

# Towards a shared Knowledge and Implementation Cycle for Lifestyle in Healthcare



## Foreword

The size of the group of patients in the Netherlands with lifestyle-related chronic conditions poses a growing challenge given the limited care capacity and rising healthcare costs. Prevention through healthy lifestyles is a frequently cited solution to healthcare challenges.

Despite ample evidence that lifestyle interventions can lead to significant health improvements, the transition from scientific knowledge to sustainable implementation of effective interventions remains suboptimal. Establishing a solid knowledge and implementation infrastructure (*kennis- en implementatie-infrastructuur, KIMI*) is crucial for embedding lifestyle as an integral part of mainstream healthcare. This infrastructure supports the development, evaluation and implementation of lifestyle-focused interventions through close collaboration between science and practice. By creating a shared knowledge base, healthcare professionals and researchers can work together to generate, disseminate and apply new insights. This ensures, on the one hand, that evidence-based and evidence-informed lifestyle interventions find their way into everyday healthcare practice faster and more effectively and, on the other hand, that insights from practice can be seamlessly applied in further research and in the optimisation/development of interventions.

The Research team of the Coalition for Lifestyle in Healthcare, in collaboration with the Healthcare Evaluation & Appropriate Use (*Zorgevaluatie & Gepast Gebruik, (ZE&GG)*) programme, has launched a knowledge and implementation cycle. This cycle outlines the steps involved in developing, evaluating, and implementing both strategic and applied knowledge.

The infrastructure is formed by partnerships between various parties, including research and education institutions, knowledge institutes and networks, health institutions, UMCs, patient and professional organisations, data platforms, policymakers and health insurers. Besides work-

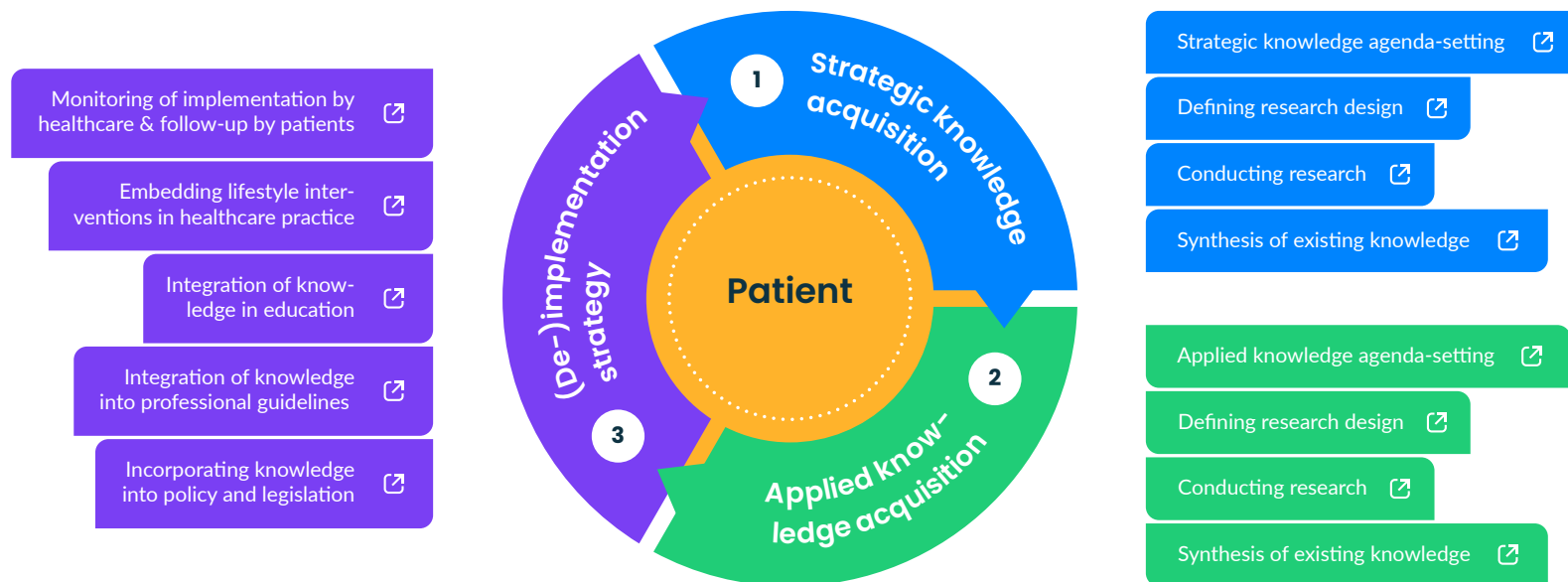
ing according to the cycle, an essential element is collaboration between these parties whereby clear roles and responsibilities ensure a continuous flow of knowledge and innovation, better embedding evidence-based and evidence-informed lifestyle-oriented work in the daily practice of healthcare.

