other collaborations exist within NIVEL, that are meant to monitor and improve research processes and their outcomes. These are diverse in composition, combining different expertise areas. In 2009, the following collaborations existed:

- Quality Committee, focusing on evaluating and adjusting quality procedures;
- Internet Editorial Committee, providing a quality check on items to be posted on the NIVEL website;
- ICT Committee, focusing on ICT improvement (error monitoring, new developments).

Research support

Research is becoming increasingly dependent on specialised technology. This requires well coordinated and adequately staffed support teams. Given the size of NIVEL, the time has come to organise research support in specialised teams. During the course of 2009 we decided to introduce several support teams (implementation started in 2010):

- Survey and panel research support team; this group coordinates and procures data collection through interviews (face-to-face and by telephone), postal and internet surveys and data preparation (scanning of questionnaires).
- Research support based on electronic medical records (EMR); this group coordinates expertise on collecting data from EMRs of GPs, allied health professionals and psychologists. Moreover, providing feedback information to health care providers requires new and efficient technologies.
- Research support for manpower data collection and dissemination; this groups collects data on human resources in health care and provides data for the general public about availability of health care via the government-sponsored website KiesBeter.nl.

Apart from the three support teams, a small team provides statistical expertise and highly specialised statistical tools.

External networks and collaboration

NIVEL's network comprises the health care and health policy sector and the national and international research community. External collaboration is one of the particular strengths of NIVEL, reflecting its national function and international orientation. In the next sections we describe NIVEL's network; first the institute's societal network and then its scientific network.

The external societal network of NIVEL

At the level of the institute as a whole, the Societal Advisory Board represents the different stakeholders. It is an important part of NIVEL's 'social capital'; individual board members are the door to the organisations and groups that are represented by them. The Societal Advisory Board was installed in 2009, when the governance structure of NIVEL was changed from a classical Board of Governors to a small, modern Supervisory Board. The Societal Advisory Board meets twice yearly; one meeting to look ahead and

provide advice about the research programme and one meeting to look back and evaluate.

An important role in maintaining the network of the institute as a whole is played by the annual round of consultations. A large number of organisations are consulted yearly by a delegation from the scientific management, programme coordinators and (senior) researchers to exchange information about research needs and NIVEL's possible role in satisfying these needs. The consultations provide feedback on the research NIVEL has done. Some of the suggestions made concerning research topics that could be further developed are: life course perspectives on chronic illness, integrating care outcomes in research on patient evaluations of care and human resource information on nursing and caring professions.

Individual researchers are visible in policy oriented networks through their membership of advisory boards and committees, informal meetings, presentations of research results and invitational conferences.

Box 3.1 Societal network in manpower planning research

Manpower planning research

This programme line has a broad societal network consisting of organisations that have an interest in human resource management and manpower planning. These include the Capacity Body, CBOG (institute for professions and training in the health care sector), the MoH and several professional associations. Over the years, research has been done for many professional associations. In 2009 research proposals were granted for manpower studies for three professional associations of medical specialists.

NIVEL is a 'preferred provider' for research for the Capacity Body. From its establishment in 1999, NIVEL has conducted manpower planning studies as background research to the advisory reports of the Capacity Body. The Capacity Body has a structure of Chambers (e.g. for medical specialists and general practitioners), with each chamber consisting of representatives of professionals, teaching organisations and insurers. In this way, by being connected to the Capacity Body, NIVEL researchers in this programme line are connected to many more organisations.

The external societal network is not only national but also international. NIVEL is a collaborating centre of WHO and is the home base of three international networks: EUPHA (the European Public Health Association) [↗](#), EACH (the European Association for Communication in Health Care) [↗](#) and EFPC (the European Forum for Primary Care) [↗](#). More than EUPHA and EACH, EFPC has a societal mission. In addition, NIVEL has been a WHO-collaborating centre for primary health care since 1987. In 2006, this status was confirmed in a re-certification procedure, which extended the collaboration period for another four years (until April 2010; recently it was again extended until 2014). The minutes of a meeting with WHO (EURO) clearly reflect their view of NIVEL:

"The partnership between WHO EURO and NIVEL is a very valuable one. It is mutually beneficial, with tremendous goodwill on both sides. It is dynamic and a living relationship that reflects the changing circumstances, challenges and opportunities that both organisations jointly face."

At project level NIVEL organises productive interactions with the health care sector and policy makers by setting up advisory committees to many of its research projects. These advisory committees typically consist of different stakeholders. The national databases all have multiparty programming committees.

The external scientific network of NIVEL

NIVEL participates in two national research schools, CaRe (Netherlands School of Primary Care Research) [↗](#) and Psychology and Health [↗](#). Research school participation has stimulated external collaboration. There are collaborative projects in both research schools and with a number of participating university groups. Universities have recently changed their research school policy. As a consequence, Psychology and Health will most probably cease to operate as a research school and instead will continue in a weaker form as a network. For the time being, CaRe will continue and will apply for re-designation in 2011. In the meantime NIVEL has diversified its links to the academic world through special chairs (8 chairs in 2009 with five universities).

Box 3.2 International networks in communication research

Communication research

Traditionally, NIVEL's medical communication research has had a strong national and international focus. For 20 years, between 20 and 30 Dutch and Belgian communication researchers have been meeting every two months at NIVEL to present and discuss their research projects. This so called Patient Provider Interaction (PPI) working group - chaired by Jozien Bensing – is the Dutch Chapter of EACH (the European Association for Communication in Health Care) and an official expert group of the Research School Psychology & Health. It includes around 40 junior researchers, post docs and professors and represents the disciplines of psychology, social science, pharmacy as well as medicine. The open and constructive climate, with a strong emphasis on sharing expertise and knowledge, is highly valued by the participants and facilitates collaboration and co-authorship. About twice a year, an international speaker gives a lecture during the PPI, usually as part of a working visit. Two large-scale collaborative projects which originated from the PPI, were the international, EU-funded comparative studies on doctor-patient communication in primary care in 10 European countries, which were carried out in 1998 and 2001. These projects and the network that was generated by these projects served as a starting point to launch EACH, the European Association for Communication in Health care, officially founded in 2001 by Jozien Bensing and Sandra van Dulmen. EACH is now an important international network with members from 33 countries and a tradition of biennial conferences with around 500 delegates and small scale workshops between conferences. EACH works closely together with a similar organisation from the USA, called AACH, the American Association for Communication in Health care. Thanks to these strong networks, the value, necessity and relevance of high quality provider-patient communication has become apparent in all echelons of health care. Moreover, these networks function as a magnet to international students and scholars who often apply for a stay at NIVEL to collaborate with NIVEL researchers.

Our national databases link our research with many university groups. NIVEL's policy is to share data with others (within the limits of data protection and the rules of the different data bases). Whenever possible, data sharing is embedded in collaborative projects (because of the need for intimate knowledge of the data being used), resulting in co-authored publications (see also chapter 4).

NIVEL's scientific network also incorporates other national institutes. The collaboration with RIVM (National Institute for Public Health and the Environment) is laid down in a covenant.

NIVEL researchers participate in scientific organisations and committees, such as the Health Council of the Netherlands, Royal Dutch Academy of Sciences and ZonMw. An important aspect of the role in (national as well as international) scientific networks is reviewing of research proposals and articles and membership of editorial boards. These activities can be seen as investments in the common good but also in (inter)national networks. Currently these investments are facilitated by the grant from the MoE.

International projects are basically always network projects. Participation in EUPHA, EACH and EFPC provides access to broader European networks. Apart from these networks, NIVEL has taken an initiative to form a network of (national) research institutes in Europe with a more or less comparable mission: ORPHEUS (Organisations of Research into Public Health in Europe and Utilisation of Services). The aim of this network was to join forces in international research projects. However, it turned out that specific projects need their own specific network partners and often these happened not to be the ones that participated in ORPHEUS. Therefore this initiative has been abandoned.

Box 3.3 International collaboration in publications: overview of collaborating countries



Conclusions

NIVEL has acquired and kept ISO-certification. This has helped to improve research processes continuously, leading to a research environment that combines a helpful and challenging atmosphere with enough guidance and direction. The quality goals as formulated in the quality system, refer both to societal and scientific quality. Research support is at an adequate level, but the increasing size of the institute combined with technological developments in data collection and handling requires a new structure which is currently being implemented.

In reaching the quality goals, networks are very important - societal as well scientific, national as well as international. NIVEL seeks direction in developing its strategy on the societal network, through a yearly round of consultations with stakeholders in policy and the health care field and through its Societal Advisory Board. At the level of research projects we aim at productive interactions by setting up multiparty committees.

The scientific network has benefited greatly from participation in national research schools and from hosting international (network) organisations. The scientific network has been strengthened by installing special chairs at several universities.

Societal impact: Organisation and quality of health care

Case: Adverse events in hospitalized patients: incidence and causes

Brief description of the research:

The first national research programme on patient safety in the Netherlands started in 2005 and was carried out by NIVEL together with the EMGO Institute for Health and Care research of the VU University Medical Center Amsterdam. The independent investigation was commissioned by the Dutch national association of medical specialists (OMS). It is a large-scale research programme on patient safety focussing on questions such as: How common are adverse events? How serious are they? And how can they be avoided?

The report, Adverse Events in Dutch Hospitals showed that of 1.3 million hospital admissions in 2004, unintentional harm - an adverse event – occurred in 5.7% of cases. This compares to international rates ranging from 2.9% to 16.6%. However, nearly 40% of the cases were deemed potentially avoidable.

The results were based on 7,926 patient records in approximately a quarter of Dutch hospitals (four university centres, six tertiary medical teaching hospitals and 11 general hospitals). In each hospital researchers studied approximately 200 files of patients discharged and 200 of those who had died. The files were first reviewed by nurses for criteria such as unintended re-admissions or unexpected deaths. Two independent medical reviewers/specialists then considered whether they constituted an adverse event.

The report notes that adverse events were not just caused by human errors but also by organisational and technical factors that may often result from the complexity of modern care, especially in older patients. Acts that contributed to death, however, are relatively often the result of potentially preventable diagnostic mistakes. It concludes: "In some situations harm can be put down to the risk of treatment itself but in other cases can be traced back to unsatisfactory treatment according to professional standards and shortcomings in the system of care". Launching the report, project leader Prof. Dr. C. Wagner outlined a number of recommendations. Variations in the function and performance of different hospital departments should be made more transparent; the registration of complications should be more systematic, and patients' records should be standardised and made part of medical training.

Policy level:

The research is the first to confirm the extent of the problem. Minister of MoH Ab Klink said in an emergency parliamentary debate that the situation could no longer be tolerated. All parties in Dutch health care back the report and prepared an "action plan" to tackle the problem.

Policy area:

Agenda setting and stimulating parties in acute care when the "action plan" was developed. The plan aims at reducing the number of potentially preventable adverse events by 50% in five years.


Impact on the general public:


Awareness was generated through articles in newspapers (NRC, Trouw, Nederlands Dagblad), press conference, and articles in journals on nursing medical and hospital care.

Zegers, H.W.M. Adverse events among hospitalised patients: results and methodological aspects of a record review study. PhD thesis. Vrije Universiteit Amsterdam. Utrecht: NIVEL, 2009.

Smits, M. Unintended events in hospitals: causes and the role of patient safety culture. PhD thesis. Vrije Universiteit Amsterdam. Utrecht: NIVEL, 2009.

Smits, M., Zegers, M., Groenewegen, P.P., Timmermans, D.R.M., Zwaan, L., Wal, G. van der, Wagner, C. Exploring the causes of adverse events in hospitals and potential prevention strategies. Quality & Safety in Health Care, 2010.

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

4 Output, academic and societal reputation

Given the size of its staff and funding, NIVEL can be expected to have a considerable output, and given its dual mission this is both scientific and policy oriented. For the scientific side of the mission we aim to publish articles in peer reviewed journals with an Impact Factor. We encourage our researchers to work on a PhD thesis.

A sizeable proportion of our output should be based on the large national information systems, used for answering policy questions, for our own research and shared with research groups all over the Netherlands. The previous institutional review emphasized the importance of more intensive use of the databases.

NIVEL has a dual mission, both societal and scientific. This is mirrored in the output of the institute. Scientific output is measured in terms of articles in peer reviewed journals, scientific books and chapters and PhD theses. Societal output is measured in articles in professional journals, NIVEL reports and fact sheets published on the website. Total output is given in table 4.1.

Table 4.1 Main categories of research output at institutional level

	2004	2005	2006	2007	2008	2009
Scientific publications:						
Articles*	95	109	158	123	99	131
- of which in journals with IF**	55	65	100	80	59	86
Scientific books	1	3	2	1	7	5
Scientific book chapters	10	11	28	9	10	9
PhD theses						
- NIVEL PhD theses	2	4	1	3	4	9
- Other PhD theses***	1	2	5	4	1	4
<i>Total scientific publications</i>	<i>109</i>	<i>129</i>	<i>194</i>	<i>140</i>	<i>121</i>	<i>158</i>
Societal publications:						
Articles	57	52	41	48	32	36
NIVEL reports	66	72	79	62	68	72
Professional books	10	5	8	6	10	7
Professional book chapters	14	6	9	5	9	12
<i>Total societal publications</i>	<i>147</i>	<i>135</i>	<i>137</i>	<i>121</i>	<i>119</i>	<i>127</i>
Total publications	256	264	331	261	240	285

* Including letters, editorials etc.

** We counted all articles in journals with an Impact Factor instead of all articles with an ISI code. For this reason, the counts presented in this table may differ from the analysis of CWTS (see chapter 5).


*** These are PhD theses of non NIVEL employees, supervised by NIVEL staff.

Scientific output


Scientific output is considerable, given the research capacity of the institute (see table 2.4 in chapter 2). Most of the scientific output is published in international peer reviewed journals with an Impact Factor. The fact that we still also publish in journals without an impact factor has several reasons. First of all, some journals that are expected to become important in our field did not yet have an impact factor at the time of

publishing one of our articles. Secondly, some research areas, such as nursing and midwifery, are not very well covered by journals with an IF (see chapter 5). It is, however, still important to publish our research in these areas in international journals.

PhD students

The scientific aspirations of NIVEL are reflected in numbers of PhD theses. Twenty-three NIVEL PhD theses  were defended in 2004–2009, which amounts to an average of nearly four dissertations per year. This is more than the previous review period of 1997 to 2003, when 22 PhD theses by NIVEL researchers were defended (over 7 years).

As described in chapter 2 we have two types of PhD theses: those based on projects with the intended output of a PhD thesis and those based on commissioned research with the primary aim of producing policy oriented reports. For the latter category it is difficult to say how many researchers are actually working on a PhD thesis at a given point in time. By the end of 2009, eight researchers were PhD students. Another 15 were writing articles, based on commissioned research, that will ultimately constitute their PhD thesis. Altogether 23 researchers were working on their PhD thesis at this point in time.

The trajectory of writing a PhD thesis on the basis of commissioned research is more difficult, the outcome is uncertain, and it takes longer. At the same time, it enhances the scientific quality of commissioned research and contributes to capacity building in our field. We believe that this trajectory needs extra support. One of the possibilities would be to set up a national fund to support PhD research on the basis of commissioned research projects, for example by funding one extra year to write a series of research articles to form a PhD-dissertation. This idea has been taken up by a committee of the Advisory Council on Health Research , and ZonMw has started a programme on health services research that provides subsidies just for this type of additional funding. More importantly for NIVEL, the grant from the MoE specifically recognizes this and provides funding for this type of PhD trajectory.

Box 4.1 Some typical examples of PhD theses at NIVEL (both types)

Type 1: comparable to PhD students at university: a long-term research project, usually funded by ZonMw, NWO or charity funds, is the basis for a PhD project from the start. Planned output: PhD thesis.

- M. Algera. All you need is... home care: matches between home care needed, indicated and delivered: a study among chronic patients. Defended at Maastricht University in 2005.
- J. Jansen. Communicating with older cancer patients: impact on information recall. Defended at Utrecht University in 2009.
- C. Veenhof. The effectiveness of behavioral graded activity in patients with osteoarthritis of hip or knee. Defended at VU University Amsterdam in 2006.
- M. Zwaanswijk. Pathways to care: help-seeking for child and adolescent mental health problems. Defended at Utrecht University in 2005.
- J.C.M. van Weert. Multi-Sensory Stimulation in 24-hour dementia care: effects of *snoezelen* on residents and caregivers. Defended at Utrecht University in 2004.

