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FRAMING COMPETING TECHNOLOGICAL TRAJECTORIES

A STUDY OF FOUR TECHNOLOGICAL
TRAJECTORIES, ASSESSMENT FRAMES AND
INTERACTIONS IN THE FIELD OF TYPE 2 DIABETES

MSC THESIS
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Abstract (EN)

Type 2 diabetes is a growing problem worldwide, and is driven by preventable risk factors such as obesity, unhealthy diets and sedentary life-styles. In light of recognition of these risk factors, prevention-based and life-style based interventions are being developed, directly competing with the incumbent technological trajectory of pharmacological treatment. Controversy on the value of each of the technological trajectories exists, however, which prompted this research. Previous research has analyzed technological trajectories, and other studies also analyzed technological assessment frames of actors, but a knowledge gap remains on how these actors and their frames influence technological trajectories in their development. This thesis combined theory on technological trajectories, technological assessment frames and different actor group relations to technologies to create an overview of the competing landscape of technological trajectories for type 2 diabetes. This was done by gathering publicly available publication data from journals, newswires and publications by actors themselves. Speech-acts were then found in the publication data, based on which technological assessment frames were constructed on each of the four technological trajectories for each actor group.

This study confirmed the roles of actor groups as proposed in previous theory, with producers driving technological trajectories, institutions promoting challengers and users filling in a more neutral role. Results also showed that the incumbent trajectory of pharmacological treatment evolves and adapts to novel technologies, while challenging trajectories hardly focus on the incumbent trajectory at all. These challenging trajectories remain more heterogeneous, and seem to experience their own era of ferment, which may serve as an indicator for technological discontinuity in the field. This should be investigated further, however.



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List of abbreviations

AVLEG	Academy of Life-style and Health (“Academie voor leefstijl en gezondheid”)
BLCN	Branch organization for life-style coaches Netherlands
BOGIN	Biosimilars and Generic drug Industry association in the Netherlands
CBG	Dutch Medicine Evaluation Board
CVZ	College of Health Insurance (predecessor of ZINL)
DVN	Dutch Diabetes Association
GLI	Combined life style intervention (“Gecombineerde leefstijlinterventie”)
HICs	Health Insurance Companies
IGJ	Dutch Healthcare and Youth Inspectorate (previously IGZ)
IGZ	Dutch Inspectorate of Healthcare (predecessor of IGJ)
IT	Information Technology
MC	Medisch Contact, journal for medical specialists
NDF	Dutch Diabetes Federation
NGO	Non-Governmental Organization
NHG	Dutch General Practitioners Association
NIA	Dutch national pharmacists association
NTvD	Dutch Journal of Diabetology
NTvG	Dutch Journal of Medicine
NVD	Dutch association of dieticians
NZa	Dutch Healthcare Authority
PST	Problem-Solving Strategy
R&D	Research and Development
RIVM	Dutch Institute for Public Health and the Environment
SWEP	“Stand Wetenschap and Praktijk”, current “state of the art” in medicine and health interventions
VIGNL	Dutch Innovative Medicine Association
VWS	Dutch Ministry of Welfare and Sports
ZINL	Dutch Healthcare Institute (previously CVZ)
ZN	Health Insurers Netherlands, Dutch Health Insurers Association



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1. Introduction

Type 2 diabetes is a growing problem, being the 9th global cause of reduced life expectancy in 2013 (Abubakar, 2015). Type 2 diabetes is driven by a number of factors such as obesity, sedentary lifestyle and consumption of unhealthy diets containing an excess amount of sugars (Zheng et al., 2017). In the Netherlands, over 1 million inhabitants suffer from type 2 diabetes, some of them undiagnosed, and an additional 750 thousand inhabitants are at a severe risk of developing diabetes (DiabetesFonds, 2018).

Traditionally, the available interventions aimed at type 2 diabetes have consisted mainly of pharmacological interventions, which are considered the standard of care (Bailey, 2017; NGH, 2017). Treatment has focused on pharmacologic supplementation of insulin since the discovery of the relation between insulin and diabetes in the 1920's (diabetes.co.uk, 2018). After this discovery, drug development for diabetes has delivered insulin analogues, insulin sensitizers, insulin secretagogues and glucosidase inhibitors to treat type 2 diabetes (Bailey, 2015; NHG, 2017). Additionally, as the relation between obesity and the prediabetic condition of impaired glucose tolerance became clear, pharmacotherapy also targeted these conditions in order to prevent the onset of type 2 diabetes (Smyth & Heron, 2006).

In addition to the pharmacological interventions for diabetes type 2, studies demonstrating the effect of "good" nutrition and regular physical activity on diabetes control started to appear from the 1990's onwards (diabetes.co.uk, 2018). This has brought forward alternative solutions focused on preventive measures and behavior and life-style change. This eventually led these life-style interventions to be included in the existing treatment plan of pharmacological therapy (Inzucchi et al., 2012). More recently, belief in treatment with life-style interventions has also gained support. For instance, the Dutch government is supporting life-style interventions such as the "reverse diabetes" program, which emphasizes that medicine-based therapy is no cure for diabetes, but life-style interventions can be one (KeerDiabetes2Om, 2018). The Dutch government is also negotiating a "prevention agreement" with societal stakeholders (VWS, 2018), which directly competes with pharmacological treatment for type 2 diabetes as it favors preventive measures.

These different solutions to the problem of type II diabetes can be viewed as four **technological trajectories** sharing a common goal. Pharmacological treatment of diabetes constitutes the incumbent trajectory, as identified by Utterback (1994) in his innovation dynamics model. It is the standard of treatment and has a set of standardized institutional routines (i.e. regulatory pathways for drug development). This guarantees little variation in the delivery of novel technologies in this trajectory, and as have creates a momentum to evolve in the direction set by these fixed routines, similar to the "natural trajectories" by Nelson & Winter (1977) and "**technological trajectory**" by Dosi (1982), which is the term we will use in this thesis.

Dosi (1982) also poses that technological trajectories can be challenged as novel trajectories rise. In the case of type 2 diabetes, three challenging trajectories can be identified. Pharmacological prevention is closely related to pharmacological treatment, but serves a different purpose as preventing the onset of type 2 diabetes instead of treating it. Life-style prevention and life-style treatment are the other challengers. These novel trajectories differ more from the incumbent trajectory. Given that these trajectories are relatively new and internal heterogenous in technologies, these trajectories can be considered fluid, lacking fixed routines and institutional embedding (Utterback, 1994).

Controversy on the value of each of the technological trajectories exists. A return to normal glucose homeostasis is rarely achieved through pharmacological treatment and balanced glucose control is



still not accomplished in a third of the patient population (Bailey, 2017). This leads to a feeling of underperformance of the existing trajectory of pharmacological treatment by actors favoring other trajectories. Meanwhile, skepticism and reluctance to embrace novel therapies is regularly expressed by healthcare professionals (Bailey, 2015; Owens et al., 2017). This shows the conflict of the dominant trajectory of pharmacological treatment-focused interventions and competing trajectories of life-style treatment-based interventions and life-style and pharmacological prevention-focused interventions.

To understand controversies that form the basis of a competitive landscape, it has been shown that different actors can have different conclusions on the same type of intervention and technology, which is caused by incongruence and competition in *technological assessment frames* of actors (Orlikowski & Gash, 1994). Technological assessment frames enable actors to make sense of reality (Bijker et al., 1987), and contains the focus of interest an actor has, its interests in the technology at hand, and its views based on these interests (Dunbar et al., 1996). These technological assessment frames differ per actor or actor group, and inhibit information not covered by technological assessment frames from being included in their sense-making process on which intervention they favor (Garud & Rappa, 1994). This means that the very existence of technological assessment frames removes a neutral view on technological trajectories, and inherently favors data fitting the view of the actor, influencing their conclusions and therefore the “construction of reality” (Latour & Woolgar, 1979; Garud & Ahlstrom, 1997). Additionally, actors implicitly assess in defense of their own expectations or previous assessments, as is done after an adoption decision (Rogers, 2003; Lamont, 2012; Vatin, 2013), adding to competitiveness between actor groups.

Previous literature on technological trajectories acknowledges competition between such trajectories and the rise of novel trajectories at the expense of incumbent trajectories (Dosi, 1982; Abernathy & Clark, 1985; Adner, 2002). However, there is a gap in the literature in how these technological trajectories interact when novel trajectories challenge the incumbent trajectory. It is known that incongruence between technological assessment frames can lead to underperformance or difficulties in development, adoption and usage of (new) technologies (Orlikowski & Gash, 1994; Gasson, 2005). Therefore, the examination and understanding of different technological assessment frames, and the interactions between these frames in this competitive environment is needed. Having an informed ability of the affection of the rate and direction of innovation in a high-technological sector such as health interventions impacts health, wealth generation and prosperity for society as a whole (Orlikowski & Gash, 1994; McKelvey & Orsenigo, 2001). Understanding interactions between frames of different actor groups, in a landscape of competing technological trajectories can create the ability to actively steer technological development into a direction beneficial to all (or most) actors, by identifying hurdles and opportunities for adoption of novel technologies into an existing technological trajectory.

Additionally, previous literature (Orlikowski & Gash, 1994; Davidson & Pai, 2004) acknowledges the existence and role of technological assessment frames on the development, adoption and usage of (new) technologies. However, these studies have focused mostly on interactions between frames within organizations, and mostly in the IT-sector (Shaw et al., 1997; Barrett, 1999; Lin & Conford, 2000; Davidson & Pai, 2004; Gasson, 2005; Kaplan, 2008; Sobreperez, 2008; Olesen, 2012; Hsu et al., 2014; Bolman & Deal, 2017), leading to conclusions on how adoption can be increased through actions *within* an organization (Lin & Silva, 2005; Hsu, 2007). An analysis on how these technological assessment frames and interactions between these frames differ when technological trajectories compete has yet to be performed.



This thesis combines the technological trajectory framework and theory on technological assessment frames and interactions between these frames to the field of type 2 diabetes interventions. By mapping technological assessment frames on the four competing technological trajectories *between* actor groups consisting of multiple organizations, an answer is provided to the following research question:

“How do technological assessment frames and framing activities on different technological trajectories differ between actor groups with different relationships to these trajectories?”

Answering this research question will provide insights in the dynamics of technological trajectories when an incumbent trajectory is challenged, and will expand theory to be able describe what could be the first phase of technological disruption in a technological framing context.

Section 2 below will discuss the theoretical framework, bridging literature on technological trajectories with that on technological assessment frames and framing strategies. [Section 3](#) then operationalizes these theories, taking the different actor groups that exist into account for the field of type 2 diabetes. [Section 4](#) discusses the methodology, and [section 5](#) the results. [Section 6](#) and [7](#) conclude this MSc-thesis with a discussion and conclusion.

2. Theoretical framework

This theoretical framework provides theoretical background on *technological trajectories*, *technological assessment frames* and *framing strategies*, and applies these to the field of type 2 diabetes. [Section 2.1](#) provides an overview of technological trajectory theory, and shows the four current technological trajectories present in the field of type 2 diabetes. [Section 2.2](#) then focuses on the different technological assessment frames that can exist surrounding such technological trajectories, also identifying *actor groups* that are expected to differ in their technological assessment frames, based on their different degrees of involvement. [Section 2.3](#) concludes with framing strategies, which take the form of *interactions* between technological assessment frames.

2.1. Technological trajectories in the field of type 2 diabetes

A *technological trajectory* is the concept that acknowledges that each developing technological field develops under influence of its history (Dosi, 1982). This history has shaped and is shaping technologies in their fields, as well as the industrial structures associated with these technologies. This means that technological trajectories also focus and limit the direction in which a technology can develop, by creating barriers for diverting too much from the path followed so far (Dosi, 1982). Additionally, incumbent technological trajectories have adapted to the institutional framework, and benefit from its longer history through economies of scale, strong institutional legitimacy and embeddedness in the (innovation) system. However, this embeddedness also means that incumbent trajectories are less flexible, and increase the chance of a technological lock in (Hekkert et al., 2007).

In the field of type 2 diabetes, four technological trajectories can be distinguished. The incumbent trajectory is that of pharmacological treatment of diabetes, which effectively is the standard of care for type 2 diabetes (Bailey, 2015) and is discussed first in [section 2.1.1](#). The challenging trajectories of pharmacological prevention, life-style prevention and life-style treatment, have all come up more recently. The main reason for these to rise was an attention shift from treatment to prevention and an increase in attention to life-style influences on the pathophysiology of type 2 diabetes. The challenging trajectories are discussed in [section 2.1.2](#).



2.1.1. Incumbent trajectory: Pharmacological treatment

Treatment of type 2 diabetes always starts with dietary and exercise advice given by the general practitioner (NHG, 2017). However, despite this written guideline, Pharmacological treatment of type 2 diabetes is effectively the standard of care (Bailey, 2015), meaning that the trajectory is fully institutionalized. The most commonly used drug to treat type 2 diabetes is insulin and derivatives, administered subcutaneously or through an insulin pump (Bailey, 2015). Besides insulin, several oral anti-diabetic medications are available; insulin sensitizers (of which metformin and thiazolidinediones are the mostly used drug classes), secretagogues (sulfonylurea, peptide analogs, GLP-1-agonists and DPP₄-inhibitors) that promote insulin secretion, alpha-glucosidase inhibitors slowing the uptake of glucose and thereby maintaining a more stable blood glucose level, and glycosurics which inhibit renal re-uptake of glucose, promoting urine secretion of excess glucose (Bailey, 2015; 2017).

In the Netherlands, the NHG-standard (Dutch general practitioners' association treatment standard), advises treating diabetes type 2 with sensitizer metformin, after which a secretagogue sulfonylurea (preferably gliclazide) can be prescribed. After these compounds have become inefficacious in the patient, insulin can be prescribed additionally to sulfonylurea (NHG, 2017). Only if one of these compounds cannot be used (if the nature of the disease lies in decreased insulin production or in case of severe side effects), can other compounds be prescribed, to which insulin can also be prescribed additionally. Diabetes type 1 is always treated with insulin supplementation (NHG, 2017). A schematic overview of the NHG-standard can be seen in figure 1 below.

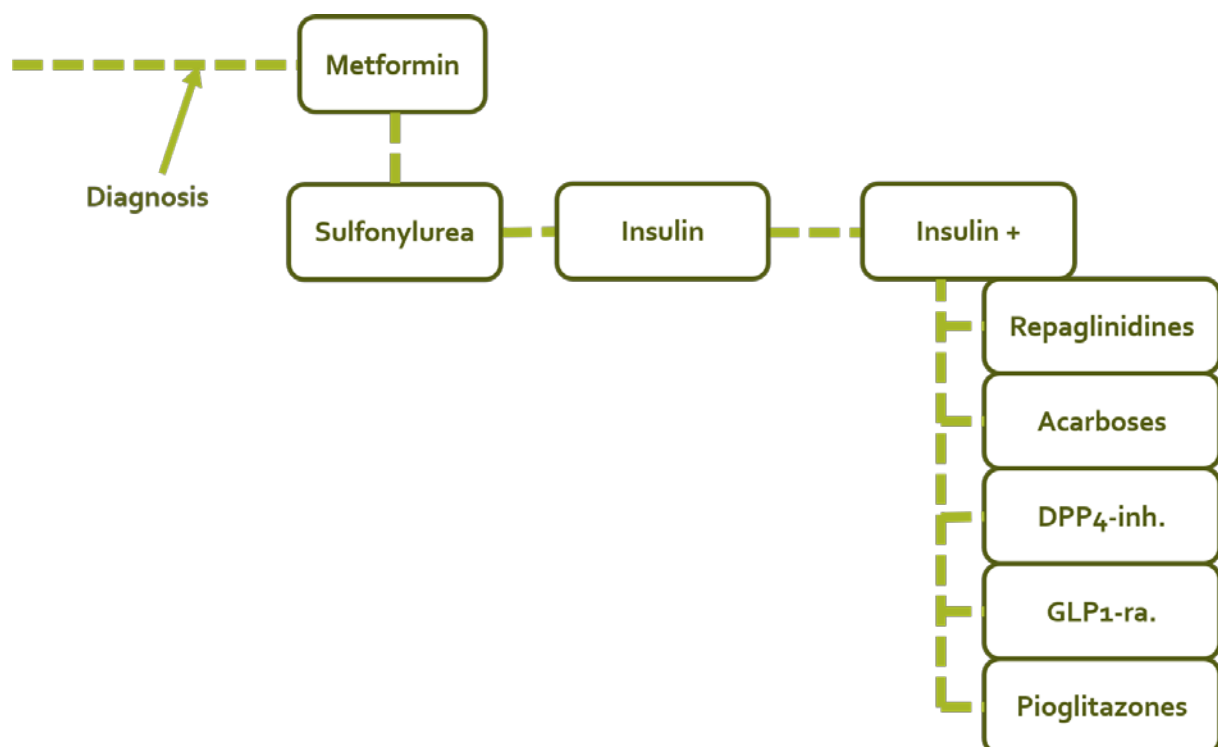


Figure 1: Schematic overview of the NHG-standard for pharmacological treatment for type 2 diabetes (simplified from NHG, 2017)

2.1.2. Competing technological trajectories

Next to the incumbent trajectory of pharmacological treatment, three more novel trajectories can be distinguished in the field of type 2 diabetes.

The first is pharmacological prevention, which uses the same technological field as pharmacological treatment, but instead of treating type 2 diabetes directly, it focuses on preventing the onset of type 2 diabetes. Medicines from this trajectory include drugs focused on treating risk factors such as obesity, smoking and other morbidities associated with type 2 diabetes such as cardiovascular diseases. Bariatric surgery and surgical procedures can also be included in this trajectory, if these focus on treating obesity, and by doing so also diminish the chances for developing diabetes.

The other two trajectories have less in common with the pharmacological trajectories, and focus on life-style interventions instead. Life-style is broadly defined as behavioral actions, and can include a variety of concepts such as exercise, diet, type of work etc. Life-style prevention are those behavioral actions made to prevent the onset of type 2 diabetes. This includes an active life-style, regular exercise and a diet with enough fresh vegetables and low amounts of sugar. Life-style treatment are behavioral changes made to treat type 2 diabetes. The most well-known life-style treatment plan is currently the program of Keerdiabetes2om, which aims at curing type 2 diabetes (Keerdiabetes2om, 2018). Life-style treatment interventions generally are more radical than life-style prevention interventions, as more concrete action is needed in order to treat type 2 diabetes (Keerdiabetes2om, 2018; Diabetesfonds, 2018).

These four technological trajectories can be envisioned along two axes. The first is the goal of the technological trajectory and ranges from prevention to treatment. The other is the nature of the technological trajectory and ranges from life-style to pharmacological interventions. Figure 2 below shows these axes and the examples of technologies mentioned above in their corresponding technological trajectory quadrant.

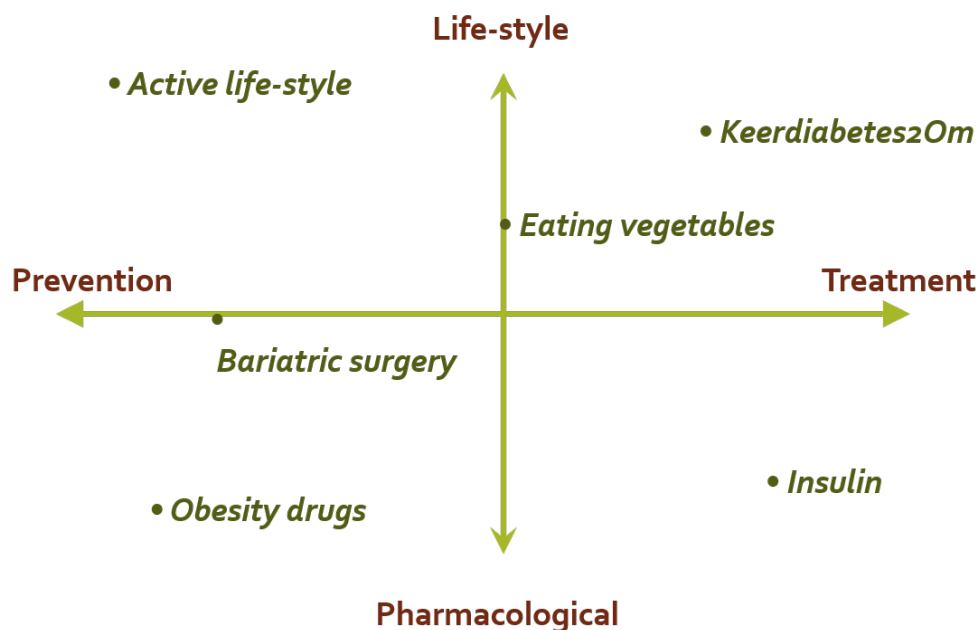


Figure 2: Four technological quadrants for type 2 diabetes

For each of these technological trajectories, technological assessment frames exist. The following section goes into this concept and discusses the *components* that make up these frames, how actors can differ in their frames and what framing strategies they can employ to defend their own technological assessment frames.

2.2. Technological assessment frames

A **technological (assessment) frame** is the focus of interest an actor has, its interests in the technology at hand, and its views based on these interests (Dunbar et al., 1996). Such frames determine how actors value and assess technologies in relation to other technologies, and which criteria actors use in this valuation (Kaplan & Tripsas, 2008). In order to understand and construct these technological assessment frames on diabetes interventions, first the **components** of these frames will be outlined in [section 2.2.1](#). [Section 2.2.2](#) provides an overview of different **actor groups**, as technological assessment frames differ per actor group, based on their relation with the technology (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997). [Section 2.3](#) will go into **framing strategies**, using **interaction** theory by Snow et al. (1986).

2.2.1. Frame components

Technological assessment frames have been studied and interpreted from two scientific traditions. The first is the social construction of technology school, in which Bijker (1995) is the most prominent author. Social construction of technology acknowledges how technology is shaped by society and social actors, and follows a bottom-up approach to the evolution of technological trajectories. The **components** this theoretical stream proposes allow for an understanding of how actors view technologies. Using this theory also allows for the identification and stratification of **actor groups** by means of their relation with the technology, which is done in [section 2.2.2](#).

The other tradition that interpreted technological assessment frames is management literature on technological change (mostly in information technology (IT)), and in this tradition Orlikowski & Gash (1994) distinguish three key components of technological assessment frames: **expectations**, **assumptions** and **knowledge** of the technology. These components translate into three domains in their studies, which characterized the interpretation of technology; the nature of technology, the technology strategy and the technology in use (Orlikowski & Gash, 1994). Further studies on technological assessment frames used only subtly different concepts for similar components, varying slightly depending on the case studied (Shaw et al., 1997; Barrett, 1999; Lin & Conford, 2000; Davidson & Pai, 2004).

In this thesis we combine the two scientific traditions and uses the concepts as posed by Orlikowski and Gash (1994), combined with the components of technological assessment frames in general, identified by Bijker (1995). The components of Bijker serve as the backbone, with addition of depth provided by the management literature stream. This allows for an actor-centered view, while also allowing for more concrete interpretation of the technological assessment frames on the technology-level.

Expectations, or the nature of technology refers to the current reputation of a technology and knowledge about its capabilities and functionality, which results in expectations on the development of the technology at hand (Orlikowski & Gash, 1994). Garud & Ahlstrom (1997) use the sub-component foci and sense making to describe these expectations, by which they mean background information used by actors to position the technology in their own environment. User experiences on a certain intervention versus producer data on the same intervention, and linkages to other themes in society such as financial aspects of disease burden and solidarity constructs in health insurance are examples of foci and sense making.

Bijker (1995) uses the concepts of goal, key problems and the perceived function of technology in the same context. The goal is the targeted problem the technology solves or need to fulfill. When applying this to the field of diabetes (all types), the overarching goal deduced from scientific literature is either the achieving of normalized glucose homeostasis, or the prevention of damage due to high or low



blood glucose levels, either by treatment or preventive interventions (Bailey, 2015; 2017). Key problems are those problems (still) associated with the use of technology used to achieve the goal, which need to be overcome to successfully use the technology (e.g. a steep learning curve). For type 2 diabetes interventions these problems include adverse events such as hypoglycemia (Bailey, 2015; 2017) and cardiovascular complications (Zannad et al., 2012; Hiatt et al., 2013) for pharmacological interventions, and for instance a low therapy loyalty (adherence) and the need for continuous coaching in life-style interventions (Neuhouser et al., 2002; Wolf et al., 2004).

The perceived function of the technology is closely related to the goal, but is more specific (Bijker, 1995). Specific functions of interventions for type 2 diabetes that are mentioned in the scientific literature are glycemic control, and the direct reduction of symptoms associated with high glucose levels (Bailey, 2015; 2017), and can therefore be diverse and are intervention-specific.

Together, expectations can be used to formulate a distinct objective of the technology, as envisioned through a technological assessment frame, and those problems associated with the reaching of the goals (Lin & Silva, 2005; Davidson & Pai, 2004). Actors are expected to have different versions and nuances of these expectations, or envision different expectations entirely, which in turn lead to differences in their technological assessment frames (Bijker, 1995). Patients will have different expectations, more related to the therapeutic value, than health insurance companies, who focus more on cost-effectiveness. Table 1 below shows an overview of the components of expectations and the main themes associated with these expectations for technological trajectories in type 2 diabetes.

Table 1: Main themes of components of expectations of type 2 diabetes interventions

Expectations	Main themes expected in diabetes medicine based on literature
Foci and sense making	Information used by producers, institutions or users to link diabetes type 2 to societally relevant themes in a certain way.
Goals	Achieving glucose homeostasis, or prevention of health issues due to abnormal glucose levels.
Key problems	Direct and indirect issues related to type 2 diabetes.
Perceived function	Glycemic control, reduction of symptoms of type 2 diabetes.

Assumptions, or technology strategy refers to the understanding of the motivation to use the technology (Orlikowsky & Gash, 1994). Different from expectations, assumptions are the conditions for the operation of a technology, instead of the actual functioning of the technology. Garud & Ahlstrom (1997) use assessment criteria to describe this, which correspond with concepts used by Bijker (1995) in this context, which are technology requirements, design methods, and design demands. Technology requirements are the specifications a technology must meet in the eyes of the end-users, which are primarily concerned with safety and efficacy, predominant topics in healthcare environments, and anchored in regulation (Hill, 2012; Kroneman et al., 2016). Design methods relate to these requirements, and entail the processes used to determine whether or not the requirements are met (Garud & Ahlstrom, 1997). In healthcare, these are the setup of (clinical) trials, end-points used in studies or other measurements to validate safety and efficacy of interventions (Hill, 2012; Kroneman et al., 2016). Design demands are then the minimum requirements attributed to a technology, such as the expected quality or shelf-life of an intervention, or the preferred setting of use (e.g. intramural versus extramural).



Lin & Silva (2005) take these three together, in a more general formulation of the requirements envisioned by user groups, so the distinction as discussed above may be arbitrary. This thesis, however, is set out to identify the concepts by Bijker (1995) separately. Table 2 provides an overview of the sub-components of assumptions and their main themes in technological trajectories in type 2 diabetes.

Table 2: Main themes of components of assumptions in diabetes medicine

Assumptions	Main themes in diabetes medicine based on literature
Technology requirements	Evidence about safety and requirements of interventions for type 2 diabetes.
Design methods	The setup of trials and evaluations of effectiveness of interventions for type 2 diabetes.
Design demands	Quality expectations and preferred setting of interventions for type 2 diabetes.

Knowledge, or technology in use refers to the understanding of how the technology can be used according to the currently available knowledge (Orlikowski & Gash, 1994), which aligns with epistemology in Garud & Ahlstrom (1997). Epistemology is the type of knowledge that can be considered valid (Bryman, 2015), in the field of healthcare most commonly associated with validity of trial data and evidence, best articulated with the difference between a randomized controlled (clinical) trial, and smaller, less-representative (successful) trials or stories. This seems closely related to design methods, but differs in the sense that epistemology focuses on knowledge *about* the problem, and not the solution *of* the problem (Bijker, 1995).

In the same context, problem-solving strategies, current theories (i.e. current scientific knowledge) on the intervention, and tacit knowledge (i.e. experience of actors) are components mentioned by Bijker (1995). For interventions for type 2 diabetes, problem-solving strategies are treatment plans and glucose monitoring plans (Bailey, 2015), and are more specific subsets and elements considered to belong to one of the major interventions discussed in section 2.1. These problem-solving strategies are based on the current available scientific knowledge on the intervention at hand, which are the current theories. Tacit knowledge is in this case practical experience actors have with the use of the intervention and the coping of their disease in the setting of the intervention.

Lin & Silva (2005) only focus on the perceived solutions to the problems a technology poses, but, as with the assumptions above, this thesis maps the three concepts of Bijker (1995), to ensure completeness, as a distinction seemed to be feasible in the field of type 2 diabetes interventions (and was shown to be during the analysis). Table 3 on the following page provides an overview of the components of knowledge and their main themes in type 2 diabetes interventions.



Table 3: Main themes of components of knowledge for type 2 diabetes interventions

Knowledge	Main themes in diabetes medicine based on literature
Epistemology	Type of data on type 2 diabetes that can be trusted or assumed valid versus data that cannot.
Problem-solving strategies	Setup of specific interventions for type 2 diabetes.
Current theories	Currently available scientific knowledge on available interventions for type 2 diabetes.
Tacit knowledge	Practical experience of doctors, patients or other stakeholders and actors with available interventions for type 2 diabetes.

Both Orlikowski & Gash (1994) and Bijker (1995) indicate that frames can differ strongly between actors. This differentiation, and the unlikeliness of frames to be shared (identically) by actor groups (Calder & Shurr, 1981), mean that a distinction between actor groups needs to be made, which will be done in the following section.

2.2.2. Actor groups

Technological assessment frames differ per actor, because a technological assessment frame is primarily based on the relation the actor has with the technology, i.e. their degree of involvement (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997). This degree of involvement can be split into two main categories: insiders and outsiders.

Insiders are those actors that are directly involved with the technological development, i.e. **producers** (Dunbar & Ahlstrom, 1995). These producers are also inherently dependent on the technology they produce, i.e. the products or services they offer, as this is their main source of income. This means that producers experience a stronger connection to the history of the technology they produce (technological trajectory), and therefore are path-dependent to the technology (Bijker, 1995). This also means that producers are prone to defending their technological trajectory, because of stranded assets and investments. It can therefore be expected that producers defend their own technological trajectory and will likely employ different technological assessment frames to their own trajectory than to challenging trajectories, questioning the challenging trajectories more often than other actors.

Outsiders are those actors that evaluate, sponsor and regulate the development, without directly engaging in it (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997), i.e. **institutions** (Kaplan & Tripsas, 2008). Their distance to the technology means that outsiders can be more flexible in their adoption choice, and are less path-dependent to the technological trajectory (Bijker, 1995). This means that institutions are more likely to be open to challenging technological trajectories, as their switching costs are lower than for producers. Institutions are a more heterogeneous group than producers; Garud & Ahlstrom (1997) distinguish four broad groups: evaluators, regulators, sponsors and market gate-keepers, according to their respective function (Garud & Ahlstrom, 1997). It can therefore be expected that institutions, because they are not dependent on a trajectory, base their preference for a certain trajectory on other factors, and in fact can employ a leading role in the agenda-setting.

Besides producers and institutions, **users** are a crucial component of the construction of technological trajectories (Bijker, 1987; Pinch & Bijker, 1987; Christensen, 1997), and the understanding of user



preferences has been regarded as important for successful technological development since the 1970's (Von Hippel, 1986). Furthermore, as users eventually make the adoption decision (Von Hippel, 2005; Rogers, 2010), their technological assessment frames are an important factor in understanding the valuation and success of technologies. Users interact with producers and involve in the technological development, but have a less direct link to the technological trajectory than producers themselves (Kaplan & Tripsas, 2008). Users therefore to experience some form of path-dependency, but less strongly than producers. User path-dependency is of a more "soft" nature, and focuses more on learning curves and habitual use of technologies from a technological trajectory. This means that users are expected to show more heterogeneous technological assessment frames, focusing both on the incumbent and the challenging frames, sharing specific components such as goals (Nahuis, 2008). Figure 3 below illustrates these actor groups and their relative position to and relation with technological trajectories.

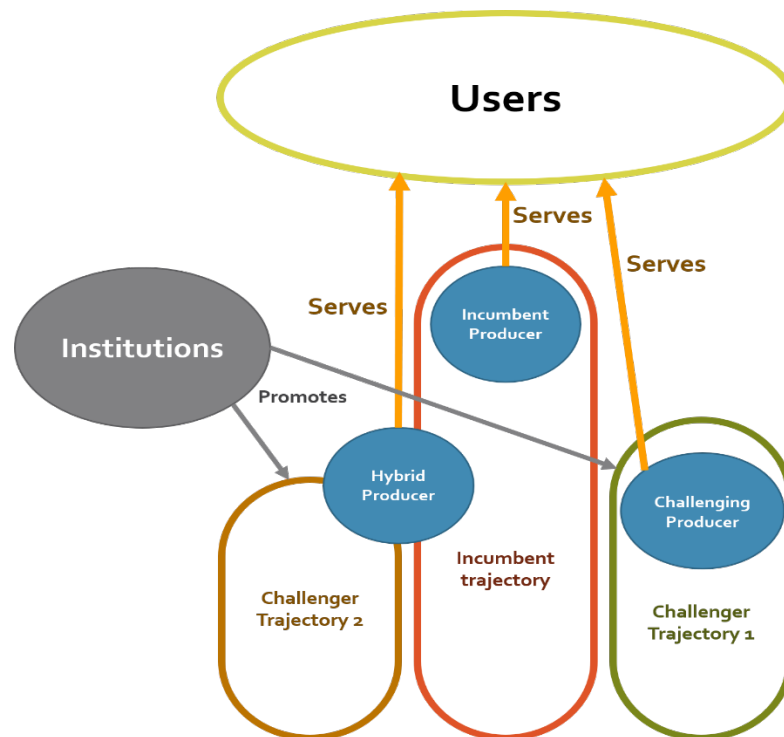


Figure 3: Actor group types and their relation to technological trajectories

The application of these categories to the Dutch healthcare system (focusing on the field of type 2 diabetes interventions), is based on De Vries & Kossen (2016) and Kroneman et al. (2016) and can be found in [section 3](#).

