Dietetic Counselling in Primary Care
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As established in the Third Andalusian Health Plan and the Second Quality Plan, the Andalusian Public Health System has among its priorities the improvement of public health encouraging or fostering healthy lifestyles in the social surroundings.

In fact, the lifestyle recommendations that health officers make to the users (of the health system) represent an important prevention and treatment resource, as these officers, specially primary care professionals, are in a privileged position to establish an effective relationship as adviser. This has been stated repeatedly by several social surveys, which show, also, that this relationship between health professional and user is one of the main sources of information and education when tackling physical activity and nutrition.

Therefore, presenting this guide is a great pleasure, as it has been conceived to provide primary care health professionals enough and appropriate resources and knowledge to obtain the best results through this methodology; that is, to advise patients over healthy lifestyles.
This booklet on Dietetic Counselling in Primary Care—completed thanks to a large work group made up with several members of the different Associations and Societies involved in the matter at hand, as well as technicians from the Andalusian Health System (SAS, in Spanish) and the ministry (autonomous government)—has selected, after rigorous examination of scientific evidence, those aspects that have shown themselves to be the most effective in their teaching and introduction in the Andalusian Primary Care centres.

I would like, therefore, to congratulate this Dietetic Counselling guide’s team, as it will doubtlessly become an efficient and useful tool in the hands of the primary care professionals as they strive to increase the Andalusian’s capacity for adopting healthy lifestyles and eating habits that will improve their general health.

 Mata Jesús Montero Cuadrado
 Consejera de Salud
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Introduction
1. Introduction

Nowadays, we are fully aware of the part that lifestyles, specially diets and physical exercise*, play in the population’s health (1) and in the genesis of diseases such as obesity, diabetes mellitus, high arterial blood pressure, coronary diseases, dyslipidemia, or various oncological processes, mainly those that affect the prostate, colon or breast (2,3,4).

Cardiovascular disease is the main cause of premature death associated with modifiable living habits and the most incapacitating disease in the Western world. Malignant neoplastic processes are, in their whole, the second cause of death in Spain, after circulatory system diseases (5). The World Health Report submitted by the World Health Organization (WHO) in 2002 suggests that 60% of the world's mortality rate and 47% of the world's morbidity are due to non-transmittable diseases. These figures are expected to increase until 2020 (6). High arterial blood pressure, high cholesterol, obesity, lack of physical activity and smoking are the most important risk factors in these non-transmittable diseases (4). Obesity rates present such an alarming increase that we can consider it a 21st century epidemic. This problem is affecting, more and more, younger population groups, and WHO -in its Health Targets XXI report- considers obesity and sedentary lifestyle priority problems in developed countries (7).

* In this document we distinguish between three levels:

- Physical Activity: Any body-movement caused by the skeletal muscles that results in energy consumption, when it's done with the appropriate frequency and intensity, and for the appropriate length of time. So we can include all our everyday and professional activities. Increasing physical activity is the lowest recommended level for people with a sedentary lifestyle, without excluding exercise and sport.

- Physical Exercise: Characterized by the deliberate repetition of muscular contraction to improve the body’s performance. This intentional increase of the functional capacity is the main difference between exercise and physical activity. Physical exercise is a voluntary activity that is planned, structured and repetitive and entails energy consumption, resulting in a better overall body-performance. Physical exercise is, therefore, a voluntary body training that seeks continuous performance improvement regardless of whether the body is healthy or not.

- Sport: Structured physical exercise, and under a set of rules. Two types of physical activity: training and competition.
To fight this obesity epidemic and promote health, many proposals have been put forward, as the Worldwide Strategy for Eating Habits, Physical Activity and Health (WHO8), the Plan for the Promotion of Physical Activity and Balanced Diet (Junta de Andalucía9) and more recently, the NAOS strategy (Public Health Ministry10). The rise of diseases of this type in our society has triggered several epidemiological surveys in an attempt to know and understand the factors involved and to design the most suitable strategies to stem, control or neutralize these factors. Up until now, healthcare has been the only answer to this problem, and it’s only now that Europe, through its 2003-2008 Public Health Program, is stressing the necessity of an integral answer to approach determining factors such as nutritional imbalance and lack of physical activity through health promotion and morbidity prevention (11).

