The TK-HealthCoach (tGC) is a differentiated and valuable product offering that is made for different target groups. Different coaches motivate insured persons to improve their health behaviour on the phone. The coaching process is divided into three phases:

- Introductory phase

- Change phase

- Sustainability phase

Different topics and modules are associated with each phase. To get started with the In most cases the coaches ask for the general state of mind of the participants (mood, complaints, current problems). The participants then report to the coaches about their health status (e.g. visits to the doctor and findings, blood values, weight progression, complaints), but often also about psychological or everyday stress (e.g. worries, stress, water in the basement). In most cases the contents addressed here are designed

the rest of the conversation strong. The coaches often ask for compliance with already received Tips, reminding you of their advantages or giving suitable new tips. You talk to the participants about personal experiences, success stories or barriers in the context of previous tips and advice. At the end of the discussion, the date for the next Coaching telephone call arranged.

Some participants set their own goals during the coaching process with regard to improving their lifestyle (weight reduction, more exercise, less need for medication).

Ideas paper menten etc.) and discuss their implementation with the coach. In addition to the very personal start of the conversation, the participants also report on receiving general information about exercise, nutrition and, especially with diabetes, about the clinical picture in general. For all participants the social contact with the Coaches an extremely important component. The coaches are 'control function' and 'consultant'.

but also 'interlocutors' (and in some cases even 'friends'), with whom you can can talk about the disease and life.

A screenshot of a social media post

Description automatically generated

The economic evaluation of the telephone health coach has shown positive effects. The economic benefit for the TC arises from the fact that possible hospital admissions of the chronically ill insured are prevented.

The offer is thus a control topic and is treated accordingly prioritized to other offers in the new forms of care. As an already evaluated offer of the TC, the overall goal of the digital connection of the telephone health coach is to improve the achieved control effects.

**1.3 Digital connectivity objectives**

Both for the participants of the telephone health coach and for the TK should be digital connectivity will create real added value. For the participants, the topic, which has already been positively received, will be made even higher quality and more contemporary. The tGC is to be targeted specifically at individual needs and

develop into a personally adaptable program through a strong user orientation

This is made possible, among other things, by the collection and synchronization of data. The contents of the Coachings are digitalized and individualized - thanks to a modular activation.

This enables efficient subscriber management, which adds value to the TC offers.

In addition, new processes are to be developed and existing processes optimised in the course of digitisation.

An example of this is the digitisation of the participant declaration (TE), see section 5.1.

This complex and time-consuming process can be simplified enormously with a digital solution and thus increase the efficiency of the telephone health coach. The primary communication channel of the telephone health coach should remain the telephone.

Since the telephone health coach Klassik was evaluated, the success of the telephone offer has proven itself. In addition, the personal and emotional component is highly appreciated by the participants. As a supplement to this personal communication, supplementary processes are to be digitalized and thus simplified.

The digital connection of the telephone health coach must be developed for two different target groups.

On the one hand there are the participants of the health coach. For these, in the course of the digital connection an app has been developed. The aim of this app is to cover the entire coaching

process digitally in the future. Certain data should be documented by the participants, (house) tasks should be fulfilled in the app, knowledge contents retrievable

and appointments for the following coaching sessions are managed

The other target group is the coaches. The most important goal for them is to modernize and update the usedr Coaching database from scratch. The database

must be made more contemporary, as this is the most important tool of the coaches, about which the complete work of the coaching is documented and managed. Furthermore enable the coaches to influence the participants' app to a certain extent to be able to design the coaching as individually as possible and to achieve the greatest possible success.

The app will later be implemented and made available for the operating systems Android and iOS and have a view for both mobile phones and tablets if necessary.

In the following the first ideas and possible contents of digital access are explained

and thus the requirements for the scope of functions are shown. These requirements form the basis for the detailed design phase

**2. View of the participants**

**Scope of functions of the app**

The digital access of the telephone health coach is to be realized for the participants by means of an app.

For the initial development of this app, four central core functions are considered necessary:

- Dashboard

- Diary

- Knowledge

- Communication

**Dashboard**

The dashboard is the start screen that participants see when they open the app and to which they always return when another function of the app is used

is to be.

As an idea, the participants should be able to document their daily well-being on the dashboard. The question of how they feel is usually asked in every coaching session and, from experience, is a good introduction and would therefore be ideally placed on the dashboard.