Based on the differences of actor groups and their relations and path dependency to technological trajectories, technological assessment frames can differ considerably along actor groups (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997). However, all actors are a part of the system in which a technological trajectory matures (Bergek et al., 2008), they influence each other, and purposeful actions (i.e. **framing strategies**) by actors can influence frames, directly affecting frame congruence through interactions (Lin & Silva, 2005; Kaplan, 2008). These interactions shape both the frame out of which the action originates, as the targeted frame (Goffman, 1974; Benford & Snow, 2000). This means that some, if not all, actor groups change their frames in reaction to one another (Davidson, 2006). The following section describes the interactions between technological assessment frames that form framing strategies and their effects on the congruence and incongruence of these frames.

2.3. Framing strategies

Technological assessment frames interact continuously (Benford & Snow, 2000) and *interactions* are needed to acquire and defend legitimacy for technological assessment frames by engaging frame components of others to gain support, or decrease resistance to the interacting frame (Kaplan, 2008). These interactions can be grouped in bridging, amplifying, extending and transforming, each aimed at specific components of technological assessment frames (own or other) (Snow et al., 1986; Kaplan, 2008; Corsaro, 2011). These interactions also form the basis of framing strategies, as they show what kind of actions actor groups take in relation to technological assessment frames on different technological trajectories.

Bridging concerns the linkage of frames, or elements thereof, and is a deliberate step towards frame congruence. *Amplifying* concerns clarification and invigoration of the frame (or elements thereof) the actor holds. This can result in both frame congruence and incongruence, as both differences and similarities are highlighted (Kaplan, 2008). *Extending* is the reaching out and establish convergence or divergence with elements of frames held by others, and *transforming* is the deliberate change of (elements of) the technological assessment frame, to fit, or oppose other frames (Snow et al., 1986; Kaplan, 2008). Table 4 shows the type of actions associated with these interactions.

Table 4: Types of interactions influencing frame congruence (Snow et al., 1986; Kaplan, 2008)

Type of interaction	Type of actions
Bridging (Positive)	Emphasizing commonalities and congruent (elements of) frames by spreading information about the technological assessment frame held. Reaching out to actors with different frames, usually by lobby groups or umbrella organizations.
Amplifying (Both)	Explain values or beliefs that are the basis of the technological assessment frame held. Bring the frame to the attention of the public in an activist manner.
Extending (Both)	Aligning frame elements with elements of other frames by reaching out through events or direct contact. Participating or collaborating with other actors that hold different frames.
Transforming (Both)	Redefine an existing component of the technological assessment frame to align or oppose another frame.

3. Operationalization

Below, the actor group distinction is operationalized for the field of type 2 diabetes. A general overview of the actors in the Dutch healthcare system and their relations can be found in [Appendix A](#). In the sections below, each actor group is described and operationalized for the field of type 2 diabetes.

3.1.1.1. Producers

Producers are key insiders in their own technological trajectory (Dunbar & Ahlstrom, 1995). In healthcare, these are those actors concerned with producing medical treatments, such as medical product manufacturers or therapists (Kroneman et al., 2016). In the field of diabetes type 2, producers



are pharmaceutical producers and companies producing devices, but can also be medical specialists providing life-style based treatment plans such as diets or food supplements or products aimed at diabetics (diabetes.co.uk, 2017).

In the Netherlands, pharmaceutical companies that produce generic compounds are organized in the industry association of BOGIN (Biosimilars and generic drug industry Netherlands). Additionally, Dutch industrial pharmacists, producing generic compounds, and (smaller) pharmacists, also producing magistral products, are members of the NIA (Dutch industry pharmacists' association). Innovative pharmaceutical companies are joined together in the umbrella organization of the Association Innovative Medicines (Vereniging Innovatieve Geneesmiddelen, VIGNL, previously Nefarma), which protects the interests of the industry (VIGNL, 2017). Besides these umbrella organizations, innovative pharmaceutical companies with a special focus on diabetes also belong to this actor group, as their efforts in R&D and product development are the primary source of novel, innovative, drugs in the field of diabetes.

In addition to these pharmaceutical producers, actors that produce and design healthcare interventions for type 2 diabetes can also be focused on life-style interventions. These life-style specialists consist of dieticians, life-style coaches, sports coaches and any other specialist aimed at establishing life-style change in patients. These coaches, if not allied to a larger healthcare organization or other branch organization, are supported by of the academy for life-style and health, which also helps shape educational programs (AVLEG, 2018), or the branch organization for life-style coaches BLCN. Additionally, dieticians have their own branch organization, the Dutch association of dieticians (NVD, 2018). These life-style actors will be taken into account as life-style specialists.

3.1.1.2. Institutions

Garud & Ahlstrom (1997) distinguish four broad groups of **institutions**: evaluators, regulators, sponsors and market gate-keepers, according to their respective function (Garud & Ahlstrom, 1997). In medical interventions, these functions overlap, and institutions can be divided into three major categories: governmental bodies, research institutes and funding agencies, and health insurance companies, as can also be seen in Appendix A (Kroneman et al., 2016).

Governmental bodies are primarily concerned with the regulation of drugs and medical interventions, and also function as market gate-keepers. The ministry of Health, Welfare and Sports (Ministerie van Volksgezondheid, Welzijn en Sport, VWS) is the main actor in this field, with final responsibility for the allowance of interventions on the health market and the reimbursement decision (De Vries & Kossen, 2016; Kroneman et al., 2016). Operating under the ministry are the Dutch Medicine Evaluation Board (College ter Beoordeling van Geneesmiddelen, CBG), which controls market authorization of pharmacological products and devices, and the National Healthcare Authority (Nederlandse Zorgautoriteit, NZa), which controls the health insurance market and pricing of medicinal products and interventions (Kroneman et al., 2016). Finally, the Dutch Healthcare Inspectorate (Inspectie Gezondheidszorg en Jeugd, IGJ, formerly known as the Inspectie voor de GezondheidsZorg, IGZ), controls the safe use of medicinal products and interventions and oversees pharmacovigilance trials (IGJ, 2017). These governmental bodies are mainly concerned with the market gate-keeper, regulator and evaluator functions as mentioned above.

As advisory bodies, the Dutch National Institute for Public Health and the Environment (Rijksinstituut voor Volksgezondheid en Milieu, RIVM) is a research institute which conducts research on the state of public health, which also entails keeping track of prevalence of diseases, such as type 2 diabetes (Kroneman et al., 2016). The Dutch healthcare institute (Zorginstituut Nederland, ZINL), advises the minister on reimbursement decisions, and assesses novel medical products and interventions



according to the “Stand Wetenschap and Praktijk” (SWEP), to ensure each product admitted to the market offers the same, or better health benefits compared to existing products (ZINL, 2017). Recently, ZINL has advised the minister on the inclusion of combined lifestyle interventions, which include type 2 diabetes interventions, in basic insurance (ZINL, 2018). Both these research institutes are concerned with the function of evaluating, and to a lesser extent, sponsoring.

Specifically, for the field of (type 2) diabetes, the Dutch Diabetes Fund (DiabetesFonds Nederland), is a funding agency focusing solely on diabetes related healthcare and research, activating and funding public and private actors to work together to solve diabetes-related problems (DiabetesFonds, 2018).

Finally, health insurance companies are those institutions concerned with the sponsoring (i.e. direct payment) of healthcare in general. Currently, there are 10 health insurance companies in the Netherlands, which offer health insurance through around 50 subsidiary labels (ZN, 2017). All health insurance companies are member of the umbrella organization Health Insurers Netherlands (Zorgverzekeraars Nederland, ZN), and share the same mission: providing good, affordable and accessible healthcare for all insured, aimed at increasing health and quality of life (ZN, 2017). ZN acts as an umbrella organization, and protects the interests of the health insurance companies, by strengthening their role in the Dutch health system, aiding in purchasing healthcare and negotiating health contracts with healthcare providers, ensuring health insurance policies are transparent, ensuring good service and efficient execution, and managing risks (ZN, 2017). In doing to, ZN works closely together with local and national government agencies, healthcare providers and organizations, and institutions (ZN, 2017).

3.1.1.3. Users

In healthcare, especially in Europe, the adoption decision (i.e. which intervention is applied) is made by the healthcare providing agent (De Vries & Kossen, 2016; Kroneman et al., 2016). This means that the **user** group know two types of agents: the actual user of the healthcare intervention, and the prescriber, which usually is a medical specialist. Intramurally for type 2 diabetes these are endocrinologists, nephrologists and diabetologists (diabetes.co.uk, 2017) and extramurally, these are general practitioners, dieticians, nurses and lifestyle coaches and other healthcare professionals. In the Dutch system, even pharmacists play a small role in this process, as they are able to execute preferences for brands and premium or generic pharmacological products (De Vries & Kossen, 2016). However, as this does not influence the type of product (i.e. it's function) given to the patients, pharmacists are taken into account in the actor group “producers” only.

Additionally, even though patients in Europe only have very limited freedom of choice over their treatment, they are organized in patient organizations aimed at a specific disease area (Van de Bovenkamp et al., 2010). As indicated by Von Hippel (1986; 2005), the end-users of the product, which are patients, play a crucial role in guiding the development of novel technologies. Therefore, patient organizations and charity organizations related to type 2 diabetes will also be included in the users category in this research. For diabetes, these are the Dutch Diabetes Association (DiabetesVereniging Nederland, DVN) and the Dutch Diabetes Federation (Nederlandse DiabetesFederatie, NDF).

4. Methodology

This research has been set up as a cross-sectional qualitative case study of the technological assessment frames held by different actor groups on four technological trajectories in the field of type 2 diabetes interventions. This research examines and specifies these technological assessment frames for each of these technological trajectories, and analyzes the differences and commonalities in how actor groups interact with these frames. To do so, media publication data was collected and



actor groups were consulted using semi-structured interviews based on the findings in the media data. Then quotes, paraphrases or opinions relatable to an actor on a type 2 diabetes related topic were used to fill in the theoretical concepts of the technological assessment frames and the frame interactions. The full data collection and analysis protocol is explicated in the following sections.

The timeframe chosen for this cross-sectional study ranges from January 1st, 2007 until January 1st, 2018. The starting point is chosen at January 1st, 2007, as the DPP4-inhibitors, the latest class of antidiabetic medicines, entered the market in October 2006 (Brock, 2010), meaning the incumbent trajectory of pharmacological treatment is expected to have changed little after this date.

Data collection took place in two ways; publication data was collected from written media and semi-structured interviews were held with decision-makers from each actor group that are involved in strategic decision-making on problem-solving strategies for diabetes type 2.

4.1. Step 1: Publication data collection

Technological assessment frames in type 2 diabetes were examined based on written media. Written media are commonly used by actors to communicate their actions and positions on certain topics, in this case on their preferred technological trajectory, with their audience, using front-stage actions (Van Lente, 1993). These front-stage actions are aimed at a specific audience, leading to a very diverse landscape of messages in mass media, the most accessible (and publicly available) form of written media. Mass-media are a very specific arena with a large number of actors, and are known for agenda-setting and filtering information to newsworthiness and presentation. (Koopmans, 2005; Roggeband & Vliegthart, 2007). Therefore, multiple additional written sources are needed to ensure an overview of the technological assessment frames can be created. In this research, professional speech-acts that are aimed at the own actor group are included to supplement this gap in the data.

The types of written media articles collected were therefore professional journals, mass-media articles (both from newspapers and digital newswires) and actor publications, selected to represent a broad overview of technological assessment frames including each actor group.

Mass-media articles provided insights in the aspects of technological assessment frames presented to the general public by the press. The four largest newspapers and digital newswires were included for mass-media articles; their estimated reach and daily circulation can be found in table 5 below. Professional journals provided insights in the front-stage actions of professionals in the field of type 2 diabetes to one another, and journals included were Medisch Contact (MC) and Nederlands Tijdschrift voor de Geneeskunde (NTvG), and Nederlands Tijdschrift voor Diabetologie (NTvD), which also includes messages and press releases by the Dutch Diabetes Association (DVN). Finally, to supplement and account for aspects of technological assessment frames only communicated to members of the own actor group, actor publications were included as well, which were found on their web sites, and include magazines and newsletters, press releases, web news pages and blogs found on the web sites of the organization. For this section of the corpus, institutional actors and user actors were chosen, as these have a publicly available archive of communication within the actor group, such as magazines and government publications. A complete overview and specification of sources per actor is shown in table 5 on page 20.

For searching these sources, the query "*(diabetes) OR (bloedsuiker) OR (suikerziekte)*" was used ("*bloedsuiker*" being the Dutch term for blood glucose levels, and "*suikerziekte*" being the Dutch non-medical, popular term for all diabetes types and related morbidities). Professional journals were searched on their respective web archives, newspapers and newswires were searched on LexisNexis and using the Google historical search function, and actor publications were found on the web



archives or databases of press releases (using Google historical search if no archives were available, further specifications shown in table 7 on the next page), all using the same query. The number of hits this search returned per source is indicated in the "Hits returned" column in table 5 on the next page.

The articles were then screened for their relevance to the research question. Only those articles with a quote, paraphrase or opinion relating to an actor on a type 2 diabetes related topic, were included for this research. Scientific publications themselves were not included in the data, as these in themselves belong to a different arena, and were expected to represent only a few components of technological assessment frames (i.e. current theories and epistemology). Articles based on scientific publications published in the aforementioned data sources were taken into account, provided there were a quote, paraphrase or opinion relating to an actor on a type 2 diabetes related topic present, as these belong to the public media arena this thesis focuses on.

The data collection and screening resulted in a corpus containing a total of 1335 articles, 15 magazine editions and 194 other items, indicated per source in the "Relevant publications" column in table 5. A complete list of included articles and publications can be found in [Appendix Ba - Bc](#).

Table 5: Publication data collection overview

Professional journals	Circulation (BSL, 2018)	Hits returned	Relevant articles
Medisch Contact	53,000	1,376	295
Nederlands Tijdschrift voor de Geneeskunde	17,000	503	85
Nederlands Tijdschrift voor Diabetologie	4,400	28 editions	62
Newspapers	Daily circulation (NOM, 2017)	Hits returned	Relevant articles
Telegraaf	~400,000	1,131	226
Algemeen Dagblad	~350,000	924	69
Volkscrant	~250,000	944	270
NRC Handelsblad	~140,000	867	176
Digital newswires	Average reach (SvdJ, 2017)	Hits returned	Relevant articles
Nu.nl	~7,000,000	198	49
NOS.nl	~6,200,000	159	42
Metronieuws.nl	~2,800,000	123	21
RTLnieuws.nl	~2,500,000	205	40



Actor publications	Source	Hits returned	Relevant files
VWS	News messages, letters, official public correspondence, attachments to these and press releases in government database on rijksoverheid.nl	239 items	34 items
ZINL, CVZ	Zorginstituut Magazine (previously Zorgmagazine and CVZ magazine)	15 editions	15 editions
DiabetesFonds Nederland	Web site content, including publications, news messages, web pages and press releases.	199 items	86 items
DiabetesVereniging Nederland	Web site content, including publications, news messages and press releases.	192 items	61 items
Nederlandse Vereniging voor Endocrinologie	Web site content, including publications, news messages and press releases.	24 items	13 items

4.2. Step 2: Publication data analysis

Before starting the coding of the publication data, each data entry was labeled with the names of actors (i.e. organizations or professional occupations of authors or those mentioned in the article), and scanned for each of the four technological trajectories, and labelled accordingly. The year of publication was also labeled, whenever possible (some web-content has no reliable publication date, these were not labeled).

Subsequently, the publication data was coded using the Nvivo software package. This was done in three rounds. In a first round we identified topics discussed in the articles, in a second round we identified the components of technological assessment frames discussed in the articles, and in a third round we identified interactions between actors.

First, topical coding was conducted, by identifying those topics associated with type 2 diabetes discussed in the articles. This was done bottom-up, labeling any element of text associated with a certain topic. These labels were later grouped, joined and sorted to provide an overview of topics discussed in the corpus, and per actor group.

Second, data was coded for the components of technological assessment frames, by coding quotes, paraphrases or opinions relatable to an actor on a type 2 diabetes related topic, labeling these as their respective frame component. This axial coding process was conducted using the coding scheme shown below in table 6 on the next page. From this data, an overview of the components dominant in the different technological trajectories for type 2 diabetes, and an overview of the components along the actor groups were constructed, which are discussed in [section 5.3 – 5.6](#).

Finally, coding was conducted using the coding scheme for frame interactions, shown in table 6 on the next page. This round of axial coding labeled any element of text indicating an interaction between two technological assessment frames, between different actors, using the operationalization table 7. This resulted in an overview of interactions per technological trajectory, and per actor group, discussed in [section 5.3 – 5.6](#).



Table 6: Operationalization of components of technological assessment frames for type 2 diabetes interventions.

Expectations	Topic of speech-acts looked for during coding
Foci and sense making	Which data is or can be used by actor groups in their technological assessment frame.
Goals	The targeted problem that should be solved by an intervention for type 2 diabetes.
Key problems	Problem associated with a specific problem-solving strategy.
Perceived function	The specific way in which an intervention fulfills the goals.
Assumptions	
Technology requirements	Specification the intervention must meet.
Design methods	The processes to determine if technological requirements are met.
Design demands	The minimum requirements attributed to an intervention for type 2 diabetes
Knowledge	
Epistemology	Types of knowledge on an intervention for type 2 diabetes that can be considered valid.
Problem-solving strategies	Setup and (treatment) plans of interventions for type 2 diabetes.
Current theories	Currently available scientific knowledge on interventions for type 2 diabetes.
Tacit knowledge	Practical experience of the actor with interventions for type 2 diabetes

Table 7: operationalization table of interactions between technological assessment frames

Type of interaction	Type of actions looked for during coding
Bridging (Congruence)	Emphasizing of commonalities and congruent (elements of) frames by explicitly naming these commonalities and providing information and argumentation on these.
	Reaching out to actors with different frames in text.
Amplifying (Both)	Explaining values or beliefs that are the basis of the technological assessment frame held.
	Bringing the frame to the attention in an activist manner, by urging the reader or others to act according to the frame of the speaker.
	Bringing the frame to the attention in an activist manner, by urging the reader or others to act according to the frame of the speaker.
Extending (Both)	Aligning frame elements with elements of other frames explicitly in text.
	Participating or collaborating with other actors that hold different frames in textual argumentations
Transforming (Both)	Redefining an existing component of the technological assessment frame to align or oppose another frame.



After coding, the data was used to construct the technological assessment frames for each technological trajectory, of each actor group. This was done by first listing the topics and components found for each technological trajectory. Then, for each actor group, their components and interactions were listed, and linked to the topics found, allowing for formulating an answer to the research question.

4.3. Step 3: Interviews

In addition to the written data collected, semi-structured interviews were conducted with one key decision-maker from each actor group, to validate and supplement the results and conclusions drawn from the publication data. Respondents were found on the strategic level, with a clear overview of the field of type 2 diabetes as a whole, and with a strong affinity to their specific actor group, ensuring high-quality information on both the actor stance and the field in general. The data was processed anonymously in the form of an interview report. Only the role of the respondent in the field and the actor group the respondent belongs to were labelled and logged, after which any personal data were removed before analysis. The interview template was based on the findings of the publication data analysis, and focused on having the respondent reflect on the topics found in the qualitative analysis, the components discussed and the dynamics found in the written data, allowing room for them to indicate discrepancies or missing topics in the data. The interview template used for the semi-structured interviews can be found in [Appendix C](#).

4.4. Quality protocol

The quality of this research is ensured along the axes of validity and reliability. Construct validity is strong as the corpus uses multiple types of sources, and additional triangulation based on semi-structured interviews. Internal validity has been ensured by the multiple-round coding schemes. External validity is mixed, as the results are specific for the field of type 2 diabetes, but as the prevention-focus is becoming more and more common in different fields of healthcare, this is not an issue, as this study can be used as groundwork for similar cases or fields. Furthermore, during the final stages of coding, no novel information was encountered when coding the final data entries, which suggests that theoretical saturation was reached. This was confirmed by interview respondents, who confirmed and refined the results obtained from the data, without indicating topics or directions missing. The thorough documentation of all analysis steps and the adding of a list of the corpus and interview templates ensures reliability. The fully coded data file will be stored for future reference by the author, and requests based on this dataset can be sent to the author (contact details on front page).

5. Results

The following sections outline the results of the analysis. [Section 5.1](#) focuses on the thematic content analysis and provides an overview of the themes found in the data for each **technological trajectory**, and comparing and contrasting them. [Section 5.2](#) then outlines the **component** distribution for each **technological trajectory**, also comparing and contrasting them against each of the trajectories. [Section 5.3](#) provides an overview of the **actor group** presence per **technological trajectory** and section [5.4](#), [5.5](#) and [5.6](#) outline the **components** and **interactions** for each of the actor groups.

5.1. Thematic content analysis

For the topical analysis, all themes coded were grouped and merged until main themes emerged from the data. This led to a total of 10 main themes, shown in figure 4 below. These 10 themes can be sorted using a tree-like structure, ranging from health, through diagnosis to full development of type 2 diabetes.



Societal organization, financial themes and diet-related themes all apply to all stages (prevention, diagnosis and treatment). Risk factors and preventive actions are concerned with the pre-diagnosed situation, while cure, care and the roles of patients and specialists are focused on the moment before diagnosis, the diagnosis itself and from that point onwards.

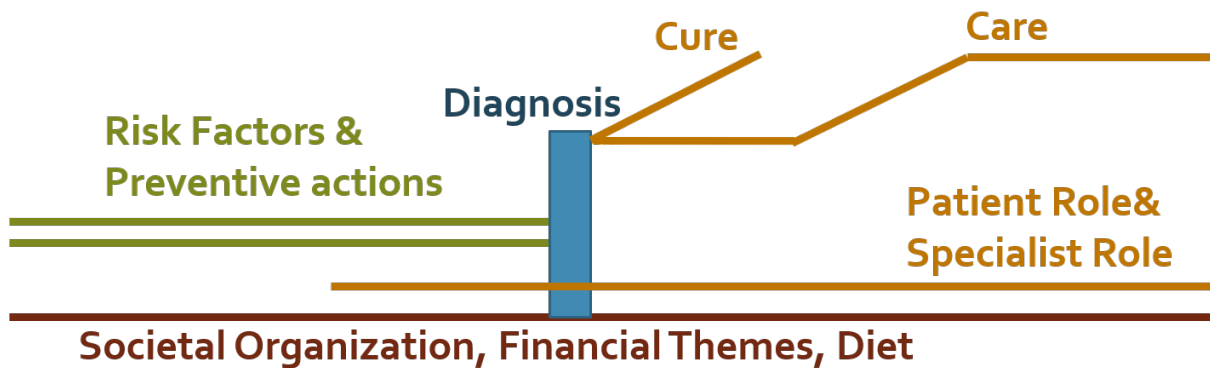


Figure 4: Overview of topics found in the corpus, sorted along a timeline

The following sub sections will discuss the topics belonging to these themes, for each of the four technological trajectories, and will highlight commonalities and differences between them.

5.1.1. Themes for pharmacological treatment

Figure Y below shows the relative occurrence of the themes for the incumbent trajectory of pharmacological treatment. It is clear that care and patient role related topics are the most important, followed by financial themes.

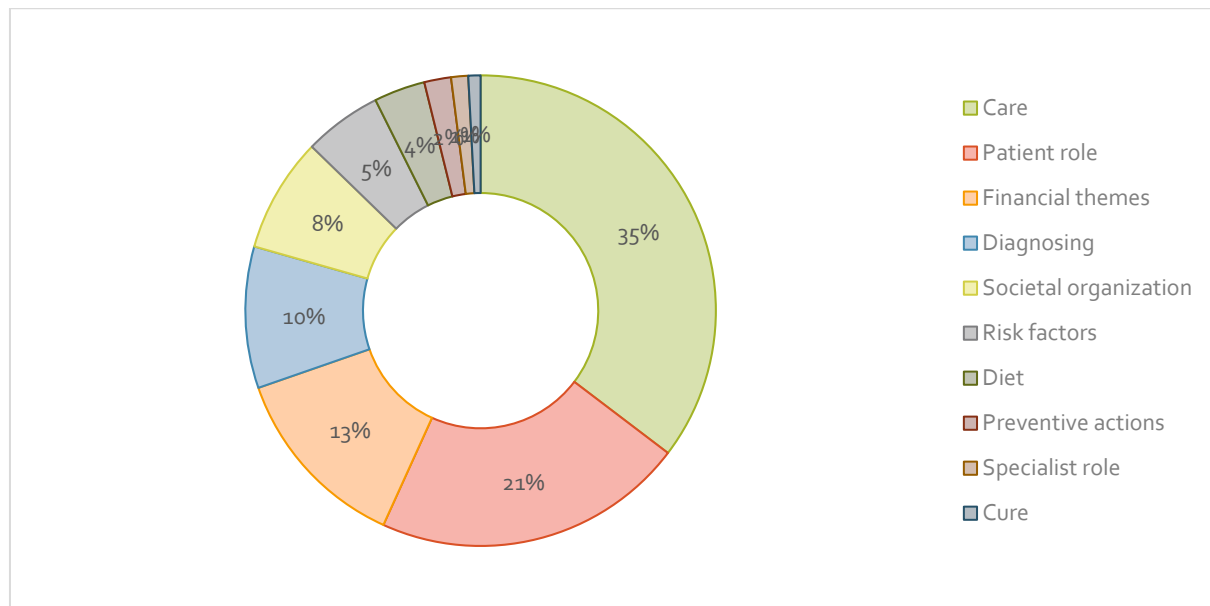


Figure 5: Theme distribution for pharmacological treatment

The care theme in this trajectory is mostly concerned with the different pharmacological treatment options available, discussions between actors about these options, care quality with respect to treatment and treatment complications and comorbidities associated with treating type 2 diabetes. Important topics within this theme were discussions on side effects of particular compounds, such as DPP4-inhibitors. For instance, AstraZeneca was negatively mentioned due to their resistance to the news that one of their DPP4-inhibitors Onglyza® was associated with increased risk of cardiovascular



complications. Related to discussions such as these are articles on the proper use (“gepast gebruik”) of medicines, often initiated by the government, who sees this as one of its core tasks and has a running action plan on this topic. Comorbidities were mentioned in a wide range of topics, mostly having to do with their own pharmacological therapies, or linked to complications frequently occurring when diabetes remains untreated. Eye infections, pedal injuries and open wounds were mentioned in such a way, for example. Care quality was also mentioned in relation to receiving previously intramural care at home. This topic was also often connected to financial themes.

Patient role topics as the second most important theme were mostly concerned with glucose monitoring by patients themselves. Topics mentioned in this theme focused on devices and e-health, and the changing patient role when such monitoring options were combined with insulin pumps and more adaptive medicine schedules. There is a strong, but critical emphasis on patient self-management in these topics, mostly concerning failing devices or problems with the use of devices in this context.

Third, the most often financial themes mentioned were reimbursement related topics, focusing especially on the preference policies employed by health insurance companies. This was expected, as the pharmacological treatment options include many generic compounds, for which preference policies are applied. However, patients voiced having had negative experiences when switching brand because of preference policies.

5.1.2. Themes for pharmacological prevention

Figure Z below shows the theme distribution for pharmacological prevention. It is clear that patient role is the most important theme found, followed by care-related topics, and more distantly by prevention topics and risk factors.

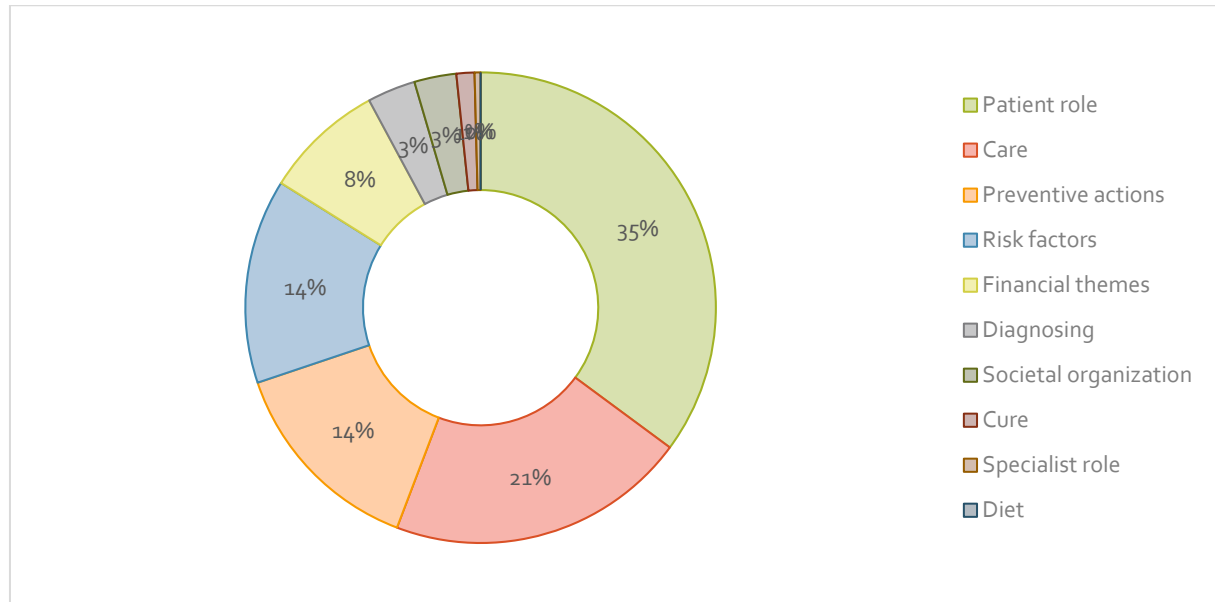


Figure 6: Theme distribution for pharmacological prevention

Similarly to pharmacological treatment, patient role topics are mostly related to self-monitoring of patients using devices. Additionally, keeping track of one’s own health by means of diet and Ehealth solutions is also often mentioned concomitant with pharmacological prevention, which is an important theme in all technological trajectories.

The care topics for pharmacological prevention are mostly focused on pharmacological interventions that target obesity or hunger. This is also often mentioned related to proper use discussions, as the use of pharmacological agents for preventing a disease appears to be debated, and life-style interventions are often mentioned in relation to these interventions.

Prevention-related topics and risk factors are mostly associated with obesity and pharmacological prevention thereof. This is done most often in light of the increasing prevalence of obesity. It stands out that life-style interventions are also mentioned here, even though this is a different technological trajectory.

Risk factors mentioned for this trajectory are most often related to hereditary traits and genetics, and comorbidities that also increase the risk of type 2 diabetes. The risk factors mentioned usually can be treated with pharmacological interventions, which then also serve as a preventive measure for type 2 diabetes. Obesity is also mentioned here as something that is hard to tackle without pharmacological help in the form of medicine.

5.1.3. Themes for life-style prevention

Figure Z below shows the theme distribution for the life-style prevention trajectory. It stands out that prevention, care, societal organization and diet are represented fairly equally and patient role-related topics follow closely.

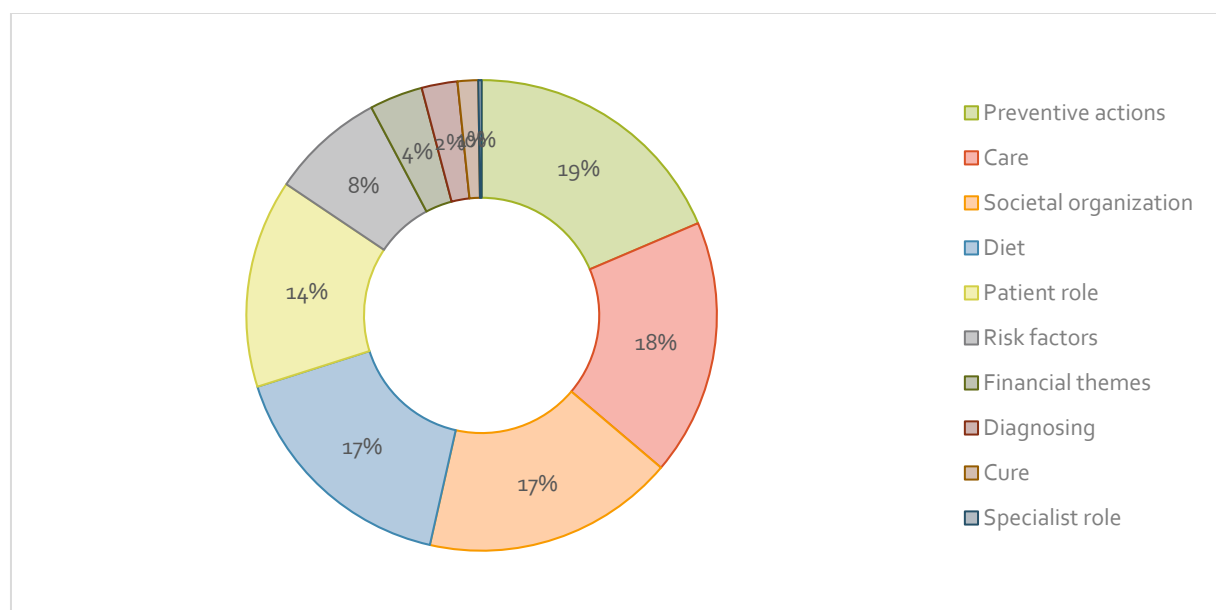


Figure 7: Theme distribution for life-style prevention

As could be expected of a prevention-focused technological trajectory, prevention-related topics are well represented, and cover an array of life-style interventions. These are heterogeneous, and range from specific diet programs (as opposed to general diet-topics in the diet theme) and specific food such as superfoods or ingredients to more rigorous life-style interventions programs such as Keerdiabetes20m. Additionally, obesity is a prominent topic in this theme, and most life-style interventions mentioned focus on this primary cause of type 2 diabetes as well. It stands out that obesity is less often discussed as a risk factor, than it is discussed in light of prevention programs of type 2 diabetes.

Care topics relate to these preventions, and for this trajectory entail specific content of life-style interventions in relation to care provided in light of preventing type 2 diabetes. The main topics here

are sports and exercise. These are found in institutional guidance such as movement guidelines, promotions of sports and informational publications on how to become more fit (and thereby diminish the risk of type 2 diabetes).

Societal organization entails those topics associated with society as a whole, and in this case are mostly aimed at infrastructural topics related to the care topics above, such as sports accommodations, bike lanes and neighborhood design to promote health (and as such, prevent welfare diseases such as type 2 diabetes). These topics are associated with promoting a healthy life-style and especially exercise and sports.

Diet topics focus on (popular) diet topics in general, such as diet advice or the effects of specific additives, not directly related to a life-style intervention aimed at type 2 diabetes. For the trajectory of life-style prevention, these topics are mostly associated with popular diet programs, sugar replacements and sweeteners, and how to lower sugar intake.