Type 2: based on commissioned research and on scientific articles based on these projects. The projects in themselves were not intended as PhD projects, but gradually developed into a PhD thesis. Planned output: policy-oriented report(s).

- T. Dorn. Health impact of the Volendam fire disaster. Defended at Maastricht University in 2007.
- J.D. de Jong. Explaining medical practice variation: social organisation and institutional mechanisms. Defended at Utrecht University in 2008.
- P.J.M.L. Mistiaen. Hospital discharge: problems and interventions. Defended at Maastricht University in 2007.
- I.C.S. Swinkels. Monitoring physiotherapy using a national registration network. Dissertation VU University Amsterdam in 2008.
- H.W.M. Zegers. Adverse events among hospitalised patients: results and methodological aspects of a record review study. Defended at VU University Amsterdam in 2009.

Staff members of NIVEL are also involved as advisors in PhD projects at other institutes (for 17 PhD theses in 2004-2009), and NIVEL attracts young researchers who defend their PhD thesis (written at another institution) while working at NIVEL (18 times in 2004-2009).

Societal publications

Our societal publications consist of articles in professional journals, reports, book chapters and books for professionals and policy makers. The output of societal publications is slightly lower than scientific output. However, as will be shown in chapter 8, there is more dissemination activity around policy-oriented and professionally oriented output.

Many commissioned research projects are published in a Dutch language report. Publishing the report is the starting point for further dissemination (see chapter 6). Part of the societal output is also published in journal articles, mainly in Dutch.



Use of research facilities

NIVEL operates a number of national databases and panels (see box 4.2). These provide information for further scientific research as well as for policy oriented products. We will briefly describe the information systems following the outline of NIVEL's research programme (see chapter 1) and we will use LINH – the national information system of general practice - as an example of how our information systems are utilized.

During the review period new databases and panels have been added and existing ones expanded to include new domains, health care providers and/or patient groups. One of the recommendations of the external Review Committee in 2005 was to focus more research on new professions in health care. This has been partly successful. Some studies have been completed on substitution of tasks to new professions, such as nurse practitioners, and also a new network of primary care psychologists has started. However, this has not yet resulted in acquiring funding for monitoring new professions on a regular basis.

NIVEL has developed procedures for the external use of these databases and panels, as it considers facilitating the external use of its databases and panels to be part of its national role in the Dutch knowledge infrastructure of health care.

Use of the Netherlands Information Network of General Practice (LINH)

Because of the specific emphasis of the previous external review committee on better utilization of the databases and panels, we illustrate this improvement with the use of the Netherlands Information Network of General Practice (LINH) . LINH is frequently used to address information requests both for internal NIVEL projects (45% of requests) and external projects (55%). In total 151 requests  were recorded in the period 2004-2009. Over the years, LINH has been used for a large number of scientific publications. In total 398 publications were recorded in the period 2004-2009, which comes down to an average of 66 publications per year. About half of these are published in Dutch, while the other half are international scientific publications. NIVEL researchers keep the LINH website up-to-date and contributed 105 publications during the review period.


Box 4.2 NIVEL's national databases and panels

Research area*	National databases and panels**	Description
Health and illness	LINH – Netherlands Information Network of General Practice; CMR-Sentinel stations: Continuous Morbidity Registration	Morbidity as presented in general practice
Patient experiences and evaluations	Dutch Health Care Consumer Panel; NPCG-National Panel of Chronically ill and Disabled; Panel of people with an intellectual disability	Questionnaire-based information from the general population and several groups of health care users
Health care professionals and organisations	Human resources registers for several professional groups	Information about individual professionals and their practices
	Panel of Nurses and Carers	Information about professional issues, work satisfaction, work-related pressure, training opportunities, career planning and involvement in the policy of the organisation.
Care processes	LINH - Netherlands Information Network of General Practice	Consultations, services, prescriptions, referrals
	LIPZ – National Information Network for Allied Health Care.	Information about patients' demographics, referrals, complaints, consultations, services and evaluation.
	LINEP - National Information Network of Primary Care Psychologists	Clients with completed treatments: background characteristics, diagnoses, number of sessions, type of treatment, treatment duration, referrals, reasons for untimely end of treatment
	Database of Doctor-Patient Communication	Video-taped real life consultations
Governance	Dutch Health Care Consumer Panel; Panel of Insurees	Questionnaire information on health insurance
Outcomes	Defined in most information systems	Health outcomes Social participation Quality and costs

* This corresponds to the structure of NIVEL's research programme (see the diagram in chapter 1).

** Some systems are mentioned more than once because they provide information in several areas.

Second National Survey of General Practice

LINH was also the basis for the second National Survey of General Practice . The first National Survey of General Practice (paper and pencil based data collection in 1987) resulted in 19 PhD theses, 35 key reports, and 172 articles in international and national journals. This in turn facilitated the funding of the Second Dutch National Survey of General Practice (EMR-based data collection in 2001). Most results of this study have been published in this assessment period, and are summarised below. Preparations for a third national survey, this time on primary care as a whole, started in 2005. Attempts to get the entire study funded failed, but an important part, the infrastructure for an integrated database of primary care, is funded by the MoH from 2010 onwards. Our strategy is to acquire funding for the other parts from different sources (a grant proposal for a census questionnaire to be conducted among the population using primary care in approximately 100 locations was submitted in the investment programme of ZonMw and favourably reviewed, but not yet granted).


The main publication  of the Second National Survey of General Practice, including the design of the study and some first results, took place in 2005. By the end of 2009 it had been cited 155 times (Scopus).

Table 4.2 Number of publications based on the Second National Survey of General Practice by NIVEL researchers until 2009*

	Before 2004	2004	2005	2006	2007	2008	2009	Total
Articles in English	3	8	22	32	23	14	16	118
Articles in Dutch	15	17	24	12	12	3	1	84
Reports and (chapters in) books	10	11	15	16	3	1	0	56
PhD dissertations	0	1	7	1	2	3	1	15
Total	28	37	68	60	40	21	18	273

* Excluding undergraduate / master theses and published abstracts of presentations.


Table 4.3 Scientific and societal collaboration 2004-2009

	2004	2005	2006	2007	2008	2009
Scientific collaboration:						
Scientific articles with international co-authors	15	7	15	7	7	10
Scientific articles with external Dutch co-authors	36	47	82	73	52	82
Memberships of editorial board scientific journal, international	12	8	12	13	13	10
Memberships of editorial board scientific journal, national	1	2	5	2	4	5
Reviewers of research proposals, permanent committees	4	5	4	5	18	9
Reviewers of research proposals, occasional	20	13	20	30	25	34
Article reviews, international	56	70	108	108	91	109
Article reviews, national	3	7	12	13	10	21
Memberships of research schools	24	24	23	24	31	29
Professorships	3	3	4	4	6	8
Keynote speakers	17	4	0	13	6	6
Societal collaboration:						
Committee memberships	14	28	10	17	21	20
Board members	4	6	3	10	14	12
External advisory groups	15	10	11	28	30	24
Formal collaboration	41	95	45	86	103	125
Projects with mirror information	4	4	3	6	3	5
Members editorial board professional journal	2	5	1	3	1	4
Formal requests for advice	10	5	4	2	5	16
Guest lectures / courses	9	18	20	25	27	27
Health Council activities	2	4	4	3	3	5
Organised Invitational Conferences	11	1	4	2	3	8

Embedding in the scientific world, the policy world and academic and societal reputation

NIVEL is embedded in the scientific world through membership of national research schools and ties with universities through special chairs occupied by the staff. We also contribute to the 'common good' by acting as editors of scientific journals, reviewing research papers and grant proposals.

NIVEL is also soundly embedded in the policy world, as described in chapter 7. NIVEL used to have a large network type board of governors, which was replaced by a smaller Supervisory Board and the Societal Advisory Board in 2009. NIVEL staff participate in committees, have board responsibility in

health care organisations and generally collaborate intensively with policy makers at the MoH and with patient associations, health care organisations and professional associations. Table 4.3 gives an overview of scientific and societal collaboration during the review period. The best proof of international collaboration consists in the publications that result from collaboration . Box 4.3 gives examples of internationally co-authored articles.

Box 4.3 Examples of international co-authorships

Jong, J.D. de, Westert, G.P., Noetscher, C.M., **Groenewegen, P.P.** Does managed care make a difference? Physicians' length of stay decisions under managed and non-managed care.

BMC Health Services Research, 2004, 4(3).

Meijer, A., Valette, M., Manuguerra, J.C., Perez-Brena, P., **Paget, J.**, Brown, C., Velden, K. van der.

Implementation of the community network of reference laboratories for human influenza in Europe.

Journal of Clinical Virology, 2005, 34(1), p87-96.

Wagner, C., Gulácsi, L., Takacs, E., Outinen, M.

The implementation of quality management systems in hospitals: a comparison between three countries.

BMC Health Services Research, 2006, 6(1).

Liseckiene, I., **Boerma, W.G.W.**, Milasauskiene, Z., Valius, L., Miseviciene, I., **Groenewegen, P.P.**

Primary care in a post-communist country 10 years later: comparison of service profiles of Lithuanian primary care physicians in 1994 and GPs in 2004.

Health Policy, 2007, 83(1), p105-113.

Verschuuren, M., Badeyan, G., Carnicero, J., Gissler, M., Asciak, R.P., Sakkeus, L., Stenbeck, M., **Devillé, W.**

The European data protection legislation and its consequences for public health monitoring: a plea for action.

European Journal of Public Health, 2008, 18(6), p550-551.

Neumann, M., **Bensing, J.**, Mercer, S., Ernstmann, N., Ommen, O., Pfaff, H.


Analyzing the 'nature' and 'specific effectiveness' of clinical empathy: a theoretical overview and contribution towards a theory-based research agenda.

Patient Education and Counselling, 2009, 74(3), p339-346.

Awards

2006 was an important year for NIVEL because Prof. Jozien Bensing received the principal Dutch award for outstanding research, the Spinoza Premium. This was one of the reasons for her to step down as director of NIVEL and spend time on her research programme, funded by the Spinoza Premium.

The awards in the review period were:

- In 2004 Dr. J. van Weert received the Public Health Prize (Volksgezondheidsprijs 2004) from the Society for Public Health and Science (VFW) for her PhD thesis  on quality of life and dementia patients in homes for the elderly.
- In 2006 Dr. J. van Weert also won the Professor Schreuder prize for her dissertation.
- In 2006 drs. J. Noordman received the ASW-Master prize (ASW Meesterprijs) for her master's degree thesis on nursing information to elderly before chemotherapy.
- In 2006 Prof. Dr. J. Bensing received the Spinoza Premium (Spinozapremie) from the Netherlands Organisation for Scientific Research (NWO) for outstanding research contributing to health care communication.
- In 2006 Dr. J. Stubbe received the Health Care Prize (Volksgezondheidsprijs 2006) from the Society for Public Health and Science (VFW) for her dissertation on the heredity of sporting behaviour and happiness (prepared outside NIVEL).
- In 2006 Dr. T. Dorn received a citation award at the 9th International Congress of Behavioral Medicine, Bangkok, Thailand for research about disaster-related stress and risk factors for hypertension.

- In 2007 Prof. Dr. J. Bensing was elected to membership of the Royal Netherlands Academy of Arts and Sciences (KNAW).
- In 2007 Dr. C. Veenhof received an award for her PhD thesis from the Scientific College of Physiotherapie (Wetenschappelijk College Fysiotherapie) and from the Royal Dutch Society for Physical Therapy (Koninklijk Nederlands Genootschap voor Fysiotherapie).
- In 2007 L. Ariaans, supervised at NIVEL, received the KNMP student prize from the Royal Dutch Pharmaceutical Society for her thesis at the Pharmacy Department of Utrecht University.
- In 2008, Dr. J. de Jong received the distinction *cum laude* for her PhD thesis 'Explaining medical practice variations' [🔗](#).
- In 2009 P. Groen-Van Dorsten received the master's thesis prize 'Online hulp' for her thesis, prepared and supervised at NIVEL on the effects of online tailored information in preparation for hereditary breast cancer counseling.
- In 2009 Dr. J. Jansen was one of the three nominees for the communication award of Medisch Contact (the official journal of the Dutch Medical Association) for her research on communication between patients and doctors during chemotherapy (published in her PhD thesis [🔗](#)).

Conclusions

In line with its dual mission, the research output of NIVEL has been divided between scientific output and professionally and policy oriented output. In both categories total output is large. Part of the scientific output is generated within PhD projects and in scientific publications based on commissioned research that are combined to form a PhD thesis. Moreover, in relation to the research input in terms of funding and FTEs, the output of NIVEL is considerable.

The national infrastructure of databases and panels is used by NIVEL researchers as well as by external research groups. The LINH database, for example, has provided data to both internal and external research. In this way the national infrastructure contributes to nationwide collaboration and to our overall research output.

National and international scientific collaboration is reflected in the numbers of co-authored publications. Furthermore, NIVEL's role in the scientific world is shown by staff participation in scientific activities as editors and reviewers. Societal participation is reflected in committee memberships, boards and advisory groups and many dissemination activities.

Societal impact: Monitoring the Health Effects of Disasters

Case: Health effects of the fireworks disaster in Enschede

Brief description of the research:

The Dutch Ministry of Health developed two major cornerstones for aftercare following disasters: a) an Information and Advice Centre should be established within two days under the responsibility of the local authority.; b) the second cornerstone was the implementation of a health impact assessment, using two types of research: surveys among the victims themselves and monitoring health problems using existing registries. In recent decades NIVEL has conducted these assessments in the wake of several disasters and environmental incidents. On 13 May 2000 a fireworks depot exploded in a residential area of the city of Enschede; 23 people, including 4 fire fighters died, one thousand were injured, 1,500 had to be relocated and lost all personal belongings and about 11,000 individuals were registered as victims. Three quarters of the Enschede GPs participated in a cohort study, which enabled NIVEL to monitor the health problems of 89% of all survivors. A reference group was established - matched for age, gender & socio-economic status. Baseline data had been collected from 16 months *before* the disaster and the study period ended 5 years *after* the disaster. All information on symptoms, diagnoses and prescriptions was extracted every three months. All participating GPs, the Ministry of Health and the regional Health Authority received results of the monitoring every three months. This study design was also applied after several other disasters and environmental incidents, both cross-sectionally as well as longitudinally.

Policy level:

On the national level, in the Enschede case, the Ministry of Health. In other cases the Ministry of Internal Affairs, Ministry of Housing, Spatial Planning & the Environment and the Health Care Inspectorate (IGZ). On the local & regional level in this and most other cases the Regional Health Authorities (GGD), local General Practitioners and other caregivers, the municipality and residents.

Impact on the general public:

Findings were communicated to the general public via newspaper articles, websites and meetings. Survivors were informed about the results of the studies on a regular basis. Indirectly, by informing the GPs about the development in the symptoms presented to them, the care for those patients was optimised.

NIVEL's role in policy networks:

NIVEL is the preferred information provider for The National Institute for Public Health and the Environment (RIVM); it is the preferred information provider for several Ministries and Regional Health Authorities when surveillance in general practice and/or information about morbidity in a community before and after a disaster/incident is needed. The instruments used by NIVEL and the expertise established are acknowledged nationally as well as internationally.


Use of national information systems:


Data from the National Information Network of GPs (LINH) are often used when a reference group or control group is required. In all circumstances the LINH procedure of handling data is used. Currently, NIVEL is developing the SURveillance Network Netherlands (SUNN), in which 5% of the Dutch population will be covered. With this network NIVEL will be (better) prepared to monitor new diseases (such as H1N1), disasters and environmental incidents regionally.

Soeteman, J.H. Health problems of Enschede residents in the aftermath of the fireworks disaster: a longitudinal study with a pre-disaster assessment in general practice. PhD thesis. Radboud Universiteit Nijmegen. Utrecht: NIVEL, 2009.