According to the figures of the 2003 National Health Survey (12), 29.08% of Andalusia’s population between 2 and 17 years old are overweight or obese. These figures are similar to those of the enKid research (29.4% of the population between 2 and 24 years old), making Andalusia hold the second place, statistically, in the young overweight and obese population chart of Spain (13).

In Andalusia, the DRECA study provides us with figures that show the prevalence of other factors related to obesity: 4.8% of the adult population is diabetic, 19.8% has high blood pressure, 15% have high cholesterol and 6.2% hipertrigliceridemia14.

According to the 2003(15) Andalusian Health Survey, 87% of those polled and older than 16 do little or no physical exercise in their normal activity, and 52% do none at all in their free time. This survey also shows that sedentarism increases with age. Doctors have recommended some kind of physical exercise to 23% of those polled. In 1999, this percentage was of 20%.
1. Introduction

This recommendation is aimed more at women than men, and as age increases, so does the number of users who are recommended stepping up physical activity, and so does the frequency of medical visits increase.

Recent studies reveal the benefits of the Mediterranean diet and of its role in the decrease of mortality in general (16, 17). Traditionally, Andalusia's eating habits have revolved around the Mediterranean diet, characterized by a big consumption of vegetables, fruit, fish and olive oil. Between 1960 and 1968, the diet of the Spanish population was well within the parameters of a typical Mediterranean diet. Since the 70s, we have moved away significantly from this diet, moving on to less cardio-healthy eating habits full of saturated fats and cholesterol (18). In fact, Andalusia is one of the regions with a bigger non-recommended nutrients consumption increase.

According to figures from the 2004 the Food Consumption Panel of the Ministry of Agriculture, Fishery and Food products, the consumption of meat, fish, olive oil, vegetables and fruit was below the national average (19). This, together with an increase in sedentary and other non-healthy lifestyles like smoking and excessive drinking, make necessary the implementation of action courses that modify these habits that can increase the population's morbi-mortality (18).

Andalusia, in the framework of the Third Andalusian Health Plan and of the Second II Public Health System Quality Plan, has among its priorities the improvement of public health encouraging or fostering healthy lifestyles (20) in the social surroundings. The Plan for the Promotion of Physical Activity and Balanced Diet pretends to improve the population's health adapting physical exercise and diet to the individual's condition and needs. With this, we are trying to meet the population's social demands, with the aim of not only preventing illness and disease but also promoting a healthy lifestyle.
We need to make changes to improve lifestyles in all population groups, not only those which are a high risk group. Even if this is only managed to a small extent, the population will obtain maximum tenable and accumulative benefits (8).

The effectiveness has been evaluated by several authors. As we will see in the next section of this guide, the brief counselling's effectiveness is proven in patients with chronic diseases such as diabetes, high blood pressure and obesity.

As lifestyles are related amongst themselves, effectiveness increases if we approach several factors at once (21,22). Lifestyles can be seen as people's normal way of life, and they are considered one of the most influential factors in the population's health. Lifestyles not only include health-related habits -as are diet, physical exercise o sedentary habits, smoking, etc.- but also include people's way of thinking and behaving with themselves, in their interpersonal relationships, with their surroundings, in their control over their life projects, their abilities, hopes, etc. Seeing as lifestyles affect social and personal circles, it's easy to understand that intervention initiatives are one of the most problematic and complex aspects, as we enter or get very close to socially conditioned spaces and those linked to individual freedom. Besides, the population is not homogenous (social class, gender, age, surroundings, expectatives, resources). In the face of a single line of counselling on healthy lifestyles, each population group will take notice in a particular way, distinguishing what they can use in accordance to their resources and using strategically that which they can fit in with their possibilities, as shown in a recent survey made in this region (23).