An example for the method could be the indication of the state of health on a scale of 1-10, where 1 stands for very bad health and 10 for very good health. By asking about the state of health in advance, coaches can respond to it directly. In addition to the state of health, other important vital signs could be shown directly, which could possibly also be provided by third-party devices. From a legal point of view, however, it is important that these values are relevant for coaching, for example the blood sugar value or blood pressure.

A screenshot of a social media post

Description automatically generated

Another aspect of the dashboard could be the visual representation of the coaching process be. Above is an example of the online health coach. With the help of a graph

the path of the participants should be shown. At which point did the participants start, where are they at the moment and where does the coaching still go? With this method, milestones can be shown directly and the path to the goal is made clear.

If successes are achieved, they should be clearly visible. As successes are achieved, further modular content should be activated for the participants. This incentive should serve as a motivating factor so that the participants want to continue to carry out the coaching conscientiously.

A news feed should also display tips on the dashboard. Links provide access to knowledge content, individual tips and other content. This could be, for example, information about the disease, prescriptions, exercises, etc.

**2. Diary**

The diary function serves to enable the participants to monitor their health and well-being document condition regularly and in detail, but without too much effort. You should be encouraged to document various values, such as:

- medical values

- Results of the last doctor visits

- Comorbidities

- Taking the medication

- further vital signs (if necessary)

- Nutritional Behaviour

- Drinking behaviour

- Smoking behaviour

- discussed goals.

It should be made possible that these values are automatically transferred to the database of the coaches and can therefore be viewed directly by the coaches.

By documenting all these values, the lifestyle of the participants will become more transparent for the coaches.

clearer, which allows for an individually adapted coaching to the participants' life situation. The chances of a successful coaching, which is based on the entire lifestyle are hereby increased.

**2.3 Knowledge**

The knowledge function is intended to provide content for the participants and

publish homework on the different stages of coaching, so that the participants can do this via the app.

The knowledge content, including homework, should be structured according to topic and orientate themselves on the current state of the coaching. Depending on the point at which

of the coaching where the participants are, and what the individual needs are, should it is possible to unlock the contents successively (see chapter 3.3). Furthermore there is

the consideration of applying a sensible barrier management to provide participants with to help the knowledge function about certain hurdles during the coaching has to adapt dynamically to the participants depending on the state of the coaching and the current day and be provided intuitively.

The knowledge contents are disease-specific background knowledge on the chronic diseases. In addition to these scientific facts, tips on life with chronic diseases. The existing info sheets are to be replaced without exception by integrating the contents of the info sheets into the app (see Chapter 5.2). A media library is to be made available for the participants. Also

the connection to the online health coach should be made possible (see chapter 4.).

2.4 **Communication**

The digital connection of the telephone health coach should allow a certain amount of communication between coaches and participants. This affects different areas

out.

In the future, it should be possible to send push messages to participants who remind them of appointments or tasks.

An interface to the web calendar of the TKgG should be made possible, since scheduling the coaching sessions will be conducted digitally in the future. The coaches and participants can schedule cancel or postpone.

Coaches should respond to changed values at short notice and give participants tips. This should be done in the context of situational support for the participants, for example

the coaches could intervene and motivate at short notice in case of anomalies in the app by reminding the user of the goal and giving tips on how to achieve it. Furthermore, it will be examined to what extent direct communication between coaches

and participants can be made precisely in order to clarify any questions that arise or to provide additional to send contents. This way of communication has to be more precisely determined and clarified within the framework of the overall concept.

An instant messaging function should not be made possible, as the risk of expanding the range of services and the increase in power users is too great. In addition, the resources for such an additional effort are not available. It would have to be ensured that there is a constant response to messages and this will not be possible. A unilateral messaging function on the part of the coaches would be possible, however. An example would be the publication of assignments until the next coaching session. The communication would in this case only start from the side of the coaches, to such Messages could not be replied to by subscribers.

**3. View of the coaches**

**3.1. documentation of the coaching**

The current database of coaches in the TKgG is outdated and not very intuitive. In the course of the digital connection of the telephone health coach, the database is to be updated and replaced by a modern software tool. In particular, the database is to be adapted to the needs of the coaches.

In the context of a workshop for the overall concept with the TK and TKgG, it should be ascertained which information and data is already documented in detail and to what extent the new database should be further developed to provide real added value for coaching and documentation.

An extension of the already existing functions is to take place.

