Revista CENIC. Ciencias Biológicas
ISSN: 0253-5688
ISSN: 2221-2450
editorial.cenic@cnic.edu.cu
Centro Nacional de Investigaciones Científicas
Cuba

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Revista CENIC. Ciencias Biológicas, vol. 49, no. 3, 2018
Centro Nacional de Investigaciones Científicas, Cuba
Available in: https://www.redalyc.org/articulo.oa?id=181261083016

Comunicación Corta

Health councils can reduce the risk of non-communicable diseases: A guide for the health council

Los concejos de salud pueden reducir el riesgo de enfermedades no transmisibles: Una guía para el consejo de salud

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Revista CENIC. Ciencias Biológicas, vol. 49, no. 3, 2018

Centro Nacional de Investigaciones Científicas, Cuba

Received: 12 March 2018
Accepted: 21 August 2018

Redalyc: https://www.redalyc.org/articulo.oa?id=181261083016

Abstract: A previous study published by Family Doctors (FDs) at the polyclinic *Dr. Tomás Romay* located in the historical centre of Havana, Cuba, verified the impact of professional health advice on health determinants related to the risk of non-communicable diseases (NCDs) in apparently healthy individuals. The objective of this article is to present the employed health-counselling guide and its usefulness in the fieldwork. To achieve the result, it was decisive (I) the face-to-face transmission of the essential elements of health promotion; (II) personalized health advice taking into account the individual determinants; (III) motivation for a healthy lifestyle as a cultural heritage; (IV) a health communication guide as an advisory tool for general practitioners. The electronic version of the guide and database was developed at National Center for Scientific Research (CNIC) and was refined during the project with the participation of the family doctors involved in the study. It is available in digital form or printed. This document presents the guide in some detail and suggests its use in the prevention of NCDs. The complexity of the NCDs risk requires a personalized approach in addition to the general prevention measures for the entire population. It is recommended that Family doctors to be interconnected in the network to facilitate the exchange of related experiences, and invite them to participate in the improvement of the guide. It is concluded that the proposed guide can be a useful tool in the prevention of NCDs.

Keywords: Non-communicable diseases, prevention, determinants, communication, health.

Resumen: Un estudio anterior publicado por médicos de familia del policlínico Dr. Tomás Romay en La Habana, Cuba, verificó el impacto del asesoramiento profesional de salud sobre los determinantes de salud relacionados con el riesgo de enfermedades no transmisibles (ENT) en individuos aparentemente sanos. El objetivo de este artículo es presentar la guía para consejos de salud empleada y su utilidad en el trabajo de terreno. Para alcanzar el resultado fue decisivo (I) la transmisión cara a cara de los elementos esenciales de promoción de la salud; (II) asesoramiento de salud personalizado teniendo en cuenta los determinantes personales; (III) motivación para un estilo de vida saludable como acervo cultural; (IV) una guía de comunicación de salud como herramienta de asesoramiento para médicos generales. La guía, su versión electrónica y base de datos se desarrollaron en el Centro Nacional de Investigaciones Científicas (CNIC) y fue perfeccionada durante el proyecto con la participación de los médicos de familia involucrados en el estudio, está disponible en forma digital o impresa. El

presente documento presenta los detalles de la guía y algunos resultados que sugieren su utilidad en la prevención de ENT que propone la OMS para alcanzar en el año 2020. Los resultados indican que complejidad del riesgo de ENT hace necesario un enfoque personalizado, además de las medidas generales de prevención para toda la población. Es recomendable que los médicos de familia estén interconectados en la red para facilitar el intercambio de experiencias relacionadas, e invitarlos a participar en el perfeccionamiento de la guía. Se concluye que la guía propuesta puede ser una herramienta útil en la prevención de ENT.

Palabras clave: Enfermedades no transmisibles, prevención, determinantes, communicación, salud.