Patient role topics for life-style prevention are, as is the case for the other trajectories, mostly concerned with self-monitoring through Ehealth and devices. However, for life-style prevention, these topics focus more on other indicators of a patients wellbeing, such as physical activity and "living healthy". These topics are usually framed in a way that relates to patient self-care, and are less often medically argued for.

Risk factors are often mentioned in relation to these self-monitoring possibilities, and relate the "fitness" to risk factors. These risk factors have less often a medicinal or disease-related cause than in the pharmacological trajectories, and focus more often to these factors that patients can actively assert influence over, such as cultural factors, habits, alcohol consumption or sleep.

5.1.4. Themes for life-style treatment

Figure G below shows the theme distribution for the trajectory of life-style treatment. It stands out that patient role is the most important theme, followed by diet, and more distantly by preventive actions, care and the other themes.

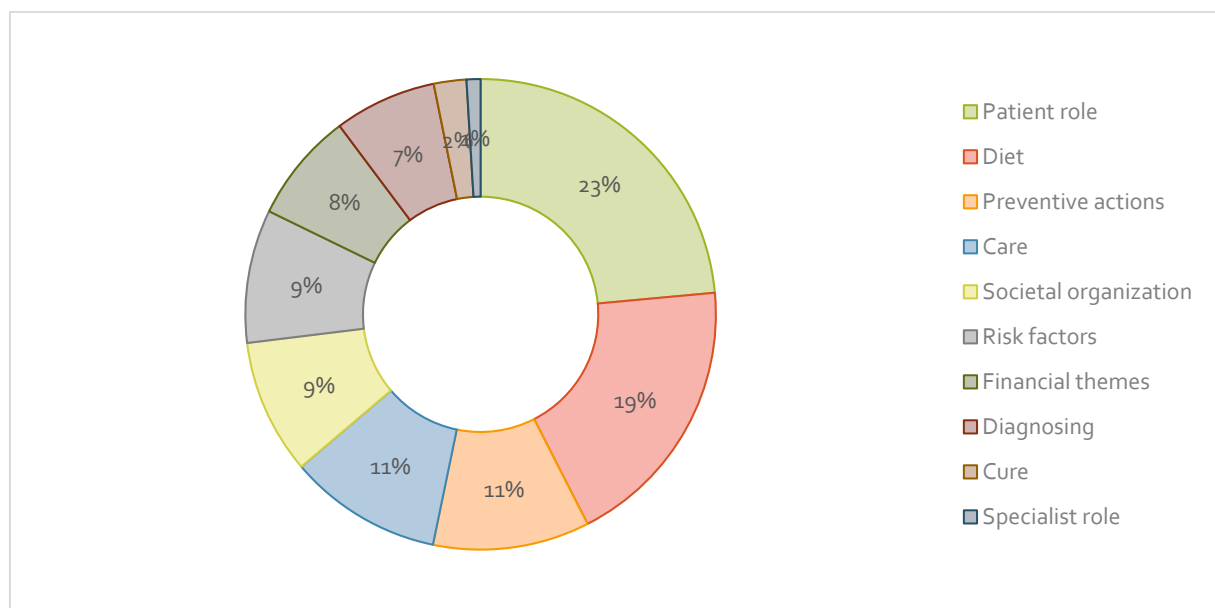


Figure 8: Theme distribution for life-style treatment

Patient role topics for the trajectory of life-style treatment are mostly focused on the required self-management that is needed for life-style treatment. As patients need to apply the interventions

themselves, they have a greater role in the success of their treatment, and as such technologies aiding them in this (Ehealth, devices) are often discussed. Related to this, and often discussed in the media is the adherence of patients to life-style treatment, which is often debated as patients find it difficult to remain loyal to life-style therapies.

Diet topics for this trajectory are very similar to those in life-style prevention, and focus on the broad range of non-medical dietary programs, sugar replacements and sweeteners, and how to lower sugar intake, which emphasizes the societal setting in which life-style treatment is currently developing, and the accompanying heterogeneity in problem-solving strategies as its result.

Prevention-related topics for life-style treatment show more homogeneity than in life-style prevention, and are mostly focused on interventions focused on treatment, such as Keerdiabeteszom. The difference with the heterogeneous topics found in life-style prevention is that most references to life-style treatment in this theme are backed by clinical evidence and the value or validity of such evidence.

Care topics for this trajectory are mostly focused on diabetes care quality, and the guidance that is needed and available for patients that are treated with life-style interventions.

5.1.5. Summary of findings

In short we find that pharmacological trajectories have a strong focus on novel care and prevention options and the role of the patient in these options. And in these themes the focus lies on glucose monitoring (through Ehealth or devices) and self-management of patients. In light of these care options, side effects and financial themes are also important for these trajectories.

Life-style trajectories focus more on obesity, exercise and sports, and the role of the patient is also important for these trajectories. These themes show a higher heterogeneity than the pharmacological trajectories, with a wider range of options discussed in speech-acts. There also is a stronger focus on societal organization themes, and themes are often linked to elements in society such as the work environment or food guidelines.

5.2. Component distribution results

The following section discusses the distributions of the technological assessment frame components found per technological trajectory. This provides insights in which components of technological assessment frames are most important and the manner in which technological trajectories are discussed.

5.2.1. Components for pharmacological treatment

Figure 9 shows the component distribution for pharmacological treatment. It stands out that expectations were most often encountered, accounting for almost half (45%) of the labeled speech-acts, followed by knowledge components (35%) and assumption components (20%). Of the expectation components, key problems were mentioned most often in speech-acts (27%), followed by foci and sense making (22%). Prominent knowledge components were current theories (17%) and problem-solving strategies (15%). Assumption components mentioned most often were design demands (12%) and technology requirements (11%).



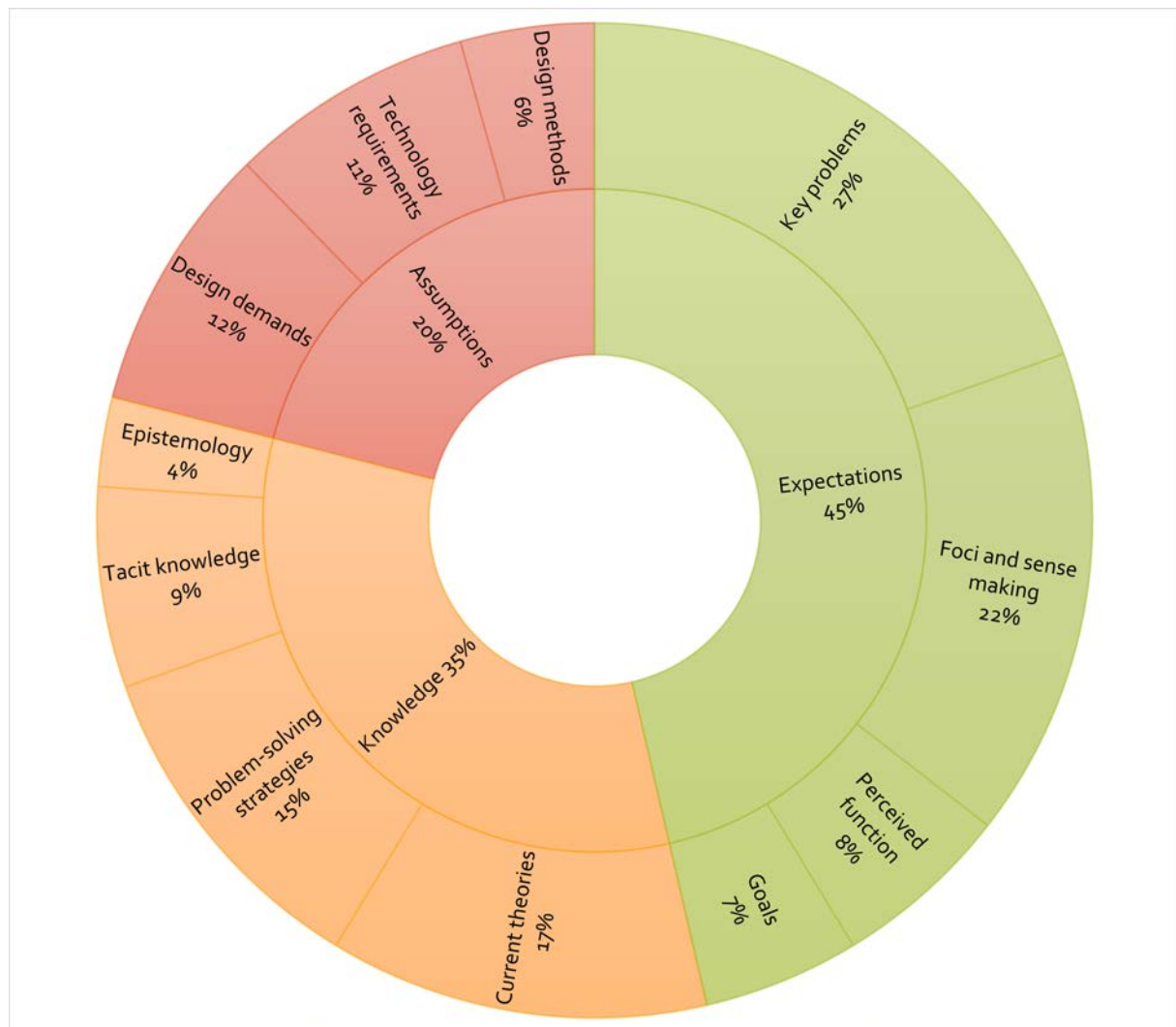


Figure 9: Component distribution for pharmacological treatment¹

The expectations component distribution reflects the topics found for pharmacological treatment. Key problems are mostly associated with side effects, which also is a dominant topic in the theme “care”. Financial issues with reimbursement were also discussed as key problems. Foci and sense making focused more on the patient role, aligning with self-management topics identified in section 5.1.1.

The knowledge component of current theories also mostly discusses patient self-management projects, questionnaires and trials conducted to evaluate continuous glucose monitoring devices such as the Freestyle Libre or Ehealth applications and their benefits for pharmacological treatment options. Problem-solving strategies provided an overview of novel and existing care options for type 2 diabetes, and included the medicine scheme as outlined in section 2.1.1 and articles on novel devices or alternative medicine schemes to accommodate comorbidities and how to treat them.

Assumptions follow similar themes, with both technology requirements and design demands being focused mostly on therapy delivery settings treatments should comply to. Additionally, design

¹ Due to overlap and multiple labels occurring in the same speech-acts, the totals may add up to more than 100%.

demands also take into account financial themes, which aligns with financial themes being an important topic for pharmacological treatment.

5.2.2. Components for pharmacological prevention

Figure 10 shows the component distribution for pharmacological prevention. Expectations account for 45% of all found speech-acts, as was the case for pharmacological treatment, followed by knowledge components (41%) and assumption components (14%). Of the expectation components, foci and sense making were mentioned by far the most often (33%). The most prominent knowledge component was current theories (30%). The assumptions component mentioned most often was technology requirements (10%).

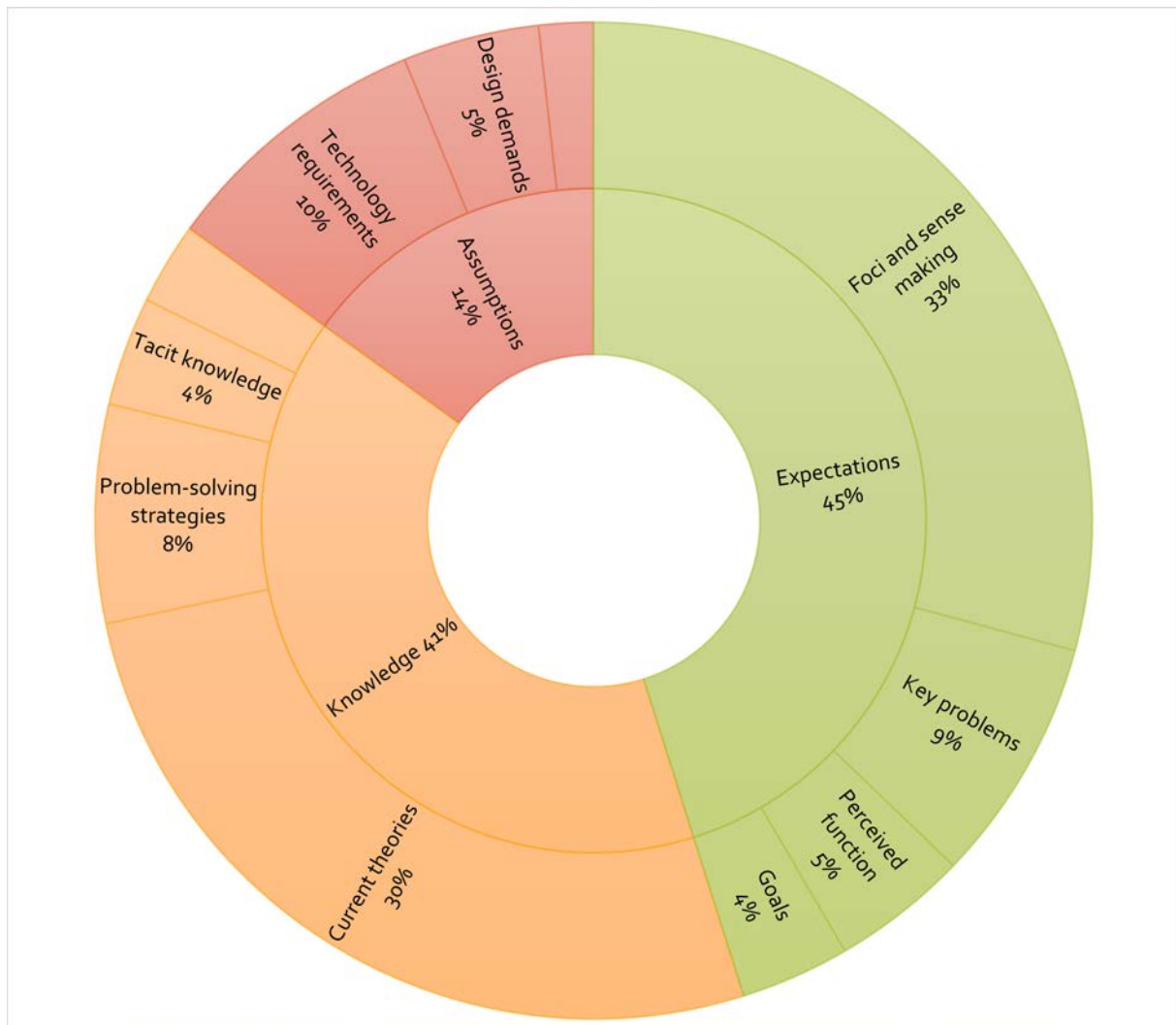


Figure 10: Component distribution for pharmacological prevention²

As is the case for pharmacological treatment, foci and sense making focus mostly on the patient role for pharmacological prevention. As indicated in section 5.1, there is a strong emphasis on self-management throughout the corpus, which applies to all problem-solving strategies. Current theories for pharmacological prevention also adhere to this topic, linking self-management studies to the

² Due to overlap and multiple labels occurring in the same speech-acts, the totals may add up to more than 100%.

prevention of type 2 diabetes and pharmacological “help” for achieving this, usually in combination with Ehealth glucose monitoring.

5.2.3. Components for life-style prevention

Figure 11 shows the component distribution for life-style prevention. For this trajectory, knowledge components were found most often (45%), followed by expectations (42%) and assumptions (13%). Of knowledge components, current theories were found most often (34%), followed by problem-solving strategies (24%). Foci and sense making (29%) and perceived function (17%) were found most often for expectations. The most occurring component for assumptions was technology requirements (7%).

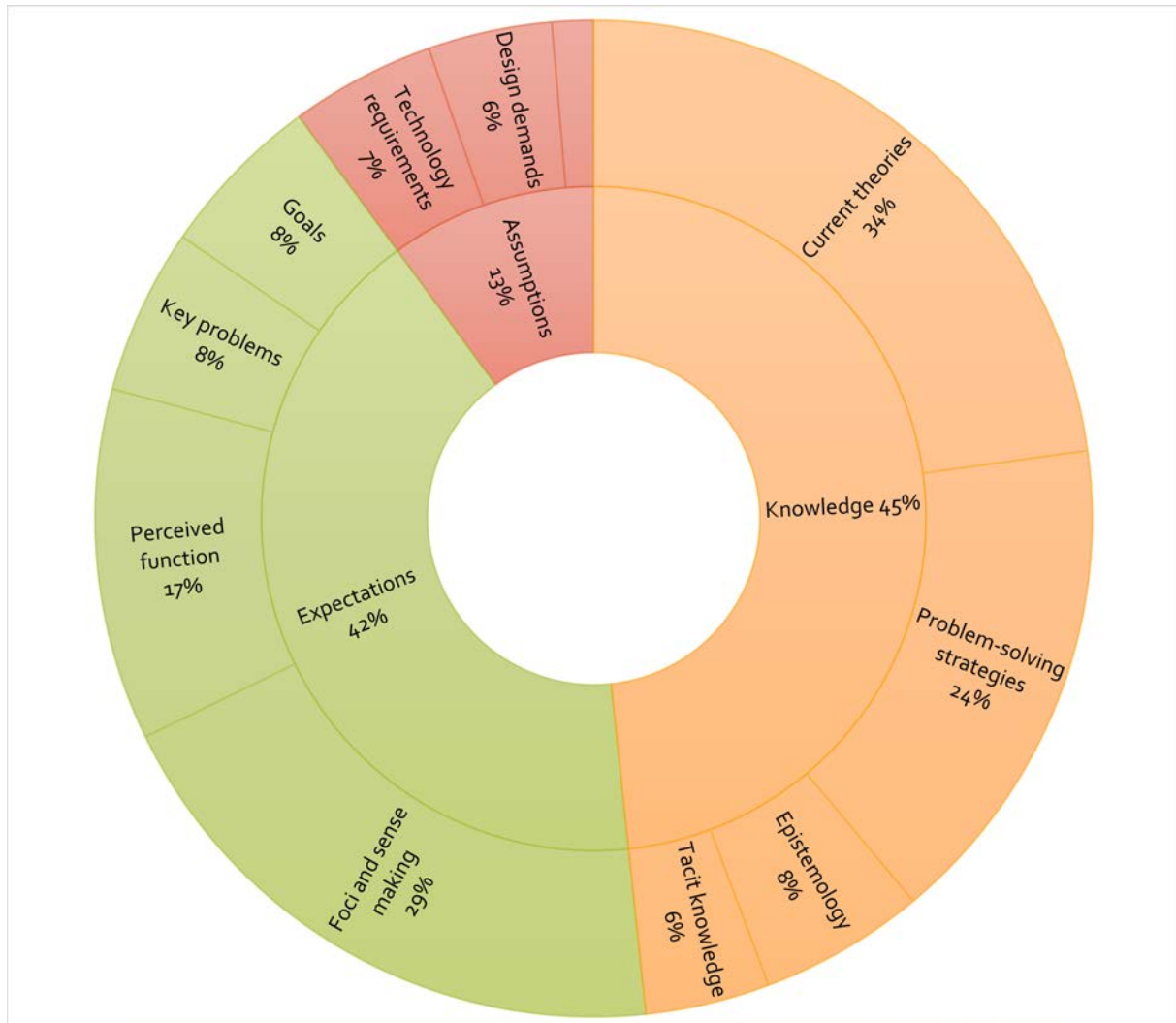


Figure 11: Component distribution for life-style prevention³

Besides the greater role of knowledge components in the component distribution, the distribution of knowledge components, with current theories and problem-solving strategies found most often, seems to show little differences compared to the distribution for the pharmacological trajectories. This only indicates a generally stronger focus to knowledge, when it comes to speech acts for life-

³ Due to overlap and multiple labels occurring in the same speech-acts, the totals may add up to more than 100%.

style prevention. When examining the context and qualitative content of the components, however, differences become clear.

Current theories and problem-solving strategies are mostly focused on prevention-topics, which stands to reason for a prevention trajectory. The topical focus is different, however, and is focused mostly on exercise and sports instead of pharmacological interventions. Another striking difference is the focus on societal organization, which did not appear in the pharmacological trajectories. Topics that are important here are information on the (presumed) effects food guidelines, interventions aimed at changing dietary habits in society and connections between work environment factors such as night shifts and the onset of type 2 diabetes. Current theories and problem-solving strategies are both mentioned in the context of these topics, with current theories functioning as a starting point for discussing problem-solving strategies. Patient role topics and care topics are also present in a similar manner to the pharmacological trajectories.

Expectations components show similar differences to the pharmacological trajectories, and also have additional attention for societal organization, next to care and patient role. Societal organization aspects are important in foci and sense making, as this component is mostly concerned with societally relevant themes. For life-style prevention, this entails themes concerned with some sort of guidance or examples set by others, such as a sugar tax, social influencers and promotions of sports by the government. Patient role topics found for this component were concerned with self-management, but have a more empowering tone than in pharmacological trajectories. For life-style prevention, these themes focus on diet, exercise and the control patients have over their health. This also applies to the perceived function component, which focuses on how life-style prevention can be made easier or better embedded in society (e.g. through a sugar tax or promotion of sports), and discusses such actions critically

Assumptions also differ and focus mostly on dietary options, including food hypes and trends such as superfoods.

5.2.4. Components for life-style treatment

Below in figure 12, the distribution of components for life-style treatment is shown. Expectations were found most often (46%), followed by knowledge (37%) and assumptions (17%). Of the expectation components, foci and sense making was found 29% and key problems 19%. Knowledge components found most frequently were problem-solving strategies (27%) and current theories (20%). The assumption component most often found was technology requirements (11%).



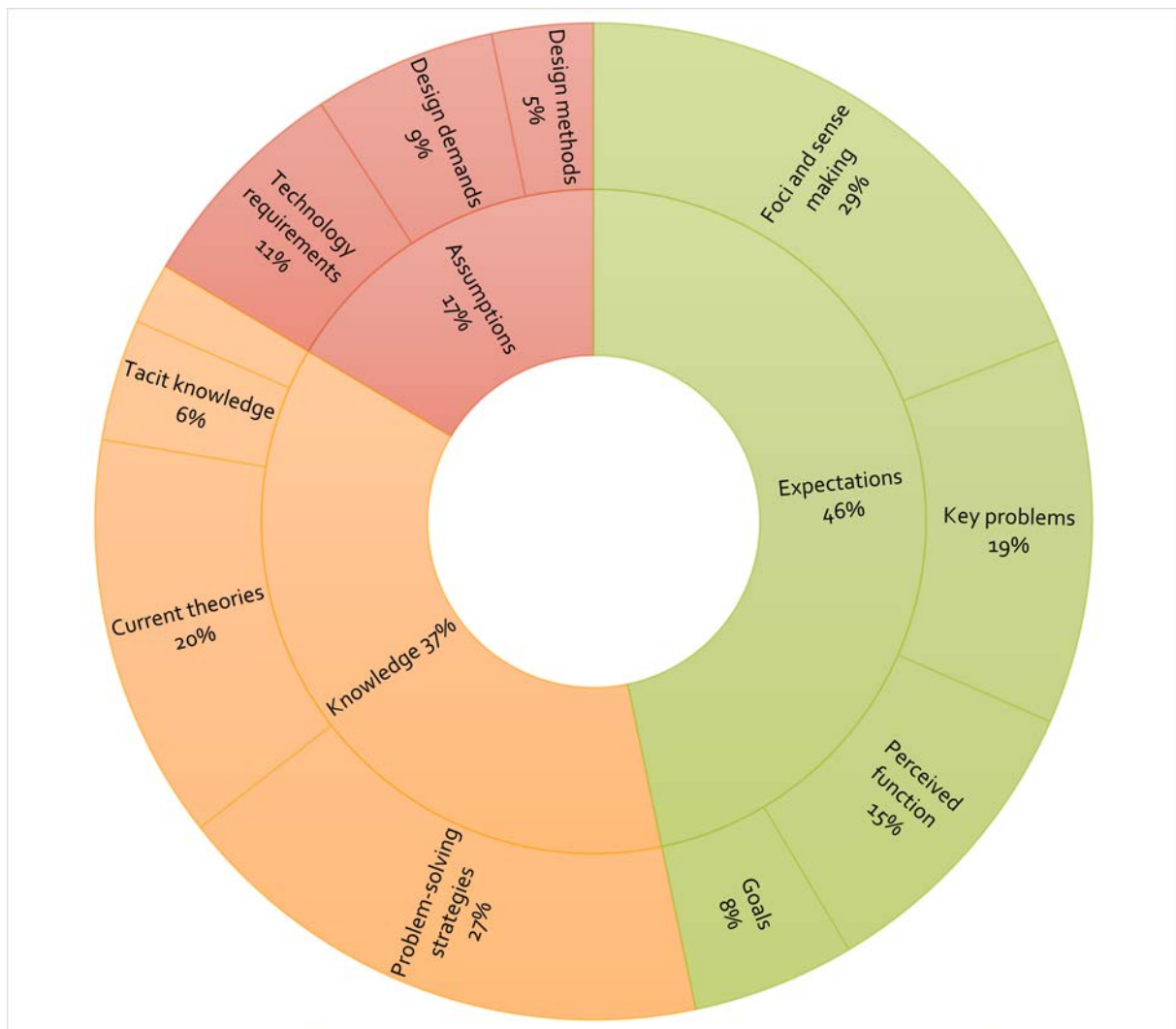


Figure 12: Component distribution for life-style treatment⁴

For life-style treatment, foci and sense making focus on the patient role, as was the case for the pharmacological trajectories. However, patient roles here focus on the more intensive role a patient needs to play in order for life-style treatment to be successful; i.e. life-style treatment requires more effort. Self-management therefore is also an important topic, but here focuses almost solely on patient empowerment through Ehealth and education, instead of pharmacological support.

Another topic prominent in this technological trajectory, also found in foci and sense making is diet, which is the core component of most life-style treatment programs. Foci and sense making examples of diet topics are valuations of existing (popular) dietary programs, which have questionable success and “should not be seen as treatment at all”, and as such are also often mentioned in key problems. Related to this are societal organization, which are only found prominently in key problems. This component focuses on what is called the “obesogenic society” and the self-control needed by patients to withstand sugary products and go exercise. Finally, as also indicated by both user and institutional respondents, the adherence and difficulty of achieving therapy loyalty in life-style treatment interventions is an important topic.

⁴ Due to overlap and multiple labels occurring in the same speech-acts, the totals may add up to more than 100%.

Knowledge components (current theories and problems-solving strategies) also cover diet topics, and focus on the evidence of the treatment effects of diets on type 2 diabetes. The patient role in these treatment plans is also often mentioned, in a similar context as mentioned above; life-style treatment requires a more active role of the patient, "the patient has to do it himself". This directly links to the adherence mentioned above.

Assumptions most found in speech-acts concern the importance of an early diagnosis in relation to the effect of life-style treatment programs and financial themes. The latter is most often discussed in the context that life-style programs overlap with non-medical costs, and therefore give rise to different financing expectations. E.g. "A health insurance company is not going to pay for your tomatoes" (Producer respondent).

5.2.5. Summary of findings.

The component distributions for the four technological trajectories reflect the themes found in the thematic content analysis. Expectations focus on the role of the patient and self-management by patients for all trajectories. Knowledge components also reflect this and focus on how changing patient roles and an increase in self-management affects the technological trajectories and the value these technologies bring to patients. Assumptions are mentioned the least, and focus on the setting for specific interventions in each of the technological trajectories.

Even though component distribution seems to differ only slightly between the technological trajectories, the qualitative content of the components does differ. Pharmacological trajectories focus more on the retaining of life-style with pharmacological options as a support, while life-style trajectories cover different topics such as exercise and sports. This results in a different perspective, in which life-style trajectories focus more on societal themes and the societal organization than the pharmacological trajectories. Something that was also identified in the thematic content analysis.

5.3. Actor group distributions

Table 8 below provides an overview of the actor group distribution in the corpus. Speech acts of institutional actors were most often encountered, accounting for 68.20% of all (9,897) speech acts identified. This was followed by users with 23.72%, and producers were found the least often, with 8.08%. The overrepresentation of institutions is in part the result of the deliberate sampling of the actor publications. Producers are least represented in the sample, which could be explained by the lack of engagement of pharmaceutical producers in the written media, also identified by the life style and user respondents in the interviews held. However, with 400 references, there is still enough data to construct their technological assessment frame, which is done in section 5.4.

Producers encountered during coding consisted of life-style specialists, device producers, pharmaceutical companies and sports foundations. Of these, life-style specialists and sports foundations were found to be inherently in favor of life-style interventions. Pharmacological producers and device producers on the other hand, produce pharmacological products. Because of this inherent opposition, the actor groups have been split before examination of their strategies, in section 5.3.1. Institutions consisted of legislators and regulators, research institutes, NGOs and funding agencies and health insurance companies. Users consist of medical specialists, patients and patient organizations, the Diabetes Federation and medical centers and care organizations. It should be noted that these specialists differ from life-style specialists in the aspect that users do not produce the care given, only prescribe or undergo care, and therefore have no producing link to any of the four technological trajectories.



Table 8: Presence of actor groups based on references in the corpus

Actors or actor group	No. of references	%
Producers	400	8.08%
- Life-style producers	166	3.35%
- Device producers	97	1.96%
- Pharmacological producers	81	1.64%
- Sports foundations	47	0.95%
Institutions	3.378	68.20%
- Legislators and regulators	1.701	34.34%
- Research institutes	1.189	24.01%
- NGOs and funding agencies	256	5.17%
- Health insurance companies	232	4.68%
Users	1.175	23.72%
- Medical specialists	638	12.88%
- Patients	352	7.11%
- Diabetes Federation	116	2.34%
- Medical centers and care organizations	69	1.39%

On the next page, in table 9, an overview of the distribution of actor groups over each of the technological trajectories is given, per actor group, producers being split into their respective sub-groups based on their relation with the technological trajectories. The theoretical preferences are found to be reflected well in the data. Pharmacological producers focus mostly on pharmacological treatment, and life-style producers have the most speech-acts on the two life-style trajectories, which supports the hypothesis that these actors defend their own trajectories. Institutions show a clear preference for discussing life-style prevention, which can be attributed to the prevention focus by the government, and aligns with the agenda-setting proposed in the theory section. Users are, as expected, more evenly distributed over the four trajectories, except for pharmacological prevention.

It is clear that pharmacological prevention is least often discussed, being by far the least referenced of the four for any of the actor groups. This links with the image of a very novel technological trajectory as sketched by the user respondent, and interpreted as a dead end by life-style producers and institutional respondents. This suggests that there are few topics available to be discussed. Components found were be foci and sense making and current theories, which support the more fluid nature of this technological trajectory.

It also stands out that life-style interventions, both prevention and treatment, are relatively more often discussed than pharmacological interventions. This does not, however, show context of these discussions. For that, an analysis of the components used by the actor groups is needed, which is performed in the next section.



Table 9: Distribution of technological trajectories mentioned in speech acts per actor group

	Pharmacological producers	Life-style producers	Institutions	Users
Pharmacological treatment	58.76%	5.67%	15.59%	30.72%
Pharmacological prevention	4.12%	0	6.87%	7.83%
life-style prevention	11.34%	45.87%	51.80%	30.35%
life-style treatment	25.77%	48.45%	25.73%	31.09%
Total	100%	100%	100%	100%

5.4. Producer components and interactions

Below, producer components and interactions are shown. Producers have been split to pharmacological producers and life-style producers, in accordance with their respective technological trajectories.

5.4.1. Pharmacological producers

Table 10 below shows an overview of the interactions per technological trajectory for pharmacological producers. Pharmacological producers in general focus less on both pharmacological and life-style prevention. This could be explained by pharmaceutical prevention being the least present in the corpus, and the more direct competition between pharmacological and life-style treatment. This competition does not however show itself in a strong negative approach towards any trajectory except, strikingly, the pharmacological treatment. This negative approach can be related to the frequent discussions of side effects and comorbidities, as shown in section 5.1.1, and affirmed by the user respondent.

Table 10: Pharmaceutical producer interactions over each technological trajectory

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Amplifying (neg)	12.63%	6.38%	0	0
Amplifying (pos)	25.26%	35.14%	33.33%	32.00%
Bridging	6.32%	9.58%	33.33%	14.00%
Extending (neg)	4.21%	6.38%	0	2.00%
Extending (pos)	29.47%	31.95%	23.81%	42.00%
Transforming (neg)	8.42%	4.79%	0	2.00%
Transforming (pos)	13.68%	5.75%	9.52%	8.00%
Total	100%	100%	100%	100%

Adding the absence of the negative approach in general to the relatively high number of positive extending and transforming references for this technological trajectory (29.47% and 13.68% respectively), a movement away from the existing technological frame to a new one is suggested. This movement was recognized by all respondents, who also noted this movement away from the traditional pharmacological treatment paradigm, to a more patient-centered, device driven



paradigm. This was also found in the topical analysis, which showed self-management of patients and the use of Ehealth and devices as important topics for this technological trajectory.

This movement away from the existing technological assessment frame is also confirmed when reviewing the components most often referenced per technological trajectory for this actor group (Table 11 on the next page). Of the expectations, key problems stand out for pharmacological treatment (19%), which is related to side effects and comorbidities being often discussed. Design demands (27%) and design methods (16%) in the assumptions category are also prominent. This shows that pharmacological producers also find delivery settings (and to a lesser extent financial themes) important.

The knowledge base for pharmacological treatment is large, being referenced a lot through current theories (trials and articles referencing scientific articles) and problem-solving strategies, focusing on novel delivery methods and schemes, fitting the movement suggested above.

Table 11: Pharmaceutical producers frame components over each technological trajectory *

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Expectations	37.00%	30.00%	40.91%	34.88%
Foci and Sense Making	14.00%	6.67%	0	13.95%
Goals	8.00%	6.67%	22.73%	20.93%
Key problems	19.00%	3.33%	0	2.33%
Perceived function	8.00%	13.33%	27.27%	20.93%
Assumptions	28.00%	36.67%	31.81%	30.23%
Design demands	27.00%	10.00%	0	23.26%
Design methods	16.00%	10.00%	13.64%	13.95%
Technology requirements	3.00%	16.67%	31.81%	11.63%
Knowledge	35.00%	33.33%	27.27%	34.88%
Current theories	13.00%	6.67%	0	0
Epistemology	2.00%	6.67%	0	2.33%
Problem-solving strategies	19.00%	16.67%	27.27%	34.88%
Tacit knowledge	9.00%	3.33%	0	11.63%
Total (BOLD)	100%	100%	100%	100%

* Totals may add up to more than 100% due to overlap and multiple components being mentioned in a single reference.