Dirkzwager, A.J., Grievink, L. Velden, P.G. van der, Yzermans, C.J. A prospective study of risk factors for psychological and physical health problems after a man-made disaster. British Journal of Psychiatry, 2006, 189, p144-149.

Morren, M., Dirkzwager, A.J.E., Kessels, F.J.M., Yzermans, C.J. The influence of a disaster on the health of rescue workers: a longitudinal study. Canadian Medical Association Journal, 2007, 176(9), p1279-1283.

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

5 Scientific quality


Ideally, the scientific and societal mission of NIVEL should reinforce each other. This chapter describes the scientific quality of NIVEL's research; the next chapter describes its societal relevance. High scientific quality is important for applied and applicable research; only sound research deserves to be used in health care policy and practice. Moreover, high quality research contributes to confidence among potential users of research results in the research NIVEL does. This is one of the important preconditions for optimum utilization of research. NIVEL's ambition is to perform at or above world level. To test this we used standard bibliometric indicators.

A new element in scientific publishing is open access publishing. From the beginning, NIVEL has seen the advantages of this. In this chapter we therefore also document the number of articles in open access journals.

Throughout the years, broadly accepted indicators of scientific quality of research have been developed. There is still debate about the validity of indicators based on bibliometric research, and even more about indicators for societal quality of health care research (see next chapter). For reasons of comparability with research evaluations in the academic world we concur with the current consensus on bibliometric indicators. Still, it is important to be aware of the fact that in view of the coverage by the ISI Web of Science, these indicators are far from perfect for our field of research. We will document the coverage for nursing studies as an example.

We will also discuss the relatively new phenomenon of open access publishing. This greatly facilitates the dissemination of research, as has been acknowledged by the most important research funds of the Netherlands, ZonMw and NWO.

Scientific quality: impact factors and citations

The analysis of scientific quality  has been performed by the Centre for Science and Technology Studies (CWTS), based on the English language articles in peer-reviewed journals, included by the Institution for Scientific Information (ISI) in any of the Citation Indexes (Web of Science). The CWTS analysis distinguishes between:

- past performance; this includes only articles (co-)authored by NIVEL employees;
- research potential; this includes articles by NIVEL researchers who previously worked elsewhere.

They contribute to the current research potential of NIVEL.

Looking retrospectively, we see a steady increase in yearly number of peer reviewed publications of NIVEL authors. On average, in 1997-2003 NIVEL authors wrote 51 peer reviewed publications per year. For 2004-2009, there were on average 74 peer reviewed publications a year.

The results of both types of analysis point to the same conclusions. Here we give the main indicators from the research potential analysis (which is most commonly used in university evaluations).

Table 5.1 Bibliometric analysis of NIVEL-publications 2000-2009, research potential (source: CWTS)*

Period	No. of publications (P)	No. of Citations (C+sc)	Average citations minus self-citations (CPP)	% publications not cited (%Pnc)	Impact comp. to average journals (CPP/JCSm)	Impact comp. to average field (CPP/FCSm)	Impact journals comp. to average field (JCSm/FCSm)	% self-citations
2000-2009	845	9,981	9.80	18%	1.05	1.16	1.11	17%
2000-2003	256	789	2.46	42%	1.00	1.06	1.05	20%
2001-2004	265	897	2.74	45%	1.05	1.13	1.08	19%
2002-2005	290	991	2.64	46%	0.98	1.11	1.13	23%
2003-2006	371	1,360	2.73	47%	1.06	1.09	1.02	26%
2004-2007	407	1,740	3.18	41%	1.06	1.09	1.03	26%
2005-2008	412	1,974	3.44	33%	0.93	0.94	1.02	28%
2006-2009	415	1,655	2.86	33%	0.84	0.79	0.94	28%

* Definitions used are explained in the CWTS report.

The research potential analysis is based on the period 2000-2009. In this period, 845 international publications were included in the analysis, of which 18% were not cited by other authors in the international literature (excluding self-citations). Until 2009, the other publications were cited 9,981 times (excluding self-citations) with a clear increase over the years, except for the last 3-year period. Overall, the international standardized impact factor, which is a powerful indicator of citation impact, is 1.16, indicating that the institute's impact as a whole is above (the western-) world average, although not significantly so. Over the full period NIVEL researchers published articles in journals that are cited above the level of the field(s) to which these journals belong, indicating a high international visibility for NIVEL research output. However, in the period 2005-2009 NIVEL's impact decreased.

An analysis of the most frequently cited papers shows that the number of papers published by NIVEL researchers among the top twenty, ten, five, two, and one percent in the world is mainly as to be expected from the volume of our publication output.

On the basis of the bibliometric analysis we conclude that the quantity of publications has been increased successfully and that the international visibility of NIVEL research has grown. However, we need to increase quality in terms of impact.

Coverage of NIVEL research by ISI

The bibliometric analysis uses publications and citations in journals that are indexed by ISI. The relevance and interpretation of the bibliometric analysis therefore depends on the coverage by ISI of the journals that NIVEL usually publishes in and of the journals that cite NIVEL research. According to CWTS an excellent coverage (80% or more) makes bibliometric analysis the most appropriate approach. With lower coverage, additional analysis of other publications, such as books or book chapters might be indicated. Coverage is simply defined as the percentage of references to NIVEL papers in ISI journals in papers that have also been published in ISI journals.

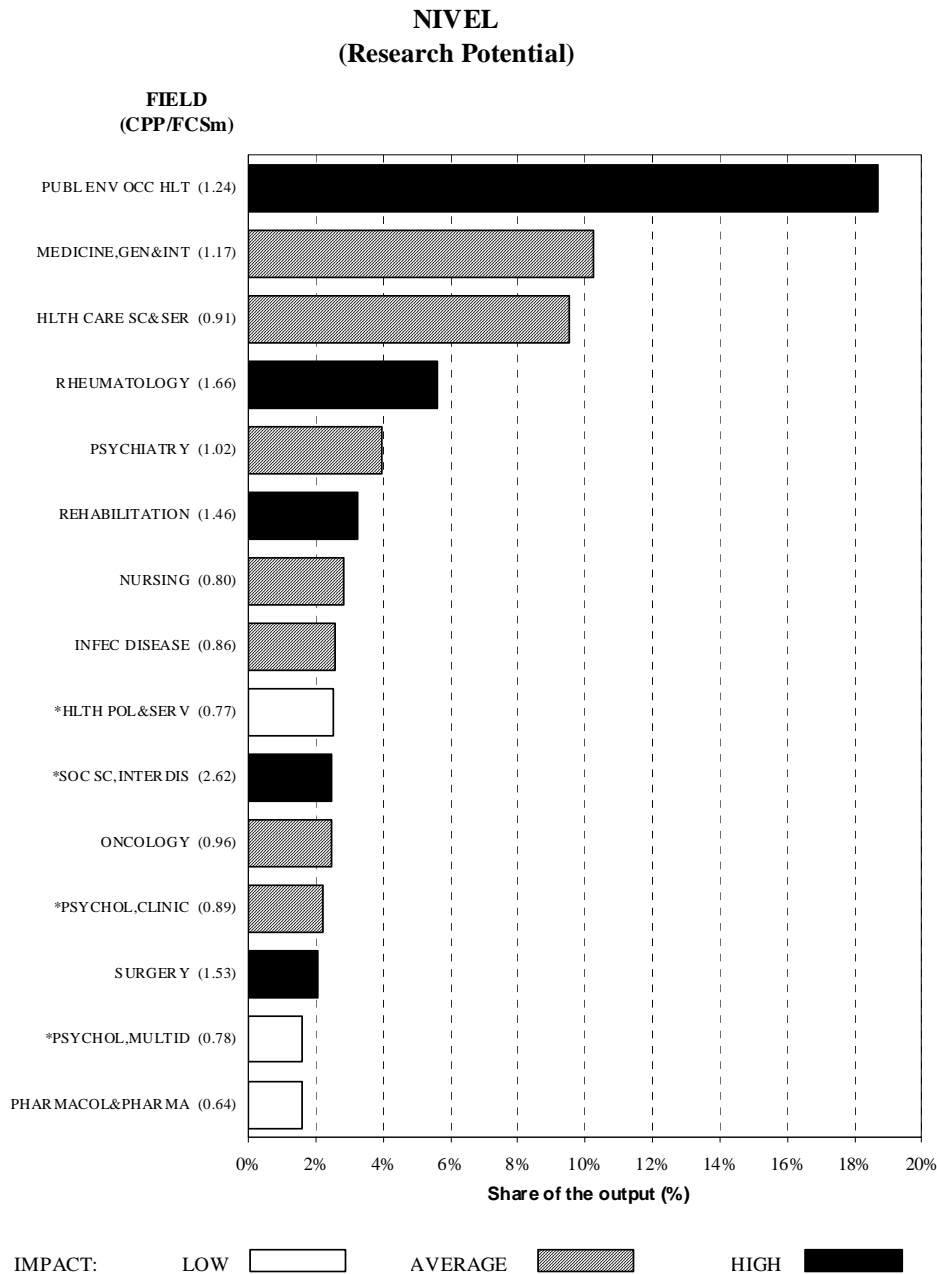
The coverage of NIVEL research as a whole is 69%. This is a satisfactory percentage. Apart from the overall coverage, we have specifically looked at the coverage for the field of nursing. Here, coverage is only 53%. Nevertheless, we have decided not to develop alternative indicators for scientific impact for research areas such as nursing. The implication, however, is that the standard bibliometric analysis only tells part of the story for NIVEL's research, especially so for fields such as nursing.

Analysis by subfields

The ISI Web of Science defines subfields that can be used to further analyse the impact of NIVEL research. The definition of the fields is not specifically tuned to NIVEL's domain, but still shows some interesting

results. The largest subfield is Public, Environmental and Occupational Health (with 19% of publications). The impact for this field is above world average. The impact in the subfield Medicine, General and Internal is slightly above world average. It is important to note that our impact in the subfield Health Care Sciences and Services is slightly below world average. However, top journals in this subfield are all US based. More so than public health research, health services research is context dependent. That makes it more difficult and often less relevant to publish in US based journals.

Figure 5.1 Scientific research profile: publications and impact per subfield, 2000-2009 (source: CWTS)



Output and impact of scientific collaboration

It was also analysed whether the output and impact of publications of NIVEL authors was in line with its scientific collaboration profile. As was identified in chapter 1 and demonstrated in chapter 4, NIVEL is a typical network organisation. This is also visible in the bibliometric analysis (table 5.2) The results show a

strong focus on national collaboration, with 539 publications of this type (64% of the total output). Both other types (NIVEL only and international collaborations) contribute respectively 17% and 19% of the total output. In particular, publications in collaboration with others within the Netherlands are cited more often and they have a relatively higher impact score. In the previous period (1997-2003) the impact of national as well as international joint publications was higher compared to no collaboration. This clearly shows the benefits of collaborating both nationally and internationally.

Table 5.2 Scientific cooperation profile output and impact per type 2000-2009, research potential analysis

Period	No. of publications (P)	No. of Citations (C+sc)	Average citations minus self-citations (CPP)	% publications not cited (%Pnc)	Impact comp. to average journals (CPP/JCSm)	Impact comp. to average field (CPP/FCSm)	Impact journals comp. to average field (JCSm/FC Sm)	% self-citations
NIVEL only	146	1,441	7.88	10%	0.84	0.86	1.02	20%
Nation. collaboration	539	6,717	10.65	21%	1.13	1.30	1.15	15%
Internat. collaboration	159	1,823	8.77	16%	0.95	1.01	1.07	23%

NIVEL's H-index

The H-index is increasingly used to compare the scientific output of individuals, research groups and research lines as well as entire institutes. The H-index is a rather robust indicator of performance. One benefit is that it is easily calculated, both for individuals and groups or institutes as a whole. The H-index is based on the highest number of publications with at least an equal number of citations. For example, an index of 8/100 indicates that 8 out of the 100 publications of an author have at least 8 citations. To indicate the possibilities of this measure, the H-index of NIVEL as a whole is presented in comparison with the Trimbos Institute (Netherlands Institute of Mental Health and Addiction).² The H-index was calculated on 28 February 2010, therefore reflecting our evaluation period.

The H-index for NIVEL (including self-citations) was 46/960. This means that 46 NIVEL articles were cited at least 46 times. The comparable figure for the Trimbos Institute was 41/467. Accordingly, NIVEL's H-index is slightly higher, based on a much larger number of publications. This confirms the conclusion that we need to move from quantity to quality.

High impact publications

The five publications with a NIVEL author listed as first author in journals with the highest impact factors are given below. The publications represent different fields of research within NIVEL and are spread over journals and publication dates.

² The H-index was calculated in Scopus on 28/02/2010 and used citations as of 1995.

Box 5.1 Top five key publications of NIVEL with a NIVEL researcher listed as first author (in order of IF of the journal) 

Bensing, J.M., Verhaak, P.F.M. Somatisation: a joint responsibility of doctor and patient. *Lancet*, 2006, 367(9509), p452-454.
Impact Factor: 28.638

Jansen, J., Butow, P.N., Weert, J.C.M. van, **Dulmen, S. van,** Devine, R.J., Heeren, T.J., **Bensing, J.M.,** Tattersall, M.H.N. Does age really matter? Recall of information presented to newly diagnosed cancer patients. *Journal of Clinical Oncology*, 2008, 26(33), p5450-7.
Impact Factor: 13.598

Cardol, M., Groenewegen, P.P., Bakker, D.H. de, Spreeuwenberg, P., Dijk, L. van, Bosch, W. van den. Shared help seeking behavior within families: a retrospective cohort study. *British Medical Journal*, 2005, 330(7496), p882-884.
Impact Factor: 9.245

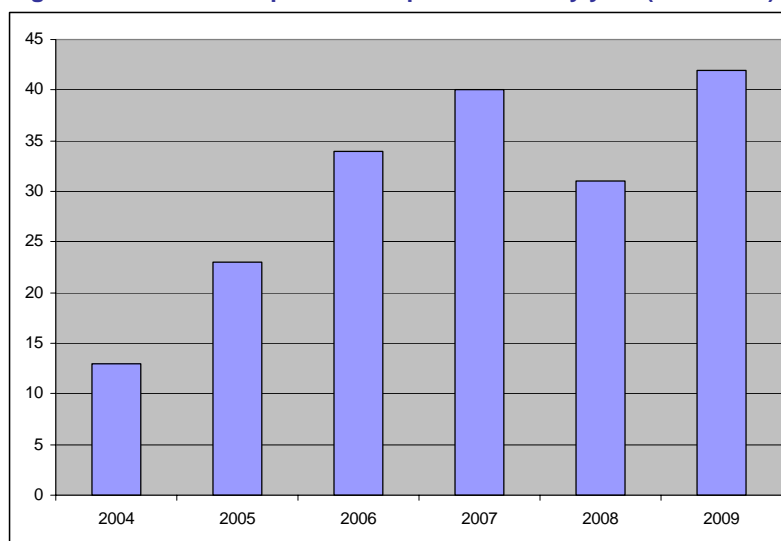
Veenhof, C., Köke, A.J.A., Dekker, J., Oostendorp, R.A., Bijlsma, J.W.J., Tulder, M.W. van, Ende, C.H.M. van den. Effectiveness of behavioral graded activity in patients with osteoarthritis of hip and/or knee: a randomized clinical trial. *Arthritis Care and Research*, 2006, 55(6), p925-934.
Impact Factor: 7.751

Veenhof, C., Dekker, J., Bijlsma, J.W.J., Ende, C.H.M. van den. Influence of various recruitment strategies on the study population and outcome of a randomized controlled trial involving patients with osteoarthritis of hip or knee. *Arthritis and Rheumatism*, 2005, 53(3), p375-382.
Impact Factor: 7.421

Open access publications

There is increasing awareness of the importance of broad access to scientific publications. In the Netherlands, ZonMw has recently (Spring 2010) decided to make extra funding available to cover the costs of open access publishing. NIVEL started to publish in open access journals at an early stage - in 2001. Open access journals in BioMed Central show the number of times articles have been accessed and on the basis of this mark, articles as highly accessed. In the last 12 months (August 2009- August 2010), 12 out of 22 NIVEL articles got the highly accessed mark.