INTRODUCTION

In its first Global Status Report on Non-Communicable Diseases 2010, World Health Organization (WHO, 2011) addressed non-communicable diseases (NCDs) as the leading global causes of death and the major health problem worldwide for the time being. Cardiovascular diseases, cancer, respiratory diseases and diabetes are the most frequent illnesses and causes of premature death. There is much progress in treatment of NCDs caused dysfunction and distress, but little in healing. Once an NCDs diagnosed most patients need medication for the rest of their lives. Some patients respond well to therapeutic measures, suffer less and enjoy almost normal life expectancy, many do not. By now NCDs treatment causes 70-80% of healthcare expenses in industrialised countries. High NCDs total costs threaten equal access to advanced healthcare. Cumulated economic losses caused by NCDs in 2011-2015 were projected at 7 trillion USD for middle and low income countries if health policies would not change. High impact interventions for reducing the NCDs burden would have required 11.2 billion (WHO, 2016). A huge prevention potential is poorly used. NCDs urge healthcare to reconsider its disease driven approach. Cuban family medicine is an efficient and well-tried model of health driven medicine. The current paper presents a tool for increasing the effectiveness of this model in reducing NCDs risk.

When the Global Status Report was issued in 2010, NCDs caused two-thirds of deaths worldwide, 80% of them in low- and middle-income countries. Two years later, in 2012, 68% of all deaths worldwide were due to NCDs, 40% of them prematurely.2 In 2015 NCDs caused 70% of all deaths, 48% prematurely (WHO, 2014). WHO's Global Action Plan for the Prevention and Control of NCDs 2013- 2020 aims at lowering the overall the mortality from NCDs by 25% until 2025 (Riley & Cowan, 2015). To this end it calls for at least 10% relative reduction of harmful alcohol intake, 30% relative reduction of tobacco use, stop of rising obesity incidence, 10% relative reduction of insufficient physical activity, 30% relative reduction of salt/sodium intake, 25% relative reduction of elevated blood pressure, stop of rising diabetes incidence, at least 50% of eligible individuals under drug therapy and counselling including blood sugar control to prevent heart attacks and strokes, 80% availability of basic technologies and essential medicines for NCDs treatment. WHO

member states were invited to come up with corresponding national action plans. In 2015 WHO published a first NCDs progress monitor (Fernández Oliva et al., 2014), actualized in 2017 and 1918. The latter informs about NCDs related activities of each WHO member state including health targets and statistics, regular health examinations, multi-sector health strategy, measures to reducing of tobacco and harmful alcohol use, healthy diet, physical activity, attention for NCDs in primary care, drug therapy.

At the present, NCDs prevention efforts focus on smoking, reduced physical activity, harmful use of alcohol and unhealthy diet. The four prominent risk factors definitely need to be controlled population-wide. However, they are not the primary causes of NCDs, but follow from underlying biological and mental traits, lifestyle, and social conditions such as education, food supply and preference, housing, employment, transport, social coherence of the population, natural environment etc. Sustainable prevention has to tackle 'the causes of the causes'. Healthcare, social policy, economy, education, mass media, and the people themselves contribute to a multi-sector prevention approach to reducing NCDs risk. In industrialised countries NCDs health promotion is becoming popular and effective to some extent in the better-off strata. Most people in middle- and low-income countries and less well-off people in affluent societies go on facing a high and rising NCDs burden. There is need for more effective NCDs prevention. As NCDs risk depends on widely differing individual bio-psycho-behavioural patterns and social conditions, sustainable NCDs prevention requires a personalised approach in addition to algorithmic medical and inter-sector measures. The latter are indispensable but insufficient to exhaust the huge NCDs prevention potential. Medical sciences and healthcare are called upon to come up with a strategy that considers the personal and social diversity of NCDs risk in addition to algorithmic performance.

To assess the feasibility and effectiveness of a personalised NCDs prevention approach ten family doctors of the policlinic Dr. Tomás Romay in the historical centre of Havana had launched the project DISSFA (in Spanish, *Determinantes individuales y sociales de salud en la medicina familiar*), in 2012. For one year 1,500 widely healthy volunteers participated in the project, 900 continued for a second year, one half each in a study, the other half in a control group. The study group members had four individual NCD risk focussing health consultations per year, the control group none. The consultations followed a communication guide developed at CNIC (National Centre for Scientific Research) and refined during the study jointly with the physicians involved. The guide focuses on major individual health determinants such as constitution, lifestyle and living conditions. It serves as an orientation for face-to-face consultations that explore the specific health conditions of the individual with a particular view on NCDs resistance and risk related constitution and conditions of life. The family doctors had been advised to dive into the particular NCDs related conditions of the individual and come up with a tailored advice for health promotion and risk reduction. The results after