5.4.2. Life-style producers

As can be seen in table 12 on the next page, life-style producers also engage mostly in positive amplifying and extending, and mostly focus on life-style interventions, not interacting with pharmacological prevention at all (0%). Considering the relatively high amount of extending (22.61% and 28.63%) and amplifying (26.09% and 25.55%) activities, this suggests that the technological assessment frames on prevention and treatment-related life-style interventions are closely related, which the life-style producer respondent confirmed in the interview. The respondent further indicated that this relation is caused by life-style prevention being a necessary precondition for successful life-style treatment, as no life-style treatment plan can be successful without a permanent life-style change in patients.

Table 12: Life-style producers interactions over each technological trajectory

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Amplifying (neg)	7.50%	0	14.78%	10.57%
Amplifying (pos)	0	0	26.09%	25.55%
Bridging	2,50%	0	14.78%	11.01%
Extending (neg)	2,50%	0	1.30%	1.32%
Extending (pos)	40.00%	0	22.61%	28.63%
Transforming (neg)	0	0	9.57%	9.69%
Transforming (pos)	42.50%	0	10.87%	13.22%
Total	100%	0	100%	100%

This close relation also shows when looking at the components in the data (table 13), as there is considerable overlap and the distribution between the life-style interventions is very similar. Knowledge is focused strongest upon (40.18% and 36.52%), and mostly current theories (34.82% and 26.96%), which shows that life-style producers aim to back up claims with scientific data.

Expectations were references second most often, and both life-style interventions show high numbers of perceived function references and foci and sense making, indicating that prevention-related topics are discussed equally. This in turn means that life-style producers focus both on diet topics as on exercise, which both form element of life-style interventions. This is also affirmed by both user and producer respondents, who indicate that life-style interventions need to focus on both physical exercise and dietary management in order to be successful.

Combining the found Societal organization and the heterogeneity of diet-related topics with the strong emphasis on current theories and the extending and amplifying interactions, this suggests that the technological assessment frames for life-style producers are expanding and still need defining, which corresponds to the relative novelty of these problem-solving strategies. This is also affirmed by the producer respondent and the user respondent, who both indicate that there still is clinical evidence to be gathered for many life-style interventions, and a lot of diets claim to be medical interventions, but in fact are not.



Table 13: Life-style producers frame components over each technological trajectory *

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Expectations	9.09%	0	37.5%	35.22%
Foci and Sense Making	0	0	24.55%	17.83%
Goals	9.09%	0	2.68%	6.96%
Key problems	9.09%	0	9.38%	10.87%
Perceived function	0	0	26.34	23.48%
Assumptions	81.81%	0	22.32%	28.26%
Design demands	81.81%	0	10.27%	15.22%
Design methods	81.81%	0	1.34%	5.65%
Technology requirements	0	0	20.98%	21.30%
Knowledge	9.09%	0	40.18%	36.52%
Current theories	0	0	34.82%	26.96%
Epistemology	0	0	3.57%	3.04%
Problem-solving strategies	9.09%	0	21.88%	26.08%
Tacit knowledge	0	0	10.27%	11.30%
Total (BOLD)	100%	0	100%	100%

5.5. Institutional components and interactions

Table 14 below shows the interactions found for the institutional actor group. Institutions show a strong presence of amplifying interactions for all technological trajectories, except for pharmacological treatment, for which extending is most often (37.58% positive, 12.08% negative) referenced. These extensions are mostly concerned with the topic of self-management, which was found to be predominant in all trajectories. Extending took place by adding novel elements to existing interventions, such as home blood glucose monitoring, needleless insulin injections and e-health treatment support, which links with the results of the producer actor group, and is also recognized by all respondents.

Additionally, life style treatment is also often bridged (25.82%), as is pharmacological prevention (21.78%). These bridging actions focus mostly on bridging life style interventions to one another. The main theme in these interactions dietary decisions and advice on food products with regard to type 2 diabetes. Pharmacological prevention, on the other hand, is bridged to life-style using references to

* Totals may add up to more than 100% due to overlap and multiple components being mentioned in a single reference.



scientific articles, and is linked to comorbidities and the prevention of risk factors of type 2 diabetes outside of the patient's control.

This suggests that the institutional actors have a preference for preventive or life-style interventions, while extending the pharmacological treatment frame to fit this new strategy, which is in line with the institutional actor publications analyzed and frequently encountered in the other media data as well. The interviews suggest that this bridging between the life-style interventions is indeed a starting point for convergence of those technological trajectories, for which pharmacological treatment can also serve as support. Both life-style producers and institutions favor this development, which also shows in the institutional publications by government bodies.

Table 14: Institutional interactions over each technological trajectory

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Amplifying (neg)	18,79%	15,84%	15,88%	8,65%
Amplifying (pos)	9,73%	45,54%	29,87%	26,05%
Bridging	15,44%	21,78%	19,56%	25,82%
Extending (neg)	12,08%	1,98%	2,18%	1,37%
Extending (pos)	37,58%	8,91%	7,52%	19,80%
Transforming (neg)	2,35%	2,97%	10,68%	8,87%
Transforming (pos)	4,03%	2,97%	14,30%	9,44%
Total	100%	100%	100%	100%

When regarding the component distribution over the four technological trajectories for institutions, shown in table 15, a similar image of life-style favorability and convergence rises. For pharmacological treatment, foci and sense making (35.44%), key problems (27.31%) and current theories (22.42%) are most often discussed. In foci and sense making, government publications are most often referenced, focusing mainly on e-health as a supplement for pharmacological treatment (mostly glucose monitoring devices). Key problems mentioned are mostly side effects and risks of the use of pharmaceutical products, and the appropriate use ("gepast gebruik") studies by the Dutch government and articles on the choice for premium brand pharmaceuticals versus generic alternatives. This suggests that the technological trajectory is indeed being redefined and positioned against life-style trajectories, with new foci being added and performance being evaluated, which aligns with the amount of extending and negative amplification (18.79%).

Pharmacological prevention is most often referenced with current theories (36.86%), and foci and sense making (41.24%), both components linking pharmacological interventions to the prevention of obesity as a risk factor for type 2 diabetes. This suggests that this technological trajectory is still abstract and in need of concretizing. The interview with the institutional respondent provided an even stronger view, that of pharmacological prevention being a dead end, because the willingness to pay for a medical intervention for preventive purposes would be nonexistent. This was also agreed upon by the life-style producer, but disagreed upon by the user respondent, which will be discussed in the following section (5.3.3.).



Table 15 Institutional frame components over each technological trajectory*

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Expectations	51,54%	46,72%	42,46%	48,67%
Foci and Sense Making	35,44%	41,24%	30,60%	34,00%
Goals	5,06%	1,82%	8,04%	5,78%
Key problems	27,31%	6,93%	8,09%	20,45%
Perceived function	5,42%	2,55%	16,94%	14,87%
Assumptions	12,84%	9,49%	10,38%	12,78%
Design demands	10,31%	5,11%	4,09%	5,30%
Design methods	4,52%	1,82%	1,71%	4,36%
Technology requirements	3,44%	5,47%	6,00%	6,63%
Knowledge	35,62%	43,80%	47,17%	38,54%
Current theories	22,42%	36,86%	36,46%	23,96%
Epistemology	5,42%	1,82%	7,52%	3,03%
Problem-solving strategies	10,31%	5,84%	24,65%	27,65%
Tacit knowledge	3,44%	3,28%	7,04%	4,55%
Total (BOLD)	100%	100%	100%	100%

5.6. User components and interactions

Below, table 16 shows an overview of the relative occurrence of frame interactions in the corpus for the user actor group. It stands out that positive amplification is performed often for each of the technological trajectories. As users have no direct connection to any of the technological trajectories, this spread was expected. The user respondent confirmed this finding, and supplemented that there are a lot of developments in all of the trajectories which are worth being excited about as they could bring considerable therapeutic value to patients.

For pharmacological treatment, negative amplifications and positive extending is also performed often, compared to the other technological trajectories, while bridging interactions were less often encountered. Negative amplification was most often associated with side effects and quality issues of pharmacological products or devices, as the topics in section 5.1 also showed. Positive extending was mostly associated with novel developments in devices for glucose monitoring such as the Freestyle Libre, and novel treatment possibilities for side effects such as ulcers. This aligns with the expansion and extension of the pharmacological treatment trajectory found in the previous sections,

* Totals may add up to more than 100% due to overlap and multiple components being mentioned in a single reference.



and adds to the idea that pharmacological treatment can serve as support for life-style based interventions. All respondents have also indicated this future vision.

Pharmacological prevention is, next to the positive amplification, also often bridged, mostly in combination with life-style prevention or in a context associated with increasing self-management in patients. This was confirmed by the user respondent, who suggested that pharmacological prevention such as obesity or appetite diminishing drugs can serve as an aid for patients who have trouble adhering to life-style prevention programs.

Life-style prevention is more evenly distributed, with bridging, negative amplification and positive extending occurring almost as often. This could be explained by the heterogeneity still present in this technological trajectory, and affirmed by the user interview. The respondent indicated that life-style prevention is something that occurs mostly in society, and is not linked to a specific medical center for the general public. Therefore, this trajectory also encompasses Societal organization, as already shown in section 5.1, and their heterogeneity leads to a wide range of interactions.

Table 16 User interactions over each technological trajectory

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Amplifying (neg)	25,66%	13,70%	15,14%	18,49%
Amplifying (pos)	21,28%	28,77%	24,02%	22,37%
Bridging	10,79%	35,62%	18,28%	16,21%
Extending (neg)	5,25%	1,37%	2,61%	3,88%
Extending (pos)	20,12%	10,96%	16,97%	24,66%
Transforming (neg)	9,33%	2,74%	8,36%	7,76%
Transforming (pos)	7,58%	6,85%	14,62%	6,62%
Total	100%	100%	100%	100%

When looking at the components encountered most often in user-data, of which an overview is shown in table 17 below, the distribution between the main categories is more even than in the producer and institutional data, i.e. assumption components were mentioned more often by users than by the other actor groups, mainly because technological requirements were more often found. This is the case because users are the main object of technology, and therefore the primary subject of technological requirements, as technology needs to fit user needs.

When looking at expectations, foci and sense making is least often found for pharmacological treatment, suggesting that background information of pharmacological treatment options is already known to the user group, or not worth discussing in written media. The user respondent affirmed this, as she indicated that the pharmacological treatment trajectory has changed little in the sense of position in the treatment plan, and therefore is not worth discussing (yet). Similarly, goals are generally less often found for pharmacological treatment, and almost never found for pharmacological prevention, which implies that goals for these technological trajectories require less discussion, also confirmed by the respondent.



Pharmacological treatment and life-style treatment both have predominant key problems in the corpus. These problems rise as these two technological trajectories are the most discussed, and form a very heterogeneous group, spanning from localized problems related to societal organization for life-style treatment (e.g. fizzy drinks being banned from a school), to system problems related to care quality and side effects for pharmacological treatment (e.g. patients complaining about lack of care). This is also found and discussed in section 5.1 and 5.4.

When looking at assumptions, design demands are more often found in the treatment trajectories, while less often for the preventive options. This can be explained by the fact that the focus of these design demands lies mostly with glucose monitoring and novel devices and methods for glucose monitoring. This is less often associated with preventive options, but a prerequisite for successful (pharmaceutical) treatment, as the glucose levels are an important biomarker for assessing treatment effectivity. Technological requirements are most often mentioned for pharmacological prevention, which may relate to the relative novelty or fluidity of this technological trajectory, and the associated uncertainty, as mentioned in section 5.2 and affirmed by the interview respondents.

Finally, when looking at the knowledge components, current theories are most often mentioned for pharmacological treatment, while epistemology is less often found. This is caused by the presence and reference to scientific articles on pharmacological compounds. Apparently, the knowledge presented in these articles is less debatable, hence the absence of epistemology discussion.

Problem-solving strategies are most often discussed for life-style prevention, and the heterogeneity and societal position of this component is the cause for this, as respondents also indicated earlier. Tacit knowledge is more often found in both treatment strategies, which can be explained by the societal position as well, since this brings forth publications on experience, such as diet advice or personal stories.

Table 17: User frame components over each technological trajectory *

	Pharmacological treatment	Pharmacological prevention	Life-style prevention	Life-style treatment
Expectations	36,83%	36,54%	39,62%	39,27%
Foci and Sense Making	6,49%	14,42%	16,00%	15,64%
Goals	8,40%	0,96%	16,38%	14,18%
Key problems	26,91%	11,54%	15,81%	22,55%
Perceived function	11,26%	10,58%	13,71%	14,18%
Assumptions	27,29%	32,69%	24,95%	26,36%
Design demands	12,40%	8,65%	6,48%	11,27%
Design methods	8,40%	6,73%	5,71%	9,27%
Technology requirements	18,51%	25,96%	15,81%	15,82%

* Totals may add up to more than 100% due to overlap and multiple components being mentioned in a single reference.



Knowledge	35,88%	30,77%	35,43%	34,36%
Current theories	11,83%	8,65%	8,00%	5,09%
Epistemology	2,10%	6,73%	7,05%	6,00%
Problem-solving strategies	19,08%	16,35%	26,67%	22,18%
Tacit knowledge	15,27%	4,81%	6,48%	12,36%
Total (BOLD)	100%	100%	100%	100%

6. Discussion

The aim of this thesis was to map technological assessment frames on the four technological trajectories in the field of type 2 diabetes, and the actions related to these frames by actor groups with different relations to the technological trajectories. This discussion first covers the main findings of the research, followed by the practical relevance and contribution to the existing literature. Additionally, further research are given and limitations are discussed.

The main findings can be divided in three main sections: thematical findings, findings on technological assessment frame components for the technological trajectories, and frame components and interactions for different actor groups.

Thematically, it was found that pharmacological trajectories have a strong focus on novel technologies defending their trajectories and the role of the patient in these technological options. Life-style technologies focus more on societal aspects of technologies, which corresponds with the setting in which life-style interventions take place, which is outside of the medical practice and in the direct environment of the patient itself.

These differences in thematical focus are rooted in the characteristics of the technological trajectories, which aligns with the theoretical concept of technological history by Dosi (1982), which defines a technological trajectory. This also showed in the trajectory of pharmacological treatment, which in this light could be seen more as a trajectory that has branched off of the incumbent trajectory of pharmacological treatment, than a novel trajectory. Additionally, topics for the challenging trajectories in life-style were found to be more heterogeneous than the other two, which also aligns with the rigidity of incumbent trajectories compared to challengers mentioned by Hekkert et al. (2007), also corresponding to the era of ferment, as mentioned by Kaplan & Tripsas (2008).

The technological assessment frame components of the four trajectories correspond to the topics found in the thematic analysis. While the differences in component distribution between the technological trajectories is small, with only life-style prevention showing a larger knowledge-focused distribution, contextual differences in the components were present. Patient role and self-management were important topics in expectations and knowledge components for all trajectories. However, the pharmacological trajectories focus more on retaining life-style by self-management and self-monitoring, while life-style trajectories view this as a tool on which life-style changes can be based.

The lack of clear differences in the distribution technological assessment frame components when viewing these through the lens of technological trajectories is striking. This does align with the theoretical notion that a technological assessment frame is a frame belonging to an actor (Dunbar et



al., 1996), however. Therefore, the relative distribution of the components could be expected to show little variety in technologies that are related, as the overarching goals, user groups and settings also show similarities. It is the qualitative, contextual content of the components that does vary, which aligns with the notion that users can have different relation to technologies and technological trajectories (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997).

These differences were identified and found in sections 5.3 up to and including 5.6. There, the relation of actor groups with the technological trajectories and their framing actions were taken into account. Producers were shown to actively defend their technological trajectory, but there was a clear difference in incumbent framing and challenger framing.

Incumbent (pharmacological) producers showed to discuss expectations and assumptions of the challenging trajectories, bridging and extending their technological assessment frame towards the challenging trajectories. Challenger (life-style) producers showed to barely discuss the incumbent trajectories at all, and focus more on extending and transforming towards the incumbent trajectory. This shows that incumbents not only defend their own technological trajectory, but also seem to reposition their technological assessment frames in relation to challenging trajectories, whereas challengers barely interact with the incumbent trajectory at all. This could indicate the beginning of an era of technological discontinuity, albeit that the incumbent trajectory still is embedded deeply in the institutional structure and is mentioned as essential by all actor groups.

Another important finding is that the institutional actors actively set the agenda and show a preference for challenging trajectories in their framing interactions. This is in line with theory stating that the institutional actor group not being dependent on the history of a specific trajectory, as posed by Dunbar & Ahstrom (1995). Knowledge components for challenging trajectories also occurred more frequently in the corpus for institutional actors, which gives rise to an image of institutional curiosity to alternative technological trajectories in the field of type 2 diabetes. Further research on this presumed stance could focus in different fields in healthcare, where self-management is also an important new development.

Finally, users were shown to be heterogeneous in their preferences for technological trajectories, as well as their framing actions. This aligns with the theoretical assumption that users do not have a direct link and dependency to the success of a technological trajectory, and therefore are more free in their pursuit of one. This was further confirmed in the contextual component analysis, where users show overlap.

By confirming and contextually deepening the understanding of actor group roles in this setting where multiple technological trajectories are present, the dynamics between these trajectories and the role of actor groups herein is achieved. This expands on previous work by Kaplan & Tripsas (2008), and provides insights on how trajectories and technological assessment frames interact in settings where technological discontinuities may develop. Incumbents are shown to remain defensive, but are not exclusively rigid in their defense of their technological trajectory, while challengers seem to be not focused on the incumbent trajectory and experience their own era of ferment. Further research could go deeper in this dynamic, in sectors or environments with a very strong incumbent trajectory, such as other healthcare related fields in which pharmacological treatment is challenged by alternative therapies.

This study focused on speech-acts in publicly available publications by actors with a relation to the field of type 2 diabetes. The deliberate sampling of institutional publications caused an overrepresentation of institutions in the data sample, and an underrepresentation of producers. With 400 producer speech-acts identified, the analysis provided credible results, but additional producer



data would have been beneficial for the conclusions to be stronger. Further research could focus more on this producer role by including more primary producer data from journals or interviews.

7. Conclusion

This thesis analyzed four technological trajectories in the field of type 2 diabetes, constructed the technological assessment frames belonging to these trajectories, and examined the different activities undertaken by user groups in this dynamic field. This was done by combining technological trajectory theory with technological assessment frame theory, and applying this to the differences of actor groups in their relation to the technologies.

Using this framework, a publication analysis was conducted, and the topics, frame components and interactions found in speech-acts for each actor group were analyzed. Based on this analysis, an answer to the following research question is formulated:

“How do technological assessment frames and framing activities on different technological trajectories differ between actor groups with different relationships to these trajectories?”

Technological assessment frames differ between actor groups based on their relation (i.e. degree of involvement) to the technology. Producers defend the technological trajectory in which they operate, institutions pursue the technological trajectory based on exogenous motives (e.g. political decisions), and users display no homogeneous preference.

This means that in their technological assessment frames, incumbent actors discuss expectations and assumptions of the challenging trajectories more often, while actors favoring challenging technological trajectories focus more on knowledge components for the challenging trajectories. Institutions in the field of type 2 diabetes show their preference for the challenging trajectory of life-style prevention by emphasizing key problems for all other trajectories, while users have a more even distribution, corresponding with their non-homogeneous preference.

Framing activities follow these preferences as well, with incumbent producers transforming their assessment frame of the incumbent trajectory and bridging and extending towards the challenging frames. Challenger producers amplify their frame, while also extending and transforming towards the incumbent frame, as do institutions. Users show no preference, but bridge their technological assessment frames towards the newest entrant.

Further research could focus on this dynamic in related sectors in healthcare, and might provide more insights in how this technological development is influenced by the institutional agenda. Understanding this influence will allow for more efficient steering of medical technologies to a direction considered favorable by institutions, which could lead to more efficient or adaptable health systems in a world where healthcare demand always rises and financial means are always limited.



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Appendix A: Actors in the Dutch healthcare system

In order to answer the research question, and find differences between the frames of actors through the drug life cycle in diabetes, the actors involved with treatment of diabetes need to be distinguished. Below, an overview of actors in the Dutch healthcare system is shown.

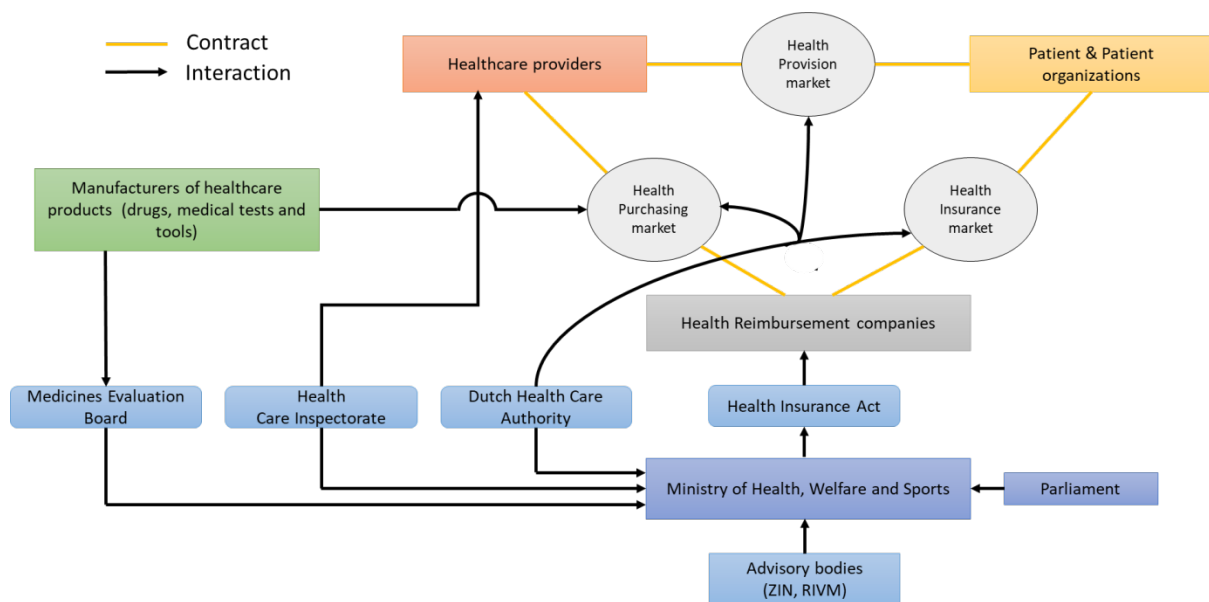


Figure A1: Overview of the Dutch healthcare system (Authors own compilation, based on Kroneman et al., 2016 and De Vries & Kossen, 2016).

The Ministry of Health, Welfare, and Sports (VWS) has the primary responsibility of health and healthcare and is held accountable for this by parliament. To this end, the ministry develops policies and measures to promote the health of Dutch citizens. They are also responsible for safeguarding access to affordable healthcare of a sufficient quality. The ministry is advised and informed by the National Institute for Public Health and the Environment (Rijksinstituut voor Volksgezondheid en Milieu, RIVM) and the National Healthcare Institute (Zorginstituut Nederland, ZINL) (Kroneman et al., 2016). The Health Care Inspectorate (Inspectie voor Gezondheidszorg en Jeugd, IGJ), and the Medicine Evaluation Board (College ter Beoordeling van Geneesmiddelen (CBG), and the National healthcare authority (Nederlandse Zorgautoriteit, NZa) are supervisory organizations.

The National Institute for Public Health and the Environment (Rijksinstituut voor Volksgezondheid en Milieu, RIVM) monitors public health and living environment and provides information and policy support to the ministry (Kroneman et al., 2016).



The National Health Care Institute (Zorginstituut Nederland, ZINL) advises the on the content of the basic insurance package by evaluating new therapies, drugs, medical tests, and tools according to the guidelines described in "Stand van de wetenschap en praktijk". By doing so, ZINL is responsible for the quality, accessibility, and affordability of healthcare (Zorginstituut Nederland, 2017).

The Health Care Inspectorate (Inspectie voor de Gezondheidszorg en Jeugd, IGJ) is an independent organization that supervises the quality and accessibility of health services, prevention measures and medical (Inspectie voor de Gezondheidszorg, 2017). The IGJ enforces statutory regulations on public health and advises the Minister on introducing various measures and policies to ensure healthcare providers offer healthcare of sufficient quality.

The supervision of the three healthcare markets, being health purchasing, health insurance, and health provision, is one of the main tasks of **The Dutch Health Care Authority** (Nederlandse Zorgautoriteit, NZa).

The Medicines Evaluation Board (College ter beoordeling van Geneesmiddelen, CBG) is responsible for the authorization and monitoring of human and veterinarian medical products by assessing the efficacy, safety, and quality of these products (interaction 9 in figure 5) (Kroneman et al., 2016). Although the CBG is an independent administrative body, the members of the CBG are appointed by the Minister of Health, Welfare, and Sports (interaction 10 in figure 5).

Dutch Health Insurance Companies operate on a non-profit basis and fund (partly) the medical and healthcare related expenses of Dutch citizens. Law obligates health insurers to accept any applicant for basic health insurance (Nederlandse Zorgautoriteit, 2017). In turn, Dutch citizens are also obligated by law to have basic health insurance that covers standard and emergency care (Rijksoverheid, 2017). Insurers are free to add extra care to the basic insurance in their own health insurance packages, as long as they at least include the base package as mandated by the government.

Patients and patient organizations are focused on the interests of patients, who are the actual users of healthcare (Kroneman et al., 2016), and can be divided in two groups; generic and categorical, of which the first focuses on the interests of general users of health, and the latter on patients with a specific condition, such as diabetes.

Healthcare providers are all the organizations and individuals that offer healthcare services to citizens and patients in the Dutch healthcare system, including medical specialists, and general practitioners.

Manufacturers of healthcare products invest in the research, development, and production of healthcare products, such as drugs and medical tests. These products are sold by these manufacturers in the health purchasing market, of which access is controlled by the regulatory authorities.



Appendix Ba: Overview of professional journal articles analyzed

Medisch Contact

Edition	Date	Title
None specified	3-1-2007	Hooggeëerd onderzoek
Wetenschap	9-1-2007	Nieuw oraal diabetesmedicijn
Wetenschap	14-2-2007	Genetische factoren diabetes
Nieuws	20-2-2007	Armband registreert lifestyle
Nieuws	28-2-2007	Continue glucosemeting getest
Nieuws	13-3-2007	Klink mikt op preventie
Wetenschap	18-4-2007	Diabetes type II vermindert cognitieve vermogens
Wetenschap	1-5-2007	Potentiële behandeling diabetische voet
Nieuws	8-5-2007	Egyptische diabetesartsen in Twente
Wetenschap	9-5-2007	Ernstige hypo's schaden cognitie niet
None specified	30-5-2007	Eerste kind behandeld met inhalatie-insuline
Wetenschap	30-5-2007	Rosiglitazon verhoogt risico op hartaanval
Wetenschap	17-7-2007	Incretine alternatief bij diabetes
None specified	31-7-2007	Vragen over diabetes
None specified	7-9-2007	Geringe psychologische impact diabetesscreening
None specified	17-9-2007	Giftige hagedis moet diabetespatiënt helpen
Wetenschap	20-9-2007	Opnieuw problemen met rosiglitazon
Wetenschap	20-9-2007	Trainen verlaagt HBA _{1c}
None specified	21-9-2007	Jonge diabetespatiënt slaat injectie over
Wetenschap	25-9-2007	Insuline toevoegen weinig effectief
Wetenschap	2-10-2007	Controverse rond thiazolidinedionen blijft
Nieuws	23-10-2007	Diabetesgeneesmiddelen niet in de ban
None specified	18-1-2008	Fondsen pakken samen toename welvaartsziekten aan
None specified	5-2-2008	Als ze ons maar niet zien als betweters'
None specified	5-2-2008	Zwaarlijvige mensen kosten gezondheidszorg minder
Nieuws	12-2-2008	Diabetesonderzoek ACCORD stopt wegens oversterfte
None specified	26-3-2008	Maagbandoperatie profijtelijk voor diabetespatiënt
Wetenschap	27-3-2008	Jong diabetes, oud nierfalen



None specified	1-4-2008	De ziekte of de zieke
Nieuws	1-4-2008	Preventieconsult huisartsen op komst
None specified	7-4-2008	Zorgen over veiligheid bloedprikken diabetici
None specified	10-4-2008	Betere zorg diabetespatiënt voorkomt hartaanval'
Wetenschap	28-5-2008	Metabool syndroom zinloos concept
Wetenschap	11-6-2008	Patiënten tellen niet in diabetesonderzoek
Wetenschap	18-6-2008	Drastische verlaging bloedsuiker niet goed
Wetenschap	25-6-2008	Verband tussen diabetes en depressie
None specified	4-7-2008	Kabinet: Nederland moet gezonder eten
None specified	8-9-2008	Medicijn helpt diabetespatiënt afslanken
Wetenschap	17-9-2008	Continue glucosemeting beter
Wetenschap	17-9-2008	Positief effect strakke glucoseregulatie houdt lang aan
None specified	30-9-2008	Nederlandse diabeteszorg in Europese top
None specified	3-10-2008	Minder doden door zorgprogramma diabetes
None specified	8-10-2008	Kind met diabetes probleem voor school
Wetenschap	8-10-2008	Bloedsuikers meten helpt zwangere diabeet
Wetenschap	29-10-2008	Betere afslankpil
Nieuws	4-11-2008	Medicijn overgewicht vrij verkrijgbaar
None specified	14-11-2008	Aandacht voor schoolgaande jeugd met diabetes
Wetenschap	20-11-2008	Rol aspirine bij diabetes onopgehelderd
None specified	2-12-2008	Obesitas is een ziekte
Nieuws	9-12-2008	Zijn alle statinen diabetogeen?
None specified	23-12-2008	Onderzoek naar vroege opsporing diabetes
Kindergeneeskunde	17-2-2009	Gerust groeien
Nieuws	25-2-2009	Deltaplan Diabetes
Wetenschap	11-3-2009	Nachtdienst ontregelt metabolisme
None specified	18-3-2009	Bijna helft kinderen met suiker snoept stiekem
None specified	18-3-2009	Vier op de honderd Nederlanders heeft suikerziekte
Wetenschap	18-3-2009	Sterfterisico diabetici met atriumfibrilleren hoger
Nieuws	16-4-2009	Rosiglitazon uit de gratie
None specified	12-5-2009	Aantal diabetici stijgt flink



None specified	20-5-2009	Ook biosimilars voor kinderen
Federatienieuws	16-6-2009	Functionele bekostiging geen oplossing bij multimorbiditeit
Wetenschap	16-6-2009	Diabetes type 2 kondigt zich al vroeg aan
Richtlijnen	8-7-2009	Basispakket en richtlijnen niet hetzelfde
None specified	20-7-2009	Klink wil zorg betaalbaar houden
Nieuws	3-9-2009	Huisartsen wijzen plannen Klink af
None specified	9-9-2009	Samenwerking bestraft door belastingdienst
None specified	23-9-2009	Insuline glargine en kanker
None specified	5-10-2009	NHG: 'Voorlopig geen nieuwe zorgstandaarden'
None specified	14-10-2009	Compleet overzicht biomarkers
None specified	22-10-2009	Bariatrische chirurgie vereist ervaring
None specified	26-10-2009	Richtlijnen nog altijd beïnvloed door farmacie
Nieuws	29-10-2009	Industrie heeft invloed op behandelrichtlijnen
Wetenschap	1-11-2009	Diabetespreventie
Marktwerking	1-12-2009	Marktwerking is zorgvershraling
None specified	8-12-2009	Zelfmanagement helpt ziekte vooruit
Wetenschap	9-12-2009	Diabetesscreening geeft valse zekerheid
Wetenschap en industrie	10-12-2009	38. Organon en insuline (1923)
Wetenschap	13-1-2010	Diabetes 2 al vroeg op te sporen
None specified	3-2-2010	Huisarts vermoord door Klink en zorgverzekeraars
None specified	19-2-2010	Statines verhogen risico op diabetes licht
None specified	2-3-2010	Marktdenken bedreigt het artsenvak
None specified	11-3-2010	Het rendement van ketenzorg (2)
None specified	11-3-2010	Verdiene aan diabetes
Wetenschap	21-3-2010	Rosiglitazon rel
None specified	22-3-2010	Zwaarlijvige oudere man heeft vaker diabetis
Wetenschap	30-3-2010	Diabetes-type-2-screening vanaf 30 jaar kosteneffectief
Wetenschap	1-4-2010	Genetica op doodlopende weg
Agenda	6-4-2010	Dweilen met de kraan open
None specified	7-4-2010	Infobesitas en datafilie
Nieuws	26-4-2010	Huisarts moet jaarcontroles diabetespatiënt doen



Wetenschap	26-4-2010	Doelgerichte screening blijkt effectief
Nieuws	3-5-2010	Oneinigheid zorgstandaarden duurt voort
None specified	4-5-2010	De impact van diabetes
None specified	5-5-2010	Dromen van gezondheid
None specified	9-5-2010	Insulineresistentie na één korte nacht
Nieuws	11-5-2010	Traplopen tegen diabetes
None specified	2-6-2010	Nieuwe inzichten diabetes
None specified	2-6-2010	Populistische aanpak van overgewicht
Veldwerk	2-6-2010	Preventieangst
None specified	3-6-2010	Metformine oorzaak toenemend vitaminetekort
Wetenschap	28-6-2010	Risico's diabetes nauwkeuriger bepaald
Wetenschap	29-6-2010	Nieuwe optie bij behandeling diabetes
None specified	14-7-2010	Spuitertje
None specified	4-8-2010	Preventie in de huisartsenpraktijk
None specified	20-8-2010	Broccoli reduceert risico diabetes 2
None specified	26-8-2010	Artsen adviseren tegenstrijdig
Federatienieuws	1-9-2010	Ga niet af op zelftest
None specified	1-9-2010	Potje honing
Nieuws	6-9-2010	Ernstige twijfel rosiglitazon
None specified	8-9-2010	U houdt de folder op zijn kop'
None specified	22-9-2010	Vijf vragen voer zorgstandaarden
None specified	24-9-2010	Rosiglitazon van de markt
None specified	5-10-2010	Diabetes, van wetenschap naar praktijk
None specified	20-10-2010	Betrouwbare cijfers over diabetes
None specified	3-11-2010	Een kind met diabetes
Zoetzuur	11-11-2010	Vier keer per dag prikken
None specified	22-11-2010	Broeikaseneffect en obesitas gaan hand in hand
Zoetzuur	1-12-2010	Zelf doen
Wetenschap	14-12-2010	Disease management goed voor diabetici
None specified	5-1-2011	Opgenomen in het basispakket
Zoetzuur	19-1-2011	Een hypo van de stress