Figure 5.3 Number of open access publications by year (2004-2009)



Conclusions

Overall, NIVEL's scientific output has increased, but its impact has tended to decrease in recent years. Approximately 40% of our international articles are in three subfields, the most important of which is Public, Environmental and Occupational Health. In this subfield our impact is above world average. However, we lag behind in impact in a core subfield, Health Care Sciences and Services. Increasing the impact in this subfield is an important target for the next period, although the US orientation of most top journals presents a challenge. Open access has become important for NIVEL and facilitates quick dissemination of research results.

Now that we have managed to increase the number of international publications, we need to improve impact by aiming at highly rated journals. As collaboration pays off, co-authorships with experts outside our institute both in the Netherlands and externally should be encouraged.

Societal impact: Patient Perspective and Demand led Health Care

Case: Development and use of the Consumer Quality Index (CQ-index)

Brief description of the research:

In the Netherlands, patient experiences with the quality of health care are measured with the Consumer Quality Index (CQ-index or CQI). The CQ-index is a family of questionnaires that have been developed for various health care sectors, providers, interventions and patient groups. The questionnaires focus on two aspects: what do patients regard as important and what are their experiences with health care? Besides the questionnaires, the CQ-index consists of guidelines to measure, analyse and report patients' experiences in care.

NIVEL has a pivotal role in the development of the CQ-index and has developed a large number of questionnaires that provide insight in the performance of health care providers and health insurers. Current NIVEL research also focuses on how CQI questionnaires can be implemented in health care settings; how CQI results can best be reported to the general public; and how the results of CQI surveys can be used by both consumers and health insurers in order to differentiate between health care providers.

Policy level:

In 2006, the Dutch government introduced elements of managed competition into the health care system. New legislation enhanced competition between insurers and health care providers as well as freedom of choice for consumers. The aim of these changes is to accomplish more efficient and demand-oriented health care. For these aims to be achieved, the performance of health care providers in terms of effectiveness, safety and patient experiences has to be assessed and publicly reported. The CQ-index has been indicated as the national standard for measuring patient experiences by the Dutch Ministry of Health.

Impact of the research on policy:

The CQ-index has improved transparency and comparability between the quality of health care providers from a patient's perspective. The information acquired via CQI questionnaires is used by patient organisations that represent their members' interests; insurers that want to purchase qualitatively good care; managers and professionals that aim to improve the quality of their care; the Health Care Inspectorate (IGZ) and the Dutch Care Authority (NZA), that are authorised to supervise care; and the Ministry of Health to supervise the efficiency, safety and patient centeredness of care.


Impact on general public:


The information acquired with the CQ-index can be used by consumers/patients when choosing between health care providers or insurers. The Ministry of Health has initiated the website www.KiesBeter.nl (Choosing better) in order to support consumers in their health care choices. On the website, consumers/patients can compare the performance of health insurers, nursing and residential care homes, homecare organisations, and organisations providing care for the disabled as measured with the CQ-index. CQI information on other health care sectors and patient groups will follow in the near future.

Damman, O.C., Hendriks, M., Rademakers, J., Delnoij, D.M.J., Groenewegen, P.P. How do healthcare consumers process and evaluate comparative healthcare information? A qualitative study using cognitive interviews. BMC Public Health, 2009, 9(423).

Delnoij, D.M.J., Rademakers, J.D.J.M., Groenewegen, P.P. The Dutch Consumer Quality Index: an example of stakeholder involvement in indicator development. BMC Health Services Research, 2010, 10(88).

Hendriks, M., Spreeuwenberg, P., Rademakers, J., Delnoij, D.M.J. Dutch healthcare reform: did it result in performance improvement of health plans? A comparison of consumer experiences over time. BMC Health Services Research, 2009, 9(167).

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

6 Societal relevance: link between health care problems and research, dissemination, impact and valorisation

Research on the utilization of research has shown that mere dissemination of results is not enough. Interaction between policy makers and researchers, at individual and institutional level, is a key element in research utilization. NIVEL therefore invests in interaction with policy makers and other stakeholders. At the same time, dissemination is important. The internet is very helpful in disseminating research. Examples of more focused ways of dissemination are feedback reports and invitational conferences. NIVEL research has an impact on health care, as we have shown throughout this report by brief narratives on utilization in national governmental policies, professional guidelines, advisory bodies etc. Valorisation of NIVEL research is not meant in the restricted sense of making money out of products and services resulting from research, but the use of products in the public domain.

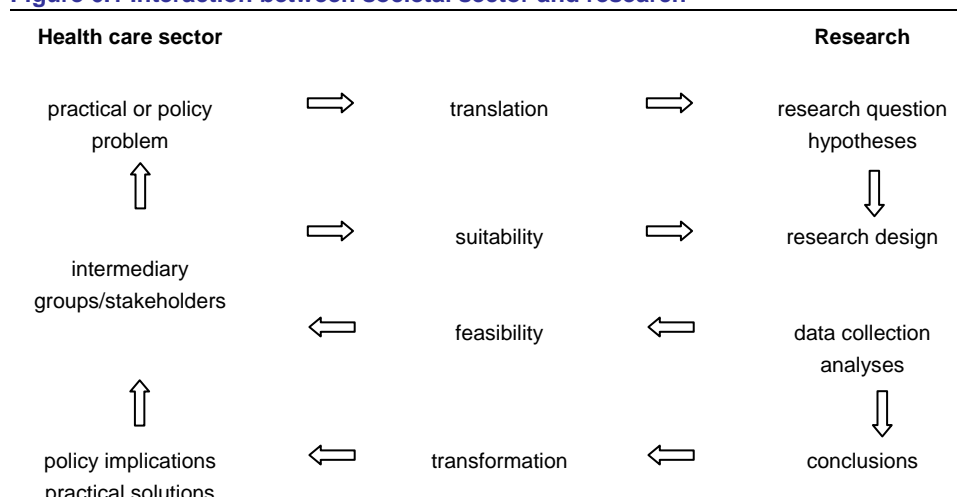
Societal relevance is difficult to define and there are no generally accepted indicators of societal quality of research. NIVEL has in the past contributed to the Dutch debate on societal quality of research³. Interaction is a key factor in research utilization, not only when research is finished, but importantly also in the phase of defining research problems and designing research. ‘Productive interactions’ is the key concept in an international project, called SIAMPI: Social Impact Assessment Methods through Productive Interactions. The Dutch part of this project is led by the Netherlands Academy of Arts and Sciences (KNAW). For this project NIVEL was asked to be one of the ‘cases’ in the field of health (services) research. We have taken this opportunity to have an external assessment of the societal quality of NIVEL research (just as we have an external assessment of scientific quality). We use the draft report of this part of the SIAMPI project as background to this chapter. We take examples from stakeholder interviews and the internet visibility analysis of NIVEL research from the SIAMPI report.

We have organised this chapter in sections around four phases of research-policy interaction and research utilization:

- the link between problems in the health care sector and research (which is the relevance of research in a restricted sense);
- dissemination of results (which is a condition for the use of research);
- impact (which is the actual utilization of research findings);
- and valorisation (which is the structured use of products that were developed on the basis of research).

³ See for example Bensing et al., 2003.

Figure 6.1 Interaction between societal sector and research



From policy issues in the health sector to research

Figure 6.1 shows the interactions between health services research and the health care sector, in the problem definition phase, in the phase when research is conducted (e.g. through multiparty committees), and in the concluding phase (dissemination and impact). Health services research is driven by policy issues and practical problems in the health care sector. These problems need to be translated into research questions, and the research has to be sensitive to the problems in the health care sector. This translation is facilitated by interaction between researchers and policy makers.

At the individual project level, we try to get in touch with policy makers and stakeholders as much as possible. At the level of the institute this is done by an annual round of consultations with stakeholders in the health care sector, including the MoH. In 2009, 29 meetings were organised as part of the yearly round of consultations. In addition, the Societal Advisory Board also helps in converting the problems in the sector into research questions.

Within the context of the SIAMPI project interviews with stakeholders were held. They were asked to state how they rated different aspects of NIVEL’s work.

Table 6.1 Stakeholders’ evaluation of aspects of NIVEL research

NIVEL research is	N	Average score (range 1-10)	Std. Deviation
Original in its research questions	17	5.7	2.0
Applicable	16	8.3	1.1
Reliable	17	8.5	0.9
Topical	15	7.6	1.6
Insightful	17	7.8	0.8
Authoritative	16	7.6	1.7
Innovative in its methodology	16	8.0	1.1

Source: SIAMPI.

Stakeholders, furthermore, expect NIVEL to produce applicable, reliable and methodologically innovative research. Stakeholders do not expect innovative research questions. This reflects the fact that the research questions of health services research are derived from problems in the sector and not generated within discipline-related research.

In drafting the new covenant with the MoH for the period 2012-2017 we have prepared an overview of the match between policy information needs of the MoH and research conducted by NIVEL. We have used three sources of policy needs: for short-term policy requirements we used the yearly policy agenda; for long-term policy requirements we used the societal challenges that were defined by the MoH some years ago and the long-term (so-called ‘daring’) goals that are currently being developed within the MoH.

Match between NIVEL research and short and long-term policy needs of the MoH: examples from yearly policy agendas, MoH defined societal challenges and long-term goals

Policy agenda curative care: removal of benzodiazepines from insured package.

MoH decision no longer to reimburse benzodiazepines from 1 January 2009. Research based on data from LINH, Dutch Health Care Consumer Panel and National Panel of Chronically Ill and Disabled to monitor effects.

Policy agenda long-term care: improving palliative care.

Development of an indicator set to measure the quality of palliative care. Examples of indicators are the percentage of patients in moderate or severe pain and assessment by patients of the expertise level of carers.

Policy agenda quality and safety: patient rights

Research on patients who filed a complaint with their hospital or care organisation. Complainants expect a prompt and adequate response from the health care providers involved, but the latter usually do not react.

Societal challenge: Living longer in health – stimulate participation in society

Development of a participation index for chronically ill people, disabled people and people with an intellectual disability. Evaluation of Wmo (Social Support Act).

Societal challenge: anticipating changing health care demand – more knowledgeable health care users

Contrary to the common belief, the relationships between GPs and patients with hypertension have not become more equitable. Rather, the communication pattern of GPs has become more task-oriented and less personal.

Long-term (daring) goals: governance based on trust

NIVEL monitors public trust in health care since 1997. The results are used in the Dutch Health Care Performance Report (RIVM).

Long-term (daring) goals: the Netherlands – the healthiest country

Research into the integration of prevention into care: introduction of special prevention consultations with GPs, overweight prevention by dieticians, attention to physical activity in health care (‘activity prescriptions’)

Long-term (daring) goals: caring – no longer a physically demanding occupation

Research on the role of new technology (such as video monitoring) and acceptance among patients and caring professions.

Dissemination

The starting point for the dissemination of research results to policy makers, other stakeholders and the general public is making the research results public. Nowadays the preferred medium is via downloadable reports on the NIVEL website. More focused dissemination is realized through presentations to policy makers and through invitational conferences.

Website

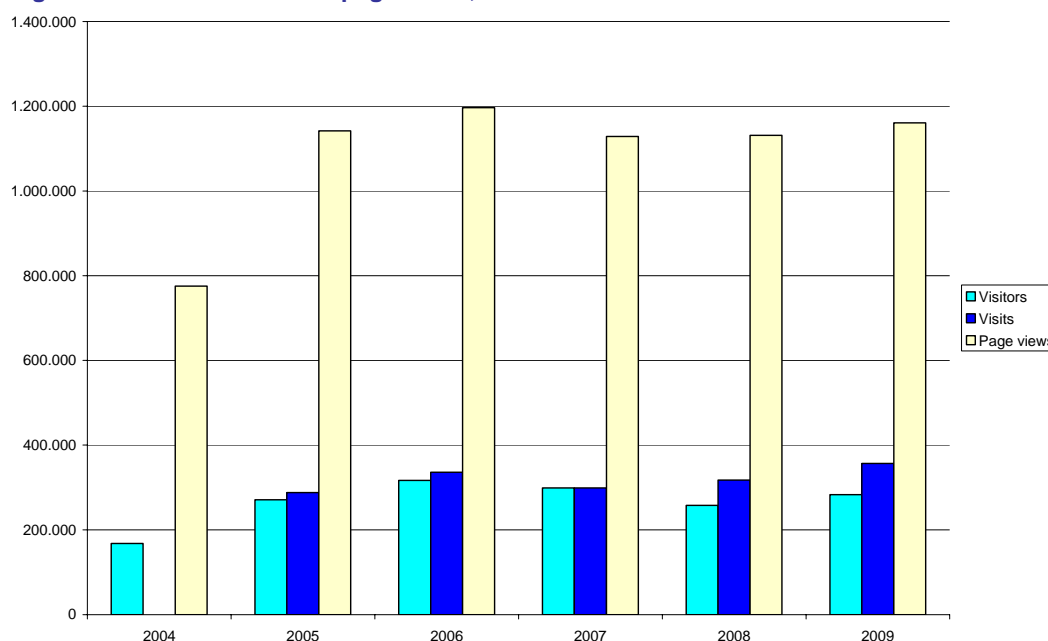
All NIVEL research reports and publications are downloadable to make them more accessible. Table 6.2 shows the most frequently downloaded reports during the review period.

Table 6.2 Top five of downloaded reports in the period 2004-2009

Translated title of report	Frequency of downloads
Experiences of insurees with health care and insurers	6,378
Guideline on the prevention and treatment of intertrigo in large skin folds	4,857
Quality of care for elderly persons with psychogeriatric problems in nursing homes and homes for the elderly	1,585
Individual professionalization of nurses in occupational training and daily practice	1,071
Monitor palliative care	872

The website is also the core medium for presenting news items based on recent research. We started to publish short news items on the website in 2003 (and on the international website in 2007 [↗](#)). On average every week one-and-half new items are presented on the home page of the website. The news items have a uniform structure of a few introductory lines with a 'read more'-button, leading to approximately one page of text and the link to the research report on which the news item was based. In addition, NIVEL provides short news items in a format that can be read on a I-Phone or Blackberry to over 3.000 subscribers. In 2007 NIVEL's new international site was launched, specifically targeting our international research activities. Apart from (international) dissemination of NIVEL research, the site contains a section on expertise and experts to promote the acquisition of international funding and the creation of new partnerships. Like our national website, the international website features small news items; in 2009 every two weeks a new item [↗](#) was posted. NIVEL keeps close track of user statistics such as overall page views and visits (figure 6.2).

Figure 6.2 Number of overall page views, visitors and visits on the NIVEL-website in 2004-2009



* No information is available on the number of visits to www.nivel.nl in 2004.

Most of the page views can be traced back to universities, representing both students and university employees. Nearly equal numbers originate from government organisations and other research institutes. To assure the quality of website publications, web texts are based on research reports that have been reviewed by the peer review committee, while the web texts themselves are reviewed by a small committee (the internet editorial committee).

Presentations

On average twice a week (103 times in total) a presentation was given to an audience of policy-makers or other societal stakeholders in 2009; this represents a doubling of the number since 2003 (48 times in total). These presentations are part of dissemination efforts, but of course they also contribute to the other phases in the research-policy interaction.

Invitational conferences

In a number of research projects, an invitational conference is part of the project. The aims of these conferences are to discuss policy implications of research with stakeholders, to discuss best practices or to reach consensus on an issue. They are an important link between research, the health care field and policy makers. The number of organised invitational conferences varies strongly between years, with an average of five invitational conferences for 2004-2009 (see also table 4.3).

Societal impact

When dissemination of research leads to uptake by policy makers or others a next step towards research impact has been taken. We look here at how often our research is cited in government documents, how often our research is mentioned in newspapers (and thus made available to a broader general public) and how often our website reports are cited by other websites.