When approaching lifestyles -that is, when we set in motion a dietetic counselling-, difficulties will increase if we focus exclusively in those aspects linked to personal change without tackling the social context that determine those habits we are aiming to change. Focusing too much in changing personal behaviour relegates the consideration of the real conditions to achieve this change. Bearing this in mind, when faced with
1. Introduction

giving nutritional advice we must be aware of the multiple and influential factors. It is also essential to keep in mind the characteristics of the patient groups, and to identify how the social and individual factors influence them (education, access to certain food products, preferences and family tastes, available cooking time, age, etc.). The Dietetic Counselling will have to adapt its contents and goals, keeping in mind the health-opportunity differences of population groups, and it will have to adapt with utmost accuracy its intervention strategies. If it does so, it could become a highly efficient tool when improving those population groups` lifestyles.

Health professionals in general, and those that carry out their work in primary care in particular, are in a privileged position to approach the promotion (or activities for promoting) of a healthy lifestyle and prevention of diseases linked to unhealthy lifestyles.

This guide aspires to reach a consensus regarding available scientific evidence of the Dietetic Counselling, and it also aspires to become a useful tool for the Primary Care health professionals, a tool that permits them apply this scientific evidence to their everyday tasks and practice.
Methodology
In order to make this Dietetic Counselling, a work group was set up and composed of representatives of the Andalusian Family and Community Medicine Society (SAMFYC in Spanish), of the Andalusian Community Nursery Association (ASANEC in Spanish), of the Andalusian Clinical and Dietetic Nutrition (SANCYD in Spanish), and also technicians of the Andalusian Public Health System (SAS in Spanish) of the (autonomous government) Health Ministry.

Work on this guide began with a request to the Andalusian Health Technologies Evaluation Agency for a report of the situation of nutritional advice and physical activity. We received studies made by the U.S Preventive Services Task Force (USPSTF) and the Canadian Task Force on Preventive Health Care (CTFPHC).

Complementing the above, we consulted other sources such as the recommendations made by the WHO and several Spanish scientific societies, mainly the Community and Family Society, (SEMFYC in Spanish), of Endocrinology and Nutrition (SEEN), and Cardiology (SEC).

The most relevant scientific literature has been reviewed through different internet pages and magazines and articles related with other health problems (smoking, alcohol24). From the technical point of view, they provided important information on the Counselling and its organization in primary care centres.

With this material, the work group has made a Dietetic Counselling guideline based on current evidence and recommendations, as well as in the current organization of primary care services in Andalusia.

Lastly, the contents of the Dietetic Counselling guideline were reviewed by experts not linked to the work group, and their contributions were added to the document.

Although there are different ways of classifying the evidence levels and the degrees of recommendation, most of the studies we reviewed
follow the classification system used by the US Agency for Health Care Policy Research (currently Agency for Healthcare Research and Quality-AHRQ-), so that when talking about available evidence we'll only mention these when the classification is substantially different.

<table>
<thead>
<tr>
<th>AHRQ Clasificación</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ia:</td>
<td>Evidence comes from the meta-analysis of randomized and controlled clinical tests</td>
</tr>
<tr>
<td>Ib:</td>
<td>Evidence comes from at least one randomized and controlled clinical test</td>
</tr>
<tr>
<td>Ila:</td>
<td>Evidence comes from at least one controlled and exploratory study, well designed and not randomized</td>
</tr>
<tr>
<td>Ilb:</td>
<td>Evidence comes from at least one almost-experimental, well designed study or research</td>
</tr>
<tr>
<td>III:</td>
<td>Evidence comes from non-experimental descriptive studies, well designed as comparative, correlautive or case and control studies</td>
</tr>
<tr>
<td>IV:</td>
<td>Evidence comes from records or experts and/or clinical experiences of prestigious medical authorities</td>
</tr>
</tbody>
</table>

Grados de recomendación, en función del nivel de evidencia disponible:

- **A**: Scientific evidence levels Ia and Ib.
- **B**: Scientific evidence levels Ila, Ilb and III
- **C**: Evidence level IV.
- **X**: This intervention or process entails a clear risk
Evidence and recommendations
There is increasing evidence that indicates that promoting health through the adoption of healthy living habits pays off in (health) benefits at a much lower cost than medically treating any high-risk group or dealing with the related diseases.