one-year study were previously published (Welsh, Davis & Shaw, 1993). The frequency of overweight, smoking, and alcohol misusing individuals had decreased slightly in the study group compared with the control group. Fewer individuals with faintly increased blood pressure were seen in the study group, a few more new cases of diabetes appeared in the control group. All changes were discrete. In the second year group the changes excelled those of the first year. The numbers of overweight, smoking and alcohol misusing individuals significantly decreased in both studies, by 43% and 15% respectively, for smoking by 55% and 13%, for alcohol misuse by 69% and 25%.

Positive, non-significant changes also occur in control group, probably due to intensified population-wide prevention measures. The differences between the study and the control groups show the impact of the additional personalised approach. Average body weight, Body Mass Index (BMI), blood pressure, nutritional preferences and physical activity improved discretely in the study group. The incidence of hypertension, diabetes, muscular-skeletal disorders and dyslipoproteinaemias was slightly lower than in the control group.

As quoted above, the *Global Action Plan for the prevention and control of NCDs 2013- 2020* of WHO (Riley & Cowan, 2015) suggests reducing of alcohol misuse by 10%, smoking by 30% and stop rising obesity in twelve years, i.e. until 2025, aiming to reduce the overall mortality of NCDs by 25%. The outcome of the project DISSFA excelled these targets in two years. As the communication guide is considered crucial for the outcome and recommended for wider application, the current paper presents it in more detail than so far published.

Communication Guide for Health Counselling

Health status:
a.-Toxic habits
Do you drink alcohol? no_, occasionally_, frequently_, daily_
Do you smoke? no_, occasionally_, frequently_, daily_
b.-Known chronic diseases
Coronary heart disease _, vascular brain disease_, hypertension_, diabetes_, cancer_, osteoarthritis _, respiratory disease_, renal disease_, others:
_____
_____

Nutritional habits
Nutritional habits are evaluated taking in account the proportions of ailments groups present in the alimentary pyramid (Goldman et al., 1981).
1. Mark your preferences from 1 to 5 for each of the following foodstuff group; 1 being your least and 5 your most preferred one
A (fruit, vegetables, salads) __
B (rice, beans, bread, pasta, potatoes, yucca, sweet potatoes) __
C (milk, yogurt, cheese, ice cream) __
D (red meat, fish, poultry, eggs) __
E (sweets, flan, jam, drops etc.) __

To Each group was assigned a value of in correspondence with the area occupied in the nutritional pyramid: A – 36; B– 34; C – 16; D – 10; E – 4.

Frequency of consumption evaluation:
100 - always; 50 - frequently; 25 - sometimes; 10 - rarely or never
The evaluation of each nutritional group considers three dimensions: preference, frequency, nutritional value, and the result of the evaluation is obtained by

multiplying: preference (P) x frequency of intake (P) x food nutritional value (V), according the formula: Σ (P. F. V) / 5 = qualification
The sum of the products corresponding to each group has a maximum value of 5000. This number is multiply by 0.002 to obtain 100 as maximal qualifications. The final evaluation could be lower according the preferences and frequency values. A nutritional habit is considered as good 90 - 100; acceptable 80 - 89; not so good 60 – 79; bad $\leq$ 59.

Physical activity evaluation

Taking into account the individual possibilities (for example: aptitude, and physical limitations), the guide evaluates tree levels physical capacity in taking as precedent the metabolic equivalent for cardiovascular evaluation (Heleen et al., 1994).[8] Eventually it is possible a subject promote to a superior level according to its physical strength improvement

First Level value: 100
The subject is able to practice sports or other type of guided physical activity, or sprint, or climb loaded several flights of stairs without difficulty (Check mark):
Daily (100) _____ periodically (50) _____ occasionally (25) _____
Second Level: 75

Is able to perform no guided physical exercises, slow jog or climb stairs not more than two flights (unloaded):
Daily (100) _____ periodically (50) _____ occasionally (25) _____
Third Level: 25

Daily activity needs some effort; can walk at normal speed during at least 30 minutes and is able to climb a flight of stairs with some difficulty though.
Daily (100) _____ periodically (50) _____ occasionally (25) _____

The general evaluation of physical capacity is obtained by summing frequency value and the level value and dividing by 2.