The KIMI presented here is an application of the ZE&GG [Cirkel van Gepast Gebruik \(CvGG\)](#) to lifestyle research, which focuses on the generation and application of scientific knowledge and collaboration between research, education, policy and practice. The cycle consists of three phases: strategic knowledge acquisition, applied knowledge acquisition and (de-)implementation strategy. Together, they describe a continuous process of knowledge development, evaluation and implementation. The addition of the 'strategic knowledge acquisition' phase is an important extension of the CvGG in this respect. This addition acts as a preparatory step that precedes the development of interventions and thus strengthens the foundation of the process.

A sequential approach is essential; after all, you cannot implement anything that has not already been thoroughly researched – the core of the process. Nevertheless, it may happen that something has already been implemented in practice without sufficient evidence. This may indicate the need for further research, so you return to an earlier phase of the cycle. The strength of the cycle lies in this flexibility to make adjustments without losing the firm framework and footing.



Click on a phase in the cycle for an explanation of the different components ↓



This is a dynamic document that can be adapted and updated based on new insights, changes in circumstances or improved work processes. For each phase, this document describes the required steps, the resources needed to do so, and the parties that should be involved to ensure a smooth flow in the cycle.

### How to move forward? Centralised orchestration

The KIMI for lifestyle in healthcare aims to provide a sustainable, structured and effective approach to the development, evaluation and implementation of lifestyle interventions in the

practice of healthcare. Crucial to this is that all parties involved feel responsible for the common goal of the KIMI and actively assume their role in it. This requires joint managerial responsibility and a shared vision for further implementation.

This continuity is ensured and coherence between policy, research and practice is strengthened by anchoring within ZE&GG or establishing a partnership that defines roles and responsibilities and includes the perspective of patients, professionals, healthcare providers, knowledge institutes and education.



## Phase 1: Strategic Knowledge acquisition

Strategic knowledge agenda-setting

Defining research design

Conducting research

Synthesis of existing knowledge

The aim of strategic knowledge acquisition in the context of lifestyle in healthcare is to develop fundamental insights that form the basis for innovations and improvements in healthcare. It focuses on identifying and closing knowledge gaps in which investment is needed to increase the potential of lifestyle interventions and give impetus to the integration of lifestyle in healthcare. Strategic knowledge is thus a prerequisite for the purposeful development of new interventions and the creation of preconditions for the sustainable implementation and safeguarding of these interventions.

### Parties involved in the 'Strategic Knowledge acquisition' phase include

- (a) Subsidy providers (e.g. ZonMw, SGF, individual health funds, Health Holland)
- (b) Knowledge institutions (such as universities, UMCs, higher education institutions, RIVM, TNO, Trimbos Institute)
- (c) Patient organisations and associations (including the Dutch Patient Federation, Patientenfederatie Nederland)
- (d) Scientific professional healthcare associations (e.g. NHG, FMS, FMS Kennisinstituut)
- (e) Professional organisations (including V&VN, KNGF, NVD, Akwa GGZ)