Wetenschap	4-2-2011	Wereldbevolking steeds dikker
Federatienieuws	9-2-2011	Koning verlaat boos met gezin de praktijk
Zoetzuur	20-2-2011	Oververhitte glucosemeter
None specified	23-2-2011	Waken over de veiligheid van medicatie
Wetenschap	10-3-2011	Ultralangwerkende insuline is veilig
Wetenschap	21-3-2011	Veel bijwerkingen maagbandoperatie
Wetenschap	24-3-2011	Pioglitazon voorkomt diabetes
None specified	6-4-2011	Kwaliteitsinstituut overbodig maken'
Federatienieuws	27-4-2011	Preventie vereist een nationale agenda
None specified	27-4-2011	De patiënt als zorgverbeteraar
Agenda	28-4-2011	Diabetes
Wetenschap	4-5-2011	Geïndividualiseerde richtlijn beter
Ouderengeneeskunde	18-5-2011	Multimorbiditeit anders benaderen
None specified	24-5-2011	Internist verdedigt nieuw diabetesmedicijn
Nieuws	7-6-2011	Gebruik nieuwe antidiabetica stijgt
Wetenschap	22-6-2011	Hoge dosis statine verhoogt diabetesrisico
Wetenschap	27-6-2011	Wereldwijde verdubbeling diabetes
Wetenschap	28-6-2011	Ook slanke mannen lopen metabool gevaar
None specified	30-6-2011	Diëtist alleen vergoed bij ketenzorg
Wetenschap	8-7-2011	Jong kind krijgt vaker ketoacidose
Wetenschap	9-7-2011	Betere bloedsuikers door continue meting
Wetenschap	12-7-2011	Niet alleen minder keukenzout
Nieuws	14-7-2011	Huisartsen: kwaliteit zorg liever niet openbaar
Nieuws	1-8-2011	Aandacht voor medicatie tijdens ramadan
None specified	18-8-2011	App helpt bij diabetes
None specified	22-8-2011	Vaker diabetes bij eerstegeneratieallochtoon
Nieuws	9-9-2011	Langwerkend exenatide vergoed voor zware diabeet
Wetenschap	20-9-2011	Diabetes als risicofactor voor dementie
Nieuws	14-11-2011	Diabeteskosten tien miljard per jaar
Tuchtrecht	17-11-2011	Dood door diabetische voet
Wetenschap	17-11-2011	Dikke kinderen zijn nog te redden



Federatienieuws	30-11-2011	Preventie, Mission Impossible?
Nieuws	8-2-2012	Meer investeringen nodig in e-health'
None specified	10-2-2012	Eigen bijdrage treft ook somatische zieken
Nieuws	21-2-2012	Vaccin tegen diabetes in zicht
None specified	8-3-2012	Integrale bekostiging diabetes duur
Nieuws	27-3-2012	Apparaat regelt bloedsuikerspiegel
None specified	11-4-2012	Medicijnen verkopen moet niet het doel zijn'
Wetenschap	12-4-2012	Twijfels over metformine
Wetenschap	13-4-2012	Slechte nachtrust maakt dik
None specified	1-5-2012	Diabeteszorg meetbaar gemaakt
Kwaliteit	2-5-2012	Metten diabeteszorg moet niet doorslaan
Wetenschap	2-5-2012	Bariatrische chirurgie beter bij DM typ 2
Wetenschap	29-5-2012	Strenge suikercontrole doet niets op niet
Wetenschap	31-5-2012	Elke dag een halve borrel
Wetenschap	8-6-2012	Diabeet niet meer bloedingen na aspirine
Column	12-6-2012	Peanuts
Wetenschap	14-6-2012	Massaal postmarketingonderzoek insulines
Wetenschap	4-7-2012	Antidiabetica gevaar voor blaas
None specified	16-7-2012	Marketinggeweld
Wetenschap	7-8-2012	Dikke diabeten leven langer
Wetenschap	23-8-2012	Diabetes door pancreabestraling
None specified	28-8-2012	Betere diabeteszorg voor weinig geld
Wetenschap	6-9-2012	Diabeet heeft minder aan clopidogrel
None specified	11-9-2012	Boek: Diagnose diabetes 2025
Agenda	12-9-2012	Allochtonen en diabetes
None specified	12-9-2012	Haal dure geneesmiddelen uit basispakket' (3)
Wetenschap	20-9-2012	Plaats vetophoping beïnvloedt risico's
Wetenschap	27-9-2012	Diabetes 2 begint misschien in darmen
Wetenschap	4-10-2012	Screening diabetes type 2 geen effect
None specified	10-10-2012	Risicofactoren efficiënter opsporen
Uitspraak tuchtcollege	23-10-2012	Nieuwe hoofdbehandelaar niet alert op diabetes



None specified	9-11-2012	Minder vlees graag
Praktijkperikel	18-12-2012	Regels zijn regels
None specified	2-1-2013	Stoppen met roken terug in pakket
Wetenschap	18-1-2013	Vroeg ontdekken diabetes levert weinig op
Wetenschap	5-3-2013	Zelf buikontrek meten zinvol
Nieuws	8-3-2013	Onderwerpen voor richtlijnontwikkeling
None specified	2-4-2013	Meer pancreatitis bij moderne antidiabetica
Wetenschap	6-4-2013	Diabetesonderzoek moet veel gericht
Wetenschap	8-4-2013	Minder melatonine, vaker diabetes
Federatienieuws	8-5-2013	Voorkomen is beter... - Voorzitter KAMG
None specified	23-5-2013	Obesitas verhoogt kans overleven ic-opname
None specified	30-5-2013	Sterke statines, meer kans op diabetes
Wetenschap	6-6-2013	Halvering aantal controles bij diabetes
Wetenschap	23-6-2013	Diabetes typ 2 et zo min ziekte als anemie'
Nieuws	30-7-2013	App helpt leefstijl te verbeteren
Wetenschap	31-7-2013	Hypoglykemie leidt tot cardiovasculaire ziekten
Wetenschap	20-8-2013	Mooie resultaten voor insulinepomp bij kinderen
Wetenschap	11-10-2013	NHG laat nieuwe diabetesmiddelen links liggen
Wetenschap	18-10-2013	BMI slecht criterium voor maagchirurgie
Wetenschap	25-10-2013	Statines ongeschikt als primaire preventie
Wetenschap	7-11-2013	Metformine bij CVR: alleen voor diabetici
Wetenschap	21-11-2013	Eet meer noten
Ouderenzorg	4-12-2013	Samen strijden voor betere leefstijl
Nieuws	6-1-2014	Klacht over reclame antidiabetica was terecht
Preventie	28-1-2014	Gevaar van te zwaar
Wetenschap	12-2-2014	Verband tussen diabetes en obesitas lastig
Wetenschap	11-3-2014	Hypo's verdienen meer aandacht
None specified	7-4-2014	Nieuwe antidiabetica te vaak voorgeschreven'
Wetenschap	16-4-2014	Zelfmanagement diabetici kan en moet beter
Preventie	16-5-2014	Laat tandartsen preventief screenen'
Wetenschap	30-5-2014	Zelfs tijdelijk gewichtsverlies positief effect



Wetenschap	5-7-2014	Insulinepomp effectiever dan spuit
Nieuws	29-7-2014	Selfies diabetespatienten gaan viral
Nieuws	19-8-2014	MSD-folder over diabetes is tóch reclame
E-health	27-8-2014	De zelfmetende mens
Wetenschap	12-9-2014	Statines geven niet meer diabetescomplicaties
Wetenschap	19-9-2014	Glucose-intolerantie door zoetstoffen
Wetenschap	9-10-2014	Laag HbA1c voorspelt niet langer hypoglykemie
None specified	13-11-2014	Bijna een op twintig Nederlanders heeft diabetes
Wetenschap	19-11-2014	Nieuwe genetische oorzaak ketoacidose
None specified	15-12-2014	Meer huisartsen weigeren contract
Column	11-2-2015	Uw bakker, uw dokter - Ivan Wolffers
Wetenschap	16-2-2015	Genetische factoren obesitas in kaart gebracht
Opinie	18-2-2015	Bariatrische chirurgie verdient meer ruimte
None specified	24-2-2015	VGZ vergoedt niet alle bloedglucosemeters
Kindergeneeskunde	11-3-2015	Slapen: nodig, maar soms lastig
TV	11-3-2015	Zembla: nieuwe diabetesmedicijnen
Wetenschap	12-3-2015	Minder diabetes type 2 bij familiale hypercholesterolemie
Web	18-3-2015	Web: Stop kindermarketing ongezonde voeding
Opinie	15-4-2015	Stop misbruik van onze standaarden
None specified	22-4-2015	AstraZeneca eist rectificatie over DPP4-remmers
Nieuws	23-4-2015	AstraZeneca ziet af van juridische stappen
Wetenschap	4-5-2015	Internationaal diabetesadvies onder de loep
Nieuws	21-5-2015	Nza moet ingrijpen in diabetesmarkt'
None specified	27-5-2015	Minder DPP-4-remmers en GLP-1-agonisten voorgeschreven
Wetenschap	8-6-2015	Langetermijn strakke instelling DM onduidelijk
Nieuws	11-6-2015	Schippers: 'Overname door fabrikant geen bezwaar'
None specified	15-6-2015	Honderden klachten over glucosemeters
Wetenschap	17-6-2015	Toevoegen sitagliptine lijkt veilig
Sport	1-7-2015	Sport: het kost wat, maar dan heb je ook wat
Wetenschap	7-7-2015	Handjevol auteurs domineert diabetesonderzoek



Preventie	21-7-2015	Dementie vaak te voorkomen met levensstijl
Wetenschap	12-8-2015	Industriële transvetten gaan samen met meer sterfte
Nieuws	7-9-2015	Patiënten kritisch over medische sportbegeleiding
Column	9-9-2015	Malle Eppie - Marcel Levi
Nieuwsfoto	13-10-2015	Grootste insulinespuit ter wereld
Interview	14-10-2015	Overdiagnostiek drijft zorgkosten op'
Kosten en baten	21-10-2015	Zorggroepen in de knel door btw
Wetenschap	13-11-2015	Eén op drie krijgt type 2 diabetes
Onderzoek	16-12-2015	Haalbare perspectieven en het maaiveld
Opinie	6-1-2016	Leefstijladvies zinloos met snackbar om de hoek
None specified	2-2-2016	Inspectie let strenger op voorschrijven
Wetenschap	26-2-2016	Verlaag bloeddruk bij DM II niet agressief'
Wetenschap	21-3-2016	Strakke glucosecontrole bij oudere vaak nadelig
Interview	13-4-2016	Negeer het nieuws over voeding'
Kwaliteit	11-5-2016	Ketenzorg diabetes werkt wél
None specified	25-5-2016	Fitte patiënt voor beter behandelresultaat
Wetenschap	27-5-2016	Goed beloofbare wijken gezonder
Wetenschap	6-6-2016	Chirurgie standaardbehandeling bij diabetes mellitus
Wetenschap	28-6-2016	Bewegen, bewegen, bewegen
None specified	29-6-2016	Ziekenhuis Bernhoven doet meer met minder
Onderzoek	4-8-2016	Artsen zuinig met nieuwe diabetesmiddelen
Nieuws	9-8-2016	Suikerpatiënt krijgt goedkoper middel van VGZ
Wetenschap	20-8-2016	Hoog cholesterol, lagere kans op diabetes
Opvallende uitspraak	2-9-2016	Huisarts gaat te lichtvaardig te werk
Wetenschap	13-10-2016	Colagiganten sponsoren zorgorganisaties
Organisatie	25-10-2016	Diabeteszorg op maat
Gezien	9-11-2016	Huidafwijking bij diabetes type 2
Wetenschap	25-11-2016	Nog eerder sprake van prediabetes
Uitspraak tuchtcollege	11-1-2017	Braken en diabetes en toch geen glucose prikken
Boek	17-1-2017	Voeding en Welvaartsziekten
Column	22-2-2017	De andere kant



Wetenschap	23-2-2017	Maagoperatie bij diabetes: ook goed op lange termijn
Nieuws	1-3-2017	Veel diabetespatiënten met onbehandelde ulcera'
Nieuws	20-4-2017	Amputatie bij diabetespatiënt simpel te voorkomen'
Wetenschap	4-5-2017	Minder gliomen met hogere bloedsuikers
Veiligheid	10-5-2017	Risico bij heup- of knieprothese niet gering
Nieuws	2-6-2017	Huisartsenuitgaven mogen met 2,5 procent groeien
Wetenschap	14-6-2017	Zelf meten bloedglucose niet altijd effectief
Wetenschap	16-6-2017	Persoonsgerichte zorg en richtlijnen gaan samen
Achter het nieuws	29-6-2017	Voeding als medicijn
Wetenschap	21-7-2017	Bewegen en dieet verminderen kans keizersnede
Wetenschap	9-8-2017	Diabetesmiddel mogelijk van nut bij parkinson
Wetenschap	6-10-2017	Screening prediabetes rammelt
Nieuws	12-10-2017	Betere uitkomsten met insulinepomp
Wetenschap	26-10-2017	Nachtwerk is ongezond
Wetenschap	30-10-2017	Statines verhogen soms risico op diabetes
Wetenschap	6-11-2017	Vaker maagkanker bij langdurig gebruik protonpompremmers
Wetenschap	10-11-2017	RVS: 'Ontwikkeling geneesmiddelen kan beter en goedkoper'
Nieuws	12-12-2017	Huisartsen waarschuwen voor ontoereikende dekking VGZ
Nieuws	14-12-2017	NZa: Huisartsen gaan te ver met brief over VGZ
Nieuws	18-12-2017	Bedrijfsarts moet richtlijn nachtwerk hebben'

Nederlands tijdschrift voor de Geneeskunde

Edition	Date	Title
NTvG	25-2-2007	Preventie in basispakket zorg Nederlands Tijdschrift voor Geneeskunde
NTvG	20-5-2007	Operatieve behandeling van ernstige obesitas: nog veel vragen over indicaties en resultaten
NTvG	11-11-2007	Inhalatie-insuline wereldwijd van de markt gehaald
NTvG	18-2-2008	Maagband tegen diabetes Nederlands Tijdschrift voor Geneeskunde
NTvG	27-10-2008	Preventie en voorlichting bepalen kwaliteit diabeteszorg
NTvG	3-11-2008	Mate van hygiëe kan ontstaan diabetes beïnvloeden



NTvG	3-11-2008	Goede resultaten door zorgprogramma diabetes
NTvG	3-11-2008	Diabetesbehandeling kinderen op school ondermaats
NTvG	3-11-2008	Nieuwe behandeling type 2-diabetes niet optimaal
NTvG	10-11-2008	Waarom getransplanterde insulinecellen doodgaan Nederlands Tijdschrift voor Geneeskunde
NTvG	22-12-2008	Minder diabetes door leefstijlbegeleiding Nederlands Tijdschrift voor Geneeskunde
NTvG	28-1-2009	Maagverkleining bij tieners heeft direct effect
NTvG	23-2-2009	Het duurzame effect van scherpe glucoseregulatie bij recent ontdekte diabetes mellitus type 2
NTvG	15-4-2009	Orale glucosetoleratietest Nederlands Tijdschrift voor Geneeskunde
NTvG	15-4-2009	Geen speciale producten voor diabetici
NTvG	28-4-2009	Diabetes door Seroquel Nederlands Tijdschrift voor Geneeskunde
NTvG	15-6-2009	Diagnostische zelftest in Nederland Nederlands Tijdschrift voor Geneeskunde
NTvG	3-7-2009	PreventieConsult gaat pilotfase in Nederlands Tijdschrift voor Geneeskunde
NTvG	10-11-2009	Rosiglitazon: niet méér cardiovasculaire sterfte
NTvG	2-4-2010	HbA1c-waarde voorspelt diabetesrisico Nederlands Tijdschrift voor Geneeskunde
NTvG	28-5-2010	HbA1c: houd vast aa de streefwaarde van 7%
NTvG	1-7-2010	Geen diabetes type 2 door laaggedoseerde rosiglitazon en metformine
NTvG	8-7-2010	Diabetes mellitus type 2 en cognitief verval
NTvG	24-8-2010	Bloedsuiker bij nierfalen: elke patiënt een eigen plan
NTvG	1-12-2010	Patiëntgerichte zorg vergt aandacht voor de context
NTvG	8-3-2011	Glucose meten? Eerst handen wassen!
NTvG	18-4-2011	Nut van diabetesmanagement Nederlands Tijdschrift voor Geneeskunde
NTvG	5-5-2011	Prestatiefinanciering in de zorg Nederlands Tijdschrift voor Geneeskunde
NTvG	10-5-2011	Sulfonylureumderivaat verhogen cardiovasculair risico Nederlands Tijdschrift voor Geneeskunde
NTvG	1-7-2011	Het preventieconsult' Nederlands Tijdschrift voor Geneeskunde
NTvG	14-10-2011	In het echt werkt de BeweegKuur nog niet



NTvG	1-12-2011	Hypoglycemia unawareness: oordeel bewust over rijvaardigheid
NTvG	12-12-2011	Dikke kinderen blijven niet altijd 'at risk'
NTvG	6-1-2012	Systematische verkenning van het woud aan risicoscores voor DM2
NTvG	6-2-2012	Suikerziektepatiënt laat netvlies vooral controleren vanwege angst gezichtsproblemen
NTvG	30-3-2012	Eten moet je leren Nederlands Tijdschrift voor Geneeskunde
NTvG	30-5-2012	Bariatrische chirurgie Nederlands Tijdschrift voor Geneeskunde
NTvG	31-5-2012	Weinig effect van scholing bij diabetes
NTvG	6-7-2012	Poging prediabetes terug te draaien lijkt zinnig
NTvG	27-7-2012	Lagere opleiding: hogere kns op diabetes
NTvG	9-10-2012	Minder vertrouwen in onderzoek betaald door de industrie
NTvG	1-11-2012	Bevolkingsonderzoek diabetes lijkt niet zinnig
NTvG	23-11-2012	Diabetes: fundi's en realo's Nederlands Tijdschrift voor Geneeskunde
NTvG	7-12-2012	Fitheid voorspelt uitkomsten na chirurgie
NTvG	28-2-2013	Screenen op diabetes verlaagt risico vaatziekten niet
NTvG	5-4-2013	Glucagonachtig-peptide-1-middelen verhogen risico op pancreatitis
NTvG	1-7-2013	Verband tussen hypoglykemie en dementie bij ouderen met diabetes
NTvG	16-7-2013	Gebruikers e-Health vormen select gezelschap
NTvG	25-7-2013	Uitkomst persoonlijke genoomtest verschilt per bedrijf
NTvG	31-7-2013	Geen verandering in levensstijl na negatieve diabetescreening
NTvG	24-9-2013	Diabetes in China even groot probleem als in VS'
NTvG	18-10-2013	Leefstijladvies over afvallen bij diabetes type 2
NTvG	4-11-2013	Leefstijlinterventie voorkomt soms diabetes, maar niet de complicaties ervan
NTvG	28-11-2013	Lichte hypoglykemie: werktijdverlies en extra zorggebruik
NTvG	3-12-2013	Ouderen actiever met 'personal coach' via internet
NTvG	15-1-2014	Diabetes niet beter gereguleerd door behandeling parodontitis
NTvG	4-3-2014	'Personalised care' in richtlijnen: een contradictio in terminis
NTvG	27-5-2014	10 jaar genetisch onderzoek diabetes
NTvG	11-6-2014	Voorkom hypoglykemie door insuline bij ouderen
NTvG	24-6-2014	Sterkere statine, hoger diabetesrisico Nederlands Tijdschrift voor Geneeskunde



NTvG	9-7-2014	Bionisch pancreas' beter dan insulinepomp alleen
NTvG	22-7-2014	Wat als een patiënt zich aan controle onttrekt?
NTvG	3-10-2014	Sulfonylureumderivaat of insuline metformine?
NTvG	22-12-2014	Snellere cognitieve achteruitgang bij diabetes op middelbare leeftijd
NTvG	7-1-2015	Eerst metformine geven, dan pas nadenken over gewenste HbA1c-streefwaarde?
NTvG	28-1-2015	Verband diabetes en kanker: veel bewijs, maar niet allemaal even solide
NTvG	29-1-2015	Verband tussen glucosewaarden en alvleesklierkanker
NTvG	12-2-2015	De preventie van nierfalen moet nog beter
NTvG	24-2-2015	Niervervangende therapie als gevolg diabetische nefropathie stabiel
NTvG	9-3-2015	Farmaceuten overtreden eigen regels veelvuldig
NTvG	22-4-2015	Preventie minder noodzakelijk dankzij betere zorg?
NTvG	22-4-2015	Diabetesmedicatie in verband met overleving bij borstkanker
NTvG	12-5-2015	Veel chronische ziekten bij kinderen met diabetes
NTvG	16-5-2015	Individueel zorgplan komt moeilijk van de grond
NTvG	11-6-2015	Diabeteszorg niet veel beter door kwaliteitsmanagement zorggroepen
NTvG	8-7-2015	Opnieuw aanwijzing voor verband tussen cholesterol en diabetes mellitus type 2
NTvG	4-11-2015	Verhoogd risico depressie bij diabetes al vóór diagnose bekend is
NTvG	8-12-2015	Risico op blindheid en amputatie bij diabetes bepaald
NTvG	12-2-2016	Suikeraccijns lijkt in Mexico te werken
NTvG	29-4-2016	Toch blaaskanker na gebruik pioglitazon?
NTvG	30-6-2016	Vaker hypoglykemie bij orale overbehandeling diabetes
NTvG	3-8-2016	Chronische ziekte ook financiële ramp'
NTvG	16-8-2016	Meer jaren met diabetes bij obesitas
NTvG	6-9-2016	Diabetici niet beter ingesteld door extra vitamine D
NTvG	4-11-2017	De sleutel tot vetzucht ligt op het stadhuis

Nederlands Tijdschrift voor de Diabetologie

Edition	Date	Title		
NDF	1-5-2011	Programmatische Actieprogramma Diabetes werkt	aanpak	Nationaal



Van de redactie	2-9-2011	Zorgen
Commentaar	2-9-2011	Ernstige hypoglycemieën en cardiovasculaire complicaties: consequenties voor de behandeling?
Educatie	2-9-2011	Hypoglycemie bij diabetes: relevant voor het cardiovasculaire risico en de cognitie?
Column	2-9-2011	Implementatie
NDF	2-9-2011	Nieuw raamwerk brengt kwaliteit diabetes zelfmanagementeductie op hoger niveau
NDF	2-9-2011	Preventie structureel inbedden in het (diabetes)zorgstelsel
NDF	3-11-2011	Zorgplan brengt patiënt en zorgverlener samen
NDF	3-11-2011	Nieuwe multidisciplinaire richtlijn 'Verantwoorde Diabeteszorg voor kwetsbare ouderen' gepubliceerd
NDF	3-11-2011	Digitale informatie-uitwisseling in de keten binnen handbereik
Nederlands Diabetesonderzoek: Oorspronkelijk stukken	4-12-2011	De implementatie van de NDF Zorgstandaard Diabetes: onderzoek onder zorgprofessionals en patiënten in het kader van het Nationaal Actieprogramma Diabetes
Educatie	4-12-2011	Hypoglycemie bij diabetes tijdens ziekenhuisopname: relevant voor klinische uitkomsten?
NDF	4-12-2011	Halverwege de rit
Interview	1-4-2012	'Bij echt goede ketenzrg staat de patiënt centraal en niet de aandoening'
Educatie	1-4-2012	Antipsychotica geïnduceerd overgewicht en insulineresistentie
NDF	1-4-2012	Proeftuinconcept' krijgt vorm in BIDON
NDF	1-4-2012	Eerste producten begin 2012 beschikbaar Aan de slag met de resultaten van het Nationaal Actieprogramma Diabetes
NDF	1-4-2012	Diabetes Werkt! Versterkt positie van werknemers met diabetes
Interview	1-7-2012	Toekomst Nederlands diabetesonderzoek onzeker
NDF Column	1-7-2012	Preventie - terug van nooit weggeweest
NDF	1-7-2012	Eenduidig advies zelfcontrole dankzij nieuwe multidisciplinaire richtlijn



NDF	1-7-2012	Goede integrale zorg begint bij eenduidige registratie
NDF	3-11-2012	Addendum Geïndiceerde preventie belangrijke mijlpaal
NDF	3-11-2012	Vragenlijst legt persoonlijke aandachtspunten bloot
Educatie	4-12-2012	Bariatrische chirurgie ter behandeling van type 2 diabetes: wat is de huidige wetenschappelijk onderbouwde stand van zaken?
Internationaal onderzoek	4-12-2012	Bariatrische chirurgie versus intensieve medicamenteuze behandeling bij diabetes met obesitas
Diabetesonderzoek: Nederlands onderzoek in internationale tijdschriften	4-12-2012	Kansen en uitdagingen voor de implementatie van een leefstijlinterventie voor de preventie van type 2 diabetes in de huisartsenpraktijk
NDF	4-12-2012	Belang voetzorg bij diabetes nog onderbelicht' Multidisciplinaire afspraken creëren duidelijkheid over samenwerking
Diabetes en werk	Unknown	Dit gaat over empowerment van de werknemer én de werkgever'
Diabetes en werk	Unknown	Diabetes vrijwel nooit belemmering bij sollicitatie
Stelling	Unknown	De diabetespatiënt wordt ernstig in zijn arbeidscarrière belemmerd door zijn ziekte
Educatie	Unknown	Alcoholgebruik en diabetes mellitus, de huidige stand van zaken
Diabetes en sport	Unknown	Adviezen over bewegen bij diabetes kunnen concreter en persoonlijker
Diabetes en sport	Unknown	Topsport is mogelijk met diabetes
Stelling	Unknown	Evolutionair gezien is sporten een zinnige bezigheid
Interview	Unknown	Kom in beweging!
Educatie	Unknown	Continue Glucose Monitoring, een innovatieve behandeling richting herstel van de normale glucoseregulatie - Huidge ervaringen en aanbevelingen
Insuline: instrument in moord en manipulatie	Unknown	Insuline wordt soms gebruikt om klachten bewust te verergeren
Insuline: instrument in moord en manipulatie	Unknown	Een dodelijke overdosis insuline is moeilijk te bewijzen

Diabetes en voeding	Unknown	Diabetes grotendeels te voorkomen met gezonde leefstijl
Diabetes en voeding	Unknown	Begeleiding bij afvallen is maatwerk
Stelling	Unknown	Koolhydraten tellen is zinvol
Opinie	Unknown	Zijn sulfonylurea wel veilig?
Diabetes en kinderen	Unknown	Grootste medische noodzaak voor therapieën ligt bij kinderen
Diabetes en kinderen	Unknown	Organiseer de diabeteszorg centraal
Diabetes en kinderen	Unknown	Veel aandachtspunten binnen landelijke werkgroep kinderdiabetes
Educatie	Unknown	Update van de farmacotherapeutische opties bij diabetes op kinderleeftijd
Van de redactie	Unknown	Wanneer kunnen we weer een inhoudelijk debat voeren Meneer de Zorgverzekeraar?
Opinie	Unknown	Inhalatie-insuline, een reële nieuwe optie?
Diabetezorg	Unknown	Ronde Tafel Diabetezorg streeft naar snelle en gerichte toelating van innovatieve behandelwijzen
Praktijk	Unknown	FreeStyle Libre continue glucoseregistratie: een aanwinst?
Interview	Unknown	Dr. Thomas van Bommel: registratie is onmisbaar voor goede diabetezorg
Praktijk	Unknown	NDF dringt aan op implementatie landelijke kwaliteitscriteria insulinepomptherapie
Praktijk	Unknown	Psychosociale zorg diabetespatiënten vraagt om structurele aanpak
Educatie	Unknown	Pijnlijke diabetische polyneuropathie: een never-ending story?
Praktijk	Unknown	Structurele aandacht voor zelfmanagement en zelfmanagementondersteuning
Praktijk	Unknown	Diabetes en drugs
Praktijk	Unknown	Vergoeding groep geneesmiddelen voor diabetesbehandeling: eerste resultaat Rondetafel Diabetezorg
Diabetezorg	Unknown	Zes vragen over zorgvernieuwing in diabetezorg: het value-based healthcare-model in de praktijk
Praktijk	Unknown	Persoonsgerichte diabetezorg



Praktijk	Unknown	Digitale informatievoorziening
Diabetezorg	Rondetafel	Diabetezorg: innovatieve strategische samenwerking werpt vruchten af

Appendix Bb: Overview of mass-media articles analyzed

Telegraaf

Edition	Date	Title
Vrouw	13-11-2017	Wél suiker, geen tentamens
Regio	18-10-2017	Dik
Radiotv	10-10-2017	'Het is geen luchtfietserij'
Binnenland	9-10-2017	Diabetes-hausse
Sport	31-8-2017	Sport op school
Binnenland	23-8-2017	Stilzitten maakt je ziek
Binnenland	23-8-2017	Ik denk dat het fietsen wordt'
Binnenland	5-8-2017	'Glutenvrij niet altijd gezond'
Lifestyle	29-7-2017	Volkoren vol smaak
Watuzezt	25-7-2017	Trek thuishet breder
Lifestyle	3-6-2017	Blauwe bessen
Financieel	29-4-2017	Sanofi onder omzetsdruk
Lifestyle	22-4-2017	Natuurlijk met kokossuiker
Binnenland	20-4-2017	Diabetesvoet te redden
Financieel	29-3-2017	'Hunkering suiker treft de werkvloer'
Binnenland	29-3-2017	Volksziekten te lijf
Binnenland	16-3-2017	Nog amper tijd om te slapen
Binnenland	23-2-2017	'Voor de verzekeraar ben ik een te groot risico'
Binnenland	15-2-2017	Diabetes: sensor in plaats van een prik
Financieel	31-1-2017	Kartel van insulinefirma's
Financieel	25-1-2017	Slimme sokken voor diabetici
Binnenland	3-1-2017	Slapen, kliekjes en boksen
Lifestyle	3-12-2016	Extra hulp bij diabetes
Binnenland	20-11-2016	Veel mis met tandvlees
Binnenland	14-11-2016	Diabetes-doorbraak



Binnenland	14-11-2016	'Gevoel dat we er dicht bij zijn'
Lifestyle	12-11-2016	Suikerpolitie
Financieel	18-10-2016	PepsiCo gaat minderen
Binnenland	13-10-2016	Suikertaks in de strijd
Binnenland	21-9-2016	Pilletjes zijn te simpel
Lifestyle	20-8-2016	Alternatieven voor keukenzout
Financieel	2-8-2016	Internetreus in bio-elektronica
Lifestyle	30-7-2016	Liever volle dan magere yoghurt
Watuzezt	12-7-2016	School steun bij leefstijl
Lifestyle	9-7-2016	Suikerverslaving
Lifestyle	18-6-2016	Kokoswater als sportdrank
Reportage	18-6-2016	Strijd om suikerpatiënt
Reportage	18-6-2016	Sensor even betrouwbaar als bloedprikken
Regio	16-6-2016	Stormloop op beweegprogramma
Binnenland	14-6-2016	Diabetesprik overbodig
Binnenland	14-6-2016	Beter grip op diabetes met nieuwe huidsensor
Watuzezt	26-5-2016	Geld boven welzijn van de patiënt
Sport	26-5-2016	De brandstof van het leven
Binnenland	11-5-2016	Diabetespatiënt moet bewegen
Regio	11-5-2016	Diabeten overhalen om te gaan sporten
Weekeinde	7-5-2016	Onder controle
Binnenland	29-4-2016	Diabetes door te schoon leven
Binnenland	14-4-2016	Prof. fileert dieetgoeroes
Binnenland	7-4-2016	Kilo's nu écht kwijt!
Binnenland	4-2-2016	'Kinderdrank suikerbom'
Weekeinde	30-1-2016	Diabetes
Financieel	20-1-2016	Grote injectie in diabetespomp
Vrouw	6-1-2016	Lijnen;
Watuzezt	2-12-2015	'Fabrikant de boosdoener'
Binnenland	1-12-2015	OVERGEWICHT Voedingsindustrie scheutig met zoetigheid
Financieel	26-11-2015	Novo Nordisk de grootste in insulineproducten



Amsterdam	19-11-2015	Gemeente intensiveert lopende acties tegen ernstig overgewicht
Nieuws	14-11-2015	'Jeugddiabetes tientallen jaren verkeerd benaderd'
Binnenland	9-11-2015	Diabetes Fonds veroordeelt simuleren lage bloedsuikerspiegel
Advertentie	5-11-2015	Deskundige: Koerscorrectie Gezondheidsraad is nodig
Nieuws	27-10-2015	Klachten over rol werkgever
Watuzezt	23-9-2015	'Verstandig eten en bewegen'
Nieuws	18-7-2015	Prikweigering leidt tot paniek; 'Diabeteskind op school niet meer helpen'
Nieuws	29-6-2015	Apotheek wil goedkopere Arabische medicatie voorschrijven
GezondEnWel	20-6-2015	Met sporten beginnen?; SPREEKUUR:
Watuzezt	21-5-2015	Symptoom- bestrijding
Watuzezt	25-4-2015	'Stop met de betutteling'
Binnenland	24-4-2015	Maak je niet dik
Radiotv	26-3-2015	De impact van diabetes
Journal	23-3-2015	Lezen over diabetes
Nieuws	12-3-2015	Meer kans op diabetes door 'diep' vet; Nu duidelijkheid over killercel
Nieuws	12-3-2015	Injectie smooit diabetes; Blokkade chronische ontstekingsreacties
Nieuws	10-3-2015	Dure smartwatch is medisch hulpje
Nieuws	6-3-2015	Schaamte en verdriet bij obesitaspatiënten
Nieuws	7-2-2015	Zorgplan belooft patiënt voor keus; Minister Schippers draait beleid 180 graden
OverGeld	7-2-2015	Toch eigen huis diabetici
Nieuws	31-1-2015	Diabetici boos over goedkope glucosemeter;
Nieuws	16-1-2015	Financiële druk fors risico voor diabetici;
GezondEnWel	6-12-2014	Nooit meer prikken;
Financieel	25-11-2014	'Bayer verkoopt zijn diabetestak'
GezondEnWel	22-11-2014	Bewegen bij diabetes;
Nieuws	21-10-2014	Diabetes Fonds gooit het over andere boeg
Financieel	17-10-2014	Medicijnmaker breekt met trend afgeblazen beursgangen
Watuzezt	17-10-2014	Snacktax maakt bewuster