Although there are few general population surveys that allow us to establish the effectiveness of recommendation and counselling on healthy lifestyles -since they require intervention studies that are difficult to design, carry out, follow and evaluate- most of the institutions consulted recommend giving the dietetic counselling, so we could say that there exists, at least, a degree C of recommendation.

As for the evidence obtained after reviewing scientific literature (Appendage 1), we can extract or reach the following conclusions:

1. The national and international institutions and organizations that express their concern over unhealthy lifestyles are numerous and important, and they insist on the need for laying out general and specific strategies to take on this problem, in order to improve general health.

2. There is solid scientific evidence to attest the effectiveness of acting or intervening on the kind of diet and the practice (or the lack) of physical exercise in users with risk of chronic, non transmittable diseases, and in secondary prevention in users that already suffer these diseases.

3. There are few available general population surveys that we can use to establish the diet-related healthy life habits advice and recommendations. In spite of this, most of the consulted institutions and organizations recommend putting in practice the dietetic counselling as a way of preventing rising diseases or ailments that are causing high morbidity and mortality, specially in developed countries.
So we can say that our evidence is documented proof and some prestigious authorities’ clinical experiences. As for making physical exercise, the existing volume of proof is somewhat bigger. Also, some intervention studies are beginning to be published with encouraging results.

4. It is important to emphasize that, as a general rule, dietetic counselling must always go together with the recommendation of physical exercise, suited to the population group that it's aimed at, and with some advice on the subject.

5. The most effective interventions are those that combine nutritional education, physical exercise and behaviour-related advice, designed so that patients adopt ability and motivation and receive the necessary support to modify unhealthy patterns.

6. The interventions that have shown themselves to be the most effective are those made by Primary Care health professionals (G.P. and nursing staff), specially trained, due to the higher accessibility of the population to this level of care or attention.

7. Intensive individual or group intervention (multiple 30 minutes or longer sessions) present better short and long term results than short or moderate length interventions.

8. These interventions must be established as prevention strategies, integrated in large-scale Public Health programs.

9. In a condensed way, interventions must strive, at least, to achieve:

   - A normal energy balance and weight, limiting fat-related energy consumption, increasing intake of fruit, vegetables, wholemeal cereal, dried fruit and nuts, cutting down on sugar and salt (sodium), no matter its origin.
3. Evidence and recommendations

- A minimum of 30 minutes of regular and of moderate intensity physical exercise everyday in the general population. In older population, exercises that will strengthen muscles and balance-keeping training.
Dietetic Counselling Objectives
4. Dietetic Counselling Objectives

GENERAL

• Reduce morbimortality linked to an unsuitable diet and sedentary lifestyles.

OPERATIVE

• Detect, in primary care, overweight and obese users, sedentary lifestyles and/or the risk of diet-related chronic, non transmittable diseases.

• Inform on health risks derived of sedentary lifestyles and excess body weight (overweight and obese users).

• Healthy life habits training: balanced diet, physical activity and the offering of educational resources.

• Make follow-ups of users included in the Counselling.

• Reinforce those changes that have been obtained.

• Evaluate the interventions.
5

Dietetic Counselling Organization
Based on the available scientific evidence commented in the previous section, we can organize dietetic counselling in the following way:

1. Target population

- Overweight or obese adults, people with a sedentary lifestyle and/or under risk of developing diet-related non transmittable chronic diseases (amongst others, diabetes, heart disease and cancer)
- General adult population. We must consider the inclusion of all those who request it, not only those approached of the health professionals` initiative.

2. Motivation stages and intervention strategies

Before the intervention, it's very important to know and value the degree of the patient's motivation to eliminate the risk factors (excess weight, sedentary lifestyle and others), as a disagreement between therapeutic intervention and motivational stage will result in resistance to change. To avoid this, we recommend using the transtheoretical change stages (Prochaska and Diclemente28,29, see appendage 3 ), employed in the anti-tobacco advice. Added to that, the fact that health professionals are familiar with this model makes it a very useful tool.