### The 'Strategic Knowledge acquisition' phase consists of four parts:

1. Putting strategic knowledge questions on the agenda
2. Defining research design
3. Conducting research
4. Synthesising existing knowledge



## Phase 1: Strategic Knowledge acquisition

### ↓ Strategic knowledge agenda-setting

### Defining research design

### Conducting research

### Synthesis of existing knowledge

### Strategic knowledge agenda-setting

This phase focuses on identifying fundamental knowledge gaps within lifestyle medicine. These include in-depth, peripheral questions that are essential to strengthening the foundation of the field, such as understanding biological mechanisms of action and core principles of sustainable behavioural change. The aim is to establish knowledge questions that focus on strategic themes expected to have the greatest impact on population health and the practice of healthcare professionals. In this phase, it is important to get input from different parties such as healthcare providers, policymakers, patients, experts and insurers to build a broadly supported research agenda. Strategic agenda-setting should align with existing health policy and health care practices to ensure relevance.

As part of this phase, the Coalition for Lifestyle in Healthcare, in collaboration with a large number of experts, drew up the [Strategic Knowledge Agenda 'Lifestyle in Care'](#) in 2023. This knowledge agenda includes knowledge questions that lead to better understanding of the biological mechanisms of lifestyle interventions and the realisation of sustainable behavioural change, and that provide insight into (and conditions for) the optimal evaluation of the implementation and effectiveness of lifestyle interventions and the health data infrastructure needed for this. A shared strategic knowledge agenda provides insight into current knowledge gaps regarding fundamental principles or mechanisms, processes and systems and prioritises research needed to lay the foundation on which proven effective lifestyle interventions can later be evaluated and implemented.

### Points of interest in this phase:

- **Long-term planning and funding:** Research into preconditions often requires long-term investments. In this phase, it is important to start thinking about structural funding and partnerships that can ensure the continuity of the research.
- **Alignment with international developments:** It is important to align the research agenda with international initiatives and best practices to draw on existing knowledge and experiences.
- **Stakeholder involvement:** Ensure broad input from practice, policy and patients as it is important, it is important from the beginning to include perspectives from all relevant stakeholders in the agenda-setting of strategic knowledge.
- **Accommodate periodic review of the strategic knowledge agenda:** To maintain a responsive and up-to-date knowledge agenda, it is important to periodically monitor and evaluate progress on the knowledge agenda and to prioritise new knowledge questions. This can be provided by establishing or embedding an umbrella organisation or programme committee in which relevant stakeholders are represented. The knowledge agendas of scientific associations and health funds such as KWF are good examples of this.



## Phase 1: Strategic Knowledge acquisition

Strategic knowledge agenda-setting

↓ Defining research design

Conducting research

Synthesis of existing knowledge

### Defining research design

Determining the research design for fundamental knowledge questions in lifestyle medicine is a crucial step to arrive at robust and relevant scientific insights. In this phase, the focus is on answering questions that form the basis for innovations and applications in care, such as understanding biological mechanisms, behavioural change or the interaction between lifestyle and disease processes. A carefully chosen research design takes into account the nature of the question and the type of data needed and lays the foundation for valuable insights that can later be translated into practical applications in lifestyle medicine, such as interventions, guidelines and policies. This includes formulating a clear research question, defining the study population, selecting appropriate measurement instruments and outcome measures, and determining the most appropriate research methodology. For strategic questions, methodologies can range from experimental research to systematic reviews or modelling studies. The choice depends on the type of knowledge sought.



## Phase 1: Strategic Knowledge acquisition

Strategic knowledge agenda-setting

Defining research design

↓ Conducting research

Synthesis of existing knowledge

### Conducting research

In this phase, the research plan, as formulated in the previous step, is implemented, including data collection, analysis, validation and reporting.