The current database can be clustered into different functions:

- Administration

- Interviews

- Modules

- Phases

- Controls

You can see these functions with the subcategories in the top row of the database:

A screenshot of a social media post

Description automatically generated

At the beginning of the coaching an administrative part has to be done. Information about the insured person is stored under the tab Administration. These are things that have been transferred from the internal database with the information about the insured (TKeasy), such as name, policyholder number, etc. as well as specially created information about the coaching, for example the reason for participation, availability and the course of the

Coachings. In this section, appointments are managed, new ones are searched for and saved so that they appear in the coach's calendar. In addition, notes on the respective appointments can be created here.

Under the tab Interviews, data on the diagnosis and laboratory values are documented. The diagnosis, which becomes the participation in the coaching, as well as comorbidities

listed here. Past and upcoming medical appointments are recorded here, as well as the results of these. Finally, an interview with the insured about the illness

guided. There are predefined questions that must be answered by the insured

The main part of the coaching is documented under the tab Modules. During the modules, various topics are dealt with which the insured and the course of the disease. The topics are: Medication, drinking patterns, exercise, nutrition, smoking and the life situation. Actual recordings are made for each of the various sub-areas. Afterwards, behavioural changes or goals are defined, as well as the measures how these are to be achieved in the course of the coaching.

The part phases defines the sustainability of the coaching. The increase in knowledge about the The course of the coaching, as well as the health goals and results of the coaching are recorded. It is thus recapitulated to what extent the behaviour of the insured person has been changed in the long term.

Under the last tab Control, two different groups of participants can be viewed. On the one hand, there are the participants who do not currently have an appointment. but are still in coaching and need an appointment. On the other hand, you can see the participants who have already completed a coaching.

The new database should enable coaches to automatically display the data that the participants document in their app. This includes vital signs such as HbA1c value, insulin, blood sugar, blood pressure, and the Data of the last visit to the doctor. It is important here that only those values are synchronized which are relevant for the coaching and for which the participants agree because these health records are highly sensitive.

In addition, the daily specially documented information of the participants about the own condition, nutrition, drinking behaviour, exercise and medication automatically to

the database can be synchronized. Therefore, this does not have to be done manually during the phone calls. but is already available to the coaches at the beginning. The documentation of the coaching sessions should also be simplified by standardised documentation guidelines. This also shortens the post-processing time and introduces automatic quality assurance, since all coaches document in the same wording. The coaches should be able to successively activate content for the respective participants on their app in order to make the coaching more individual and to meet the needs of the participants.

Idea paper to be observed. In addition, these functions are intended to provide better situational support of coaching. The coaches can react to changes in the vital signs or the like depending on react and intervene. By optimizing the control of the app via the database of coaches the coaching can be better used for interventions and discussion of content.

**3.2 Appointment management**

At the moment, appointment management is handled in such a way that suitable insured persons are OVM staff can be contacted specifically by telephone. If insured persons are contacted during the If a customer expresses interest in the tGC by telephone, a TE will be sent to them. As soon as the TE is signed and returned to the OVM, the employees there will set an appointment for an initial interview via the GC calendar.

From this point on the OVM is no longer involved in the administration of the coaching, the responsibility is transferred to the TKgG. The optimisation of these processes in the OVM should not be prioritised during the overall design and should only be considered in the course of further development, as a change of this system would entail some changes in OVM, which would require further consultation.

The priority is to optimise the schedule management of TKgG in the course of the overall concept.

The appointment process runs as follows:

From the second appointment onwards, the coaches in TKgG themselves take over the scheduling about the current database. The coaches search for a free date in their own web calendar and allocate the slot to the insured. The insured persons must then note the date themselves.

This way of scheduling by the coaches is to be improved within the overall concept. For this purpose the web calendar is to be replaced by a digital appointment management tool in the database.

Appointments should be arranged and booked through the view of the coaches. With the help of this tool, push messages should be sent automatically to the insured person in order to send them to Digital Access Telephone Health Coach Page 19 of 25

idea paper to remember the phone call. There should also be the possibility to cancel an appointment

**3.3 Activation of the contents**

The possibility of successively unlocking content for participants should definitely be introduced as the new database is developed.

The aim of this successive activation is to individualize the coaching for the participants. It is to be achieved that the offer can be completely individually adapted to the needs.

Depending on the coaching process the participants are in, different knowledge contents, homework, exercises or similar will be activated by the coaches. Certain problems or interests can be addressed individually.

This individual activation should increase the motivation of the coaching of

sides of the participants, which in turn leads to better results.

**4. Networking**

**4.1 Online Coaching**

The connection to the online health coach would be an enrichment for the telephone health coach, as the latter would have a lot of professional content that would be useful for the

telephone health coach are useful. How exactly the connection to the online health coach should work still has to be analysed.