Next, a brief summary of the recommended type of intervention depending on the patient's motivation stage, regardless of the existence or not of other risk factors linked to sedentary life habits, excess weight, obesity, nutritional unbalance:

<table>
<thead>
<tr>
<th>Pre-consideration</th>
<th>Consideration / Preparation</th>
<th>Action</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inform about risks</td>
<td>Encourage change</td>
<td>Educate</td>
<td>Strengthen behaviour</td>
</tr>
</tbody>
</table>
DIETETIC COUNSELLING

Dietetic Counselling algorithm in primary care

**DETECTION**

- BMI, PA, Habits, RF *
- Motivation gauging and consumption assessment

**INTERRUPTION (Action)**

(Without other RF) (With other RF)

In surgery hours/ nursery
Balanced diet and P. exercise information
Support material
Record intervention in Medical History

**INTENSIVE COUNSELLING**

Individually or in groups
Trained health staff
4 to 6 sessions
Support material
Record intervention in Medical History

**FOLLOW-UP**

(Maintenance)
Follow-up Frequency
Positive reinforcement
Record

(No Maintenance)
Assess motivation
Record information

* AHB: Arterial high blood pressure
  DM: Diabetes Mellitus
  PA: Physical activity
  RF: Risk factor(s)
  BMI: Body mass index
3. Stages

DETECTION

Detection will be carried out by Primary Care health professionals through the following steps:

- In the target population, and when the opportunity presents itself, they will measure height and weight to calculate Body Mass Index (BMI), they will assess life habits, usual food consumption and physical activity through a semi-structured interview using a validated questionnaire (physical activity and Mediterranean diet adherence questionnaire, included in appendages 4 and 5) and they will check for other risk factors.
- Inform on the risks and dangers of prolonging an unhealthy lifestyle, and explain the importance of its modification so as to improve general health and prevent diseases.
- Assess the patient's degree of motivation for changing his/her lifestyle, following Prochaska`s and Diclemente`s model.
- Depending on motivation and the existence or not of other risk factors, health staff will offer Basic or Intensive Counselling.
- Offer educational and support material.

Some physical activity examples, according to degree of effort

<table>
<thead>
<tr>
<th>VERY LIGHT P.A.</th>
<th>MODERATE P.A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Be sitting or standing up</td>
<td>- Walking at 5,5-6.5 km/hour</td>
</tr>
<tr>
<td>- Drive car or truck</td>
<td>- Working with mortar and plaster</td>
</tr>
<tr>
<td>- Lab work</td>
<td>- Weeding</td>
</tr>
<tr>
<td>- Typing</td>
<td>- Carrying and piling bundles</td>
</tr>
<tr>
<td>- Play musical instruments</td>
<td>- Scrub floors</td>
</tr>
<tr>
<td>- Sewing, ironing</td>
<td>- Heavy shopping</td>
</tr>
<tr>
<td></td>
<td>- Ride a bicycle</td>
</tr>
<tr>
<td></td>
<td>- Skiing, dancing, playing tennis</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>LIGHT P.A.</td>
<td>HEAVY P.A.</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>- Walking on flat terrain at 4-5 km/hour</td>
<td>- Climbing with a load</td>
</tr>
<tr>
<td>- Tailoring Home repairs</td>
<td>- Tree cutting</td>
</tr>
<tr>
<td>- Woodwork</td>
<td>- Working with shovel and pickaxe</td>
</tr>
<tr>
<td>- Electrical housework</td>
<td>- Basketball, swimming, football, mountaineering</td>
</tr>
<tr>
<td>- Kitchen work</td>
<td></td>
</tr>
<tr>
<td>- Washing clothes by hand</td>
<td></td>
</tr>
<tr>
<td>- Light shopping</td>
<td></td>
</tr>
<tr>
<td>- Golf, sailing</td>
<td></td>
</tr>
<tr>
<td>- Table tennis, volleyball</td>
<td></td>
</tr>
</tbody>
</table>
**DIETETIC COUNSELLING**