## Phase 1: Strategic Knowledge acquisition

Strategic knowledge agenda-setting

Defining research design

Conducting research

↓ Synthesis of existing knowledge

### Synthesising of existing knowledge

In this phase, the existing scientific literature and new preconditional knowledge on a particular topic are brought together and analysed in a systematic way. This synthesized knowledge is hereafter referred to as 'evidence' and this forms the starting point for further development of interventions and implementation. After all, a careful knowledge synthesis forms the basis for decisions on which lifestyle interventions have the greatest chance of success in practice. Identification of blank spots in the evidence base leads to fundamental (preclinical/randomising) research questions, for example in the field of behavioural change, biomedical mechanisms or implementation issues. These questions then guide research efforts to address these knowledge gaps.

#### Points of interest in this phase:

- Involving multidisciplinary expertise (e.g. for methodology)
- Optimising the transparency and reproducibility of methods used





## Phase 2: Applied knowledge acquisition

Applied knowledge agenda-setting

Research design

Research execution

Synthesis of existing knowledge

This phase focuses on developing and evaluating lifestyle interventions that are directly applicable in the practice of healthcare. Whereas strategic knowledge mainly lays the basis for fundamental insights and innovative ideas, applied knowledge revolves around translating these insights into concrete solutions and interventions that can be implemented in healthcare structures, care paths and guidelines once their effectiveness has been proven through evaluation research. The ultimate goal is to design lifestyle interventions, programmes and elements that are effective, efficient and appropriate within the specific context of healthcare.

### Parties involved in the 'Applied knowledge acquisition' phase include

- (a) Patient organisations and associations (including the Patiëntenfederatie Nederland, Longfonds, Diabetesvereniging)
- (b) Knowledge institutions (such as universities, UMCs, TNO, RIVM, Trimbos Institute)
- (c) Subsidy providers (e.g. ZonMw, SGF, individual health funds, Health Holland)
- (d) Health insurers: Zorgverzekeraars Nederland (ZIN)
- (e) Healthcare institutes and policymakers: Zorginstituut Nederland (ZiN), Ministry of Health, Welfare and Sport
- (f) Primary healthcare parties (including NHG, KNGF, InEen, NVD)
- (g) Second-line healthcare parties (including ZE&GG, FMS, V&VN, Akwa GGZ; hospital organisations (ZKN, NFU, NVZ))

### The 'Applied knowledge acquisition' phase consists of four parts:

1. Putting applied knowledge questions on the agenda
2. Defining research design
3. Conducting research
4. Synthesising existing knowledge



## Phase 2: Applied knowledge acquisition

↓ Applied knowledge agenda-setting

Defining research design

Conducting research

Synthesis of existing knowledge

### Applied knowledge agenda-setting

This phase revolves around prioritising and retrieving knowledge questions focused on practical applications of lifestyle in care, starting with identifying bottlenecks and needs in current healthcare practice, such as issues around the implementation or effectiveness of existing lifestyle interventions. Systematic literature reviews, meta-analyses and the comparison of different (lifestyle) interventions for effectiveness and feasibility provide insight into which interventions and implementation strategies have sufficient evidence. At the same time, areas where insufficient research has been done are identified. It also looks at new interventions that could potentially be valuable.

Stakeholders can draw up this inventory, such as healthcare providers, patients, policymakers, researchers and health insurers. By gathering their input, it will become clear which interventions not only yield the most health gains but also fit the daily practice of healthcare professionals.

In the Netherlands, the agenda-setting of such knowledge questions is typically conducted within specific healthcare disciplines. Scientific associations for specialist and primary healthcare have an important role in this. In cooperation with patient associations and the FMS Kennisinstituut, among others, they determine which knowledge questions have the most urgency and impact for improving healthcare and health outcomes within their discipline. The integrality of lifestyle issues requires the interdisciplinary cooperation and involvement of stakeholders within other domains such as social healthcare and welfare. Furthermore, although

lifestyle-related knowledge questions find their place in some knowledge agendas, the Netherlands lacks central orchestration in putting applied lifestyle knowledge questions on the lifestyle in healthcare agenda.