Citations in government documents

These are the counterpart of citations in scientific articles. The database ‘Opmaat’ contains governmental sources such as official letters and ministerial policy memos. The number of times NIVEL was mentioned in governmental files has been benchmarked against other organisations. We have compared NIVEL, the Trimbos Institute (research in mental health and addiction), Prismant (former hospital institute), and NIZW (development and support in care and welfare, now Vilans/NJI/Movisie). NIVEL performs relatively well compared to these institutes with a health care related societal mission. In 2005, 2007, 2008 and 2009 NIVEL is mentioned in ‘Opmaat’ more than a hundred times. The organisations that we use as comparison to NIVEL, differ in size. This partly explains the differences.

Table 6.3 Number of times the name of an institute was mentioned in ‘Opmaat’, in absolute numbers

Year	NIVEL	Trimbos	Prismant	NIZW*
2004	76	50	55	96
2005	120	50	43	122
2006	94	75	46	121
2007	116	83	56	200
2008	115	94	41	176
2009	132	130	47	215

* Since 2007: Vilans, NJI and Movisie.

Newspaper coverage

The way to create an impact on the general public is through the mass media, but this also constitutes an indirect way to reach policy makers. NIVEL invests in bringing research results to the attention of the media. A clipping service scans the Dutch newspapers for the name NIVEL, which provides a count of the number of times NIVEL or NIVEL research is mentioned in newspapers. The number of newspaper clippings containing the word NIVEL remained fairly stable from 2004 to 2009 varying between 405 (2004) and 469 (2007).

The number of newspaper clippings has been benchmarked against other organisations by using an open access data base containing quality Dutch newspapers (since 2006 the 'Krantenbank plus'). Among these institutes NIVEL does quite well (table 6.4).

Table 6.4 Number of times the name of an institute was mentioned in 'Krantenbank (plus)', in absolute numbers

Year	NIVEL ¹	Trimbos	Prismant	NIZW ²
2004	60	128	23	50
2005	63	68	13	21
2006	68 (73)	89 (102)	18 (18)	23 (25)
2007	95 (105)	120 (153)	14 (17)	51 (65)
2008	68 (97)	95 (142)	11 (13)	49 (70)
2009	85 (105)	109 (152)	8 (8)	36 (54)

¹ Numbers differ from the total number of clippings because 'Krantenbank' only includes quality newspapers. Krantenbank Plus contains quality newspapers and free papers (Metro, Spits, Dag (2007-2008) and NRC.Next. Since 2006 the number of times an institute is mentioned in Krantenbank Plus is provided between brackets.

² Since 2007: Vilans, NJI and Movisie.

Websites citing the NIVEL website

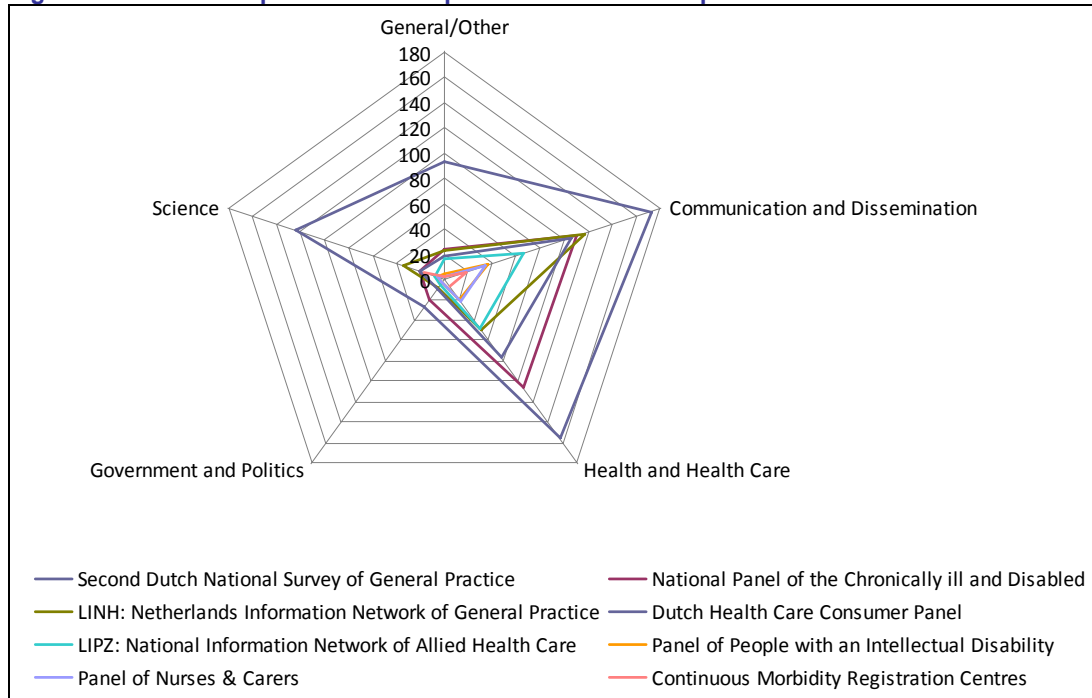
Apart from our own website, NIVEL contributes to other websites. These include the website of the National Care Compass (Nationaal Kompas Volksgezondheid) and KiesBeter.nl developed by RIVM. KiesBeter.nl contains information to facilitate the general public in choosing a health care provider and health care insurance. NIVEL has developed survey instruments to measure patients' experiences with their health care providers and insurance (the so-called Consumer Quality Index or CQ-index). The results are published on KiesBeter.nl.

Within the SIAMPI project, a contextual response analysis was performed on the visibility via internet of reports and documents from NIVEL's national databases and panels and a number of projects. Other websites – belonging to various domains – use information from NIVEL databases/panels and projects. This analysis was split up between five domains of responding websites: General/other, Government and politics, Health and health care, Science, and Communication and dissemination.

According to the SIAMPI report, this analysis reveals receptiveness in a much wider circle than stakeholders directly involved in research projects, and shows indications of use in specific domains of health care (health care authorities), policy making (local authorities) or science and also indications of use in a more general audience of media, knowledge platforms and bloggers. The databases, panels and projects analysed have different internet profiles. Some are more often traced back to web sources from 'science', others to 'health and health care'. The most striking finding, however, is that the domain 'Government and politics' apparently generated relatively few internet responses about NIVEL research. This is probably related to the way in which government uses internet. Visibility of government use is clearer in the database of official documents, presented in table 6.3.

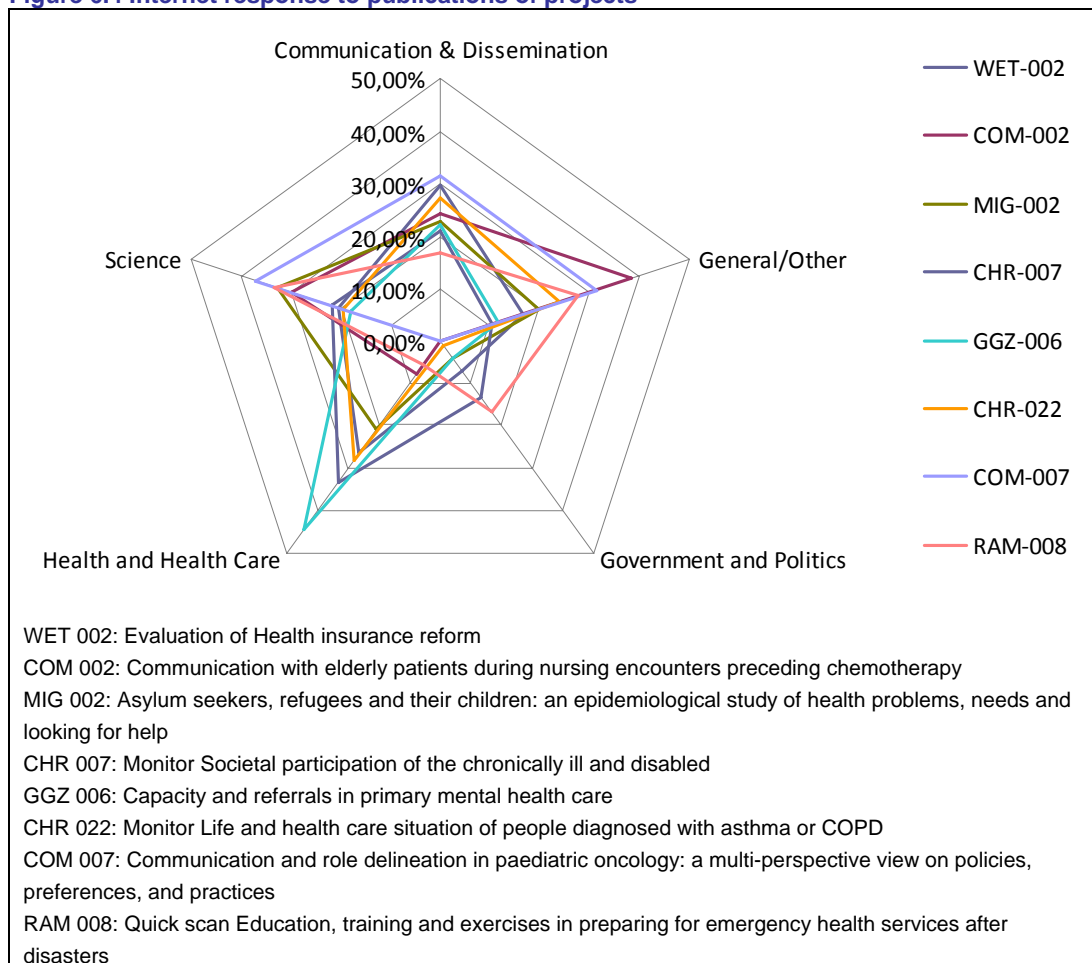
Another way of quantifying the use of NIVEL research on the web is to analyse how often the news items on the NIVEL website are cited by other websites. We noticed that many of our news-items were relayed by a number of other websites, thus increasing the exposure without a parallel increase of the amount of visitors to our own website. To be able to monitor the intensity of web citations of NIVEL research we constructed an indicator which is comparable to the H-index used in bibliometric research on scientific quality of researchers and research groups. This H-index denotes the number of website items cited by the same number of other websites. In 2009, 26 of our website news items were cited at least 26 times by other websites.

Figure 6.3 Internet response to NIVEL panels and databases per domain



Source: SIAMPI.

Figure 6.4 Internet response to publications of projects



Source: SIAMPI.

Examples of societal impact of NIVEL research

Current consensus in the health research community is that the actual impact of research is best illustrated by narratives of how research is used. To date there is no quantitative approach that captures research impact in a systematic way. Inbetween the chapters of this Self-Evaluation we have presented key examples of the impact of NIVEL research. Box 6.1 gives an overview of these and other examples.

Box 6.1 Examples of the societal impact of NIVEL research

Examples presented in this report:	Other Examples:
<p>International and Migrant Health <i>Case: Assessment of primary care in Central and Eastern Europe and Central Asia</i> The state of primary care is studied on the basis of a format developed by NIVEL in cooperation with WHO Europe. Reports are published by WHO Europe in English as well as in the national language and launched at a policy round table with stakeholder representatives. ↗</p>	<p>Maternity Care and Reproductive Health <i>Case: Monitoring Midwifery Care and Maternity Care Assistance</i> This study addressed the shortage of midwives and maternity care assistants, leading to high workload and to the reduction of maternity care assistance. The results have contributed to policy decisions to reduce workload/caseload for midwives. ↗</p>
<p>Communication in Health Care <i>Case: VOICE - Communicating with older cancer patients</i> The project aimed at improving the way oncology nurses inform older patients with cancer about chemotherapy. We have translated the results into a new educational model and training programme for cancer nursing, increasingly used in Dutch hospitals. ↗</p>	<p>Pharmaceutical care <i>Case: Professional Level of Pharmaco-therapeutical Audit Meeting groups (PTAMs)</i> NIVEL studied the professionalization of PTAMs, local peer review groups of GPs and pharmacists, aiming at quality improvement in prescribing. The levels of cooperation of PTAMs have been used by insurance organisations in contracts with GPs. ↗</p>
<p>Organisation and quality of health care <i>Case: Adverse events in hospitalized patients: incidence and causes</i> Our research on patient safety, the first to confirm the extent of the problem, is seen as a milestone in Dutch health care. The position of the MoH is that preventable adverse events cannot be tolerated. All parties in health care back the report and have developed an "action plan" to tackle the problem. ↗</p>	<p>General Practice Care <i>Case: Embedding prevention in the general practice care setting</i> Integration of disease prevention, especially at population level, in general practice has been controversial for many years. We have studied the conditions for a more positive attitude of GPs towards preventive services: focus on high-risk groups and sufficient supporting personnel. ↗</p>
<p>Monitoring the Health Effects of Disasters <i>Case: Health effects of the fireworks disaster in Enschede</i> NIVEL has monitored health problems after several disasters and environmental incidents, using EMD information from general practices. This has supported national, regional and local policies during many years of managing the mental and physical health consequences for survivors. ↗</p>	<p>Mental Health and Primary Care <i>Case: Monitoring Primary Mental Health Care</i> The problem-solving capacity of primary care is being enhanced by the introduction of practice nurses for mental health care. Our research contributed to the task description for these new professionals in primary care. ↗</p>
<p>Patient Perspective and Demand led Health Care <i>Case: Development and use of the Consumer Quality Index</i> NIVEL had and still has a pivotal role in the development and use of the CQ-index. CQ-index information is used by patient organisations, insurers, managers and professionals, and the Ministry of Health. ↗</p>	<p>Professions in Health Care and Manpower Planning <i>Case: Manpower planning for medical professions</i> NIVEL has developed a stock and flow model to support the planning of the required number of doctors in training to meet projected demand. Our work is used by the Capacity Body in advising the MoH and the MoE. ↗</p>
<p>Needs and Health Care Demands of People with Chronic Illness or Disability <i>Case: Financial compensation for the higher health care costs of people with chronic illness or disability</i></p>	<p>Evaluation of Health Law <i>Case: Evaluation of the Health Insurance Act</i> The introduction of the 2006 Health Insurance Act was relatively smooth. The short term evaluation provided</p>

<p>We have conducted several studies on the use of tax-relief by people with a chronic illness or disability to compensate for higher health-related costs. The results have been frequently used to respond to parliamentary questions. ↗</p> <p>Nursing Care <i>Case: Moral dilemmas in the daily work of nurses</i> The Centre for Ethics and Health published a report on moral dilemmas in daily care that nurses and carers are confronted with. The report was largely based on NIVEL research conducted within the Panel of Nurses & Carers. ↗</p>	<p>pointers to areas that might be improved. The government's reaction has been sent to Parliament. ↗</p> <p>Allied Health Care <i>Case: Behavioural graded activity in patients with osteoarthritis</i> A randomized trial showed that behavioural graded activity is preferable to usual physiotherapy for the treatment of patients with hip osteoarthritis. This evidence has been included in a new version of the national physiotherapy guideline on osteoarthritis. ↗</p>
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Valorisation

One aspect of the impact of research results on policy and practice is the utilization of new products, processes and services. This is the definition of valorisation – with the connotation of bringing these products, processes or services to the ‘market’. NIVEL does not produce for the market; the results of research and products based on research are available in the public domain. A number of our products are widely used by other organisations. In a market situation they would probably have been sold. We briefly discuss some examples of valorisation of NIVEL research.

The CQ-index, discussed previously as an instance of the societal impact of our research, is now the standard for measuring patient evaluations of health care in the Netherlands. CQ-index questionnaires are used by other (research) organisations to conduct measurements on a regular basis in several sub-sectors of health care.

VAAM (or Vraag Aanbod Analyse Monitor, in translation Demand-Supply Analysis Monitor) denotes an instrument that enables a diagnosis of the match between primary care supply and the local need for primary care at the level of municipalities and neighbourhoods. VAAM has its own website and is widely used by organisations in health care. This instrument has been developed in cooperation with the NPCF (The Federation of Patients and Consumer Organisations in the Netherlands). VAAM provides insight into:

- demand for care for specific conditions, such as chronic disease and psychosocial problems;
- demand for care for specific services, such as general practices, pharmacies, physiotherapy practices, and primary mental health care;
- demographic data for the municipality or neighbourhood chosen;
- future demand for primary care.