Pagina 5	16-10-2014	Geen pillen maar broccoli!;
Binnenland	4-10-2014	Vette hap op station taboe;
Binnenland	23-9-2014	'Werkgevers moeten traplopen stimuleren'
GezondEnWel	9-8-2014	Van slapen rust ik niet uit;
Binnenland	1-7-2014	Roep om personeel dat insuline kan toedienen
Etenengenieten	21-6-2014	Smaakvol 'superfood'; Blauwe bessen
GezondEnWel	7-6-2014	Gevaar versuikerde eiwitten;
Binnenland	14-5-2014	Vet rond bloedvaten veroorzaakt diabetes
Binnenland	7-2-2014	Glucosemeter wapen tegen complicaties; Diabetespatiënt krijgt advies insulinegebruik
Reportage	1-2-2014	'Artsen spreekbuis pillenindustrie';
TVActueel	18-1-2014	Voeding en veroudering
GezondEnWel	28-12-2013	Continue glucosecheck;
Voorpagina	16-12-2013	Gezond eten in december taboe
Groene Telegraaf	30-11-2013	Suikermaffia
Amsterdam	14-11-2013	'Naakte waarheid' over suikerziekte
Vrouw	13-11-2013	Ambassadeur Tooske vertelt: 'Diabetes treft ook kinderen'
Voorpagina	1-11-2013	Verlaging van bloedsuiker via urine bij type 2-patiënt
GezondEnWel	26-10-2013	Sensor bewaakt glucose;
Binnenland	26-10-2013	Doorbraak voor diabetici
Buitenland	2-10-2013	Colatax
Vrouw	23-9-2013	Dieetvrij afvallen;
Carriere	14-9-2013	Diabetes bepaalt loopbaan
Binnenland	30-8-2013	Diabetici verlost van pijn
GezondEnWel	17-8-2013	Al vier kilo kwijt;
GezondEnWel	27-7-2013	Als eetbuien je leven beheersen
Vrouw	17-7-2013	Brood
GezondEnWel	13-7-2013	Dikke kinderen en bezorgde ouders
Binnenland	12-7-2013	Zieke is bang om baan te verliezen
Not specified	11-6-2013	Gezond slank met vader en dochter



Not specified	25-5-2013	'Zorgverkwisting is zo zonde'
Not specified	23-5-2013	Dik
Not specified	11-5-2013	Mythes over afvallen
Not specified	4-5-2013	Frisdranken zijn niet zo fris
Not specified	13-4-2013	Voeding die echt gezond is
Not specified	6-4-2013	Beperk kans op suikerziekte
Not specified	2-3-2013	Kracht van lekker eten;
Not specified	23-2-2013	Continue meting suikerwaarde;
Not specified	12-1-2013	Radicaal roer om;
Not specified	8-1-2013	Net zo lang leven met diabetes 2
Not specified	5-1-2013	Diëten
Not specified	22-12-2012	Bloedsuiker
Not specified	8-12-2012	Ouderen gebaat bij extra eiwitten
Not specified	10-11-2012	Onzichtbaar gevaar;
Not specified	19-5-2012	Samen tegen diabetes
Not specified	18-5-2012	Suiker maakt dommer
Not specified	15-5-2012	Vast te veel gesnoept
Not specified	15-5-2012	Gevaar diabetes vaak onderschat;
Not specified	11-5-2012	Liever fietsen dan pillen;
Not specified	21-4-2012	Sport als beste medicijn;
Not specified	14-4-2012	Diabetesmiddel geregistreerd
Not specified	29-3-2012	Diabetes niet eigen schuld
Not specified	27-3-2012	Tablet tegen suikerziekte
Not specified	27-3-2012	DURE INSULINE VERSUS AFVALLEN
Not specified	27-3-2012	Voor suikerpatiënt met slechte nier kan dit goed alternatief zijn
Not specified	6-3-2012	DWEILEN MET DE KRAAN OPEN
Not specified	21-2-2012	DE SNELLE SUIKERS VAN FAST FOOD
Not specified	7-2-2012	Onregelmatig werk
Not specified	3-2-2012	Diëtist gedwongen tot een vermageringskuur
Not specified	24-1-2012	DE GEVAREN VAN EEN TE DIKKE BUIK
Not specified	18-1-2012	Stemmers hameren op verantwoordelijkheid van ouders



Not specified	18-1-2012	Te weinig aandacht voor personeel met suikerziekte
Not specified	6-1-2012	Pas op voor fabeltjes en tegelwijsheden over afvallen
Not specified	6-1-2012	Peulvruchten tegen ziektes
Not specified	15-12-2011	Stemmers vinden bevordering gezond eten geen overheidstaak
Not specified	10-12-2011	Derde boek Dr.Frank richt zich op calorie-gebruik
Not specified	29-11-2011	Tienerdiabetes
Etenengenieten	18-11-2011	Nieuwe veilige zoetstof
Not specified	17-11-2011	Spaarzaam met gezoete drankjes
Not specified	14-11-2011	Kosten diabetes rijzen de pan uit;
Not specified	11-11-2011	Slotervaartziekenhuis helpt mensen met overgewicht echt afvallen
Not specified	10-11-2011	Suikerziek door landbouwbeleid
Not specified	9-11-2011	Tachtig miljoen mensen meer lijden aan diabetes; Cijfer fors omhoog na nieuwe onderzoeken
Not specified	3-11-2011	Overgewicht
Not specified	20-9-2011	Glucose op de iPhone
Not specified	8-9-2011	Nieuw diabetesmedicijn vergoed
Not specified	25-8-2011	Nieuw middel geeft gemak bij diabetes; Zorgverzekeraars huiverig voor brede verstrekking
Not specified	9-8-2011	Overgewicht door te weinig slaap
Not specified	28-7-2011	Suikerziektetest
Not specified	19-7-2011	SAUNA EN DE BLOEDGLUCOSE
Not specified	21-6-2011	Een geheimzinnig en gevaarlijk orgaan
Not specified	11-6-2011	getest met één vingerprik; Gemakkelijk, anoniem en snel
Not specified	11-6-2011	Leefstijl als preventie; Bewegen en goed eten tegen diabetes
Not specified	7-6-2011	LICHAAM IS DUURZAME ALLESBRANDER
Not specified	26-4-2011	Vetzucht kan een levenslang persoonlijk drama zijn
Not specified	20-4-2011	Leven met diabetes
DrFrank	30-3-2011	Koolhydraten, zijn dat dan de dikmakers?
Binnenland	29-3-2011	Zelftest vindt veel risicogeveallen; Kans op diabetes, nierschade en hart- en vaatziekten



GezondEnWel	29-3-2011	Bewegen bij diabetes
Binnenland	24-3-2011	Onzin rond voeding bij diabetes
GezondEnWel	1-3-2011	Streng dieet bij diabetes?
GezondEnWel	27-7-2010	CHOLESTEROLPILLEN zinvol bij hart- en vaatziekten
Advertentie	26-6-2010	Nieuw medicijn tegen diabetes veelbelovend
GezondEnWel	4-5-2010	DIABETES in BEELD; Student legt videodagboek aan over suikerziekte en erfelijkheid "Pas toen mijn twee broers het ook bleken te hebben, werd ik onrustig"
GezondEnWel	20-4-2010	Erfelijkheid beïnvloedt DIABETES TYPE 2
Binnenland	20-2-2010	Kans op diabetes stijgt met statines
Financieel	19-1-2010	Ziekenhuiskwaliteit bepaalt prijs
GezondEnWel	19-1-2010	Persoonlijke COACH voor IEDEREEN;
Voorpagina	13-1-2010	Dikke kont is gezond
GezondEnWel	15-12-2009	Waarom afvallen goed is bij DIABETES
Voorpagina	9-12-2009	Volkorenbrood tegen suikerziekte
GezondEnWel	8-12-2009	Pijnscheuten in de DIABETESVOET
GezondEnWel	6-12-2009	Kleding deelnemers dr. Frank-dieet wordt veel te wijd
Watuzezt	25-11-2009	Meer gym op het lesrooster;
GezondEnWel	8-11-2009	DÁG INSULINE!; Diabetici dr. Frank-dieet inmiddels zonder medicijn 'Gezamenlijk besparen ze zichzelf 8500 euro per jaar'
GezondEnWel	1-11-2009	Kilo's deelnemers dr. Frank-dieet vliegen eraf
Reportage	11-10-2009	Dr. Frank van Berkum ontwikkelt eigen dieet "Ik ben geen goeroe"
GezondEnWel	15-9-2009	Geneesmiddelenreclame: levensgevaarlijk!
Watuzezt	11-8-2009	Informatie over vette hap belangrijk, maar of het helpt
GezondEnWel	28-7-2009	Pillenpin
GezondEnWel	14-7-2009	Zijn patiënten makke, blinde schapen?
RTV	9-7-2009	Schadeclaim tegen Lilly
Binnenland	30-6-2009	We hebben kracht niet voor gezonde leefstijl
Siemens	13-6-2009	Laboratorium- diagnostiek
GezondEnWel	26-5-2009	DIABETES-restaurants in opmars;
Voorpagina	12-5-2009	EXPLOSIE DIABETICI;



Binnenland	27-4-2009	Speeksel hagedis als medicijn diabetes
Binnenland	27-4-2009	Via internet direct in contact met apotheker
Binnenland	11-4-2009	Zorgcollege: Afvallen in basispakket;
Binnenland	1-4-2009	Aanleg suikerziekte ook erfelijk bepaald;
Metropool	27-3-2009	Vechten tegen de kilo's;
Reportage	18-3-2009	12.000 jonge patiënten leveren dagelijks gevecht tegen diabetes
GezondEnWel	3-3-2009	ZOEKTOCHT naar oorsprong DIABETES
GezondEnWel	13-1-2009	"Goedkoop als het kan, duurder als het moet"
GezondEnWel	16-12-2008	Zorgalarm voor 'welvaartsdiabetes';
Binnenland	20-11-2008	Cholesterolpil Crestor veroorzaakt diabetes-II
Binnenland	4-11-2008	Gezondheidsniveau leefstijl overschat
Binnenland	21-10-2008	Diabetici zijn beter af met 24-uursmeter
Financieel	4-10-2008	EEN KILO VET WORDT DUUR BETAALD
GezondEnWel	9-9-2008	'Voedsel is medicijn'
Binnenland	8-9-2008	Medicijn ook afslankmiddel suikerpatiënt;
Binnenland	13-7-2008	Tieners krijgen maagverkleining
Binnenland	10-7-2008	Wijn goed tegen ouderdomssuiker
Binnenland	4-7-2008	Dure cholesterolpil niet langer vergoed;
Zondag	29-6-2008	Wat is er waar van alle goedbedoelde fitnessadviezen?
Maandag	8-6-2008	Hoe krijg ik minder trek?
Watuzegt	3-5-2008	Voorlichting over (on)gezonde voeding via scholen
Not specified	10-5-2007	'Premie voor consumenten dankzij zorgketens omlaag'
Stadseditite	24-4-2007	Type 2 diabetes
Stadseditite	24-4-2007	Doordenken over DIABETES;
Stadseditite	20-4-2007	Explosieve toename van welvaartsziekten;
Not specified	3-4-2007	Joggers

Algemeen Dagblad

Economie	28-10-2017	Zitten is dodelijker dan roken'
AD Nationaal	17-10-2017	Een meetlint zegt hoe gezond je bent
AD Nationaal	31-5-2017	Koffiekick of koffiekater



Nieuwsdienst	27-4-2017	Diabetesvereniging wil af van eigen risico
Nieuwsdienst	30-3-2017	[84 procent van de Nederlanders weet niet wat ze mo...]*
AD Nationaal	28-2-2017	Artsen zouden stappentellers moeten voorschrijven'
Nieuwsdienst	12-1-2017	Maagband voor kinderen, moeten we dat willen?'
Nieuwsdienst	20-12-2016	Slimme pleister voor diabetici
AD Nationaal	20-12-2016	Wissel van stoel tijdens kerstdiner
Nieuwsdienst	20-12-2016	Slimme pleister voor diabetici
Nieuwsdienst	12-12-2016	Apotheek bepaalt toch keuze glucosemeter
Nieuwsdienst	12-12-2016	Apotheek bepaalt toch keuze glucosemeter
Nieuws	8-8-2016	Dokter Google, ik voel me niet lekker!
Service	4-8-2016	Obesitas
Nieuws	4-8-2016	Oudere dikkerds niet eerder dood
Nieuws	27-7-2016	Strenge ouder heeft gezond kind
Nieuws	15-7-2016	Staande receptie vandaag, dokter?'
Nieuws	25-6-2016	Maak jezelf los uit die ongezonde sleur!
Service	16-6-2016	Andere leefstijl helpt echt
Nieuws	12-4-2016	Stoel uit, trap op
Weekend	26-3-2016	Met zwemmen draag ik altijd een badmuts'
Nieuws	22-3-2016	Schijf van vijf: hulpmiddel of ziekmaker?
Nieuws	12-3-2016	Diabetes? Eet dan lekker vet
Nieuws	16-2-2016	Nooit meer die pijnlijke vingerprik'
Nieuws	5-11-2015	Ook dat ene wijntje mag niet meer
Specials	24-10-2015	Cafeïne goed voor de gezondheid
Weekend	26-9-2015	Met je binnenste naar buiten
Nieuws	29-7-2015	Diabetespatiënten bijna door hun spullen heen
Nieuws	7-7-2015	Kou gunstig voor diabetes
Stad en Land	3-7-2015	Weinig onafhankelijk onderzoek diabetes
Nieuws	11-6-2015	Pinda doet wonderen
Nieuws	6-11-2014	Elektrode pakt pijn diabetici aan
Algemeen	4-7-2014	Zelftest leidt steeds vaker tot onnodige zorgkosten
Algemeen	3-7-2014	Dokter zit straks in de computer



Special 5	10-5-2014	[Fietsen houdt beginnende diabetes op afstand. Volg...]*
Weekend	11-1-2014	Oervoedsel eten voorkomt ziekten'
Nieuwsdienst	26-10-2013	Kunstmatige alvleesklier
Nieuwsdienst	19-10-2013	De slag om de zweetdruppels
Specials - Special 2	28-9-2013	Geen titel
Weekend	21-9-2013	DiabetesEen miljoen patiënten
Weekend	31-8-2013	Elitair'
Nieuwsdienst	4-5-2013	Meedoen aan Obese is absoluut onhaalbaar voor gewone mensen'
Bijlagen	23-2-2013	Vergeet dat lijnen, eet bewust
Service	17-8-2012	Farmacie misleidt
Nieuwsdienst	14-11-2011	Minister Schippers en de sportcoach
Nieuwsdienst	14-11-2011	Hartstikke leuk, opa boksend achter de Wii
Nieuwsdienst	14-11-2011	Elke buurt krijgt een sportcoach
Nieuwsdienst	20-8-2011	Na dikke muizen mogen nu mensen aan de obesitaspil
Nieuwsdienst	20-8-2011	Na dikke muizen mogen nu mensen aan de obesitaspil
Nieuwsdienst	2-7-2011	Thuistests: Doe ze niet!
Weekeinde	21-5-2011	Rauw dieet op rand van (on)gezond
Media	20-4-2011	Ik heb nooit beseft dat diabetes zo ingrijpend is
Nieuwsdienst	4-1-2011	Dankzij zelftest melden patiënten zich bij huisarts
Nieuwsdienst	27-12-2010	Naaldloos prikken doorbraak
Nieuwsdienst	27-12-2010	Naaldloos prikken doorbraak
Diagnose	27-11-2010	Afgeslankte Emma heeft weer pit
Nieuwsdienst	26-6-2010	Geen titel
Nieuwsdienst	26-5-2010	Geen titel
BIBUo8	13-12-2009	Behandelplan ontbreekt vaak - Zorg voor diabetici is 'alarterend'
DIAGo2	5-12-2009	Feiten en fabels over suiker
BIBU12	22-10-2009	Antidepressiva beïnvloeden suikerziekte
BIBUo8	1-10-2009	Af en toe een taartje is helemaal geen probleem'
BIBUo8	1-10-2009	Preventie levert samenleving grote winst op



BIBU08	4-11-2008	Barometer: Ongezonde leefstijl moeilijk af te leren
VOOROP	3-10-2008	Doorbraak voor diabetes - Intensief volgen van patiënt brengt sterfte fors terug
BIBU02	3-10-2008	DIABETES Samenwerking hulpverleners sleutel tot succesvolle behandeling - 'Ik hoef nu zelf geen insuline meer'
DGST02	10-9-2008	Zorgen om 'sugarkids': diabetes rukt op
Pg. 18	7-1-2008	Goede voornemens voor 2008 - Door gezond te eten leef je 1,2 jaar langer
Edition	Date	Title

Volkskrant

30 december 2017 zaterdag, 1. Genezen wordt steeds gekker.

30 december 2017 zaterdag, 7. Artsen worden activistischer.

20 december 2017 woensdag, Cholesterolmiddel te snel gegeven.

19 december 2017 dinsdag, Laat zoet een traktatie zijn.

11 december 2017 maandag, Insulinepennen? Een scootmobiel is simpeler te snappen.

9 december 2017 zaterdag, De maatschappij, dié heeft een stoornis.

23 november 2017 donderdag, De digitale dokter heeft nog een wereld te winnen.

17 november 2017 vrijdag, Waarom al dat gezeur over de zorg?.

14 november 2017 dinsdag, Klopt dit wel?.

6 november 2017 maandag, Geld voor extra zorg blijft steken bij verzekeraars.

25 oktober 2017 woensdag, Nachtwerk sloopt slaap en hart.

7 oktober 2017 zaterdag, Volgens voorschrift.

30 september 2017 zaterdag, Koud geperste huppelkutjes.

23 september 2017 zaterdag, Slik die pillen!.

22 september 2017 vrijdag, Hoe verstandig om te gaan met het eigen risico.

7 september 2017 donderdag, 8.400 De Nederlander krijgt gemiddeld suikerklontjes per jaar binnen.

26 augustus 2017 zaterdag, Pak toch de trap.

22 augustus 2017 dinsdag, Sportschool is niet de norm voor fit lijf.

21 augustus 2017 maandag, Plantaardige kwark zonder kartonsmaak.

15 augustus 2017 dinsdag, Vloeibaar voedsel is niks voor de lekkerbek.

5 augustus 2017 zaterdag, Stuur ze vooral het bos in.

5 augustus 2017 zaterdag, Zorgpremie 30 euro hoger in 2018.



- 11 juli 2017 dinsdag, Koffie drinken vergroot de kans op een lang leven.
- 17 juni 2017 zaterdag, Beter/eten.
- 22 april 2017 zaterdag, Beter/eten.
- 13 april 2017 donderdag, Over overdaad aan suiker, zout en vet hoor je Hertzberger niet.
- 1 april 2017 zaterdag, Beter/eten.
- 30 maart 2017 donderdag, Kunstalvleesklier bij diabetes.
- 27 maart 2017 maandag, Op de eerste hulp staat de specialist al klaar.
- 23 maart 2017 donderdag, Besef beter de invloed van ouders op kind.
- 23 maart 2017 donderdag, Geachte redactie.
- 22 maart 2017 woensdag, Geen koolhydraat meer in het dorp.
- 18 maart 2017 zaterdag, Beter/eten.
- 11 maart 2017 zaterdag, Beter/eten.
- 25 februari 2017 zaterdag, Beter/eten.
- 24 februari 2017 vrijdag, Preventie is niet per se een goed idee.
- 6 februari 2017 maandag, Op de glijbaan van ongezondheid.
- 21 januari 2017 zaterdag, De helemaal niet zo schokkende waarheid over suiker.
- 7 januari 2017 zaterdag, Pak de trap. Ga dansen. Stoei met de kinderen. Maak het huis schoon. Maai het gras. Ga bij een drumband. Hoe dan ook: bewéég!.
- 7 januari 2017 zaterdag, Beter/eten.
- 3 januari 2017 dinsdag, #nofat #nocarbs #nolife?.
- 31 december 2016 zaterdag, Hoe vet verdween van tafel en er inmiddels weer volop op is teruggezet .
- 10 december 2016 zaterdag, Beter/eten.
- 26 november 2016 zaterdag, Beter/eten.
- 3 september 2016 zaterdag, beter/eten.
- 27 augustus 2016 zaterdag, Beter/eten.
- 26 augustus 2016 vrijdag, 'Ongezond' vruchtensap heeft het verbruid bij klant.
- 13 augustus 2016 zaterdag, Doe ons zo'n nier.
- 5 augustus 2016 vrijdag, Obesitaspatiënt gaat niet eerder dood.
- 4 augustus 2016 donderdag, De strijd om de diabetespatiënt.
- 4 augustus 2016 donderdag, Huisarts boycot dure diabetespil.
- 30 juli 2016 zaterdag, Suikerlobby aan winnende hand.



15 juli 2016 vrijdag, Slurpfruit?.

6 juli 2016 woensdag, Onuitgesproken band.

11 juni 2016 zaterdag, De kliniek die kilo's wegwerkt.

25 mei 2016 woensdag, Food.

18 mei 2016 woensdag, Gezond.

14 mei 2016 zaterdag, De verborgen betalingen van farmaceuten.

7 april 2016 donderdag, Forse toename aantal diabetici.

2 april 2016 zaterdag, Meer obesitas dan ondergewicht.

15 februari 2016 maandag, Geef de patiënt niet de schuld van zijn ziekte.

13 februari 2016 zaterdag, Beter/eten.

18 januari 2016 maandag, Niet met elk knipsel naar de dokter.

16 januari 2016 zaterdag, Bloednerveus getest.

9 januari 2016 zaterdag, En na de winter gezond weer op.

6 januari 2016 woensdag, Hoe meer vrienden, hoe gezonder.

12 december 2015 zaterdag, Help ons van die pillen af.

28 november 2015 zaterdag, Bizons passen hun dieet aan het seizoen aan.

14 november 2015 zaterdag, Beter/eten.

12 november 2015 donderdag, Diabetes-risico hoog, ook bij gezond gewicht.

5 november 2015 donderdag, Pak een hand nootjes meer - en een wijntje minder.

7 oktober 2015 woensdag, Zo beperk je de schade van nachtwerk.

3 oktober 2015 zaterdag, Beter/Eten.

26 september 2015 zaterdag, Altijd moe zijn is geen aanstellerij.

26 september 2015 zaterdag, De nieuwe voorvechter van het vet.

19 september 2015 zaterdag, Waarom zou dit nu net onoplosbaar zijn?.

10 september 2015 donderdag, 'Inwoners Overvecht het ongezondst'.

3 september 2015 donderdag, Frisdrank in de ban.

29 augustus 2015 zaterdag, Honderd procent natuur.

15 augustus 2015 zaterdag, Dik zijn is ongezond en diëten werken wel degelijk.

31 juli 2015 vrijdag, Opleidingsniveau is geen leefstijl.

27 juli 2015 maandag, Achteloos vragen hoe het met de biertjes is.

7 juli 2015 dinsdag, Diabetespatiënt gebaat bij wat kou.



20 juni 2015 zaterdag, beter/eten.
10 juni 2015 woensdag, Dieetpil stapje dichterbij.
10 juni 2015 woensdag, De droom van makkelijke rijkdom.
2 juni 2015 dinsdag, De kantoorwandelaar werkt aan zijn gezondheid.
16 mei 2015 zaterdag, Vet gezond.
27 april 2015 maandag, Val je meer af als je sport voor het ontbijt?.
25 april 2015 zaterdag, Beter gegeten.
7 april 2015 dinsdag, Coole kool.
4 april 2015 zaterdag, Blijvend slank met deze pill!
21 maart 2015 zaterdag, Oervoer.
3 maart 2015 dinsdag, Medische informatie duidelijker.
26 februari 2015 donderdag, Kritiek op Nature-voedingsstudie.
24 februari 2015 dinsdag, Hoe gezond ben ik? Doe de test.
17 februari 2015 dinsdag, Gevaar voor hartaanval vaak te hoog ingeschat.
22 januari 2015 donderdag, Zware diabetespatiënt gebaat bij inwendige insulinepomp.
6 januari 2015 dinsdag, Zwaarder én slanker.
5 januari 2015 maandag, Wat gebeurt er met de kerst kilo's als we op dieet gaan?.
3 januari 2015 zaterdag, Meer bewegen en toch meer wegen.
24 december 2014 woensdag, Dertig kilo lichter en enorm opgefleurd.
20 december 2014 zaterdag, 1. Wij zijn onze darm.
12 december 2014 vrijdag, Ook in Nederland is orgaanhandel.
29 november 2014 zaterdag, Nooit meer slapen.
15 november 2014 zaterdag, Wetenschapsnieuws.
22 oktober 2014 woensdag, Randstedeling wordt eenzaam en dik.
4 oktober 2014 zaterdag, Gevaarlijk schoon.
1 oktober 2014 woensdag, Klassieke maatschap niet van deze tijd.
18 september 2014 donderdag, Met zoetjes en cola light juist meer kans op diabetes.
26 augustus 2014 dinsdag, Hier waakt een vrijwilliger.
2 augustus 2014 zaterdag, Oud worden is een ziekte.
21 juni 2014 zaterdag, De verhalen die ons beter moeten maken.
18 juni 2014 woensdag, Bionische pancreas blijkt sensatie bij tests.



30 mei 2014 vrijdag, Vooral meer dikke kinderen in Derde Wereld.

14 mei 2014 woensdag, Rode wijn is toch geen toverdrank.

28 april 2014 maandag, Nu is pindakaas of chocola al net zo slecht als tabak.

16 april 2014 woensdag, Zware vrouw loopt meer risico op dode baby.

15 april 2014 dinsdag, Echtelijke twist? Neem wat zoet, dan is het zo weer goed.

2 april 2014 woensdag, Matig eten verlengt leven.

22 maart 2014 zaterdag, Jaren voor niks bittere groene thee gedronken.

20 maart 2014 donderdag, Voedingscentrum, laat uw behoudzucht varen.

13 maart 2014 donderdag, We eten allemaal hetzelfde.

4 maart 2014 dinsdag, Afbraak suiker kan cel slopen.

26 februari 2014 woensdag, Recept zonder krabbel van de arts.

4 januari 2014 zaterdag, Purpura bacca-bes belooft afslankwonder.

28 december 2013 zaterdag, De ultieme pijnstillers .

13 december 2013 vrijdag, Dik.

7 december 2013 zaterdag, Zitten is dodelijk.

4 december 2013 woensdag, Een gezond zwaar lijf is een mythe.

20 november 2013 woensdag, Creatief met spelt.

11 november 2013 maandag, Opzouten.

29 oktober 2013 dinsdag, Eerste kunstalveesklier geeft diabetespatiënt goede hoop.

19 oktober 2013 zaterdag, Mijn pijn, jouw pijn.

14 oktober 2013 maandag, Op de haverkist.

21 september 2013 zaterdag, De zoete inval.

19 september 2013 donderdag, Culinair leermeester.

2 september 2013 maandag, Bacterie maakt dik in orde.

24 augustus 2013 zaterdag, Stress, de grote redder/sloper.

20 augustus 2013 dinsdag, Insulinepompje helpt suikerspiegel puber.

17 augustus 2013 zaterdag, Geplunderde koelkasten.

3 augustus 2013 zaterdag, Dikke mensen zijn verslaafden.

18 juli 2013 donderdag, 'Niet meteen de patiënt doorsturen'.

6 juli 2013 zaterdag, FOOD MET POWERRR.

22 juni 2013 zaterdag, Eet als een oermensch.



- 15 juni 2013 zaterdag, Puur gif.
- 15 juni 2013 zaterdag, Een been gered?.
- 4 juni 2013 dinsdag, Meer nadelen cholesterolverlagers.
- 30 mei 2013 donderdag, Sleutelrol voor darmflora bij diabetes.
- 26 april 2013 vrijdag, Achmea: geen contract voor duur ziekenhuis.
- 13 april 2013 zaterdag, Laat de proefmuis los.
- 9 april 2013 dinsdag, Metamorfose in alvleesklier biedt hoop op aanpak diabetes.
- 8 april 2013 maandag, Rood vlees remt aanmaak 'goed cholesterol'.
- 16 maart 2013 zaterdag, Van het padje.
- 4 maart 2013 maandag, Hebben dikke mensen ook dikkere organen?.
- 23 februari 2013 zaterdag, Het vruchtgebruik van scholieren.
- 18 februari 2013 maandag, Gezondheid is oneerlijk verdeeld.
- 16 februari 2013 zaterdag, De heelmeester is te zacht voor zichzelf.
- 2 februari 2013 zaterdag, De tweeling is niet zo identiek Genetica; Reportage De genen zijn constant in beweging.
- 26 januari 2013 zaterdag, 'Meer bezuinigen op gezondheidszorg kan!'.
- 17 januari 2013 donderdag, Diëten! Leven; Overzicht Dieetboeken.
- 9 januari 2013 woensdag, Less best Superfoods 2 ; Interview schrijver en arts Ivan Wolffers.
- 9 januari 2013 woensdag, Oud is het nieuwe dun Superfoods 1 ; Beschouwing Dagboek van een gezondheidstrendvolger.
- 11 december 2012 dinsdag, Nee, alzheimer is geen straf van Allah.
- 24 november 2012 zaterdag, 'Je komt hier onder de mensen'; Reportage Voedselbank in Amsterdamse Pijp.
- 16 oktober 2012 dinsdag, Waarom krijgen dikke mensen vaker kanker?; Gezond.
- 8 oktober 2012 maandag, 'Het lijkt wel of ze ons oudjes dood willen'.
- 1 september 2012 zaterdag, Invriezen die handel voor het te laat is?.
- 30 augustus 2012 donderdag, Twijfel over nut van hongerdieet.
- 14 juli 2012 zaterdag, Uitkomst van studie keer op keer dezelfde.
- 9 juli 2012 maandag, 'Overal zie je dikke buiken'; Interview Hoogleraar Heleen EvenhuisHappy Weight Merel viel 40 kilo af met 'kleuren-en-stippendieet'.
- 7 juli 2012 zaterdag, Vetzucht.
- 7 juli 2012 zaterdag, Als homeopathie helpt, kan er niets tegen zijn.



- 3 juli 2012 dinsdag, Kun je 'gewoon zittend op de bank' afvallen?; gezond@vK.NL.
- 27 juni 2012 woensdag, Glucose-arm dieet houdt afgeslankte beter op peil.
- 9 juni 2012 zaterdag, Kinderen onder toezicht gesteld om overgewicht.
- 8 juni 2012 vrijdag, Gij zult meer slenteren.
- 11 april 2012 woensdag, Gezondheidszorg is een overheidstaak.
- 10 april 2012 dinsdag, Jong te dik: groter risico op dementie Explosieve groei verwacht.
- 21 maart 2012 woensdag, McYoga and me Leven; INTERVIEW Bikram Choudhury, yogagoeroe.
- 19 maart 2012 maandag, Een beter leven geven, als het lukt; De onderneming.
- 21 februari 2012 dinsdag, Hoop voor diabetespatiënt In alvleesklier vaak nog cellen die insuline kunnen aanmaken.
- 15 februari 2012 woensdag, Dieet.
- 14 februari 2012 dinsdag, Ernstig zieke schrap bezoek aan diëtist Wijziging basispakket leidt tot halvering aantal dieetconsulten.
- 10 februari 2012 vrijdag, Eigen bijdrage treft volksgezondheid.
- 13 januari 2012 vrijdag, 'Zalig niets doen' bestaat helaas niet.
- 2 januari 2012 maandag, Lichaam verzet zich tegen gewichtsverlies na dieet.
- 17 december 2011 zaterdag, Kind heeft recht niet te worden volgepropt.
- 17 december 2011 zaterdag, Dik zijn, eigen schuld?.
- 15 december 2011 donderdag, Vettaks op 'slecht' voedsel werkt niet.
- 7 december 2011 woensdag, Nachtdienst kan kans op diabetes vergroten.
- 23 november 2011 woensdag, Risico op diabetes kan helft kleiner.
- 19 november 2011 zaterdag, Voor eeuwig jong.
- 15 november 2011 dinsdag, Sportcoach moet buurt in beweging krijgen.
- 11 november 2011 vrijdag, 'Sport en beweging ook goed voor 90-jarigen'; nieuwe hoogleraar maastricht.
- 10 november 2011 donderdag, Extra werk met minder geld, dat kan niet; reportage meer zorg naar huisartsen.
- 9 november 2011 woensdag, Is de dokter echt zo veel meer gaan verdienen?; zeven vragen over Het salaris van huisartsen.
- 1 november 2011 dinsdag, Supervoedsel Leven; reportage supervoedsel en functioneel voedsel.
- 4 oktober 2011 dinsdag, Iedere nacht harder vechten tegen de klok; Reportage steeds meer werk wordt naar de nacht verplaatst.
- 19 september 2011 maandag, Patiënt is straks duurder uit.



7 juli 2011 donderdag, Voedsetiketten worden duidelijker; consumenten.

1 juli 2011 vrijdag, Anatomische liveshow propageert maagoperatie; Reportage operatie in de bioscoop.

27 juni 2011 maandag, 'Zorgverzekeraars remmen innovatie'; interview Daniël saris aanvaardt leerstoel reconstructieve geneeskunde.

25 juni 2011 zaterdag, 'Ik zou ervoor zijn ook bij kinderen de maag te verkleinen'; twistgesprek Marie louise schipper met maurits de brauw, bariatrisch chirurg.

7 mei 2011 zaterdag, Onder en boven de honderd kilo.

7 mei 2011 zaterdag, Smaakt beter, maakt beter.

22 april 2011 vrijdag, Naast bloedgroep ook 'darmgroep' Aanknopingspunten voor medisch en voedingsadvies.

16 april 2011 zaterdag, Een krachtig geluid tegen dokter Frank.

13 april 2011 woensdag, Banden filantropie en industrie.

19 maart 2011 zaterdag, Eiwitrijk dieet van Dr. Frank verhoogt kans op diabetes.

14 maart 2011 maandag, 'Appel' en 'peer' lopen evenveel risico op hart- en vaatziekten.