#### Points of interest in this phase:

- **Context-specific approach:** Applied knowledge questions should be relevant to the context in which the interventions are applied, e.g. in primary healthcare or specialist healthcare, and align with existing healthcare practices and the broader context (community-based care healthcare, social domain, etc.).
- **Stakeholder involvement:** The early involvement of all relevant parties and the formulation of knowledge questions in co-creation with patients ensures that research is not only scientifically relevant, but also practically in line with the needs of the people who benefit from it and the required societal impact. This creates broad support and increases the chances of successful implementation.
- **Evaluation criteria/criteria for appropriate evidence:** In this phase, it is already important to define evaluation criteria, such as criteria for coverage, effectiveness, user-friendliness and cost-effectiveness.
- **Accommodating periodic review:** To ensure that the knowledge agenda remains dynamic and responsive to new developments and knowledge, it is important to periodically monitor and evaluate progress on the knowledge agenda and to prioritise new knowledge questions. The knowledge agenda of the ZE&GG programme is a good example of this.



## Phase 2: Applied knowledge acquisition

Applied knowledge agenda-setting

↓ Defining research design

Conducting research

Synthesis of existing knowledge

### Defining research design

If the systematic literature analysis shows that, according to the parties involved, there is still insufficient knowledge to determine whether a lifestyle intervention is truly effective, the next step is to determine together with these parties what research is still needed. To ensure at the start of a study that the knowledge gained is usable and applicable, it is important to carefully formulate a research design that leads to appropriate evidence. This includes formulating a clear research question, identifying the target population, selecting appropriate measurement instruments and outcome measures, and determining the most appropriate research method. Because of the major differences between medical interventions, such as drugs or surgery, and lifestyle interventions (e.g. the longer induction time of effects), the multidisciplinary in the approach (e.g. behavioural, medical and transmutal expertise needed), and the wide variation in lifestyle interventions (e.g. in the degree of complexity), there is no single method that is best to evaluate effectiveness or implementation in all cases; indeed, the usual 'gold standard' for gathering evidence, the randomised clinical trial (RCT), is by no means always applicable in lifestyle interventions. For instance, the study design must be practical to be implemented in the healthcare setting, and variability in patient and carer adherence must be considered. In addition, it is important to anticipate criteria for inclusion in insured healthcare and in professional association guidelines. It is crucial that all parties involved agree on the study design in advance and recognise that it is sufficient to achieve appropriate evidence. This 'support-first' model prevents discussion about the adequacy of the evidence after the study is completed, as recently seen in the discussion regarding prehabilitation for surgery.

### Points of interest in this phase:

- **Data registration and management:** In this phase, it is important to anticipate the (sustainable) accessibility of data. The knowledge and implementation infrastructure should provide facilities for uniformity in outcome measures and data registration along with the safe collection and storage of research data so that they remain accessible for future use.
- **Criteria for and consensus on appropriate evidence:** A system should be in place to establish the scientific basis for determining (cost) effectiveness a priori. In this way, criteria for appropriate evidence – and thus conditions for insured healthcare, among other things – can be anticipated early in the knowledge and implementation cycle. Formally recording the consensus reached by the parties involved is essential here.



## Phase 2: Applied knowledge acquisition

Applied knowledge agenda-setting

Defining research design

↓ Conducting research

Synthesis of existing knowledge

### Conducting research

In this phase, the research plan formulated in the previous step is implemented. The aim is to generate new scientific knowledge that is sufficient to prove the effectiveness, feasibility and applicability of lifestyle interventions in practice. To promote the assurance of research results in practice, it is important to assess the intervention's effectiveness as reliably and validly as possible. In addition to determining the extent to which intended health outcomes were achieved (effect evaluation), it is important to examine how the intervention was implemented and reflect on the methods and processes used (process evaluation). This looks at adherence by participants and healthcare professionals, the feasibility of the intervention, and whether the intervention was implemented as intended. In addition, evaluating the cost-effectiveness of the intervention helps to determine whether the intervention is financially feasible for wide implementation in healthcare.

