

## EXHIBIT

COMMUNICATION TOOLS AND HABIT MANAGEMENT FOR THE PREVENTION OF  
CARDIOVASCULAR DISEASE

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Regarding the implementation of lifestyle changes, physicians have various communication strategies that can have an impact on patients and the community to achieve positive changes in quality of life, health improvement, and disease prevention<sup>1</sup>.

The first step to achieve effective communication between doctor and patient involves positioning and identifying the healthcare professional as an advisor in the patient's decision-making process, serving as a guide at each step of their progress. A fundamental concept is recognizing and accepting that changes are often gradual and must be individualized, like pharmacological therapy. This process involves analysis, intervention, and a cycle of improvement until the agreed-upon objectives are achieved with the patient<sup>2</sup>.

On the other hand, sustaining long-term treatments (whether lifestyle or pharmacological changes) requires organizational adjustments (such as facilitating follow-up, assembling multidisciplinary teams) and the use of communication strategies that go beyond brief consultations, including the use of social networks and available technological advances<sup>3,4</sup>.

Since the scenario for these changes is everyday life, it is essential that individuals acquire self-management skills for health in their daily lives, where different contexts, moments, and social relationships become relevant, as indicated by the strategy proposed by the World Health Organization, known as the Life Course Approach<sup>5,6</sup>.

### How to reach patient's daily lives?

Various methods are available according to the level of intervention, which are described below:

**A. Interventions at the doctor's appointment**, addressing various health-related topics related to daily routines.

**B. Interventions that extend aspects of the consultation into everyday life** using media and content selected for that patient.

**C. Community-level dissemination and communication**, involving health institutions, scientific societies, ministries, and other relevant entities.

### A. Interventions at the doctor's appointment

Despite the constraints of limited time, these meetings hold significant importance not only in terms of therapy and lifestyle modifications but also in establishing a foundational bond, representing the initial step toward effective communication. Face-to-face interactions allow for communication to be tailored based on the patient's verbal and non-verbal cues. In this context, the trust and comprehensive understanding gained through a sustained connection become crucial. This facilitates the primary care physician in building bridges between scientific knowledge and the patient's communication style, using understandable words that promote changes and identify barriers in their implementation.

The challenge lies in ensuring that the patients receive adequate information, comprehend the importance and impact of recommendations, and can integrate them into their daily lives. Throughout the year, the patient will be in the consultation for only 30 or 120 minutes, depending on the case, but the remaining time will be in their daily life.

Before recommending strategies, we must get to know the patients:

- Their biography, what they do for a living, both related to how they manage their life and health.
- The confidence they have in achieving changes.
- What they know and what skills they have related to what they want to achieve.
- What their perspective is on the proposed change.

**In which stage are they in relation to their condition:**

Have they just found out about the need to change, or have they been dealing with this problem for a while? In the first case, explanations about what is happening to them are appropriate; in the second, an inventory of what they have already done, what they have achieved, and the barriers and opportunities.

These data are part of the educational diagnosis and contribute precision when implementing modifications and achieving a bridge between scientific knowledge and people's conceptual networks and capabilities. They can be considered as "target" points, "leverage" points; For example, if the patient knows how to cook, it is easier for them to create recipes with less salt, fat or calories<sup>7,8</sup>.

Knowing the patient allows for better communication, extending beyond explanatory and descriptive aspects. For instance, using metaphors that enable connection by similarity between the new information and what the person has already acquired, establishing common ground that facilitates the patient's understanding<sup>9-11</sup>.

Consider that there may be substantial differences regarding the need for health care in each individual, with no single answer as to why and for what purpose they should take care of their health and adhere to a possible treatment. For example, with the same goal of a patient reducing salt in their meals, there can be different scenarios: a) a 75-year-old patient mentioning reducing salt intake to avoid bothering their children in the future (this is what they imagine will happen if they have a stroke); b) another patient, a 40-year-old male, accepting a low-sodium diet but asking, "Do I always have to eat without salt?" He is concerned about feeling different at dinners or social events. There are numerous scenarios, hence the importance of individualizing recommendations<sup>7</sup>.