17 januari 2011 maandag, Genoeg te eten voor iedereen Column Sheila Sitalsing.

31 december 2010 vrijdag, Hartpatiënt levert eigen geneesmiddel.

24 december 2010 vrijdag, Waar zouden we zijn zonder de lijn?; achtergrond aankomen en afvallen.

17 november 2010 woensdag, 'Dodelijk medicijn'; Diabetes.

13 november 2010 zaterdag, Digitaal hulp halen.

11 november 2010 donderdag, Ontwikkelingshulp die wel levens redt.

27 oktober 2010 woensdag, Niemand kent elkaar in Kerkrade.

16 oktober 2010 zaterdag, Handboek schiet door.

14 oktober 2010 donderdag, 'Westerse ziekten' rukken op in het Zuiden.

13 oktober 2010 woensdag, Genetisch paspoort als cadeau.

11 oktober 2010 maandag, Overgewicht ten dele te wijten aan genen.

9 oktober 2010 zaterdag, Het is bewezen: vaccineren tegen griep helpt echt.

2 oktober 2010 zaterdag, Het brein is wat wij zijn.

19 juli 2010 maandag, Hoop op genezing uit navelstreng.

6 juli 2010 dinsdag, Chronisch ziek, maar weerbaar.

26 juni 2010 zaterdag, Verpleegster uit liefde; tekst Corine Koole fotografie Henk Wildschutmedisch centrum.

26 juni 2010 zaterdag, Alle kanten op met de genenkaart Moet je de patiënt alles vertellen?.



- 24 juni 2010 donderdag, Meting kwaliteit ziekenhuis deugt niet.
- 1 juni 2010 dinsdag, Fabrikant diabetesmedicijn stopt levering aan Grieken om crisis.
- 29 mei 2010 zaterdag, Eigen stamcellen eerst; INTERVIEW ARTS/BIOLOOG HANS CLEVERS.
- 22 mei 2010 zaterdag, Doe-het-zelf-diabetici.
- 1 mei 2010 zaterdag, Buikvetverplaatser.
- 8 april 2010 donderdag, Voedselbank met kerken in medicijnbank.
- 3 april 2010 zaterdag, Wetenschapsnieuws.
- 19 maart 2010 vrijdag, Gezellig; Tv-recensie Jean-pierre Geelen.
- 12 maart 2010 vrijdag, Dikke kinderen op zwemles moet wat opleveren; Niemand weet precies hoeveel geld er wordt bespaard door preventieve zorg te organiseren in de gemeenten.
- 24 februari 2010 woensdag, Chronisch zieke gevat in grafiekjes.
- 6 februari 2010 zaterdag, De nieuwe slank makers; tekst Margreet Vermeulen fotografie Heidi de Gierafslankgoeroes.
- 2 februari 2010 dinsdag, Suikerziekte is niet alleen voor oude dikke mensen; Hoeksteen kind met diabetes.
- 30 januari 2010 zaterdag, Stop het verval, blijf bewegen; Healthy ageing Wetenschappers speuren wereldwijd naar oorzaken en oplossingen voor problemen van veroudering.
- 21 januari 2010 donderdag, Niet alle calorieën tellen even zwaar; Achtergrond Voedingswaarde.
- 16 januari 2010 zaterdag, Afvallen begint pas als de kilo's zijn verdwenen; Overgewicht Onderzoek naar optimale voeding tendert naar meer eiwitten en minder koolhydraten en vetten.
- 2 januari 2010 zaterdag, 'Er zijn grenzen aan de solidariteit, ook in de zorg'; Twistgesprek Tjerk Gualthérie van Weezel met Dik hermans.
- 2 januari 2010 zaterdag, Volstrekt respectvol leven; Reportage oprukkend veganisme in Nederland.
- 21 november 2009 zaterdag, Krokante kidneybeanballetjes; De Volkskeuken Marie Louise Schipper.
- 21 november 2009 zaterdag, Hulp van buiten; in beeld medisch-technische hulpmiddelen.
- 4 november 2009 woensdag, Minder naar de dokter door Philips en Achmea; Accent Groeimarkt thuiszorg.
- 6 oktober 2009 dinsdag, Drankje om erbij te horen; Sportdrank regelmatige consumptie draagt bij aan toename overgewicht en diabetes jonge kinderen.
- 30 september 2009 woensdag, Chronisch zieke moet kunnen meedoen.
- 19 september 2009 zaterdag, Slaaptekort zit tussen de oren; KennisCafé MRI-metingen laten bij chronisch slechte slapers een lagere intensiteit in hersencellen zien.
- 19 september 2009 zaterdag, Industrie moet goed voedsel leveren.
- 19 augustus 2009 woensdag, Evelien Tonkens Gevangen in ketenzorg.



13 augustus 2009 donderdag, Klink ondermijnt huisartsenzorg.

22 juli 2009 woensdag, We eten gezonder als de prijs daalt.

July 17, 2009, 'Wordt de patiënt hier beter van?'; Het mes in de regels Farmaceut Lilly stuit bij introductie diabetesmedicijn op kostenbeheersing Het mes in de regels.

July 14, 2009, Diabetes wijzigt hersenactiviteit.

June 13, 2009, Versuikering is maatstaf.

May 16, 2009, De claim Vetarm; De claim Vetarm.

May 1, 2009, Vet eten vergeet je niet; Onderzoek.

April 11, 2009, Rauwkorstgangers; modern eten.

April 9, 2009, Dikke mensen kunnen maar beter in de kou zitten; OVERGEWICHT.

March 7, 2009, Toch niet te dik van binnen?; Obesitas Vet rondom organen is volgens voedingsexperts gevaarlijker dan buikje, taille of achterwerk.

January 17, 2009, Het afvalemmerdieet.

January 17, 2009, Zet een bio-kok in het Witte Huis.

December 20, 2008, Lang leve de wijndrinker.

14 november 2008 vrijdag, Korianderkip voor een diabeteskater; De Volkskeuken.

November 8, 2008, Zes bakken per dag? Geen probleem; Gezond leven Slecht imago van koffie slaat om in suggestie dat het zelfs goed kan zijn.

November 8, 2008, Onderzoek wijst uit: koffie is best gezond.

September 3, 2008, Obesitas biedt kansen voor belegger.

August 18, 2008, De waarheid over eten.

July 24, 2008, Vierdaagselopers aan de dikke kant.

June 21, 2008, Hoge bloeddruk moet maar gauw één getal worden; Metingen Artsen bepleiten herbezinning op de betekenis van boven- en onderwaarde bij 50-plussers.

June 14, 2008, Wachten op het wonder; De Volkskeuken.

June 14, 2008, Maak suikerpatiënt niet te gewoon Kenniscafé; Diabetes Nieuwe studies tonen aan dat nastreven van normaal glucosegehalte in het bloed een risico kan zijn.

June 13, 2008, Wie levens kan redden, moet dat niet nalaten.

May 21, 2008, De pillenbrug is terug, nu op het net; 'Joop' uit Arnhem adverteert zijn oxazepam in de rubriek elektronica en witgoed op marktplaats.nl.

May 17, 2008, Stemmen met je vork; Interview Michel Pollan.

April 1, 2008, 'Huisarts kan zorg niet alleen aan'.

March 26, 2008, Babysterfte is het echte probleem vk.nl/opinie opinies, debatten en columns vk.nl/opinie; Huwelijken tussen neef en nicht Gezondheidsrisico of stemmingmakerij.



March 21, 2008, Alleen winst door de verandering leefstijl.

March 15, 2008, Dagenlang niets eten is niet/wel gezond voor je.

March 8, 2008, Miljonairsgevoel in honingbad.

March 8, 2008, Foute genen, foute conclusies, foute adviezen; Dna Commerciële genetische zelftests op internet deugen niet, toont Rotterdams onderzoek aan.

March 7, 2008, 'Genetische zelftest deugt niet'.

February 26, 2008, Sportarts voelt zich nog steeds beperkt; Subsidie van anderhalf miljoen euro geeft vereniging impuls.

February 23, 2008, Wachten op de Google van het dna; Genen Bedrijven werken aan machines die complete menselijke genenkaart afleveren voor 1000 dollar.

February 9, 2008, Vermeden dikkerd is duurder dan een levende dikkerd; Obesitas Preventie levert de samenleving geen kostenbesparing op, blijkt uit studie.

February 9, 2008, Hupla, terug naar de huisarts; Interview Geriater Gerard Ligthart ziet hoe oudere patiënt zich moet voegen naar specialisten.

February 4, 2008, 'Nieuwe pil sneller toelaten'.

January 5, 2008, Buikje.

January 5, 2008, Mannenbuik; De Claim.

December 6, 2007, Jouw kind? Drogist in de VS wijst echte vader aan; Accent Vaderschapstesten.

December 3, 2007, Superstuntman sterft in bed.

November 26, 2007, Geen flauw besef wat zorg kost.

November 2, 2007, Een onsje rood vlees per dag mag best; Voedingsadvies van internationale denktank: eet en drink met mate en beweeg dagelijks een half uur.

October 15, 2007, Antillianen schrikken van hun dikke buik.

September 29, 2007, Stop op tijd, dat is beter.

September 26, 2007, 'Als ik kapot op straat lig, laat me dan'.

September 15, 2007, Spuit spuug in plaats van insuline; Suikerziekte Nieuw middel helpt diabetespatiënten van bepaalde bijwerkingen af.

September 8, 2007, Wie geen alzheimer wil, kan het roken maar beter vergeten; Hersenen Grote studie in Rotterdam bevestigt verband tussen dementie en tabaksgebruik.

June 9, 2007, Testen kunnen we steeds meer, nu nog genezen; Ziekten Genetische diagnostiek loopt ver uit op mogelijkheden voor behandeling.

June 8, 2007, Alles geprobeerd en toch te dik.

June 2, 2007, Bewegen en gezond eten is ingewikkeld.

May 25, 2007, Vier tosti's bij wijze van ontbijt; Meer beweging remt het ontstaan van suikerziekte bij dikke kinderen.



May 23, 2007, DSM zou doelwit zijn van private equity; Euronext & Beurzen Europa.

May 23, 2007, GlaxoSmithKlines diabetesmiddel Avandia omstreden.

May 22, 2007, Avandia verhoogt kans hartaanval.

May 19, 2007, Levensstijlmonitor; gezondSensewear-armband.

May 19, 2007, Big!Move: 'Wij halen ouderen achter de geraniums vandaan'.

May 12, 2007, Groep 6/7/8 wil in Science; Experiment Schoolkinderen doen mee aan NWO-onderzoek over voeding, energie en beweging.

May 12, 2007, Orgaandonatie: na tien jaar even ver; Tweede Kamer reageert eenstemmig geschokt, maar is sterk verdeeld over de oplossing van het probleem.

April 23, 2007, Hollende oud-volleyballer steekt diabetici hart onder de riem.

April 21, 2007, De ontdekking van het spekvet-gen is weer zwaar overtrokken; Twijfel Hans van Maanen.

April 14, 2007, De pseudowetenschap is ondergronds gegaan.

April 14, 2007, Stamcellen maken de insulinespuit overbodig; Diabetes Brazilliaans experiment geeft patiënten goed werkend immuunsysteem terug.

February 19, 2007, Na het ijsdansen moeten de BN'ers nu gaan afvallen.

February 10, 2007, Kibbelen om een diabetespil; Suikerziekte Internist en fabrikant twisten over werkzaamheid nieuw middel.

February 3, 2007, Alleen minder eten helpt.

January 23, 2007, Preventieve zorg is meer dan een cursus lunchwandelen.



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- "Het geheim van de slaapkamer." *NRC Handelsblad*. 30 December 2017 .
- "De aftakeling van het lichaam." *NRC Handelsblad*. 07 December 2017 .
- "Paar kopjes koffie per dag is goed voor je." *NRC Handelsblad*. 01 December 2017 .
- "Mensen met ADHD sneller obees door slechte slaap." *NRC Handelsblad*. 15 November 2017 .
- "Het Nationaal Schoolontbijt is geen gezonde start'." *NRC Handelsblad*. 10 November 2017 .
- "Gezonde voeding Kinderen eten zich ziek met het Nationaal Schoolontbijt." *NRC Handelsblad*. 08 November 2017 .
- "Stress is geen individueel probleem." *NRC Handelsblad*. 21 October 2017 .
- "Goed slapen is een probleem." *NRC Handelsblad*. 19 September 2017 .
- "Hoe darmbacteriën ons lichaam besturen." *NRC Handelsblad*. 01 September 2017 .
- "suikerziekte Test met experimentele immuuntherapie voor diabetes type 1 is succesvol." *NRC Handelsblad*. 12 August 2017 .
- "Deze leugens zijn slecht voor de volksgezondheid'." *NRC Handelsblad*. 02 August 2017 .
- "Een fruitschaal neerzetten, daar red je het niet mee'." *NRC Handelsblad*. 08 July 2017 .
- "Snelle toelating medicijn vaak te snel'." *NRC Handelsblad*. 09 May 2017 .
- "Voor elk uur dat je hardloopt, leef je 7 uur langer'." *NRC Handelsblad*. 08 May 2017 .
- "Laat de dikkerd met rust." *NRC Handelsblad*. 06 May 2017 .
- "De voordelen van een flink eind wandelen." *NRC Handelsblad*. 01 May 2017 .
- "Huisarts moet paprika voorschrijven, geen pillen." *NRC Handelsblad*. 28 April 2017 .
- "De sleutel tot een gezonde generatie is lunch op school." *NRC Handelsblad*. 18 April 2017 .
- "Nieuw honger-hormoon ontdekt." *NRC Handelsblad*. 17 March 2017 .
- "Te dik kind verdient een operatie." *NRC Handelsblad*. 28 January 2017 .
- "Vijftig jaar bewerkt voedsel: een mislukt experiment." *NRC Handelsblad*. 26 January 2017 .
- "Langer leven door schraal te eten." *NRC Handelsblad*. 18 January 2017 .
- "Afvallen door de juiste darmbacteriën." *NRC Handelsblad*. 17 January 2017 .
- "De vloek van het het vet." *NRC Handelsblad*. 07 January 2017 .
- "De lokroep van het vet." *NRC Handelsblad*. 07 January 2017 .
- "De zegen van het vet." *NRC Handelsblad*. 07 January 2017 .
- "De kracht van het vet." *NRC Handelsblad*. 07 January 2017 .
- "Prachtig, bitterzoet vaarwel." *NRC Handelsblad*. 17 November 2016 .
- " Dure pillen doen ons allemaal pijn ." *NRC Handelsblad*. 14 November 2016 .



- "Afkickkliniek voor suiker verslaafden is populair." *NRC Handelsblad*. 11 November 2016 .
- "Industrie beïnvloedt onderzoek frisdrank." *NRC Handelsblad*. 04 November 2016 .
- "Kamer vergadert staande." *NRC Handelsblad*. 02 November 2016 .
- "Tweede Kamer Sportbegroting is het beste staand te genieten." *NRC Handelsblad*. 02 November 2016 .
- "Wijn als medicijn." *NRC Handelsblad*. 22 October 2016 .
- "Calorieën afrekenen." *NRC Handelsblad*. 18 October 2016 .
- "Het begint bij een glas per dag." *NRC Handelsblad*. 05 October 2016 .
- "Zelfvertering redt gist en baby s." *NRC Handelsblad*. 04 October 2016 .
- "Stappenteller helpt niet bij begeleid diëten." *NRC Handelsblad*. 24 September 2016 .
- "Schrijver van het huwelijksdrama aller huwelijksdrama s." *NRC Handelsblad*. 19 September 2016 .
- "Suiker moet en zal gezond zijn." *NRC Handelsblad*. 16 September 2016 .
- "Geef kind geen zoete dranken." *NRC Handelsblad*. 10 September 2016 .
- "Twijfels aan de veiligheid diabetespil." *NRC Handelsblad*. 15 July 2016 .
- "Strijd om de slaap." *NRC Handelsblad*. 3 juni 2016 vrijdag .
- "Ineens zit je wel en wee in je darm; Wij zijn onze darmen." *NRC Handelsblad*. 16 april 2016 zaterdag .
- "We doen te heilig over groente en fruit'." *NRC Handelsblad*. 15 april 2016 vrijdag .
- "Obesitas los je niet op met Sla & Sport." *NRC Handelsblad*. 9 april 2016 zaterdag .
- "Leefgewoontes Jongere generaties ongezonder." *NRC Handelsblad*. 31 maart 2016 donderdag .
- "Ik verschoon de bedden en maak frieten en tosti's; Spitsuur." *NRC Handelsblad*. 26 maart 2016 zaterdag .
- "Een suiker beschermt dikke mensen." *NRC Handelsblad*. 27 februari 2016 zaterdag .
- "Onderzoek Eén op drie mensen krijgt diabetes ." *NRC Handelsblad*. 11 november 2015 woensdag .
- "Wat als roker stopt met vlees...." *NRC Handelsblad*. 7 november 2015 zaterdag .
- "We moeten eten zoals vroeger aan de Mediterraanee." *NRC Handelsblad*. 5 november 2015 donderdag .
- "We krijgen een 'war on sugar'." *NRC Handelsblad*. 15 september 2015 dinsdag .
- "Voer voor lobbyisten ." *NRC Handelsblad*. 12 september 2015 zaterdag .
- "Van suiker kun je puistjes krijgen'; Factcheck." *NRC Handelsblad*. 11 september 2015 vrijdag .
- "Waterdieet maakt slank - maar ook op lange duur?." *NRC Handelsblad*. 27 augustus 2015 donderdag .
- "Studie AMC Bijna alle onderzoekers naar diabetes hebben banden met industrie." *NRC Handelsblad*. 2 juli 2015 donderdag .



- "Fietsend je mail beantwoorden." *NRC Handelsblad*. 20 juni 2015 zaterdag .
- "Zacht buikspek Vader laat zijn buik staan." *NRC Handelsblad*. 20 juni 2015 zaterdag .
- "Suiker: zo klaar als een klontje." *NRC Handelsblad*. 16 juni 2015 dinsdag .
- "Die goedkope glucosemeter doet vaak maar wat." *NRC Handelsblad*. 15 juni 2015 maandag .
- "Suikerziekte Zeshonderd klachten van diabetici over ongeschikte glucosemeters." *NRC Handelsblad*. 15 juni 2015 maandag .
- "Suiker, het heerlijke gevaar ; De zoete duivel." *NRC Handelsblad*. 13 juni 2015 zaterdag .
- "Vette vis, uien en pure chocola." *NRC Handelsblad*. 18 april 2015 zaterdag .
- "Dieetbedrijf Hoe Weight Watchers er weer bovenop probeert te komen; vandaag op NRCQ.NL." *NRC Handelsblad*. 26 februari 2015 donderdag .
- "Chronisch slaapttekort leidt tot diabetes ." *NRC Handelsblad*. 23 februari 2015 maandag .
- "We bewegen veel én zitten veel." *NRC Handelsblad*. 23 januari 2015 vrijdag .
- "Brieven; Preventie is goedkoper." *NRC Handelsblad*. 22 januari 2015 donderdag .
- "Wie te dik is, leeft korter." *NRC Handelsblad*. 11 december 2014 donderdag .
- "Diabetespil bestrijdt ook tuberculose." *NRC Handelsblad*. 22 november 2014 zaterdag .
- "Koekje erbij?; Automatische." *NRC Handelsblad*. 1 november 2014 zaterdag .
- "Moeten leraren nu insuline gaan meten en bloed gaan prikken?; Ouders draaien er voor op." *NRC Handelsblad*. 28 oktober 2014 dinsdag .
- "Brieven; Meer dan gezond voedsel." *NRC Handelsblad*. 8 oktober 2014 woensdag .
- "Zoetjes geven muizen diabetes via darmflora." *NRC Handelsblad*. 18 september 2014 donderdag .
- "Vermageren Lowcarb-dieet is gezonder en werkt beter dan lowfat." *NRC Handelsblad*. 2 september 2014 dinsdag .
- "De evolutie bezorgde de mens een denkbrein, maar helaas geen zitrug." *NRC Handelsblad*. 30 augustus 2014 zaterdag .
- "Wij zijn nu allemaal patiënt geworden." *NRC Handelsblad*. 28 juni 2014 zaterdag .
- "Heimwee naar quinoa." *NRC Handelsblad*. 28 juni 2014 zaterdag .
- "Kunstavleesklier doet het goed vergeleken met insulinepomp." *NRC Handelsblad*. 16 juni 2014 maandag .
- "[Insuline Meer injecties verlengt leven suikerpati...]*." *NRC Handelsblad*. 13 mei 2014 dinsdag .
- "Baas over eigen lijf." *NRC Handelsblad*. 10 mei 2014 zaterdag .
- "Deugt pindakaas?." *NRC Handelsblad*. 6 mei 2014 dinsdag .
- "Stop demonisering van suiker, geef juiste informatie." *NRC Handelsblad*. 1 april 2014 dinsdag .
- "Suikerstop." *NRC Handelsblad*. 22 maart 2014 zaterdag .



- "Supervoedsel is de ideale placebo; Deze week ." *NRC Handelsblad*. 15 maart 2014 zaterdag .
- "Supervoedsel is marketing." *NRC Handelsblad*. 15 maart 2014 zaterdag .
- "Middel pakt vetzucht en diabetes aan." *NRC Handelsblad*. 2 november 2013 zaterdag .
- "Glucose is vooral een schadelijke suiker na omzetting in fructose ." *NRC Handelsblad*. 11 september 2013 woensdag .
- "Een zittend leven duurt niet lang." *NRC Handelsblad*. 7 september 2013 zaterdag .
- "Pas op met en zero light." *NRC Handelsblad*. 13 augustus 2013 dinsdag .
- "Energie-inname van dikke kinderen ernstig onderschat." *NRC Handelsblad*. 30 juli 2013 dinsdag .
- "Meer dementie bij diabetes." *NRC Handelsblad*. 12 juni 2013 woensdag .
- "Vaker blessures en diabetes door statinen." *NRC Handelsblad*. 4 juni 2013 dinsdag .
- "De voedselindustrie lust hem rauw; Interview Michael Pollan, schrijver, hoogleraar en activist." *NRC Handelsblad*. 1 juni 2013 zaterdag .
- "Diabetes laat sporen na in poep." *NRC Handelsblad*. 30 mei 2013 donderdag .
- "Vroeg dikke mannen sterven vaker voor hun 55ste." *NRC Handelsblad*. 30 april 2013 dinsdag .
- "Leverhormoon herstelt kapotte insulinecellen." *NRC Handelsblad*. 26 april 2013 vrijdag .
- "Coca-Cola helpt beetje bij obesitas." *NRC Handelsblad*. 23 april 2013 dinsdag .
- "Je bent het zelf niet, het is je biochemie die dik maakt; BOEKEN." *NRC Handelsblad*. 6 april 2013 zaterdag .
- "Een beker frisdrank is een vloeibare zak snoep ." *NRC Handelsblad*. 9 maart 2013 zaterdag .
- "Mannen moeten meer gaan sporten; Vier vragen over overgewicht bij Nederlanders." *NRC Handelsblad*. 4 december 2012 dinsdag .
- "Brieven over de zorgpremie." *NRC Handelsblad*. 5 november 2012 maandag .
- "Dikke mensen hebben het gemaakt; Nu de welvaart stijgt in Afrika, nemen ook welvaartsziektes zoals obesitas toe." *NRC Handelsblad*. 1 november 2012 donderdag .
- "Snijden in de zorg kan gebeuren alleen met zoete leugens; Vierluik. Deel 4: over de fabels van artsen, politici en zorgconsultants.." *NRC Handelsblad*. 20 oktober 2012 zaterdag .
- "Screenen op diabetes verlengt leven niet." *NRC Handelsblad*. 5 oktober 2012 vrijdag .
- "Eén kilo lichter." *NRC Handelsblad*. 22 september 2012 zaterdag .
- "Gedrag bestraffen mag niet, maar belonen wel; Zes vragen over minder zorgpremie bij gezonde levensstijl." *NRC Handelsblad*. 18 september 2012 dinsdag .
- "Voedselproductie moet radicaal anders!" *NRC Handelsblad*. 5 september 2012 woensdag .
- "Veel slapen houdt de dokter weg." *NRC Handelsblad*. 18 augustus 2012 zaterdag .
- "Mens staat ongezond veel stil." *NRC Handelsblad*. 18 juli 2012 woensdag .



"Deze pil maakt blij, hitsig én dun"; Britse farmaceut bekent misleiding medicijngebruikers en schikt voor 2,4 miljard euro." *NRC Handelsblad*. 3 juli 2012 dinsdag .

"Wie na afvallen dun wil blijven moet vet eten." *NRC Handelsblad*. 28 juni 2012 donderdag .

"Dikke kinderen? De rechter oordeelt; De uitspraak." *NRC Handelsblad*. 8 juni 2012 vrijdag .

"Wie slank wil zijn, moet kou lijden." *NRC Handelsblad*. 12 mei 2012 zaterdag .

"Verraden door je lichaam; Column." *NRC Handelsblad*. 17 december 2011 zaterdag .

"Melk maakt meer kapot dan je lief is; Voedingsdeskundige Walter Willett trotseert tientallen jaren van zuivelaanbevelingen." *NRC Handelsblad*. 26 september 2011 maandag .

"Aanpak onzichtbare epidemie is een gemiste kans; In de wereld." *NRC Handelsblad*. 24 september 2011 zaterdag .

"Kleffe boterhammen versus stevige kippenpoten op school; Brieven over eten voor pubers." *NRC Handelsblad*. 3 september 2011 zaterdag

"Vooral weinig chocola is goed voor het hart." *NRC Handelsblad*. 30 augustus 2011 dinsdag .

"Voor het ontbijt al tien pillen op." *NRC Handelsblad*. 13 augustus 2011 zaterdag .

"Aantal diabetespatiënten stijgt snel." *NRC Handelsblad*. 27 juni 2011 maandag .

"Die actie tegen vetzucht en roken kost alleen maar geld; Preventie van leefstijlziekten leidt tot hoge zorgkosten." *NRC Handelsblad*. 29 april 2011 vrijdag .

"In gevecht met de obesitas-industrie." *NRC Handelsblad*. 9 april 2011 zaterdag .

"Appels en peren vergelijken heeft zin, voor hartziekerisico; Ophef & Onzin." *NRC Handelsblad*. 19 maart 2011 zaterdag .

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"Bij mij mag je lekker eten, en veel"; interview dokter Frank van Berkum." *NRC Handelsblad*. 22 januari 2011 zaterdag .

"De huisarts vindt het lastig om te zeggen: u bent te dik." *NRC Handelsblad*. 25 november 2010 donderdag .

"Obesitas ongeneeslijke ziekte." *NRC Handelsblad*. 25 november 2010 donderdag .

"Witte rijst geeft meer kans op diabetes." *NRC Handelsblad*. 15 juni 2010 dinsdag .

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"Wie fit is en sport, verteert sneller vet." *NRC Handelsblad*. 27 mei 2010 donderdag .

"Dagelijks een handje noten verlaagt het cholesterolgehalte." *NRC Handelsblad*. 15 mei 2010 zaterdag .

"Kwetsbare diabetici." *NRC Handelsblad*. 8 mei 2010 zaterdag .

"Tandvleesontsteking verergert de ernst van ouderdomsdiabetes." *NRC Handelsblad*. 20 februari 2010 zaterdag .

"Diabetesbehandeling schiet door." *NRC Handelsblad*. 28 januari 2010 donderdag .



- "Weg met de diëten; onderzoek eetgedrag." *NRC Handelsblad*. 2 januari 2010 zaterdag .
- "Borstplaat op recept; eten Joep & Janneke." *NRC Handelsblad*. 5 december 2009 zaterdag .
- "Beetje diabetes niet goed voor baby." *NRC Handelsblad*. 1 oktober 2009 donderdag .
- "Een nieuw einde voor het antioxidantensprookje; 'Gezond' extraatje kan kanker bevorderen." *NRC Handelsblad*. 21 augustus 2009 vrijdag .
- "Klink drijft huisarts naar goedkopere pil." *NRC Handelsblad*. July 14, 2009 .
- "Het vet van dunne mensen." *NRC Handelsblad*. April 25, 2009 .
- "Fructose slechter dan glucose." *NRC Handelsblad*. April 21, 2009 .
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- "LUMC werkt aan therapie voor diabetes; Diabetesfonds geeft 1,6 miljoen." *NRC Handelsblad*. April 7, 2009 .
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- "Bij afvallen telt het gedrag, niet de voeding; Vetzucht Type dieet maakt geen verschil voor mate van afvallen, blijkt uit grootste onderzoek ooit naar dieeteffect." *NRC Handelsblad*. February 26, 2009 .
- "Celtherapie voor muis met suikerziekte." *NRC Handelsblad*. August 28, 2008 .
- "Zoet, wit en je wordt er winderig van; Voeding Belgisch bedrijf introduceert nieuwe zoetstof als wondermiddel in Nederlandse supermarkten." *NRC Handelsblad*. August 2, 2008 .
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- "Drie weken luieren maakt al ongezond." *NRC Handelsblad*. March 20, 2008 .
- "Vies en gezond; Visseren over vet." *NRC Handelsblad*. March 15, 2008 .
- "Coach is het best om slank te blijven." *NRC Handelsblad*. March 13, 2008 .
- "Geen appel tussendoor; Visseren over vet." *NRC Handelsblad*. February 16, 2008 .
- "Dik is link; Visseren over vet." *NRC Handelsblad*. February 9, 2008 .
- "Voorbode in de buik; Visseren over vet." *NRC Handelsblad*. February 2, 2008 .
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"Yoghurt slikken als medicijn; Onderzoek naar voedingsmiddelen met een gezondheidsclaim." *NRC Handelsblad*. November 24, 2007 .

"Slimme zorgelektronica." *NRC Handelsblad*. November 17, 2007 .

"Alleen ernstig overgewicht blijkt dodelijk; Dik mens vaker gehandicapt." *NRC Handelsblad*. November 8, 2007 .

"Een pil met ingeperkt gebruik." *NRC Handelsblad*. November 1, 2007 .

"Honger is een dwingende meester Kilocalorieën zijn niet genoeg; honger." *NRC Handelsblad*. October 16, 2007 .

"Ik honger, dus ik besta; Medici denken na over gedwongen behandeling van anorexia-patiënten." *NRC Handelsblad*. September 22, 2007 .

"Cadeautje voor een matig medicijn." *NRC Handelsblad*. September 20, 2007 .

"Geen Atkins, dat werkt." *NRC Handelsblad*. July 14, 2007 .

"Vetopslagcellen kunnen veranderen in vetverbranders." *NRC Handelsblad*. July 14, 2007 .

"Snoep verstandig, eet aspartaam; Voedingscentrum wil geen dominee zijn en werkt samen met de levensmiddelen-industrie." *NRC Handelsblad*. June 30, 2007 .

"Diabetespil vergroot kans op hartinfarct; Met veertig procent." *NRC Handelsblad*. May 22, 2007 .

"Lijnen met veel vet minst nutteloos." *NRC Handelsblad*. March 8, 2007 .

"Diabeteszorg baat allochtoon niet." *NRC Handelsblad*. February 8, 2007 .

"Snoepfabriek Mars staakt reclame voor kinderen tot 12 jaar." *NRC Handelsblad*. February 5, 2007 .