### Points of interest in this phase:

- **Multidisciplinary collaboration:** Conducting lifestyle research requires collaboration between different disciplines, such as researchers, healthcare providers and professionals, behavioural scientists, data specialists, and patients. Involving patients in this collaboration adds valuable experiential knowledge and helps set relevant priorities. Facilitating networking between all stakeholders, including patients, is therefore essential to enriching research and increasing impact.
- **Transparency and reproducibility:** Clear documentation of the methodology used contributes to the reproducibility of research results. This promotes the acceptance of results by the scientific community, but also by healthcare providers and professionals. It is therefore important that the infrastructure provides a platform for the registration of lifestyle research and the resulting outcomes. The active and consistent use of this platform by researchers should be encouraged.



## Phase 2: Applied knowledge acquisition

Applied knowledge agenda-setting

Defining research design

Conducting research

↓ Synthesis of existing knowledge

### Synthesising of existing knowledge

At present, the Netherlands lacks a central body or platform that focuses on knowledge synthesis in the field of lifestyle in healthcare; this is usually invested in the separate scientific associations for specialist and primary healthcare. The result is fragmentation in knowledge synthesis in the field of lifestyle medicine. Ideally, this knowledge synthesis of lifestyle research would be facilitated by integrating it into existing structures, such as the Healthcare Evaluation & Appropriate Use programme, which could give impetus to implementation of proven effective lifestyle interventions in healthcare.



## Phase 3: (De-)implementation strategy

Incorporating knowledge into policy and legislation

Integration of knowledge into professional guidelines

Integration of knowledge in education

Embedding lifestyle interventions in healthcare practice

Monitoring of implementation by healthcare & follow-up by patients

This phase focuses on the actual integration of the new knowledge into the practice of care and is crucial to ensuring that scientific knowledge leads to improved healthcare outcomes. If the evaluation shows that the lifestyle intervention is not effective, the decision to de-implement is also made in this phase.

### To achieve this, the following steps are important:

1. Incorporating knowledge into policy and legislation
2. Integration of knowledge into professional guidelines
3. Integration of knowledge into education
4. Embedding lifestyle interventions in healthcare practice
5. Monitoring implementation

The sequence of these steps may vary.

### Parties involved in the '(De-)implementation' phase include

- (a) Healthcare institutes and policymakers: Zorginstituut Nederland (ZiN), Ministry of Health, Welfare and Sport (VWS)
- (b) Patient organisations and associations (including the Dutch Patient Federation, Longfonds, Diabetesvereniging)
- (c) Healthcare professionals and professional organisations
  - First-line care parties (including NHG, KNGF, InEen, NVD)
  - Second-line care parties (including FMS, V&VN ZKN, NFU, NVZ, Akwa GGZ, NVAB, PPN)
- (d) Knowledge institutions and training institutes (e.g. FMS Kennisinstituut, Universities of Applied Sciences Netherlands, MBO Council, Thuisarts.nl, Pharos, Student&Leefstijl, Vereniging Arts en Leefstijl, PON, Alliantie Voeding in de Zorg, NVMO)
- (e) Intervention owners and implementation supervisors
- (f) Supervisory and quality-promoting bodies (including FMS scientific associations, Zorginstituut Nederland, health insurers)
- (g) Monitoring facilitators and data and knowledge platforms (e.g. Vektis, NIVEL, Dutch Health Platform)
- (h) Collaborations and networks (e.g. ROS network, Samenwerkingsverband Vroegsignalering Alcoholproblematiek, Beweegalliantie)



## Phase 3: (De-)implementation strategy

Incorporating knowledge into policy and legislation ↓	Integration of knowledge into professional guidelines	Integration of knowledge in education	Embedding lifestyle interventions in healthcare practice	Monitoring of implementation by healthcare & follow-up by patients
--	---	---------------------------------------	--	--