In the context of a large study on patient safety in Dutch hospitals, patient record review methods with trigger lists to detect adverse events were developed. This methodology has been adopted for use by hospitals themselves, with NIVEL providing support and training. Hospitals have now started to use this methodology as part of their safety management system.

NIVEL has developed a ‘deprivation index’ to rate neighbourhoods. The deprivation index is used for additional reimbursement of GPs for their patients living in deprived areas. The deprivation index was also adopted in 2009 by the Royal National Association of Midwives to support midwives delivering services for clients living in disadvantaged areas.

Conclusions

NIVEL invests in making its research responsive to problems in the health care sector, problems faced by policy makers as well as other stakeholders. This takes a large investment in time and energy, but in our evaluation it pays off in terms of the impact of our research. Interaction is the key element to facilitate the translation of problems in the health care sector and in health care policy into research questions, and this interaction increases the chances of future utilization of the research findings. The SIAMPI project tentatively concludes that productive interactions require:

- institutional policy and management;
- involvement of stakeholders in the early stages of research;
- involvement of various stakeholders;
- transparency of involvement of funding agents.

This chapter has shown that NIVEL performs quite well on these conditions. A challenge for the future is to make these interactions even more productive.

A further challenge is to develop a system of monitoring research uptake in policy in a more quantitative way. Up to now, the best we have is the use of narratives of actual research utilization. Finally, valorisation is an area in which we have shown some successes but no systematic investment.

Societal impact: Needs and Health Care Demands of People with Chronic Illness or Disability

Case: Financial compensation for health-related costs of people with chronic illness or disability

Brief description of the research:

During the period 2001-2009, NIVEL conducted several studies on financial compensation arrangements by people with a chronic illness or disability. These people often have higher costs of living because of their illness or disability, e.g. higher insurance premiums, co-payments, dietary expenses, energy costs because of specific aids, etc.. Tax deduction facilities (within Income Tax Law) have been used to compensate for extraordinary health-related costs. This tax facility was adapted several times during the period 2001-2008, and was finally replaced by a new law (Wtcg; January 2009) consisting of a comprehensive system of new - fiscal and non-fiscal - compensation arrangements.

Policy level:

Our research has proved to be important for the monitoring and evaluation of financial compensation arrangements at national policy level, in particular income policy for vulnerable citizens, developed by the Ministry of Social Affairs and Employment in collaboration with the Ministry of Health and the Ministry of Finance.

Policy area:

Until 2009, extraordinary health-related costs could (partly) be compensated by a tax deduction facility. This facility has been adapted several times in order to make it more tailored to the characteristics of the target groups, to provide better compensation for these groups and to counteract abuse by people who are not chronically ill or disabled. Notwithstanding these adaptations, our studies have demonstrated that underuse by people with chronic illness or disability remained substantial because of the complexity of the arrangement and the need for individual initiative to establish eligibility for compensation. In 2009, the tax facility was partly replaced by compensation arrangements related to social security and the use of long-term care.

Impact of the research on policy:

The ministries involved have frequently used our results to respond to parliamentary questions. In response to a resolution (Meurs motion, December 10th, 2009) by the Senate, the Minister of Social Affairs and Employment and the junior Minister of Health have promised to monitor the income effects of the new law – in comparison with the old law - among chronically ill or disabled people. In the minister's letter to the Senate (EK-31706; 2009-2010), he explicitly referred to NIVEL for monitoring this.


Use of national information systems:


For this research we make use of the National Panel of the Chronically Ill and Disabled (NPCD), a nationwide representative prospective panel for studies conducted by NIVEL since 1998. NPCD consists of about 3,800 people who have been diagnosed with a somatic chronic disease or who have moderate to severe levels of physical disability. Its national representativeness is an important characteristic. Moreover, since we have collected data on health related costs and the use of compensation arrangements each year since 1998, data for this research are available from both before and after the transition.

Kok, L., Houkes, A., Rijken, M. Effects of cost sharing rules on income and health care consumption of the chronically ill. Oral presentation (and abstract), European Conference on Health Economics. Rome, July 25th, 2008.

Rijken, M., Groenewegen, P.P. Money does not bring well-being, but it does help! The relationship between financial resources and life satisfaction of the chronically ill mediated by social deprivation and loneliness. Journal of Community and Applied Social Psychology, 2008, 18, p39-53.

Janssens, L., Rijken, M., Spreeuwenberg, P. Wijziging van de regeling voor buitengewone uitgaven. Inkomenseffecten bij chronisch zieken. [Adaptation of tax deduction of extraordinary health related costs. Income effects among the chronically ill.] Amsterdam/Utrecht: SEO Economisch Onderzoek/ NIVEL, March 2005.

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

7 Viability of the institute and investment in the next generation

NIVEL is an organisation of professionals led by professionals. At the end of 2008 the management structure of NIVEL changed, with a new director and governance. The core of the scientific staff of NIVEL comprises the programme coordinators. They develop their own programme line, taking into account changes in policy, in the field of health care and scientific developments. Within the programme lines, young researchers evolve into a new generation of research leadership.

NIVEL sets out to have a strong and stable leadership. The backbone of the institute, the programme leaders, should be top academics, who are themselves active in research and have a sound reputation as experts in their field. NIVEL claims to be able to continuously innovate in the research areas covered, in research methods and in ways of relating to stakeholders. NIVEL provides an environment of continuous learning to its personnel.

In this chapter we describe the leadership of the institute and its formal structure. Moreover, we will discuss the innovative capacity of NIVEL and its human resources policy.

Management of NIVEL

Until 2008, NIVEL was headed by a Board of Directors which consisted of two persons with joint responsibility for NIVEL as a whole: Prof. Jozien M. Bensing [✉](#), PhD, primarily responsible for external affairs and networks and Prof. Jouke van der Zee, PhD, primarily responsible for internal and international affairs. By the end of 2008 Prof. Van der Zee opted for early retirement and Prof. Bensing stepped down as director to continue working on her own research programme within NIVEL. Their position was assumed by Prof. Peter P. Groenewegen [✉](#), PhD, former head of one of the NIVEL research departments.

Prof. Groenewegen is assisted in his daily management tasks by four Heads of Research Departments, and the Deputy Director of General Affairs. Each of the Heads of the Research Departments is primarily responsible for specific areas of attention:

- Prof. Ir. R. (Roland) Friele [✉](#), PhD (Deputy Director of Research): publicity, Centre for Knowledge Exchange (CKE)
- J. (Jany) Rademakers [✉](#), PhD: quality assurance and continuous education
- Prof. D. (Dinny) de Bakker [✉](#), PhD: information systems and research-related ICT
- Prof. F. (Francois) Schellevis [✉](#), PhD, MD: international relations and international research activities

The Deputy Director of General Affairs (Machteld Roos, MSc) is primarily responsible for finances, human resources, housing and equipment, and ICT.

The management team has weekly meetings in which information is shared. All formal decisions, including those concerning the acquisition of new projects have to be agreed at this weekly meeting.

Supervisory Board and Societal Advisory Board

Since June 2009, NIVEL has a Supervisory Board and a Societal Advisory Board. Until then, NIVEL was supervised by a Board of Governors. However, in recent years there was a need for a new model of combining efficient governance with the network aim (as described in chapter 3). There were two reasons for this. Firstly, societal ideas about good governance have changed over time; having actors in the health care system represented within the board of governors no longer fits in with these ideas, instead, the emphasis is on autonomy and separation of roles. Secondly, it was increasingly difficult to have a large attendance at the Board of Governors' meetings.

The Supervisory Board consists of five members, who supervise NIVEL management at arms length. Together they cover competencies in scientific research, finance, health care policy and legal areas. The Societal Advisory Board includes high-ranking individuals from national organisations of health care providers, insurers and patients, as well as from semi-government organisations. The Societal Advisory Board ensures that NIVEL research is embedded in the Dutch health care system; it informs NIVEL on developments in health care policies and the health care field; and it reflects on NIVEL research from a societal point of view.

Management of research projects

The organisational chart shows the internal organisation of NIVEL (see next page). NIVEL’s research programme consists of several more or less constant programme lines which are managed and developed by fourteen coordinators. These are responsible for the acquisition of new research projects in their programme line, they maintain their own societal and scientific network and they supervise research projects. The programme coordinators are not mere managers, they are academic leaders who remain active as researchers (as witnessed by their publications). Nearly half of them also have an academic position. By the end of this evaluation period (2009), the programme coordinators were (in alphabetic order):















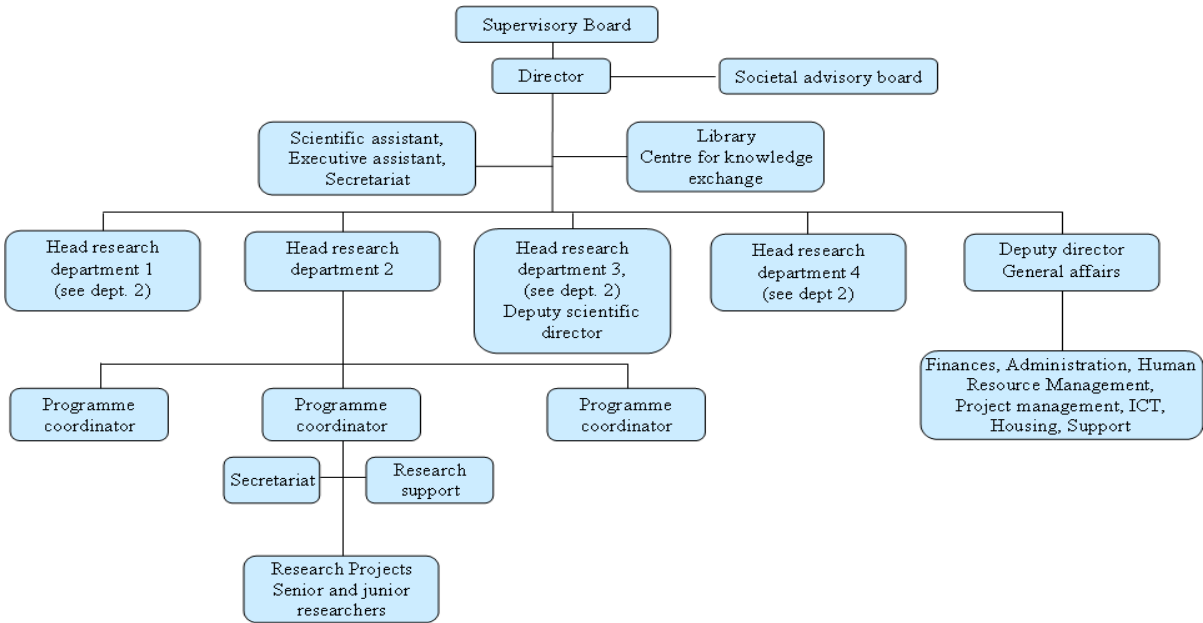
- R.S. (Ronald) Batenburg , PhD, Professions in health care and manpower planning
- Prof. W. (Walter) Devillé , MD, PhD, International and migrant health
- L. (Liset) van Dijk , PhD, Pharmaceutical care
- A.M. (Sandra) van Dulmen , PhD, Communication in health care
- Prof. A.L. (Anneke) Francke , PhD, Nursing care
- Prof. R.D. Friele , PhD, Evaluation of health law
- C.J. (Joris) IJzermans , PhD, Monitoring health effects of disasters
- J.D. (Judith) de Jong , PhD, Health care system and governance
- J. (Jany) Rademakers , PhD (acting), Patient perspective and demand driven health care
- P.M. (Mieke) Rijken , PhD, Care demand of the chronically ill and disabled
- Prof. F. (Francois) Schellevis , PhD, MD (acting), General practice care
- C. (Cindy) Veenhof , PhD, Allied health care/ sport, physical activity and health
- Prof. P.F.M. (Peter) Verhaak , PhD, Mental health and primary care
- Prof. C. (Cordula) Wagner , PhD, Organisation and quality of health care

Figure 7.1 Organisational chart of NIVEL



Four times a year, preceding the meetings of the Supervisory Board, there is a meeting of the management and all programme coordinators to discuss periodic evaluations, the general state of affairs, quality management and strategies for the future. These meetings are prepared by the management team and chaired by the director.

HRM policy and recruitment

HRM policy

NIVEL's HRM (Human Resource Management) policy has clear and constant principles. Priority is given to the core activity of research. When budgetary priorities have to be set, e.g. in the case of budget cuts, we try to cut costs in overheads rather than in research. Because of the demographic profile of researchers, the organisation supports the combination of home and work (working part-time, location close to railway station).

Secondly, NIVEL sees itself as an on-the-job educator of researchers, devoting considerable attention and funds to education and training. NIVEL does not provide a job for life – at least not for most researchers. Policy is 'up or out'. As funding is mostly based on commissioned research, researchers start with temporary contracts. Tenure depends on broad research experience, a large network in research and policy, being able to attract research grants, having a PhD, and publishing in international journals; furthermore, the economic prospects for the institute must be sound. Researchers are regularly assessed by their supervisors. After at least three years of contracts, researchers are evaluated on their potential and an explicit 'up or out decision' is made. Of the research staff, 37% hold a tenured position.

Thirdly, HRM is primarily performed by the programme coordinators as line managers. The personnel department is small and supportive. Finally, the division into programme lines creates small teams of five to ten people, who can instantly react to calls for research commissions, which is essential for a flexible organisation that depends for so much of its budget on commissioned research.

Labour laws restrict temporary contracts to a maximum period of three years. After that employees have to have a period of at least three months without a contract with NIVEL. It is important to mitigate the effects that this legislation has on individual researchers. Some researchers spend this period at another research institute or abroad, broadening their experience.

Recruitment

Nearly one third of the job openings in 2004-2009 were filled with an internal candidate, providing extended contracts for researchers who were positively assessed. Until 2006, recruitment of external candidates took place mainly through the NIVEL website. Vacancies posted on the NIVEL website had approximately 14,000 hits in 2003; in 2009 this number had increased to 35,082 hits. Due to labour market changes, the response rate declined in 2007 and 2008, and it was decided to advertise more actively in external media (e.g. newspaper advertisements and specialized job vacancy websites). On average, vacancies are filled within five weeks; this rate has increased over time. Since 2009, it is standard procedure to ask all external candidates how they learned about the job they applied for. This information will help us to recruit researchers more efficiently in the future.

Training and employment of the next generation of researchers

Introductory period

New employees are introduced to the institute by their direct supervisor. In addition, there is an introduction about NIVEL's quality system and procedures (especially the use of a logbook in research projects), our HRM policy and daily procedures. The director provides information on NIVEL's history and mission and has an individual interview with all new employees. Since 2004 we have monitored how these meetings were rated by new employees: the average assessment on a scale of 1-10 of the introduction over the period 2004-2009 was 7.9, 7.6, 7.5, 7.8, 7.9 and 7.9 respectively.

Personnel evaluation

Personnel evaluations constitute the most explicit opportunity to discuss employees' career and training prospects. Based on the quality procedures, an employee should have an evaluation at least once a year, of which a record is kept in personnel files. In 2007 it was decided that the number of personnel evaluations was too low and should be increased. In 2008 and 2009 the number of recorded evaluations was 113 and 102; however, with a view to reaching a standard of once per year this is still too low.

Continuous education

NIVEL stimulates and facilitates continuous education of all its researchers, including PhD students. It is important for both the individual and the institute that researchers keep their knowledge and skills up to date. Some educational activities are organised in-house; other courses can be followed elsewhere, e.g. at the two research schools (CaRe and Psychology and Health) in which NIVEL participates.

Table 7.1 Courses followed by NIVEL researchers (numbers of participants)

Type of course	2004	2005	2006	2007	2008	2009
Academic writing in English / presenting skills in English	10	12	33	12	31	18
Statistics and methodology courses	32	21	49	22	67	103*
Other research skills	11	4	27	5	12	19
General computer skills	29	23	21	12	16	12
Other (including management courses)	28	42	33	44	70	80

* The large number in 2009 was caused by a change from SPSS to Stata.

