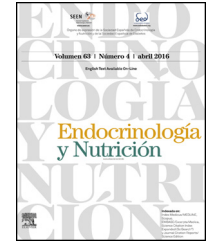




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ORIGINAL ARTICLE

Detection of people at risk of diabetes in community pharmacies of Pontevedra (Spain) (DEDIPO)[☆]

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KEYWORDS

Screening;
Diabetes risk;
Diagnosis;
Cost;
Savings;
Community pharmacy

Abstract

Objective: The aim of this study was to detect people at risk of suffering diabetes or changes in carbohydrate metabolism and to refer them for possible diagnosis to health care centers. The number of diagnoses and costs for the pharmacy were recorded.

Methods: A cross-sectional, observational study was conducted in community pharmacies in Pontevedra in September–October of 2014. The Findrisc questionnaire was completed by pharmacy users over 18 years old. If Findrisc score was ≥ 15 , capillary blood glucose was measured, and the participant was referred to a physician if the value was ≥ 110 mg/dL. The main variables included score in the Findrisc questionnaire, number of diabetes diagnosed, and cost of the service.

Differences between the groups were calculated using a Chi-squared test, a Student's *t* test, and/or a Wilcoxon test.

Results: This study was conducted in 180 pharmacies on a sample of 4222 users, including 992 (23.5%) with a high or very high risk of diabetes ($F \geq 15$). In the 1060 basal capillary blood glucose tests performed, mean glucose level was 110.2 (SD = 20.4) mg/dL (56–254). The Galician Health Service sent information about 83 of the 384 (9.1%) subjects referred to a physician: 28 (33.7%) of them were diagnosed with diabetes (3.1% of the sample), and 26 (31.3%) were diagnosed with prediabetes (2.8% of the sample).

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Cost per diagnosed subject was €184.22 per subject with diabetes and €96.86 per subject with prediabetes.

Conclusions: The proportion of subjects with new diagnosis of diabetes (3.1%) shows the high efficiency of a screening program for hidden diabetics implemented at community pharmacies as the one presented here.

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PALABRAS CLAVE

Cribado;
Riesgo de diabetes;
Diagnóstico;
Coste;
Ahorro;
Farmacia comunitaria

Detección de personas en riesgo de padecer diabetes en farmacias comunitarias de Pontevedra (DEDIPO)

Resumen

Objetivo: Pilotar una actividad profesional consistente en la detección de personas en riesgo de padecer diabetes o alteraciones del metabolismo de los hidratos de carbono y derivación para posible diagnóstico en los centros de salud. Comprobación del número de diagnósticos y evaluación del coste para la farmacia.

Métodos: Estudio observacional transversal en farmacias comunitarias de Pontevedra en septiembre-octubre de 2014. Cuestionario Findrisc a usuarios de la farmacia con más de 18 años. Con Findrisc ≥ 15 determinación de la glucemia basal capilar y derivación al médico con ≥ 110 mg/dL. Variables principales: puntos en cuestionario Findrisc, número de diagnósticos de diabetes, coste del servicio.

Las diferencias entre grupos se calcularon con el test de chi-cuadrado, t de Student o test de Wilcoxon.

Resultados: El estudio se realizó en 180 farmacias. La muestra incluyó a 4.222 usuarios. De ellos, 992 (23,5%) tenían alto o muy alto riesgo de diabetes ($F \geq 15$). Se realizaron 1.060 test de glucemia basal capilar, con un resultado medio de 110,2 (DE = 20,4) mg/dL (56-254). De los 384 (9,1%) sujetos derivados al médico, el Servicio Gallego de Salud envió información de 83: 28 (33,7%) diagnosticados de diabetes (3,1% de la muestra) y 26 (31,3%) de prediabetes (2,8%). El coste por sujeto diagnosticado fue de 184,22 € y por sujeto con diabetes o prediabetes fue de 96,86 €.

Conclusiones: El número de diagnósticos de nuevos pacientes diabéticos, 3,1% de la muestra total, muestra la alta eficiencia de un programa de cribado para diabéticos ocultos realizado en farmacias comunitarias como el que aquí se presenta.

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Introduction

The 2009 National Health Survey¹ estimated the prevalence of diabetes in Spain at 5.9% (5.8% in females and 6.0% in males). A recent study conducted in Spain² found that almost 30% of the population had some change in carbohydrate metabolism, and that the overall age- and sex-adjusted prevalence of diabetes mellitus was 13.8%. Diabetes was undiagnosed in almost half the cases (6.0%).

In a study reported in 2011 based on data from "electronic health information systems" about which no details were given, Domínguez González et al.³ estimated a 4.7% prevalence of type 2 diabetes mellitus (T2DM) in Galicia, with a wide variability between the different health areas (4.2–6.4%).

People with undiagnosed T2DM are at a high risk of developing cardiac disease, dyslipidemia, high blood pressure, and obesity as compared to the nondiabetic population. Therefore, early detection and early treatment decrease disease progression and severity, as well as future complications.^{4,5}

The risk of suffering diabetes is currently estimated as being similar to cardiovascular risk. The Findrisc (FINnish Diabetes RiskScore) questionnaire, validated in 2012 for the Spanish population by Soriguer et al.,⁶ is considered one of the most efficient screening tools.

Screening for diabetes using the Findrisc questionnaire is recommended by international bodies such as the National Institute for Health and Care Excellence (NICE)⁷ and the Canadian Task Force,⁸ and by national organizations such as the Spanish Society of Diabetes (SED).⁹ It has been used in public diabetes detection campaigns,¹⁰ health care centers,¹¹ and community pharmacies (CFs).^{12–14} The experience of the screening of undiagnosed subjects by pharmacists at CFs, based on the estimation of the risk of developing DM using the Findrisc questionnaire,^{12–14} has been a very positive one.

Therefore, because of the accessibility and proximity to the population of community pharmacies and pharmacists, the Pontevedra medical association, in collaboration with the Galician Health Service (SERGAS), decided to undertake at the community pharmacies of Pontevedra a professional

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