Eventually it is possible a subject to promote to a superior level according to its physical improvement.
(The following aspects of the Guide are evaluated with a similar procedure).

Sleep
Quality: well (100) ____, with difficulty (50) _____, bad (25) _____.
Frequency: always (100) ____, frequently (50) _____, rarely (25) _____.

Pain or discomfort
Intensity: light (100) ____, moderate (50) ____, intense (25) _____.
Frequency: never (100) ____, sometimes (50) ____, frequently (25) _____,

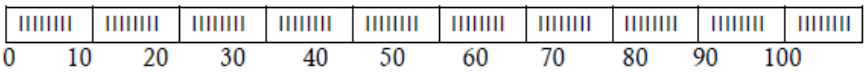
Social and cultural activity, participation
Frequently (100) ____, sometimes (50)____, rarely or never (25) _____.

Social and familial coherence
Family: excellent (100) ___, not so good (50) ____, bad (25) _____

Friends: excellent (100) ___, not so good (50) ____, bad (25) _____
Fellow workers: excellent (100) ___, not so good (50) ____, bad (25) _____

Subjective health perception

Health today compared with last visit? equal__ better__ worse__
Rate your state of health today on a scale between 0 (worst imaginable) to 100 (excellent)



The scale is taken from EuroQol (Stephani, Opoku & Quentin, 2016).

Recommendations done

Toxic habits _, nutritional habits _, physical activity _, socio-cultural activity _, Family and social coherence_
others_____
_____
Drug prescriptions Non___
Kind of drugs: lipid lowering __, blood glucose controlling__, blood pressure controlling__, anti-inflammatory__ others: _____
_____

A digitized database was installed in note-books (others electronic devises or hard support might also be used) which were distributed to each family doctor, and the collected data by each one was then stored in a central computer for statistical evaluation.

Discussion

As the NCDs burden is brought about by only four groups of afflictions - cardiovascular diseases, cancers, respiratory diseases and diabetes, and only four main risks factors are blamed to trigger them - smoking, physical inactivity, harmful drinking and unhealthy diet -, it is consistent to take an algorithmic approach to NCDs prevention and claim: No

smoking, more physical activity, less alcohol, healthy diet. That is what healthcare rightly does support by other sectors such as education, media, sports, food industry etc. The algorithmic inter-sector proceeding is definitely essential and does have an effect, but is falls short. NCDs are on the rise despite massive efforts. The NCDs burden is paradoxically even aggravated by strongly curative biased medical progress but low healing rates. Continuously growing curative costs threaten equal access to contemporary care. Equality though is a fundamental commitment of the medical profession and healthcare. Reducing of NCDs morbidity by more effective prevention is the only way out of the dilemma. Healthy lifestyle is becoming popular in some countries, health oriented efforts gain momentum in societal, economic and commercial sectors. Nevertheless, the outcome is still poor due to variegated underlying conditions.

Harmful habits use to follow from multiple complex social, socio-economic and natural environmental conditions the health implications of which depend on the biological and psychological constitution of the individual. The algorithmic approach to changing the four harmful behavioural patterns blamed to cause the four main NCD groups cannot cope with the complexity of the wide variety of underlying causes and their multiple interactions. A more promising prevention strategy has to address the individual traits and conditions in addition to algorithmic measures. Medicine and healthcare are called upon to come up with a strategy that complements the algorithmic approach to NCDs prevention with a personalised one.