Apart from formal courses, researchers also keep up to date by attending conferences. The policy on international conference attendance is that attendees have an abstract accepted for an oral or poster presentation. Attending international conferences encourages researchers to publish their results in international journals. The number of conferences attended varies somewhat between the years. On average, approximately 160 conferences, invitationals and other meetings are attended yearly. Given a total number of research staff of around 100 in this period, this amounts to some 1.5 conferences per year per researcher. A little less than one third of these conferences are international. Expenditure on continuous education and conference attendance per year has gradually increased to an average of about 1.5 percent of total NIVEL turnover. This figure does not include the important educational effect of the peer review meetings (see chapter 3). There are no comparable figures of other institutes to benchmark this.

Table 7.2 Conferences attended by NIVEL researchers

Conferences attended	2004	2005	2006	2007	2008	2009
International	78	49	53	52	60	45
National	108	69	67	66	68	64
Expert meetings	74	37	40	41	38	30
Other meetings	14	8	11	12	6	6

Table 7.3 Annual costs of continuous education and conference attendance

Conference costs	2004	2005	2006	2007	2008	2009
Costs in euros	112,527	178,005	191,543	146,720	141,223	82,792
Share personnel costs*	1.5%	2.2%	2.7%	2.3%	2.50%	1.40%
Share of total turnover	1.0%	1.4%	1.7%	1.3%	1.20%	0.60%

* This includes both direct personnel costs (wages) and indirect costs, including social expenses.

The lower number of people who attended an international conference in 2009 and the lower level of expenses in that year are not the result of policy; this is most likely a chance fluctuation.

Short-term research / writing leave

The dual mission of NIVEL can put pressure on researchers. Policy-oriented research is usually commissioned research with strict deadlines. Research projects differ greatly in length, but there is a tendency towards shorter projects. In view of the strict deadlines, a first priority is usually to finish the report in time. This is to the advantage of societal production, but can be to the detriment of the scientific production. To reduce some of the pressure related to NIVEL's two-fold mission, NIVEL introduced the option of short-term leave-of-absence in 2000, for the purpose of working on a scientific article. From 2004 to 2009, 40 researchers availed of this opportunity - an average of 6.7 per year. From 2009 the MoE project grant facilitates senior researchers and programme coordinators in taking a one-month writing leave each year. Based on current registration, it is not known what the exact pay-off has been for these leaves-of-absence. However, they coincide with an increased number of international publications.

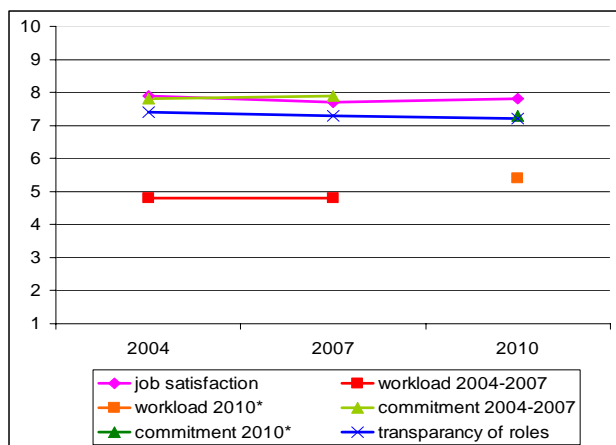
Mobility of researchers

One of the positive side effects of the on-the-job training function of NIVEL is that researchers who leave NIVEL usually find another job easily. As these jobs are mainly in the health care sector, be it research or policy, those who leave NIVEL become part of the wider network of the institute. In 2009, of 16 researchers with a known job after leaving NIVEL, 6 went to an university position, 4 to a research position elsewhere and another 6 to a policy position. Every now and then a researcher comes back, after a period of personal and professional development outside NIVEL.

Evaluation of human resource management

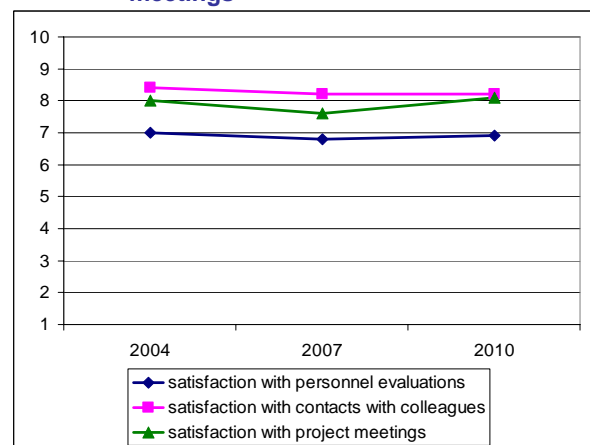
In order to get an unbiased picture of how NIVEL employees rate their work, working conditions, work atmosphere and leadership, an employee questionnaire is sent to all employees every three years since 2001. The latest was in Spring 2010. The questionnaires are treated anonymously, and are analysed and reported on by an independent, external researcher. NIVEL management has no access to the data. In 2004, the questionnaire was completed by 131 individuals (78%); in 2007 by 118 individuals (75%) and in 2010 by 151 (87%).

Figure 7.2 Job satisfaction, experienced workload, commitment and transparency of roles



* The scales for workload and commitment were adjusted in 2010.

Figure 7.3 Satisfaction with personnel evaluations, contacts with colleagues and project meetings




During the 2004-2009 period NIVEL employees were generally satisfied with their work (7.9 on a ten-point scale in 2004, 7.7 in 2007 and 7.8 in 2010) and their working conditions. Workload is not experienced as very high (employees value workload at mid scale (5.4)); and taking work home or working more than contractual hours is not seen as a burden. Employees are especially satisfied with their contact with colleagues and with their level of autonomy. Moreover, employees are satisfied with leadership, except for supervisors' attention to career development. Employees are positive about project meetings (8.1 on a 10 point scale) and this increased over time. They are satisfied with the internal communication at NIVEL, especially because of intranet. Sick leave is low (2.8% in 2009), and people who had been ill were generally satisfied with the contact with management and colleagues during sick leave. Most people indicate that they expect to remain employed at NIVEL in the near future. Compared to 2004, employees have slightly more ambition to specialize or to move to a higher level job. Compared to 2007, they more often want to realize these ambitions within NIVEL. Employees think that within NIVEL, possibilities for upward mobility are insufficient. Several employees are not satisfied with their opportunities for a prolonged career at NIVEL (due to temporary contracts). Satisfaction with salary is also relatively low (average mark in 2004: 5.9; in 2007: 5.6; and in 2010: 5.4). The reports of the Employee satisfaction monitor are being used to adapt policies when necessary and where possible. The possibilities for upward mobility are perceived as problematic by employees. This may be (partly) due to the lack of attention among supervisors to career development. In recent years, we tried to improve this by training programme coordinators in personnel evaluation and by implementing greater adherence to the cycle of personnel evaluations. Possibly as a result of special attention to this aspect of leadership, supervisors' attention to career development is valued somewhat higher by employees in 2010. Currently, we are critically evaluating the job evaluation system ('Functieopbouwsysteem'). If necessary, this will be adapted.

The career development of researchers is also important for continuity in management positions. Some of the members of the management team and a number of programme coordinators will retire in ten years' time. To be able to fill management positions in the future, we decided to invest more in the development of researchers at post-doc level. In 2009 the first specific internal training for this group took place. However, not all vacancies can be filled by internal researchers. Two programme lines had a vacant position of programme coordinator in 2009 and were run by a head of research department. This was caused by difficulty in attracting qualified researchers for these positions from outside. The vacancy for programme coordinator 'Patient perspective in health care' is now filled by one of the researchers in this programme line who is now receiving support and training to become programme coordinator. The vacancy for programme coordinator 'General practice care' was difficult to fill because of a lack of qualified external researchers – we were looking for a GP with a PhD. We have now contracted an epidemiologist with broad experience; we expect her to do very well in this position (although she is not a GP). A general problem with external applicants for programme coordinator positions is that they usually work in an university context where they were not trained in the societal aspects of research and did not develop an ability to attract money from policy and health care funds.

Innovative capacity

NIVEL's core business is health services research. Health services research has to be responsive to changes in the policy and health care environment. NIVEL's research programme is therefore changing continuously. Sometimes gradual change is not enough and new approaches and new research lines have to be developed. Large scale innovations and strategic shifts in research policy that occurred in NIVEL's past include the extensions of the research domain (from general practice to primary care, and from primary care to health care in general) and the development of a formal quality system.

At programme level, in response to health care policy changes, new programme lines were started. An example is the new programme line established in 2009 on Health Care System and Governance . This is

a response to changes in the Dutch health care system, where health insurance organisations now occupy a more important position. Within this programme, collaboration in a triangle with one of the big insurance organisations (UVIT), the Open University and NIVEL is being organised as a so-called academic research workplace.

On a scale somewhere between programme lines and projects, the development of the National Survey of Primary Care (NSpc), as successor to the two previous highly successful National Surveys of General Practice can be mentioned as an example of innovative capacity. This is a direct response to changes in primary care and related policies. These changes necessitate the development of an integrated data infrastructure for primary care. Separate data infrastructures for GP care and other primary care services no longer give full coverage. As mentioned in chapter 4, NSpc is now partially funded to be able to develop this integrated data structure for primary care.

Finally, at project level, innovations take place continuously. Scientific research has an internal dynamic of developing new theories and methods.

Innovations frequently develop from individual projects into more generally applicable tools, often in cooperation between a specific project and the CKE. Examples are:

- the development of the Demand and Supply Monitor in Primary Care (VAAM) [↗](#), developed in projects together with the Federation of Patients and Consumer Organisations in the Netherlands (NPCF), to plan and monitor local primary care teams;
- interactive data collection techniques for use in international projects and online focus groups [↗](#) to reach difficult groups;
- new research instruments to measure patient experiences with health care and health insurance, the so-called CQ (consumer quality) index [↗](#).

Funding of innovative initiatives is very important. Part of NIVEL's MoH subsidy is devoted just to this function of strategic knowledge development. Relative to total turnover, the budget for strategic and free research has decreased, making it difficult to earmark enough resources for innovation (see chapter 2).

However, with the special grant from the MoE more funds became available (as of 2009) for investing in scientific innovation. At the same time this gives more room for investing in innovation in the societal part of the mission within the MoH subsidy. Within our quality system, innovation is seen as a planned process with an evaluation cycle.

Conclusions

After a long period with the same successful management, the leadership of the institute changed in late 2008. Management of the institute was handed over smoothly. Moreover, the new structure of governance appears to work well; the supervisory function and the network function are separate, with a Supervisory Board at arm's length supervising the management, and the Societal Advisory Board providing the network in the health care field.

The backbone of the institute consists of the programme coordinators. Each and every one of them has a strong position and a good reputation in research, with many having academic links. It is, however, difficult to find good replacements. That is one of the reasons to invest in the education of post-docs who are tomorrow's programme coordinators.

A clear HRM policy gives people opportunities to develop, and selects those who have potential. The policy is up or out. Given the large share of soft money, tenure is only available for few. HRM policy aims at providing an environment of continuous learning. Writing a PhD thesis is part of this, but also learning to attract research funding, not only from scientific sources but also from policy and health care funds.

Employees see NIVEL as a good place to work. Systematic and regular monitoring of employee satisfaction contributes to improvement.

Innovative capacity is evidenced by some strong examples at institute level and at project level. NIVEL is able to innovate at the level of research projects and at the level of the institute as a whole.

Societal impact: Nursing Care

Case: Moral dilemmas in the daily work of nurses

Brief description of the research:

The Netherlands Centre for Ethics and Health (CEG) is a joint venture of the Health Council of the Netherlands and the Council for Public Health and Health Care (RVZ). Its main task is to identify developments in the field of health which deserve a place on the government's ethical policy agenda. On 26 November 2009, the Centre for Ethics and Health published a report on moral dilemmas in daily care that nurses and carers are confronted with. These dilemmas are related to institutional issues, such as achieving targets, meeting performance requirements and dealing with new financial structures. They can make nurses and carers feel overwhelmed by additional tasks, taking time away from providing good care. The report was largely based on research conducted by NIVEL. First, the CEG identified instances of moral dilemmas within nursing care by organising some group discussions. Then, in order to validate these, NIVEL investigated whether these dilemmas were actually recognised as such by nursing staff. NIVEL also investigated the moral distress caused by the dilemmas, as well as possible solutions to reduce the distress. The research data were an integrated part of the CEG report.

Policy level:

National, viz., Ministry of Health, Welfare and Sport. The reports by the CEG describe recent developments in public health, which raise certain ethical questions, calling for government attention. In publishing these reports, the Health Council of the Netherlands and the Council for Public Health and Health Care are fulfilling their 'watchdog' role within the context of the CEG.

Policy area:

Agenda setting. The purpose of the reports by the CEG is to provide input for the Ethics and Health Agenda, which forms part of the annual budget proposals of the Ministry of Health, Welfare and Sport.

Impact of the research on policy:

Questions were asked about the report in the Dutch parliament. The answers given by the Minister of Health were also sent to organisations for the education and training of nursing staff and to umbrella organisations within health care.

Impact on the general public:

Articles in newspapers (Trouw, Nederlands Dagblad), radio interview, articles in journals on nursing care and hospital care


Use of national information systems:


Panel of Nurses & Carers. The Panel of Nurses & Carers is a nationally representative research sample of nursing staff in the Netherlands. The Panel consists of a permanent group of Nursing Assistants (NAs) and Registered Nurses (RNs) who are prepared to fill in a postal questionnaire twice a year on average. The participants represent the nursing staff in the largest health care sectors in the Netherlands, i.e. hospitals, psychiatry, care for disabled people, home care, nursing homes and homes for the elderly. By using this infrastructure it is possible to investigate the experiences and perspectives of nursing staff within a relatively short period of time.

Veer, A.J.E. de, Francke, A.L. *Attitudes of nursing staff towards electronic patient records: a questionnaire survey. International Journal of Nursing Studies*, 2010, 47(7), p846-854.

Veer, A.J.E. de, Francke, A.L., Buijse, R., Friele, R.D. *The use of physical restraints in home care in the Netherlands. Journal of the American Geriatrics Society*, 2009, 57(10), p1881-1886.

Veer, A.J.E. de, Francke, A.L., Poortvliet, E.P. *Nurses' involvement in end-of-life decisions. Cancer Nursing*, 2008, 33(3), p222-228.

This case was based on the following sources... 

Top 3 scientific publications from this programme line... 

8 SWOT analysis and strategy

NIVEL has a dual mission and, as we stated in the first chapter, we want to be evaluated on both dimensions. In the preceding chapters we have analysed these two dimensions separately. In this chapter we address the balance between scientific and societal quality.

As any organisation, we need to know our strengths to be able to use the opportunities that come up; in this way we combat our weaknesses and cope with threats. On the basis of this SWOT analysis we define our strategy for the years to come.

The mission of NIVEL is to conduct good quality research that is applicable in health policy and the health care field. To be able to realize this mission we require a financially healthy organisation with a sound earning capacity (chapter 2), with personnel that is well qualified for their job and motivated to work for the goals of the organisation (chapter 7), in a well organised institute (chapter 3).

The two aspects of our dual mission have been extensively discussed; scientific quality has been described in chapter 5 and societal relevance in chapter 6. However, they were discussed separately. Therefore, in this concluding chapter of the self-evaluation we first discuss the issue of balance between the two. We then summarize the main conclusions of the preceding chapters.

The core of this chapter is a SWOT analysis of NIVEL. This provides the basis for the final section on NIVEL's strategy for the next period.

The balance between scientific and societal quality

Having a dual mission can create additional tension for the organisation and its staff. It is all too easy to emphasise one part of the mission at the expense of the other. Balance is therefore at the core of our self-evaluation.

NIVEL has a strong reputation for combining good scientific quality of research with relevance and applicability in policy and health care practice. Chapter 5 showed that the scientific output as measured in terms of number of articles in journals with an impact factor has increased over the years. However, the impact of our research has decreased over the years. This is an important area for improvement. Overall the bibliometric analysis is appropriate, as the coverage of NIVEL research by ISI journals is satisfactory. However, in areas such as nursing, coverage is rather low.