**Body Mass Index Assessment**

<table>
<thead>
<tr>
<th>BMI</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 18.5 Kg/m²</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 - 24.9 Kg/m²</td>
<td>Normal weight</td>
</tr>
<tr>
<td>25.0 - 26.9 Kg/m²</td>
<td>Overweight grade I</td>
</tr>
<tr>
<td>27.0 - 29.9 Kg/m²</td>
<td>Overweight grade II</td>
</tr>
<tr>
<td>30.0 - 34.9 Kg/m²</td>
<td>Obesity Grade I</td>
</tr>
<tr>
<td>35.0 - 39.9 Kg/m²</td>
<td>Obesity Grade II</td>
</tr>
<tr>
<td>40.0 - 49.9 Kg/m²</td>
<td>Obesity Grade III</td>
</tr>
<tr>
<td>≥ 50.0 Kg/m²</td>
<td>Extreme Obesity</td>
</tr>
</tbody>
</table>

**ACTION**

**BASIC COUNSELLING:**

Offer brief counselling (5 minutes approximately) on physical activity and balanced diet.

**Regarding diet:**

- Balance daily food consumption and physical activity to maintain a regular weight or to permit weight-loss in overweight/obesity cases.

- Limit fatty energy consumption by:
  - Limiting fried food and sauces,
  - Limiting fat found in cold cuts, cold meat, whole dairy products, fat-rich meats as pork or lamb, butter and margarine.
  - Preferably using, with moderation, olive oil for cooking.
  - Cut down on or avoid pre-cooked food and commercial sauces (they can contain important quantities of trans fat).

- Increasing intake of fruit, vegetables of all kinds, wholemeal cereal and dried nuts (the latter not recommended in overweight/obesity cases).

- Foment eating fish at least 3 - 5 times a week.
Limit energy-rich and micronutrient-poor food such as: soft drinks, commercial juices, chocolate, ice creams or cakes.

Limit eating salt, and preferably use iodized salt.

Have 3 main and 2 light meals a day. Avoid "snacking".

Remind patients that "dietetic", "weight-losing" or "diet" products are not always low-calorie.

Regarding Physical Activity:

We recommend, specially for those whose occupational activity doesn't entail physical effort, to:

• Make use of the opportunities that present themselves during the day to increase physical activity (walk up or down stairs instead of taking the lift, walk when distances are feasible, etc).

• Reduce free time sedentary habits to a minimum (cutting down on television or sitting down time, for example) and foment healthy activities (walking with family or friends, help with the domestic chores and maintenance).

• For those who don't do any physical exercise, recommend at least 30 minutes of regular physical exercise of moderate intensity (walking, preferably), at least 5 times a week. Subsequently recommend increasing aerobical physical exercise (long walks, running, swimming, cycling, etc).

INTENSIVE COUNSELLING:

It aspires to offer higher intensity counselling as a second action guideline after the basic counselling in those patients that present risk factors. Preferably, it will be carried out by nurses following the nursery
process model adapted to Dietetic Counselling (Appendage 6), with the collaboration, if necessary, of other health professionals.

We present the intensive dietetic counselling in Primary Care as a service aiming for the following goals or objectives:

• General Goal:
  - To reduce morbimortality associated with an inadequate diet and sedentary lifestyles.

• Intermediate Goal:
  - To establish healthy eating habits.
  - To establish adequate physical exercise, and reduce sedentary habits.

• Specific Goals (Cognitive, Emotional and Psychomotor):
  - To know and understand the importance of eating and its effects on health.
  - To know the foundations of a healthy diet.
  - To know the importance of physical activity, and be aware of the health risks of its lack and of sedentary habits.
  - To know the exercise(s) and level of physical activity suitable to each person.
  - To be willing (want/wish) to keep to a healthy diet.
  - To be willing (want/wish) to keep an appropriate physical activity level and to reduce sedentary habits.
5. Dietetic Counselling Organization

- To have the ability of drawing up and/or choosing "diets" suitable to each person.
- To be able to adapt the daily diet to the family and social surroundings.
- To be able to establish a physical activity plan adapted to the user's personal characteristics (time, resources, limitations...).