The NCDs dilemma urges modern medicine to reconsider the relation of each two aspects of three of its essential competences. (i) *Treating patients* vs. *avoiding disease*. More effective health promotion and prevention of disease is needed to slow down curative needs, avoid human suffering and allow for equal access to up-to-date care. (ii) *Natural scientific* vs. *social scientific* concepts and methods. More personalised social-medical performance is required on both the individual and communal levels. (iii) *Algorithmic* vs. *casuistic* proceeding. The algorithmic approach is indispensable for general measures as well as for orientation in the particular case. More effective prevention though needs casuistic proceeding in addition, i.e. consideration of individual traits, conditions and behaviour, and face-to-face motivation.

The project DISSFA aimed to contribute to strengthening the casuistic approach by testing the feasibility and effectiveness of personalised NCDs risk focussed health counselling. The counselling guide developed for this purpose at CNIC and enhanced jointly with the family physicians involved in the project and presented in some detail in this paper was easy to handle and well accepted by population and physicians. Its use proved effective. The targets of the *WHO Global NCDs Action Plan 2013-2020* (Riley & Cowan, 2015) for reducing alcohol misuse and smoking until 2025 were reached in two years. Labour investment though was high. 20-30 min per consultation is much time for a busy policlinic, but definitely needed for effective counselling and welcomed by the

people who appreciate thorough health oriented communication with their doctor and respond appropriately depending on the motivation skills of the physician. Once the procedure perfected one consultation per year and citizen is expected to meet the targets for NCDs risk reduction set by the *WHO Global Action Plan* (Riley & Cowan, 2015). It might be considered to convert the common yearly health check of every Cuban into a communication guide steered health consultation.

Perfection of the procedure refers to the following issues: - *Continuous optimisation of the guide* should become a common concern of family physicians worldwide. - As health counselling along the guide must not require more than 20-30 min once a year the outcome highly depends on the communication and motivation skills of family physicians. Proper training should be offered. - Media should be invited to popularise health counselling, elucidate the significance and stimulate the receptiveness and cooperativeness of the population. - The guide should be made available as *app*. - Family physicians involved in an NCDs risk reduction programme might become interconnected via *intra-net* for exchange of information and suggestions including optimisation of the counselling guide. - Central data collection and accessibility of data should be arranged, possibly by *cloud computing*, in any case under safeguarding confidentiality of sensitive personal data.

Cuban healthcare is well prepared for coming up with a model for slowing down the NCD pandemic. Prevention of disease is fundamental to its concept. The results are noteworthy: life expectancy 78.45 yrs. (f 80.45, m 76.50), infant mortality 4.1 yrs. per 1000 live births in 2017. Primary care by family physicians and primary care teams has a crucial share in these results. Family physicians work in the midst of the society. They are well familiar with the particular social and natural environment and enjoy the respect and confidence of the people, which is essential for effective comprehensive health counselling for NCD risk reduction (Stephani, opoku & Quentin, 2016). An extensive research project of Cuban family physicians could elaborate a model for the reduction of NCDs risk, NCDs incidence and premature death due to NCDs and monitor the outcome under real life conditions

Acknowledgments

The autors highly acknowledge:

- The excellent work carried out by the FDs of the Policlinic Dr. Tomás Romay involved: Bermúdez-Conrrado S, Bormey-Quiñones MB, Calderón -Izquierdo I, Cordova -Rojas L, González -Caraballo M, Hernández -Pérez E, Padrón- Duquesne J, Pereira- Delisle R, Reyes -Naranjo P, Rizo- Escalona E, Rosas-Perdomo YM, Toirac - Rodríguez M.;
- The statistical evaluation of the data by Fernandez-Travieso JC, Reyes-Naranjo P, Alvarez E., Cruz Y, from the National Centre of Scientific Research (CNIC), Havana;

- The generous sponsoring of equipment by Dr. Gunter Frenzel, Tagesklinik Esplanade, Berlin-Pankow; Prof. Dr. June Crown, London; Dr. Helmut Recknagel, Berlin; Prof. Dr. Ina Veronika Wagner-Ellinghaus and Jürgen Ellinghaus, Potsdam; Gerda Daenecke, KarEn e.V., Berlin; Dr. Günther Jonitz, President of the Physicians' Chamber of Berlin;
- The logistic support by the Office of the City Historian and most valuable conceptual participation of the City Historian of Havana himself, Dr. Drs. h. c. mult. Eusebio Leal Spengler.

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