We evaluate the societal quality of our research as very strong. Chapter 6 showed that stakeholders see NIVEL research as applicable, reliable and innovative. There is a lot of interaction in all phases of the research and at both programme and project level. This is an important condition for optimum utilization of the research. The results of the research are widely disseminated to stakeholders in face-to-face contacts and more generally through the website. NIVEL research is often cited in government documents, newspapers and websites. And all programme lines have compelling examples of the societal impact of their research.

On an annual basis, we monitor the balance between scientific and societal knowledge *production* and *dissemination* in a quantitative way. Regarding production, figure 8.1 shows the scientific and societal production of NIVEL publications in numbers and the scientific/societal production ratio.⁴ Over time, the

⁴ To calculate this share we have taken the number of articles in peer-reviewed journals, the number of dissertations and the number of (chapters in) academic books for scientific knowledge production and the number of policy reports and publications in books and journals for professionals and policy-makers for policy oriented knowledge production.

total research *production* shows a slight but non-linear increase (this is total production). The ratio of scientific to societal production is slightly over 1, as a result of a marginally larger share of scientific work in total production. Figure 8.2 presents the same for scientific versus societal *dissemination* of knowledge.⁵ Total dissemination is on the increase (with the exception of 2009). The scientific/societal ratio is mostly below one, indicating a relative emphasis on societal dissemination.

It is difficult to say exactly where the balance between the scientific and societal dimensions of our mission should lie. However, it seems appropriate that knowledge production tends to be dominated more by scientific work, and knowledge dissemination by societal work. NIVEL's performance underscores the conclusion of a recent report on the Management and Performance of Research Groups⁶: good scientific performance and societal output strengthen each other.

An important challenge is to increase the scientific impact of our research to world reference level, while at the same time keeping societal quality at its current, high level.

Figure 8.1 Scientific and societal *production* in numbers and scientific/societal ratio 2004-2009

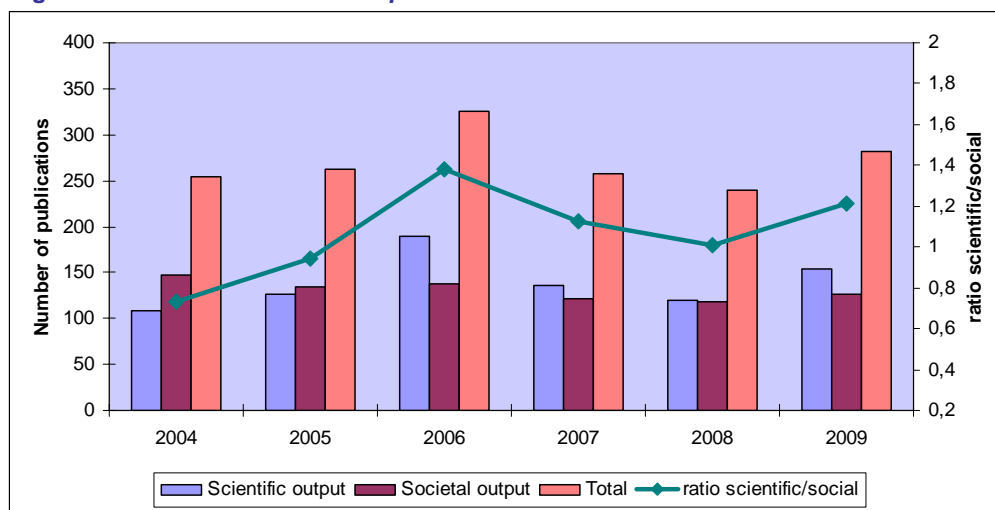
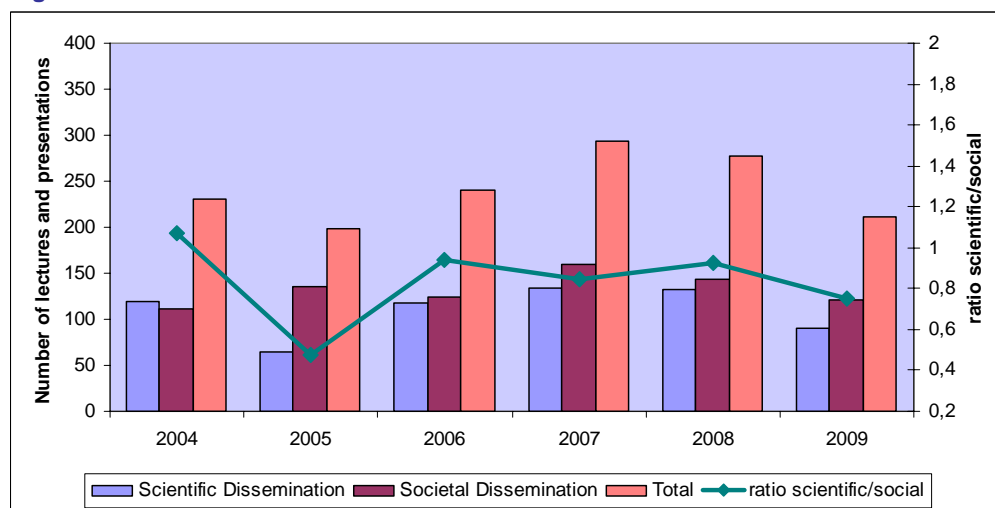


Figure 8.2 Scientific and societal *dissemination* in numbers and scientific/societal ratio 2004-2009



⁵ Scientific dissemination is the number of oral presentations, keynote and posters at scientific conferences for scientific dissemination; conversely, the number of presentations for policymakers and professionals, website contributions, fact sheets, invitational conferences is used for societal dissemination.

⁶ Van der Weijden, I. et al. Management en prestaties van onderzoeksgroepen. Den Haag, Rathenau Instituut, 2009.

Conclusions from the preceding chapters

All in all, we are proud of NIVEL's performance as described in the previous chapters. We believe our good performance is the result of a continuous process of strategic planning and monitoring, a focussed human resources policy, and a strongly developed internal quality assurance system, with accredited certification to ISO-9001. These factors have helped to strengthen NIVEL's identity as National Institute for Health Services Research, and to build a reputation in the academic world as well as in the health sector at large, both nationally and internationally.

Most, but not all the challenges defined in and after the last external assessment have been addressed in a satisfactory way. NIVEL now has a clear place in the knowledge infrastructure of the MoH. In 2007 an agreement was reached for a 4-year (2008-2011) covenant with the Ministry. The funding situation of NIVEL has improved, firstly by virtue of the covenant with the MoH and secondly by means of support from the MoE. In the area of European research we have acquired a number of important new European projects; we are hosting a new European network (EFPC); and we are allowed to use part of the budget for strategic knowledge development for the purposes of matching funding. Our ambition is to increase the share of EU-funded research in the next evaluation period.

Our national databases and panels are a resource shared with many external research groups. We have started to conduct research on new professions in health care, and the first policy-oriented overview study has been completed. The academic position of NIVEL has been reinforced by new special university chairs. At the same time, increasing the scientific impact of our research is an important target for the years to come.

The renewal of the covenant with the MoH for the period 2012-2017 is currently being negotiated. Given the financial situation of the country, NIVEL faces a big challenge here. We hope that the current Self-Evaluation and the conclusions of the committee will underscore the undiminished value of NIVEL for the MoH.

The societal context in which NIVEL conducts its research is exciting because of the fundamental changes taking place in the health care sector. The Dutch health care system is evolving into a more market-oriented system with new roles for patients / consumers and health care insurers. Various drivers coexist (regulated markets, macro budgets, increasing role of municipalities). This will enhance the information needs of a growing number of decision makers in health care and will introduce a lot of new research questions. We believe that NIVEL – through its elaborate networks – is well positioned to play a role in this changing environment. Likewise, internationally, a great deal of change is currently taking place, especially within Europe.

SWOT analysis

The SWOT analysis is based on a discussion in NIVEL's scientific staff meeting and with other personnel during a two-day retreat on the occasion of NIVEL's 25th anniversary in May 2010. We have grouped the issues that came up in these discussions into the four SWOT analysis dimensions (strengths, weaknesses, opportunities and threats) and five key areas:

- assets (such as the national databases);
- core issues in research (process, performance, topics and competition & cooperation);
- relationship with the environment (networks, response to change);
- funding;
- management and personnel (internal processes).

The main strengths of NIVEL are the national databases and panels that are used to address policy questions *and* scientific questions, the well controlled research processes with peer review as the core of the quality system, and good relations with stakeholders in policy, the health care field and academia.

Box 8.1 SWOT-analysis NIVEL Spring 2010

<p>Strengths:</p> <ul style="list-style-type: none"> - <i>Assets:</i> strategic knowledge of the health care sector, national databases and panels, both for own research and external users - <i>Research:</i> well controlled research processes, quality assurance, timely, sound and state-of-the-art research; high research output: both scientific and societal products - <i>Relationship with environment:</i> strong networks in policy, health care and academia - <i>Funding:</i> good earning capacity; stable, subsidy from MoH; competitive in contract research; European funding - <i>Management and personnel:</i> stability and continuity, central overview/monitoring by management team; well qualified and motivated personnel, willingness to put in extra effort. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> - <i>Assets:</i> assets and results are used by many others; this usage is not always visible to the outside world - <i>Research:</i> tension between the broad expertise required in a project organisation in HSR and the need to specialize and deepen knowledge in scientific performance - <i>Relationship with environment:</i> lack of innovation in ways of connecting to stakeholders, tension between independence and customer orientation - <i>Funding:</i> dependency on MoH; not enough room for securing matching funds for European projects - <i>Management and personnel:</i> project information and management needs further improvement; long term perspective for researchers is lacking, need to invest in the post-doc group.
<p>Opportunities:</p> <ul style="list-style-type: none"> - <i>Assets:</i> international projects can be developed into databases - <i>Research:</i> strategic cooperation with other groups; use of ICT in (online and web-based) data collection - <i>Relationship with environment:</i> new research opportunities as result of changes in health care (policy) - <i>Funding:</i> potential continuation of MoE subsidy - <i>Management and personnel:</i> increased flexibility, new governance structure; more expertise in ICT, educational and coaching trajectories for post-docs 	<p>Threats:</p> <ul style="list-style-type: none"> - <i>Assets:</i> technology for extracting and utilizing EMR information increasingly available to others - <i>Research:</i> dual mission hampers competition with university departments, lack of expertise in the area of cost-effectiveness studies - <i>Relationship with environment:</i> research procurement procedures, lack of continuity and substantial interest in civil servants, lack of appreciation for scientific research in politics and policy - <i>Funding:</i> financial crisis; no full costing by universities (competitive disadvantage) - <i>Management and personnel:</i> difficulty in attracting and keeping good researchers, especially programme coordinators

The main weaknesses of NIVEL are the tension between the broad expertise that is required in a project organisation in health services research and the need to specialize and deepen knowledge in scientific performance, the lack of visibility of NIVEL databases in important policy documents, and the ‘in between position’ of postdocs. We have started to invest in each of these areas, but it will take time and commitment to overcome these weaknesses.

Changes in health care policy and broader society provide opportunities for NIVEL research in the form of ‘new markets’. Further opportunities are seen in the area of international research and strategic cooperation with other research groups in areas where NIVEL is less strong, such as outcomes research and health economics.

The first and main threat is the current financial crisis that might lead to a cut in funding for the new contract with the MoH for the period 20012-2017. A second threat is related to a broader societal process that we observe: the value of research as a legitimate factor in policy making is decreasing, notwithstanding lip service to evidence-based policy making. Finally, competition in the applied and policy research arena will become fiercer with cuts in funding, procurement rules, and new entrants, such as universities of applied sciences (HBOs). Procurement rules work counter-productively because they hamper the interaction between researchers and policy makers (as outlined in figure 6.1).

Strategy 2010-2015: meeting the challenges of a dual mission

NIVEL's two-fold mission, the pre-conditions to realize this mission and the SWOT analysis define a number of strategic challenges that we face in the coming period. Our main goal for the years to come is related to quality: increasing scientific quality and keeping societal quality at its current high level, while at the same time maintaining a balance between the two. For the financial stability of the organisation it is important to finalize the new covenant with the MoH for the period 2012-2017.

Assets

The strengths, weaknesses, opportunities and threats with regard to research listed above define a number of strategic challenges for NIVEL. NIVEL's national databases and panels are a major strength. However, we have also identified a lack of visibility relating to the use of our databases and panels – and of NIVEL research in general - in policy documents. This is partly a consequence of the way policy makers use research and refer (or fail to refer) to them in their documents. We see a (partial) solution in fine tuning of our research products to policy needs and in seeking better ways to disseminate them. The technology that is being used to extract information from EMRs is becoming standard and is therefore less exclusive. However, we have already started a new step by designing an integrated data infrastructure for primary care. This will be one of the building blocks of a new national study - this time not of general practice, but of integrated primary care (in 2010 we acquired funding for building the integrated infrastructure from the MoH). This is a clear innovation based on our EMR-based national databases. At the same time it is a response to opportunities mentioned, i.e. new policy needs. As the master plan for a new national study as a whole turned out not to be fundable, we have decided to find funding for separate parts of the original idea. The challenge will be to give this as much mass as the two previous national studies, both of which had a large scientific and societal impact.

Research

One of the challenges is to find solutions to the tension between the broad expertise that is required in a project organisation in health services research and the need to specialize and deepen knowledge in scientific performance. The project subsidy provided by the MoE helps to resolve this tension. The productivity of this subsidy (in terms of scientific output and position in the academic world) will be one of the determinants of continued MoE support. An important target is to increase the scientific impact of our research. This said, we will look at the internal organisation to find a balance between broad expertise and the advantages of specialization. In terms of internal organisation, the programme coordinators need to have rather broad expertise to be able to attract external funds. However, within their programme lines more specialized researchers would also be welcome. This might also be a way forward for some of the post-docs, provided that they are able to attract enough research money.

Relationship with environment

As a national institute for health services research, NIVEL is well embedded in policy and research networks. This is an important strength, but at the same time, with changes in the strategic value of research, we have to protect the independence of our research while at same time being customer-oriented. We will reinforce our policies in this area by emphasizing transparency about funding relations (one of the conditions for productive interactions, identified by the SIAMPI project), by early identification of projects that are policy-relevant or politically sensitive, by setting up multiparty committees for more projects, and by explicitly requesting commitment for research methods if there is keen interest in the results among some stakeholders. Changes in the environment pose a threat to the societal dimension of our mission in that the interactions that are so crucial to the utilization of research are hindered by procurement rules, mobility of policy makers and perhaps also by differing opinions about the value of research. This threat can only be contained by investing in interactions with policy makers. The environment, however, also

provides opportunities as a result of changes in health policy. We intend to invest in new research areas that we expect to become more important in the future. These innovations will take place within several NIVEL programme lines. At the strategic level we conclude that an important area will be research on the (anticipated new) role of municipalities in the health care field.

Funding

Compared to the previous review period, the funding situation has clearly improved. A significant strength is NIVEL's stable funding situation and solid earning capacity. To date we haven't felt the consequences of the financial crisis as a serious threat, but we are aware that there may be a delayed effect. The Dutch government will be forced to cut its spending during the years to come. This is the situation in which we are renegotiating a new covenant with the MoH. We trust to be able to show the value of NIVEL for the MoH. Whatever the outcome of this process, diversity of funders is important. Currently a large share of funding is from the MoH. Our strategy is to actively look for and invest in new research funders and hence dedicate more attention to customer portfolio management. An important opportunity lies in the hoped for continuation of the MoE subsidy.

Management and personnel

NIVEL has survived well a change of its management and executive structure. Project and management information are a relative weakness at the moment but improvement is on its way. Personnel evaluations show that NIVEL is a place where people are happy to work. This strength is important, as the HRM policy is and has been for a long time: up or out. This is only possible when we invest in continuous education and in career development and coaching trajectories, areas that can be improved. This policy is currently being intensified. The key group here concerns the post-docs, who are the potential programme coordinators of the future. This is all the more important because we experience difficulties in attracting programme coordinators from outside.

In conclusion, NIVEL is a strong organisation that continuously adapts its strategy to the changing environment. Strengths and opportunities prevail over weaknesses and threats, and of course there is potential for improvement. As a learning organisation we rise to the challenges ahead with confidence in NIVEL's future.