Nu.nl

Edition	Date	Title
Economie	15-5-2007	Consumentenbond waarschuwt voor 'gezond' brood
Overig - Wetenschap	18-3-2011	Eiwitrijk dieet vergroot kans op diabetes
Overig - Gezondheid	24-6-2011	Extreem dieet kan diabetes type 2 genezen'
Overig - Gezondheid	14-11-2011	Diabetes kost miljarden per jaar'
Overig - Wetenschap	21-2-2012	Suikerziekte valt te genezen'
Overig - Gezondheid	27-3-2012	Maagverkleining verlaagt bloedsuikerspiegel'
Overig - Gezondheid	6-8-2012	Gember lijkt effectief bij diabetes
Overig - Gezondheid	12-11-2012	Alleen 's avonds koolhydraten is gezonder'
Overig - Gezondheid	10-12-2012	Mensen met diabetes 48 procent meer kans op hartaanval
Overig - Wetenschap	21-1-2013	Eenzaamheid slecht voor de gezondheid'
Overig - Gezondheid	14-2-2013	Slenteren beter voor de gezondheid dan sporten'
Overig - Gezondheid	1-5-2013	Groene thee helpt bij diabetes'
Overig - Lifestyle	11-7-2013	Light frisdrank zorgt voor gewichtstoename'
Overig - Gezondheid	13-9-2013	Kaneel kan gunstig effect hebben bij diabetes
Overig - Gezondheid	27-9-2013	Stevig ontbijt gunstig bij diabetes type 2
Overig - Gezondheid	30-9-2013	Diabetes verhoogt kans op overlijden aan darm- en borstkanker
Overig - Gezondheid	3-1-2014	Wereldwijd steeds meer overgewicht
Overig - Gezondheid	28-1-2014	Veertig procent Nederlanders is te dik'
Overig - Gezondheid	15-1-2015	Niet bewegen dodelijker dan obesitas'
Overig - Gezondheid	25-2-2015	Vitamine D-tekort verhoogt risico op diabetes'
Overig - Gezondheid	11-6-2015	Mensen die noten en pinda's eten hebben hogere levensverwachting'
Overig - Gezondheid	29-8-2015	Verband gevonden tussen antibioticagebruik en diabetes type 2
Economie - Achtergrond	21-9-2015	Wat je moet weten over het eigen risico
Overig - Lifestyle	9-6-2016	Voedselwaakhond foodwatch wil consumptie frisdrank verlagen



Overig - Eten en Drinken	14-6-2016	Ondervoeding komt steeds vaker voor bij mensen met obesitas
Overig - Eten en Drinken	29-7-2016	Suikerlobby voedingsindustrie ondermijnt regelgeving EU'
Overig - Gezondheid	4-8-2016	Levensverwachting bij obesitas even hoog als bij gezond gewicht'
Overig - Gezondheid	10-8-2016	Aanbevolen dagelijkse hoeveelheid bewegen moet hoger'
Suiker Afkickkliniek (Adverteerder)	8-11-2016	Eerste Suiker Afkickkliniek geopend in Amsterdam
Overig - Eten en Drinken	5-12-2016	Handvol noten verlaagt kans op hartziekten, kanker en diabetes type 2'
Mediapartners - Consumentenbond	21-12-2016	Tien labels en feiten over afvallen
Overig - Gezondheid	7-2-2017	Op gewicht blijven belangrijk bij preventie diabetes type 2'
Overig - Gezondheid	7-2-2017	Voedingssupplementen volgens experts 'alles behalve nodig'
Overig - Gezondheid	8-3-2017	Ernstige tandvleesontsteking zou kunnen wijzen op diabetes'
Overig - Eten en Drinken	9-3-2017	Ontbijt kun je best overslaan'
Overig - Eten en Drinken	10-3-2017	Sprite met suiker verdwijnt uit de schappen
Overig - Eten en Drinken	29-3-2017	Nederlander eet gemiddeld dertig suikerklontjes per dag
Overig - Eten en Drinken	6-4-2017	Industrie doet te weinig om suiker en zout in voeding te verminderen'
Overig - Gezondheid	6-8-2017	Diabetesmedicijn geeft veelbelovend resultaten bij Parkinson-patiënten
Overig - Gezondheid	15-9-2017	Een op de vijf doden is gevolg van slechte voeding
Overig - Gezondheid	9-10-2017	Diabetes Fonds start campagne tegen suikergebruik in producten
Overig - Gezondheid	12-10-2017	Verband gevonden tussen omega 6 en preventie diabetes type 2'
Overig - Gezondheid	24-10-2017	Gezondheidsraad adviseert zo min mogelijk nachtdiensten te draaien
Overig - Eten en Drinken	5-11-2017	Je ontbijt een keer overslaan is echt geen ramp'



Overig - Gezondheid	13-11-2017	Diabetesvereniging overweegt juridische stappen tegen fabrikant insulinepomp
Overig - Eten en Drinken	17-11-2017	Kinderen eten te weinig groente en fruit'
Overig - Gezondheid	21-11-2017	Kaneel kan belangrijk ingrediënt zijn in strijd tegen obesitas'
Overig - Gezondheid	23-11-2017	Gematigd drinken van koffie eerder goed dan slecht voor gezondheid'
Overig - Gezondheid	6-12-2017	Vrouwen met opvliegers lopen groter risico op diabetes type 2'

NOS.nl

Edition	Date	Title
Politiek	28-1-2010	Ongezonder leven? Hogere zorgpremie'
Binnenland	30-1-2012	Meer dan helft Nederlanders te dik
Binnenland	28-1-2014	'BMI-index is alleen een indicatie''
Buitenland	20-11-2014	Vetzucht duurder dan oorlog'
Binnenland	16-1-2015	Mensen moeten niet meer dan vier uur per dag zitten'
Tech	18-1-2015	Suikers meten met plakker in plaats van prikker
Binnenland	24-2-2015	Antwoord huisartsen op wildgroei gezondheidschecks
Binnenland	28-7-2015	Diabetici verstoken van belangrijke hulpmiddelen
Binnenland	1-8-2015	Roche: excuus voor verwarring rond insulinepomp
Binnenland	4-11-2015	Sinaasappelsap net zo slecht als cola'
Binnenland	4-11-2015	Advies: geen alcohol meer, wel dagelijks noten eten
Binnenland	11-11-2015	Een op de drie Nederlanders krijgt ooit diabetes
Binnenland	23-3-2016	Waarom we geen voedingshypes terugzien in de Schijf van Vijf
Binnenland	26-3-2016	Vloggers maken hun YouTube-fans dik'
Binnenland	31-3-2016	Nieuwe generaties steeds ongezonder
Binnenland	1-4-2016	Op de VU zie je studenten die staan zitten te studeren
Binnenland - Buitenland	6-4-2016	WHO: aantal diabetespatiënten verviervoudigd sinds 1980
Binnenland	11-6-2016	Langer leven dankzij handjevol noten per dag'
Binnenland	20-6-2016	Frisdranktaks, een goed idee voor Nederland?
Binnenland	11-7-2016	Je zit te veel en dat is niet goed. Dit doe je er tegen



Binnenland	11-7-2016	Nederlandse jongeren zijn Europees kampioen zitten
Binnenland	25-7-2016	Ik heb diabetes 2 maar toch een koelkast vol lekkere dingen
Binnenland - Economie	14-10-2016	Voedingscentrum: 'oermelk' is vooral slimme marketing
Binnenland - Buitenland	24-10-2016	Obesitas is het nieuwe roken, ontmoediging heeft effect'
Binnenland	25-11-2016	Beter eten en meer bewegen kunnen diabetes type 2 genezen
Binnenland	22-12-2016	Arts kiest vaker voor medicijnen van betalende farmaceut'
Binnenland - Politiek	16-1-2017	Patiënten klagen over gebrek aan zorg
Buitenland	27-1-2017	Frankrijk verbiedt onbeperkt aanbieden frisdrank in horeca
Binnenland	3-2-2017	Ziekenhuis Uden houdt patiënten buiten de deur voor betere zorg
Binnenland - Economie	10-3-2017	Sprite met suiker verdwijnt uit de schappen
Binnenland	25-5-2017	Diabetespatiënten in de wacht voor hulpmiddelen
Buitenland	12-6-2017	Meer dan twee miljard mensen te dik
Economie	11-7-2017	Minder suiker in pakjes drinken voor kinderen bij AH
Binnenland	25-7-2017	Zaadkwaliteit van de westerse man keldert
Binnenland	22-8-2017	We moeten meer bewegen en vooral de spieren trainen
Binnenland - Economie	10-9-2017	Sprite met suiker uit de schappen halen is vooral slimme politieke zet'
Binnenland	16-9-2017	Ziekenhuiszorg, maar dan thuis: 'mooi voor patiënt, maar niet goedkoper'
Binnenland - Buitenland	2-10-2017	Biologische klok is essentieel voor ons voortbestaan'
Binnenland	24-10-2017	Meer diabetes en hart- en vaatziekten door nachtdiensten

Metronieuws.nl

Edition	Date	Title
Good vibes	18-9-2012	'Voorkom dat suikers in je lichaam worden omgezet in vetten''
In het nieuws	9-9-2014	Cola light is wel/niet gezonder dan variant met suiker
Good vibes	18-9-2014	Zoetjes rotzooien met darmbacteriën
In het nieuws	18-2-2015	Edith Schippers gaat niet voor populariteitsprijs
In het nieuws	11-11-2015	Pepernootje? Niet zomaar als je kind diabetes heeft
Food	12-4-2016	Dit is het perfecte tijdstip om junkfood te eten
In het nieuws	9-6-2016	Hogere accijns op peuken? Dan ook op suiker en drank



In het nieuws	21-6-2016	Verbod ranja op school: noodzaak of betutteling
In het nieuws	11-7-2016	Waarom zitten zo ontzettend slecht voor je is
Lifestyle	3-8-2016	Dit zijn de 8 voordelen van een dagelijkse wandeling
Good vibes	13-8-2016	Vrouw valt 100 kilo af door McDonald's-verslaving
Lifestyle	24-8-2016	Science says: zoveel calorieën verbrand je in bad
Food	27-9-2016	Voedingscentrum: green happiness-dieet is gevaarlijk
Good vibes	21-10-2016	Twee cola per dag verdubbelt kans op diabetes'
Food	13-1-2017	Deze test laat zien hoe (on)gezond je écht eet
Lifestyle	25-9-2017	Hoe korter je slaapt, hoe korter je leeft'
In het nieuws	27-9-2017	Waarom we dokter Google niet moeten vertrouwen
Food	1-10-2017	Schepje cacao erbij? Zo maak je jouw koffie gezond
In het nieuws	24-10-2017	Nachtdiensten slecht voor gezondheid
Food	10-11-2017	Eet je vaak onregelmatig? Pas dan maar goed op
Lifestyle	24-11-2017	Drie a vier koppen koffie per dag is goed voor je'

RTLnieuws.nl

Edition	Date	Title
EditieNL	13-12-2011	Raad wil invoering vettaks
Economie	23-9-2014	Robot Charlie geeft niet alleen les, hij helpt ook diabetici
Nederland	13-11-2014	Bloedprikken bij suikerziekte verleden tijd'
Nederland	13-11-2014	Suikerziekte zónder bloedprikken: hoe kan dat?
Nederland	28-7-2015	Suikerpatiënten in de kou: hulpmiddelen niet verkrijgbaar
Lifestyle	19-8-2015	Hete pepers mogelijk nieuw wapen tegen obesitas
Nederland	11-11-2015	Diabetes : een rotziekte die steeds vaker voorkomt.
Nederland	3-2-2016	Pakjes drinken zijn suikerbommen: kan dat kwaad?
Gezondheid	6-6-2016	Behandeling diabetes moet veranderen: 'Operatie effectiever dan medicijnen'
Gezondheid	29-7-2016	Suikerindustrie lobbyt tegen terugdringen suiker in voedsel'
Gezondheid	14-8-2016	Aardbeien als medicijn voor patiënt met diabetes type 2
Gezondheid	19-8-2016	Nieuw diabetesmedicijn beschermt de nieren
Sport	20-8-2016	Vidal zet tattoo met insulinepomp voor zoontje



Gevaren van suiker	4-11-2016	We eten kilo's suiker, maar hebben geen idee hoeveel precies
Gevaren van suiker	7-11-2016	Afkicken van suiker, is dat wel echt nodig?
Gezondheid	14-11-2016	Diabetespatiënt Maarten durft nu te hopen: genezing was nog nooit zo dichtbij
Gezondheid	15-11-2016	Arme mensen snacken meer: 'Haal junkfood weg uit achterstandswijk'
Gezondheid	19-12-2016	Prijs voor slimme pleister die suikerpatiënt waarschuwt
Gezondheid	5-2-2017	Hé vetzak!' Gepest met overgewicht, dan hoger risico op hartziekten
Gezin	25-2-2017	Canadese jongen (15) sterft aan gevolgen diabetes, ouders vervolgd voor moord
Gezondheid	10-3-2017	Glutenvrij dieet zorgt voor grotere kans op diabetes
Nederland	10-3-2017	Nederland heeft de primeur: alle Sprite wordt suikervrij
Gezondheid	29-3-2017	Diabetes, artrose en nierfalen zijn over tien jaar te genezen'
Tech	13-4-2017	Apple werkt aan sensoren die bloedsuikerspiegel meten'
Gezondheid	20-4-2017	Belangrijke stap': zenuwoperatie kan 'diabetesvoet' redden
Gezondheid	27-4-2017	Diabetespatiënten willen ander eigen risico
Gezondheid	20-5-2017	Afvallen? Zorg ook voor goede nachtrust
Nederland	8-6-2017	Nederlanders zitten het langst van alle Europeanen
Gezondheid	26-6-2017	Ingeblikte zomergroenten voortaan zonder toegevoegde suikers
Gezondheid	11-7-2017	Peter (13) overleed aan diabetes: 'Zijn dood was niet nodig'
EditieNL	28-7-2017	Onderzoek: te veel suiker kan leiden tot depressie
Geld en Werk	22-8-2017	Nieuwe beweegrichtlijn: minstens 150 minuten bewegen en minder zitten
Bright	3-10-2017	Deze tatoeage verkleurt bij verandering van bloedsuikerwaarden
Gezondheid	24-10-2017	Honger, hoofdpijn en zelfs darmklachten: dit is waarom nachtdiensten slecht voor je zijn
Gezondheid	24-10-2017	Meer kans op diabetes en hart- en vaatziekten door nachtdienst
EditieNL	14-11-2017	Pubers met diabetes worden niet begrepen: 'Nee, ik eet niet ongezond!'
Gezondheid	23-11-2017	Een koekje 's nachts maakt dikker dan een koekje overdag
Gezondheid	26-11-2017	Beslag proeven kan gevaarlijk zijn voor gezondheid
Gezondheid	28-11-2017	Dat we suiker lekker vinden is van nature bepaald



Nederland

28-11-2017 Diabetes Fonds waarschuwt: veel te veel suiker in ons eten



Appendix Bc: Overview of actor publications analyzed

VWS

Edition	Date	Title
Ministry publication file	29-10-2012	Onderwijsagenda Sport, Bewegen en een Gezonde Leefstijl in en rondom de school
Ministry publication file	2-7-2014	Kamerbrief Over e-health en zorgverbetering
Mulier instituut	1-12-2014	Voortgangsrapportage monitor sport en bewegen in de buurt 2014
Ministry publication file	3-3-2016	Kamerbrief Over advies richtlijnen goede voeding 2015
Ministry publication file	9-3-2016	Kamerbrief Over voortgang nationaal programma preventie 2015
Ministry publication file	25-3-2016	Kamerbrief Over preventie in het zorgstelsel van goede bedoelingen naar het in de praktijk ontwikkelen van resultaten
Rapportage eHealth-doelstellingen 2016	1-5-2016	Omdat ik het belangrijk vind om goed voor mezelf te zorgen'
Ministry publication file	12-9-2016	Beantwoording kamervragen over lang zitten Nederlanders
Ministry publication file	25-10-2016	Sport en bewegen voor maatschappelijke impact een inventarisatie
Ministry publication file	8-12-2016	Kamerbrief Over sport & bewegen en gezondheidszorg
Ministry publication file	15-12-2016	Kamerbrief Over actieplan gepast gebruik van geneesmiddelen
Beter met elkaar	16-1-2017	Beter met elkaar
Ministry publication file	31-1-2017	Beantwoording kamervragen over het bericht dat artsen vaker kiezen voor pillen van farmaceuten waarvan sponsorgeld ontvangen
Ministry publication file	9-2-2017	Kamerbrief over e-health en de raad voor volksgezondheid en samenleving rvs briefadvies



Ministry publication file	21-2-2017	Kamerbrief Over verzamelbrief breed aanbod van gepaste bloedglucosemeters
Voedingscentrum	28-2-2017	Kindermarketing
Ministry publication file	12-5-2017	Kamerbrief Over voortgang nationaal programma preventie 2016
Ministry publication file	15-6-2017	Beantwoording kamervragen over speciale voorzieningen in ziekenhuizen tijdens de ramadan
Gezondheidsraad	22-8-2017	Beweegrichtlijnen 2017
Nederlandse Zorgautoriteit	1-9-2017	Wegwijzer bekostiging e-health overzicht per zorgsector
Volksgezondheids en raad voor samenleving	1-10-2017	Heft in eigen hand Zorg en ondersteuning voor mensen met meervoudige problemen
Achtergrondstudie bij het advies Heft in eigen handen	1-10-2017	Juridische mogelijkheden voor het versterken van (zelf)regie bij samenloop van problemen
eHealth-monitor	1-11-2017	Kies bewust voor eHealth
Vektis intelligence	7-12-2017	Herclassificatie chronisch zieken
Ministry publication file	21-12-2017	Commissiebrief met reactie op petitie fresstyle libre vergoeding
Raad voor de Volksgezondheid en Zorg	year 2011	Preventie van welvaartsziekten
Rijksinstituut voor Volksgezondheid en Milieu	year 2012	Een gezonder Nederland
Leefstijlmonitor, RIVM i.s.m. VeiligheidNL	year 2015	Factsheet zitgedrag
Ministry publication file	year 2015	Preventie in het zorgstelsel: wat kunnen we leren van het buitenland?
RIVM publication	year 2016	Blood glucose meters Performance of devices on the Dutch market
Ministry publication file	Unknown	Bijlage tekst voor in stand van zakenbrief
Ministry publication file	Unknown	Kamerbrief Bestuurlijk overleg hulpmiddelen
Ministry publication file	Unknown	Bijlage: Overzicht van gepast gebruik acties door de keten heen
Ministry publication file	Unknown	Samenwerking gemeenten en zorgverzekeraars





ZINL, CVZ

Edition	Date	Title
CVZ	1-4-2012	CVZ. Magazine (nummer 1)
CVZ	1-7-2012	CVZ. Magazine (nummer 2)
CVZ	1-10-2012	CVZ. Magazine (nummer 3)
CVZ	1-6-2013	CVZ. Magazine (nummer 2)
College voor Zorgverzekeringen	1-1-2014	CVZ. Magazine
Zorginstituut Nederland	1-4-2014	ZorgMagazine
Zorginstituut Nederland	1-8-2014	ZorgMagazine
Zorginstituut Nederland	1-1-2015	ZorgMagazine
Zorginstituut Nederland	1-4-2015	ZorgMagazine
Zorginstituut Nederland	1-4-2016	Zorginstituut Magazine
Zorginstituut Nederland	1-4-2017	Zorginstituut Magazine
Zorginstituut Nederland	1-6-2017	Zorginstituut Magazine
Zorginstituut Nederland	1-9-2017	Zorginstituut Magazine
Zorginstituut Nederland	1-12-2017	Zorginstituut Magazine

DiabetesFonds Nederland

Edition	Date	Title
Not specified	27-4-2012	Bloedsuiker verbetert bij voeding met gezond vet
Not specified	16-7-2012	nieuw wapen in de strijd tegen diabetes?
Nieuws	9-1-2013	Ijzer heeft invloed op kans diabetes type 2
Not specified	12-2-2013	Rood vlees geeft meer kans op diabetes
Not specified	6-5-2013	Krachttraining belangrijk bij diabetes type 2
Not specified	31-5-2013	Ook bij goed ingestelde diabetes: bewegen een must
Not specified	30-8-2013	Nieuwe behandeling dempt pijn bij mensen met diabetes
Not specified	1-11-2013	Nieuwe bloedsuikerverlagende pil voor mensen met diabetes type 2
Not specified	30-1-2014	Zilvervliesrijst beter voor bloedsuiker dan witte rijst
Not specified	7-7-2014	Insulinepomp bij diabetes type 2?
Not specified	17-7-2014	Veelbelovende ontdekking voor behandeling diabetes type 2
Not specified	28-7-2014	Te veel zout vergroot kans op hart- en vaatziekten bij diabetes
Not specified	20-8-2014	Apparaatje tegen verzuring bloed bij diabetes



Not specified	10-9-2014	Omgaan met diabetes? Positieve instelling en sociale steun belangrijk
Not specified	24-10-2014	Mensen met jicht hebben vaker diabetes type 2
Not specified	13-11-2014	Belangrijke stap naar naaldloos bloedsuiker meten
Not specified	4-2-2015	Nieuwe voedingsrichtlijn voor diabetes
Not specified	29-5-2015	Vezels eten verlaagt risico diabetes type 2
Not specified	11-6-2015	Kleinere kans op sterfte aan diabetes door noten
Not specified	26-6-2015	Bloedsuiker onder controle met een sticker
Not specified	6-7-2015	Ku lijden voor een betere bloedsuiker?
Not specified	9-7-2015	Maagverkleining helpt bij diabetes
Not specified	17-7-2015	Start onderzoek naar nieuwe behandeling diabetes
Not specified	22-3-2016	Nieuwe Schijf van Vijf goed tegen diabetes type 2
Not specified	3-5-2016	Gehoorverlies bij diabetes
Not specified	17-5-2016	Verschillen tussen mannen en vrouwen in ontwikkeling diabetes
Not specified	7-6-2016	Verband tussen emotionele stress en diabetes
Not specified	7-6-2016	Verband tussen emotionele stress en diabetes
Not specified	28-7-2016	Overgang bepaalt risico op diabetes type 2
Not specified	10-10-2016	4 miljoen kinderen met diabetes type 2 in 2025
Not specified	24-10-2016	Link vrouwelijke hormonen en diabetes
Not specified	7-11-2016	Het Not specified open suiker Afkickkliniek
Not specified	Unknown	1,2 miljoen Nederlanders hebben diabetes
Not specified	Unknown	Advies over veilig rijden
Not specified	Unknown	Afvallen bij diabetes
Not specified	Unknown	Alternatieve geneeswijzen en diabetes
Not specified	Unknown	Begeleiding bij diabetes type 2
Not specified	Unknown	Behandeling van diabetes
Not specified	Unknown	Behandeling van diabetes
Not specified	Unknown	Bestaat er een zelftest voor diabetes?
Not specified	Unknown	Bewegen verkleint de kans op diabetes
Not specified	Unknown	Bijna 1.200 Nederlanders met diabetes per week
Not specified	Unknown	Bloedsuiker meten zonder naald



Not specified	Unknown	Coeliakie en diabetes
Not specified	Unknown	Complicaties van diabetes voorkomen
Not specified	Unknown	Cursus Diabetes de baas
Not specified	Unknown	De schae tussen overgewicht en diabetes type 2?
Not specified	Unknown	Diabetes en slaap
Not specified	Unknown	Druiven en sinaasappels tegen diabetes type 2?
Not specified	Unknown	Eiwitten
Not specified	Unknown	Fabels en misverstanden over diabetes
Not specified	Unknown	Hart en bloedvaten
Not specified	Unknown	Het geheim van koffie
Not specified	Unknown	Hoe meet ik mijn bloedsuiker?
Not specified	Unknown	Hoe zit het met diabetes en de darmen?
Not specified	Unknown	Hoort vermoeidheid bij diabetes?
Not specified	Unknown	Hypo en hyper
Not specified	Unknown	Is diabetes erfelijk?
Not specified	Unknown	Is een griepvaccinatie nodig als je diabetes hebt?
Not specified	Unknown	Is kamelenmelk goed bij diabetes?
Not specified	Unknown	Kerst met diabetes
Not specified	Unknown	Koffie en thee en diabetes
Not specified	Unknown	Kun je diabetes voorkomen?
Not specified	Unknown	Mag je met diabetes sporten?
Not specified	Unknown	Medicijnen bij diabetes
Not specified	Unknown	Misselijkheid en diabetes
Not specified	Unknown	Onverzadigd vet is beter voor mensen met diabetes
Not specified	Unknown	Oren
Not specified	Unknown	Over suiker
Not specified	Unknown	Richtlijn voor gezond eten met diabetes
Not specified	Unknown	Spieren van slag bij diabetes type 2
Not specified	Unknown	Stoppen met roken verkleint de kans op diabetes
Not specified	Unknown	Traktaties voor kinderen met diabetes
Not specified	Unknown	Verschil tussen diabetes type 1 en 2



Not specified	Unknown	Vezels
Not specified	Unknown	Visie Not specified
Not specified	Unknown	Voetcomplicaties van diabetes
Not specified	Unknown	Wat er ook gebeurt! Begeleiding van mensen met diabetes type 2
Not specified	Unknown	Wat gebeurt er tijdens sporten in je lichaam bij diabetes?
Not specified	Unknown	Wat is diabetes?
Not specified	Unknown	Wat is een insulinepomp?
Not specified	Unknown	Wat is het dieet '30 days raw'?
Not specified	Unknown	Werken aan gezond blijven?
Not specified	Unknown	Werken aan gezond eten met diabetes
Not specified	Unknown	Werken aan oplossingen voor diabetes type 2
Not specified	Unknown	Zijn voedingsmiddelen gezoet met fructose beter?

DiabetesVereniging Nederland

Edition	Date	Title
Web site	4-11-2014	Nieuw-bloedsuiker-meten-zonder-prikken
Web site	5-8-2016	Nieuwe-diabetsmedicatie-en-het-voorschrijfbeleid-van-huisartsen
Web site	7-12-2017	Voetzorg-regels-en-vergoedingen-in-2017
Web site	11-8-2017	Zomerweetje! Warmte en je bloedglucosewaarden
Web site	12-6-2016	Kosten-FreeStyle-Libre-aftrekbaar
Web site	14-10-2016	Web site eist aanpassing preferentiebeleid Menzis
Web site	14-12-2017	Diabetes type 2 op zijn retour door dieet?
Web site	15-4-2016	Minder koolhydraten, meer eiwit en vet tegen diabetes type 2
Web site	16-10-2017	op weg naar genezing van diabetes
Web site	18-5-2016	Zorgen over kwaliteit glucose teststrips
Web site	21-11-2017	Petitie vergoeding FreeStyle Libre overhandigd aan Kamerleden
Nieuws	22-9-2016	Bewegen, bewegen en nog eens bewegen
Web site	22-12-2016	Behandeling met GLP-1 analoog plus insuline in basispakket
Web site	23-3-2017	Minder prikken, meer meten: over CGM en FGM
Web site	24-3-2016	Metformine-en-maag-en-darmklachten
Web site	26-10-2016	Voedingsrichtlijn-diabetes-uitebreid
Web site	27-9-2017	Gezonde leefstijl met diabetesgame?



Web site	28-11-2017	regels en vergoedingen in 2018
Web site	30-4-2015	hoe zit het met de vergoeding?
Web site	Unknown	Aantasting van je zenuwen door diabetes
Web site	Unknown	Acceptatie van diabetes is niet makkelijk. Wat kun je doen?
Web site	Unknown	Alcohol en diabetes: hoe doe je dat?
Web site	Unknown	Alcohol en diabetes- waar moet je op letten?
Web site	Unknown	Bewegen bij diabetes type 2: de aanhouder wint!
Web site	Unknown	Bewegen met diabetes type 2. Hoe pak je dat aan?
Web site	Unknown	De diabeteswerkcoach helpt als werken met diabetes lastig is
Web site	Unknown	Diabetes en depressie: wat kun je doen?
Web site	Unknown	Diabetes op school: voor leerkrachten en begeleiders
Web site	Unknown	Diabetes op school: voor ouders
Web site	Unknown	Drugs en diabetes: hoe doe je dat?
Web site	Unknown	Een goede bloedglucosemeter is van levensbelang. Hoe kies je een meter?
Web site	Unknown	Gebitsproblemen bij diabetes- waarom en hoe voorkom je ze?
Web site	Unknown	Grotere kans op infecties bij diabetes
Web site	Unknown	Hart- en vaatziekten bij diabetes: oorzaken en oplossingen
Web site	Unknown	Heb ik diabetes? Wanneer laat je je op diabetes testen?
Web site	Unknown	Het lijkt soms wel een rapportcijfer. Wat is je HbA1c?
Web site	Unknown	Hoe ga je om met jouw diabetes op de werkvloer?
Web site	Unknown	Hoe werkt een insulinepomp en is het wat voor mij?
Web site	Unknown	Insuline spuiten bij diabetes. Voor wie en hoe werkt het?
Web site	Unknown	Kinderen met diabetes op school
Web site	Unknown	Leven met diabetes type 2: boeiende workshops, boordevol tips
Web site	Unknown	Minder prikken, meer meten: alles over sensoren
Web site	Unknown	Nieuws over diabetesonderzoek en de landelijke cijfers
Web site	Unknown	Oogcomplicaties door diabetes
Web site	Unknown	Overstappen van tabletten naar insuline met diabetes type 2
Web site	Unknown	Ramadan en de risico's van onregelde diabetes
Web site	Unknown	Seksuele problemen door diabetes. Wat kun je doen?



Web site	Unknown	Solliciteren met diabetes: wat vertel je over je diabetes?
Web site	Unknown	Sporten met diabetes? Web site geeft tips!
Web site	Unknown	Symptomen van diabetes. Hoe herken ik diabetes?
Web site	Unknown	Tabletten voor diabetes type 2: welke zijn er en wat doen ze?
Web site	Unknown	Voeding bij diabetes: hoe maak je gezonde keuzes?
Web site	Unknown	Voetcomplicaties door diabetes: soorten en hoe te voorkomen
Web site	Unknown	Wat is diabetes type 2?
Web site	Unknown	Wat is ketoacidose? Wat zijn de gevolgen van ketoacidose?
Web site	Unknown	Wat te doen bij kou met diabetes?
Web site	Unknown	Wat te doen met warm weer bij diabetes?
Web site	Unknown	Wat zijn de oorzaken van diabetes type 1 en diabetes type 2?
Web site	Unknown	Welke diabeteskosten kun je vergoed krijgen?
Web site	Unknown	Wil jouw sportschool het keurmerk 'oog voor diabetes?'
Web site	Unknown	Ziek melden met diabetes: wat moet je weten?

Nederlandse Vereniging voor Endocrinologie

Edition	Date	Title
Web publication	unknown	Acromegalie
Web publication	unknown	Adrenogenitaal syndroom (AGS)
Web publication	unknown	Bijnierschorscarcinoom
Web publication	unknown	Bijnierschorsinsufficiëntie (primair)
Web publication	unknown	Bijnierschorsinsufficiëntie (secundair)
Web publication	unknown	Bijnierschorsinsufficiëntie (steroïd geïnduceerd)
Web publication	unknown	Cushing (syndroom)
Web publication	unknown	Feochromocytoom
Web publication	unknown	Hyperaldosteronisme (primair)
Web publication	unknown	MEN1 syndroom
Web publication	unknown	Niet-functionerende hypofyse adenomen (NFA)
Web publication	unknown	Oogziekte van Graves
Web publication	unknown	Prolactinoom



Appendix C: Semi-structured interview templates

Producers

Introduction in which the researcher introduces himself, and the reason for this thesis.

Topic: Interventions in type 2 diabetes

Ask for permission to record the interview, and indicate recording will start now.

Introduction of the distinction between four technological trajectories as used in this thesis: Pharmacological treatment, pharmacological prevention, life-style treatment, life-style prevention.

1. *Do you recognize this distinction? Do you agree with this distinction? If not, why?*

2. *How do you feel these technological trajectories link together?*
 - a. *Are they exclusive or supplementary? Why?*

3. *Which technological trajectories does your organization favor? Why?*
 - a. *Which aspects are important in reviewing technological trajectories for type 2 diabetes for your organization?*

 - b. *Which activities does your organization participate in in favor of this technological trajectory?*

 - c. *Which other actors do you often encounter? Could you qualify the relation between your organization and these actors?*

4. *What stance does your organization take in the media, regarding the four technological trajectories? Why?*
 - a. *Which actors do you respond to in the media? Why?*

 - b. *How would you type the roles of the other actors?*

 - c. *What type of discussions does your organization have in these media? Why?*



Introduce the analysis conducted in this thesis, and indicate that the following questions are based on results found in the analysis.

1. *From the data, almost no interactions become clear between life-style problem-solving strategies and pharmacological strategies. Do you interact with pharmaceutical producers? Why/why not?*
 - a. *How is this relation between life style prevention and life-style treatment? Why?*

2. *Do you recognize the negative image and trend on pharmacological treatment? How does your organization see this?*
 - a. *Which elements play an important role in your view of this technological trajectory? [link to aspects mentioned above]*

 - b. *Does a decreased visibility or a negative image also mean that the pharmacological treatment is less often used? Why/Why not?*

3. *The data suggests an extension of the existing idea of pharmacological treatments. Which way do you feel this extension moves to?*
 - a. *Could the same be said about life-style interventions? Which direction do these expand to?*

4. *Both life-style technological trajectories appear to converge, do you recognize this convergence? If so, in which aspects is this convergence found (or not) according to your organization?*
 - a. *Why? And what is the stance of your organization against this development?*

5. *Would you see pharmacological prevention as a dead end or an upcoming strategy? Why?*
 - a. *Which aspects are important in this view?*



Institutions

Introduction in which the researcher introduces himself, and the reason for this thesis.

Topic: Interventions in type 2 diabetes

Ask for permission to record the interview, and indicate recording will start now.

Introduction of the distinction between four technological trajectories as used in this thesis: Pharmacological treatment, pharmacological prevention, life-style treatment, life-style prevention.

5. *Do you recognize this distinction? Do you agree with this distinction? If not, why?*

6. *How do you feel these technological trajectories link together?*
 - a. *Are they exclusive or supplementary? Why?*

7. *Which technological trajectories does your organization favor? Why?*
 - a. *Which aspects are important in reviewing technological trajectories for type 2 diabetes for your organization?*

 - b. *Which activities does your organization participate in in favor of this technological trajectory?*

 - c. *Which other actors do you often encounter? Could you quality the relation between your organization and these actors?*

8. *What stance does your organization take in the media, regarding the four technological trajectories? Why?*
 - a. *Which actors do you respond to in the media? Why?*

 - b. *What type of discussions does your organization have in these media? Why?*



Introduce the analysis conducted in this thesis, and indicate that the following questions are based on results found in the analysis.

6. *Do you recognize the negative image and trend on pharmacological treatment? How does your organization see this?*
 - a. *Which elements play an important role in your view of this technological trajectory? [link to aspects mentioned above]*
 - b. *Does a decreased visibility or a negative image also mean that the pharmacological treatment is less often used? Why/Why not?*

7. *The data suggests an extension of the existing idea of pharmacological treatments. Which way do you feel this extension moves to?*
 - a. *Suggest drug-device combinations or away from existing ideas if needed.*

8. *The preventive and life-style technological trajectories appear to converge, do you recognize this convergence? If so, in which aspects is this convergence found (or not) according to your organization?*
 - a. *Why? And what is the stance of your organization against this development?*

9. *Would you see pharmacological prevention as a dead end or an upcoming strategy? Why?*
 - a. *Which aspects are important in this view?*



Users

Introduction in which the researcher introduces himself, and the reason for this thesis.

Topic: Interventions in type 2 diabetes

Ask for permission to record the interview, and indicate recording will start now.

Introduction of the distinction between four technological trajectories as used in this thesis: Pharmacological treatment, pharmacological prevention, life-style treatment, life-style prevention.

1. *Do you recognize this distinction? Do you agree with this distinction? If not, why?*

2. *How do you feel these technological trajectories link together?*
 - a. *Are they exclusive or supplementary? Why?*

3. *Which technological trajectories does your organization favor? Why?*
 - a. *Which aspects are important in reviewing technological trajectories for type 2 diabetes for your organization?*

 - b. *Which activities does your organization participate in in favor of this technological trajectory?*

 - c. *Which other actors do you often encounter? Could you quality the relation between your organization and these actors?*

4. *What stance does your organization take in the media, regarding the technological trajectories? Why?*
 - a. *Which actors do you respond to in the media? Why?*

 - b. *What type of discussions do you/your colleagues organization have in these media? Why?*



Introduce the analysis conducted in this thesis, and indicate that the following questions are based on results found in the analysis.

- 10. The data shows in general quite a lot of positive publications for all technological trajectories. Why would this be the case for patients and/or medical specialists?**
- 11. However, pharmacological treatment is also often mentioned in a critical and negative way. Do you recognize this negative image and trend on pharmacological treatment? How does your organization see this?**

 - a. Which elements play an important role in your view of this technological trajectory? [link to aspects mentioned above]**
 - b. Does a decreased visibility or a negative image also mean that the pharmacological treatment is less often used? Why/Why not?**
- 12. The data suggests an extension of the existing idea of pharmacological treatments. Which way do you feel this extension moves to?**

 - a. How does this relate to the other technological trajectories?**
- 13. How do you feel about pharmacological prevention in relation to the other technological trajectories?**

 - a. Why? Which aspects are important in this view?**
 - b. Is pharmacological prevention an upcoming strategy? Why?**
- 14. Life-style prevention is shown to be also negatively discussed in the media. Why would this be the case?**