### Incorporating knowledge into policy and legislation

To make lifestyle interventions widely accessible and permanently embedded in existing healthcare pathways, it is important to develop frameworks for structural support and funding. An important step here is to include lifestyle interventions in the insured healthcare package. Reimbursing participation in lifestyle interventions using health insurance reduces financial barriers that patients may experience and promotes equal access to lifestyle healthcare. To increase the likelihood of inclusion in the insured package, it is essential to consider criteria for reliable scientific evidence for lifestyle interventions early in the knowledge and implementation cycle (e.g. when drafting the research plan). For step-by-step information on costing lifestyle interventions, intervention developers and owners can visit [here](#).

It is also important to engage relevant stakeholders early on to build support for policy changes. This underscores the importance of co-creating appropriate research designs.

### Points of interest in this phase:

- **Stakeholder dialogue:** Collaboration with health insurers, policymakers, patient organisations and professional groups is essential to building support for the inclusion of lifestyle interventions in laws and regulations
- **A system must be in place:** To establish the scientific basis for determining (cost) effectiveness a priori (see also previous phases)
- **Ensuring continuity:** Policies should be designed to ensure that the deployment of lifestyle interventions is sustainable and resilient to political or economic fluctuations



## Phase 3: (De-)implementation strategy

Incorporating knowledge  
into policy and legislation

Integration of knowledge  
↓  
into professional guidelines

Integration of know-  
ledge in education

Embedding lifestyle inter-  
ventions in healthcare practice

Monitoring of implementation by  
healthcare & follow-up by patients

### Integration of knowledge into professional guidelines

Professional guidelines are an important basis for healthcare decisions and aim to provide patients with the proven best healthcare. The guidelines should be based on new scientific insights while being consistent with the practice of healthcare providers and the needs of patients. For lifestyle interventions, this means that outcomes of evaluation research regarding effectiveness and feasibility are translated into practical tools for healthcare professionals. These guidelines support them in applying or referring to interventions themselves and in giving concrete and understandable lifestyle advice to patients. To ensure the guidelines are widely accepted and practical, patients, healthcare professionals and experts from different disciplines (such as doctors, nurses and dieticians but also behavioural scientists) should be involved in their development.

In the Netherlands, scientific associations and patient organisations play an important role in developing and maintaining guidelines within their specialities. This also applies to guidelines that include lifestyle recommendations. However, lifestyle interventions are often multi-disciplinary and transcend the boundaries of individual specialisms, creating a risk of insufficient alignment and fragmentation. When different associations each develop lifestyle advice within their own frameworks, this advice may vary or even contradict each other. This can complicate implementation in practice and confuse healthcare providers and patients. For the future, it is therefore essential to consider the possibility of central coordination when incorporating lifestyle advice into guidelines. A central body could ensure consistency and alignment so that

lifestyle interventions are included consistently and integrated in guidelines from different specialities. This would support consistent and broad application of lifestyle advice in clinical practice, regardless of specialism.

In addition, it is important to agree on a set process with all relevant actors on which topics need to be implemented or de-implemented nationwide. Combining these topics in a national implementation agenda makes it clear to all parties in the field what needs to be done. This enables them to operate in a more focused way and shift the conversation from the 'what' (what should we actually (de-)implement?) to the 'how' (what is needed to (de-)implement?). Alignment in implementation is essential here.

### Points of interest in this phase:

- Collaboration between scientific parties, practice, policy, patients
- Familiarity with and accessibility to guidelines (e.g. platform, integration with existing healthcare systems such as EHR)
- evaluation of the use of directives
- Clear procedures for updating and revising guidelines >> central orchestration?