This advising can be done individually or in groups, and must include at least:

- Motivational interview aimed at identifying barriers and detecting problems and difficulties.

- Agreeing on and establishing targets (what has to change), tackling them in order of importance and follow-up.

- Offering suggestions, giving nutritional advice, fomenting exercise, modification of behaviour and help to lose or reduce weight.

- Evaluation of progress and expected results after each session (individual or group).

- Individual sessions will last a minimum of 30 minutes, while group sessions will last a minimum of 60 minutes.

- The number of sessions will range from 4-6, but can change according to the characteristics of the patient and the process.

- Follow-up for 6-12 months.
When giving Intensive Counselling, see in Appendix 6 the assessment focusing on problems related to nutrition and physical exercise, Nursery Diagnosis, main Expected Results (NOC) and the main Interventions (NIC).

**INTENSIVE COUNSELLING**

COMPLETE NURSERY ASSESSMENT
EDUCATIONAL ACTIVITIES: MOTIVATION

Care Plan
(Diang- Targets-Interventions)

GROUP ACTIVITY
4 to 6 sessions
Can be replace with individual activity if necessary

PERSONALIZED AND INDIVIDUAL EDUCATIONAL ACTIVITY
- 1 session (more if necessary)

ASSESSMENT AND REINFORCEMENT
- Targets Assessment/Evaluation
- Reinforcement: Knowledge, Motivation, Abilities.

Number and content of sessions according to the process.
Individual activities with possibilities of a group session (mainly motivational).
FOLLOW-UP:

Follow-up sessions will be scheduled for all patients included in the Counselling.

Counselling can be done by telephone, at the health centre, and/or in house-visits (for bed-ridden or unable to move users).

- A follow-up session will be scheduled, at least, every 3 months.

- In any case, any visit to the health centre will be used for positive reinforcement.

- Evaluation of lifestyle changes (physical activity and diet), BMI, weight-loss and specific parameters (waist circumference, blood pressure, glycaemia, lipid profile).

- Those patients who have received Basic Counselling and don't show positive results but are highly motivated will receive Intensive Counselling.

- The follow-up period will be of 12 months, unless specific issues advise a different length of time.
Register and Evaluation System
6. Register and Evaluation System

Register procedures, with data from the Patient's Medical History, will be established, and the possibility of using that information for the evaluation of the program will be considered.

Registering the counselling in the medical history

If we give dietetic counselling, we must mention the fact in the user's medical history.

The giving of advice will be registered in the Digital History (Diraya application), we'll write it in the Attendance Sheet or follow-up register, in Action Plan (e.g. "I give dietetic counselling, etc"). It can also be written in the Problem List, as it's easier to see when opening the History, and also easier to look for when building an indicator.

We will use the application to register Size, Weight, BMI (in Constants Sheet), and any other clinical notes.

Temporarily, in those health centres that still don't have the TASS application, the intervention can be recorded as seen above (Attendance Sheet or register, Action Plan section, and Problem List).

Information System for the Assessment and Follow-up of the Educational Intervention

We propose creating an information system that allows following-up the counselling, as well as an indicator system that tells us the effectiveness of said counselling:

- Percentage of people who have received dietetic counselling/ population of the ZB Salud.

- Percentage of overweight and/or obese who have received counselling on nutrition and/or exercise.
Information gathering medium: Diraya application, through the Data Exploitation Module. If this Module is not available, information will be gathered by hand.

**Intervention Results Information System.**

At a later stage, the results of the Counselling in terms of Intervention Health Impacts. In the future, especially if Digital Medical Histories are widespread and data exploitation was feasible, we could extract very interesting information (pre and post intervention BMI analysis in temporary sets, linked to risk-groups interventions, etc).
Bibliography
7. Bibliography


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