It is important to simplify the prescription since a significant part of the burden of chronic care is the dissatisfaction caused by disrupting routines, we call habits. The great opportunity of habit changes is that they can influence multiple risk factors simultaneously, achieving a significant impact if implemented from early ages<sup>6</sup>. It is useful to choose a modification, for example, increasing vegetable consumption in the diet, which would be suitable for a set of alterations<sup>12,13</sup>.

To assess both **feasibility and barriers and opportunities**, it is necessary to conduct an analysis after the dialogue that allows identifying the reality of the person being consulted. If, for example, the obstacle to eating healthily is the lack of available time, strategies can be developed to enable easy cooking or acquiring healthy ready-made meals for this purpose<sup>7,14,15</sup>.

When assessing the possibility of implementing a lifestyle modification, it is also necessary to consider the **self-confidence** the person has in achieving the goal. This concept is at the core of the social learning theory, introduced by Alberto Bandura and extensively applied in

health education by Kate Lorig. "Self-efficacy" is one of the parameters most prospectively related to outcomes, in addition to avoiding the frustration of instructing a patient to do something they cannot achieve. If there are numerous changes to propose, some theorists recommend resisting the temptation to begin with the most significant and instead starting with what is more feasible. For instance, in a session with an overweight individual with metabolic syndrome, the instinct may be to focus on weight loss, but it might be more practical to encourage them to engage in physical activity first, even if weight loss is not immediate<sup>17,18</sup>.

In general, it is recommended to formulate a **plan that can be progressively develop** in subsequent visits, treating it as a step-by-step process within a program that will likely span several sessions. Discussing daily routines naturally helps break down asymmetries between doctors and patients. For instance, when discussing food and dietary changes, allowing patients who have gained knowledge and skills in managing their condition to share what they've learned fosters the practical "empowerment" of the patient.

It should be considered that successive consultations, even periodic check-ups, are opportunities to evaluate the process, observe progress, and provide positive reinforcements. It will also be necessary to evaluate and to some extent, have tolerance for setbacks, where according to J. Prochaska, change is a process that includes the possibility of falling and starting over. Beyond conceptualization, it is crucial to actively undergo and consolidate the process<sup>19</sup>.

A well-established set of concepts and evidence suggests that specific approaches may be more successful in promoting the adoption of habit changes. While **there is no singular theory**, the study of behavior and its changes draws from various disciplines, including philosophy, pedagogical and psychological schools, innovations in companies, and even behavioral economics, among others. The PRECEDE-PROCEED model, originating from the Centers for Disease Control and Prevention (CDC), proposes that, upon conducting a situational diagnosis, the best theory for the posed problem should be employed. This model is one of the most widely used in health education and promotion, offering a comprehensive, systemic framework for understanding the various determinants of health. Some of the concepts mentioned earlier stem from practical experience in applying this model<sup>7,20</sup>.

In a clinical trial **comparing the effect of two communication models** in patients with high blood pressure, one that assumes people lack knowledge and merely need to be taught (assuming that to know is to do), as commonly proposed, and another that adjusts communication tailored to individual needs, following the mentioned guidelines. This approach prioritizes recognizing what individuals have already accomplished, their existing knowledge

and skills, and their potential for promptly enhancing their self-management. Starting from a baseline of 40%, blood pressure control increased in the second group, reaching 40% and 70%, respectively, without altering medication. Similar results were observed when working with family physicians and implementing organizational changes<sup>16,21</sup>.

## B. Consultation extended to daily life using media

Consultation naturally extends and gets closer to everyday life, to routines, decisions, and uncertainties. This can be enhanced and made even more effective if some educational content is developed to accompany it and is placed on an appropriate platform (a website, a WhatsApp group, social networks, and even Instagram, which can allow organizing content like in a library).