The online health coach is another service offered by Techniker Krankenkasse, which is accessible to all those insured by TK. The online health coach aims to achieve various health goals that the insured persons set themselves independently.

The health goals are:

- to increase their own fitness

- the improvement of nutrition

- Weight reduction

- improve the well-being

- Coping with stress and psychological well-being

- suffer less from headaches

- the restriction of smoking

- the management of diabetes.

The participants of the online health coach receive recommendations and challenges according to their respective health goals. A wide range of knowledge is made available to the participants of the coaching, both general health information

and the interpretation of this as well as topic-specific knowledge on the various health objectives

This includes contents for personal training and nutritional knowledge, recipes and the

Control of eating habits. In addition, various contents on stress management and relaxation are provided, as well as healthy behaviour in the job with

Self-management content. For diabetics, content on better quality of life with diabetes mellitus is provided. This content is sent in various forms to the insuredDigital access Telephone health coach Page 21 of 25

Idea paper mediated. There are information sheets, instructions and evaluations, videos, courses, training plans,

interactive documentation etc.

The offer of the online health coach is responsively programmed and is participants on mobile devices.

These above-mentioned resources, which are available through the online health coach The aim of the project, which is based on a digital connection of the telephone health coach

can be included. Thus, the already existing contents can be expanded many times over and the insured persons experience more possibilities in the course of their coaching.

In particular, the module of online coaching on the topic of diabetes could contribute positively to telephone coaching. In addition to the already existing contents, the contents of the online health coach enable an extension of the knowledge spectrum as well as the setting of goals which can be implemented daily. But also for patients with heart diseases, contents such as the basic health information, as well as the interpretation

this or contents on stress management and much more.

The complement of the telephone health coach with the online health coach is therefore highly recommended

**4.2 Electronic health record**

In recent years, TK has developed the electronic health file "TK-Safe". Within the framework of the TK strategy, this electronic file folder will gradually become

digital supply platform. The insured person decides to what extent he wants to use the offers of the TK-Safe. An important area, which perspectively here must be integrated, is that of personalised health coaching, such as

tGC. In the context of an MVP development this is not necessarily a priority, must be taken into account for the future via connection and interfaces.

A screenshot of a cell phone

Description automatically generated

**5. processes**

**5.1 Digitisation Declaration of participation**

Currently, the process of the declaration of participation is carried out by post. The participants must

sign the sent form and send it back to the TK This step should

be digitized in the future. It is to be implemented that the TE can be converted with only one click into

the app can be approved.

moments, potential participants are specifically called by OVM staff.

The participants are released to the employees after they have been automatically selected. In the telephone call the offer is presented to the insured and if interested the participant declaration is sent to them by post. This must be signed

to be sent back to T.K. The Operative Supply Management (OVM) receives

then the signed TE in the form of a scan. This is then forwarded to the employees in the TKgG. The coaching can only be started when the TE is received.

An essential part of the digital access will be to digitalize the participant declaration.

The OVM will continue to recruit the insured persons using the existing selection procedure and will have the first contact with the customer. Here the customers will be informed about the offer

and to refer to the app for the participants.

In the app, the participant should then be able to agree to the digital TE with one click.

When logging in to the app for the first time, the TE is displayed and must be confirmed with a check mark.

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**5.2 Digitisation of coach content**

In addition to digitising the declaration of participation, the contents currently sent by post are to be digitised. digital access Telephone health coach Page 24 of 25 ideas paper

The dispatch of written materials takes time, is not sustainable and all in all not modern and efficient. The digitalisation of the written material should address the participants individually.

should be digitized:

- information sheets / consultation sheets

- Flyer

- Brochures

- Worksheets

- CD's and DVD's

This coach content will be digitally displayed in the app for the participants and successively

and can be activated individually for specific needs. Information sheets, flyers and brochures should be available in digital form. In the future, the worksheets should be editable via the app so that the coach can also access the results. Also the CD's and

DVD's should be available and used in the app.

The effective use of the contents can thus be increased enormously and a temporal

Displacement by sending content is avoided.

**6. technical context or distribution context**

The technical requirements of the digital connection of the telephone health coach

is still to be defined and elaborated in the course of the overall concept.

It should be shown which systems interact with each other and how. The relationship between TK, TKgG and an external third party (eHealth company), which carries out the implementation of the digital connection, is to be described here. Which interfaces

must exist between the three actors, how will data exchange work

and further technical requirements must be described here?