## Phase 3: (De-)implementation strategy

Incorporating knowledge  
into policy and legislation

Integration of knowledge  
into professional guidelines

Integration of know-  
ledge in education

Embedding lifestyle inter-  
ventions in healthcare practice

Monitoring of implementation by  
healthcare & follow-up by patients

### Integration of knowledge in education

Besides inclusion in guidelines for healthcare professionals, it is crucial that new knowledge, or evidence, is put into practice by integrating it in the education and in-service training of healthcare professionals. This ensures that (future) healthcare professionals have the latest scientific insights on lifestyle, but also the necessary skills to apply this knowledge in practice.

### Points of interest in this phase:

- Cooperation between research and education institutions for direct integration of the latest knowledge into curricula
- Ensuring accreditation of training modules
- Updating/regular review of curricula content in line with state-of-the-art science



## Phase 3: (De-)implementation strategy

Incorporating knowledge  
into policy and legislation

Integration of knowledge  
into professional guidelines

Integration of know-  
ledge in education

Embedding lifestyle inter-  
ventions in healthcare practice

Monitoring of implementation by  
healthcare & follow-up by patients

### Embedding lifestyle interventions in healthcare practice

This phase focuses on promoting behavioural change among both healthcare professionals and patients so that lifestyle interventions are applied and followed up sustainably. This requires a culture of ongoing professionalisation and willingness among healthcare providers and professionals to include lifestyle interventions in their work processes. Increasing awareness and changing norms play an important role here. It is also important to set up procedures in such a way that daily work processes are disrupted as little as possible. Making resources available, such as training or digital tools, can also contribute to effective implementation and referral to lifestyle interventions.

### Points of interest in this phase:

- Multidisciplinary collaboration
- Provision of resources (e.g. training, digital tools) to facilitate the deployment of/referral to lifestyle interventions



## Phase 3: (De-)implementation strategy

Translation of knowledge in legislation and regulations

Integration of knowledge in professional guidelines

Integration of knowledge in education

Embedding in actions by healthcare professionals & patients

↓ Monitoring of implementation by healthcare & follow-up by patients

### Monitoring of implementation by healthcare & follow-up by patients

This final step monitors how well lifestyle interventions are implemented in daily healthcare practice and the subsequent impact on health outcomes. This includes, for example, monitoring the application of directives by healthcare professionals and follow-up of interventions by patients. The use of uniform data definitions is important here. Using standardised data definitions ensures comparability across studies. Such monitoring provides insight into how implementation in practice can be made more effective and can result, for instance, in recommendations to intensify training or to adjust the way interventions are offered.

The outcomes in this phase may also lead to modifying or de-implementing interventions when, for example, they do not lead to the desired effects, when the interventions are not (or no longer) feasible or accepted by healthcare providers or patients, or when they have become outdated and new, better interventions become available.

### Points of interest in this phase:

- Data systems/recording systems
- Integration of population data
- Standardised data definitions to monitor implementation
- Close cooperation between healthcare institutions and research organisations so that the data collected can be analysed in a systematic way and used for further improvements

**Knowledge and implementation infrastructure colophon**  
**Research team of the Coalition for Lifestyle in Healthcare**

**Supervisors**

Dr. J.H.M. van Bilsen (TNO)

Drs. M.J. Knapen (NFU)

**Content contributor**

Dr. L.A.D.M. van Osch (Maastricht University, Maastricht UMC+)

**With input from**

Prof. dr. S. Kremers (Maastricht UMC+)

Dr. S.M. Braun, Lector (Zuyd University of Applied Sciences)

Drs. K. de Brouwer (ZE&GG)

Dr. L. Diepenveen (Dutch Patient Federation, ZE&GG)

Dr. M. Fix, Practor (Landstede MBO, MBO Council)

Prof. dr. J.C. Kieffe-de Jong (LUMC)

Drs. L. Krul (Samenwerkende Gezondheidsfondsen)

Prof. dr. J.O. Mierau (UMCG, RUG, Lifelines)

Prof. dr. S. Repping (ZE&GG, Amsterdam UMC)

Prof. dr. K. Stronks (Amsterdam UMC)

Dr. K. van der Swaluw (Ministry of Health, Welfare and Sport, Radboud University Nijmegen)