The content should be precise, consistently motivating, and should target key behaviors for achievement or serve as a helpful reminder. The effect is completed when the patient (teaches) feels they have something new to share with their family, neighbors, etc., and then we delve into how to do it<sup>22,23</sup>.

## C. Communication with the community

As we transition from a paradigm of treating diseases to promoting health, it is crucial for this information to reach all possible levels. This requires a focus on modifying educational content at the initial, primary, and secondary levels, actively coordinating efforts, and concentrating on recommendations to foster healthy habits. The actions and content should be straightforward, promoting understanding and easy application, thereby instigating positive changes from an early age.

## D. Quality criteria for health communication

Since the early initiatives, the concept of quality has become more complex<sup>22,24</sup>. When starting to design content, it's essential to assess its scope. There's a foundational level that is informational, and a communicative level comes into play when audiences are segmented, and the content aligns with their specific needs.

### 1. The first step. Define the audiences To whom/ who is the message directed?

A) **To the person who consults:** It will accompany a professional act, a consultation as "reinforcement" material that will be delivered by the intervening professional.

B) **To the community:** It will be read at any time by anyone.

Evaluate whether it will be directed towards individuals who are encountering the topic for the first time or those who are already familiar or have taken initial steps in dealing with it. Knows/doesn't know, takes care/doesn't take care, is afraid/isn't, has skills/doesn't. In addition to age, gender, having children or dependents, adults, etc.<sup>7</sup>.

If audiences are not clearly defined, only generalities will be communicated that will be of helplessness<sup>22</sup>.

### 2. Develop an idea for multiple platforms that integrate into everyday life.

Initially, a core concept is developed, and then communication is tailored based on the usage characteristics of each platform. Here, the usage contexts are considered (the traditional Sender, Message, Receiver model is no longer sufficient).

### 3. Design statements following quality criteria

In the design of a statement, various considerations came into play:

A) **Communication structuring and the inverted pyramid concept:** The most important information should be presented at the beginning. This is a strategy originating from operational communication in wartime (where communication could be cut off at any moment, so essential information is shared first). This contrasts with a **scientific statement**, which is typically structured differently (introduction, material and methods, results, and conclusions).

B) **Ease of reading and comprehension, or health literacy.** The specific language of each discipline is a traditional barrier to this intention, often being the first obstacle in communication. This coexists with adequate accuracy (unambiguous language, explanation of usage context and limitations), and tone. Using examples, anecdotes or concrete situations allows for greater understanding. Including the voice of the people, in the form of questions, testimonies, the speech becomes **polyphonic**<sup>25</sup>.

C) **The title** clearly states the message's objective, defining the topic.

D) **Subheadings** are an essential tool for maintaining attention and establishing new "entry points".

Other quality criteria: Grouping similar concepts, avoiding negations and double negations, specifying who is communicating, providing dates, citing sources correctly, and avoiding plagiarism<sup>22,25,26</sup>.

### 4. Visual language and conceptual integration

Visual language contributes on its own, providing color, vitality, art, and tacitly communicates the value of health and life for the institution or service creating the communication. It adds structure to the text, influences reading modes, enhances meaning, and promotes identification<sup>25,26</sup>.

### 5. Social networks: generating possibilities for new communication channels.

Most concepts of effective communication remain relevant but are now subordinate to the effects they will produce. The **importance of interaction** through questions, surveys, reactions, and other resources is highlighted.

### 6. How to implement these practices?

There is no single path, and doing something is always better than doing nothing. It is useful to form interdisciplinary teams within institutions to act as mediators between health professionals interested in communication, communicators, and audiovisual designers with teaching experience and a commitment to health promotion.

Additionally, **medical information websites for the community can be utilized, containing quality content with reliable information suitable for patients.** Examples of sites with ongoing updates include Medline Plus Mayo Clinic, CDC, and Learn Health from the Italian Hospital of Buenos Aires<sup>23</sup>. Including young doctors in teams who are familiar with new modes of social communication facilitates a quicker transition to opportunities for health-focused communication and people's well-being.

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