TITAN CRETE

Developing a Primary Care <u>Tobacco Dependence</u>
<u>TreAtment Network in Crete, Greece</u>

Final Report

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Executive Summary

Background: Rates of tobacco use in Greece are among the highest in all of Europe and few tobacco users are seeking support with quitting. Primary care providers have been identified as an important group of health care providers for delivering cessation treatment to patients.

Purpose: Our goal is to develop a network of trained GPs serving primary health care (PHC) providers in Crete, Greece that will integrate treatment of tobacco dependence into daily clinical practice and become champions of tobacco control and create a new "node" of the Global Bridges network.

Scope: The 'Tobacco treatment TrAining Network in Crete' (TiTAN Crete) Initiative aimed to train family doctors in the Heraklion region of Crete in evidence-based tobacco treatment. A multi-session training program and tools to help busy providers integrate discussions about smoking cessation into their visits with patients was adapted from an evidence-based initiative successfully applied in Canada ('The Ottawa Model for Smoking Cessation') for use in primary care practices in Greece.

Methods: A pre-post evaluation was conducted to evaluate the impacts of the program on provider satisfaction, knowledge, attitudes, intentions regarding evidence-based tobacco dependence treatment. Providers who participated in the TiTAN program completed a survey before the training program, at the end of the 1-day training, and again 4 months later. From each of the provider practices, a cross-sectional sample of eligible tobacco users was recruited before and after the TiTAN-Crete intervention program was implemented to assess changes in the rates at which tobacco dependence treatment (5As model; ask, advise, assist, arrange) was delivered to patients.

Results: More than 52 primary care physicians and residents took part in the program. Post-CME surveys documented very high levels of satisfaction among primary care provider who participated in the GP training program with rates of satisfaction being 4.7/5 and the majority of providers identifying the training exceeded their expectations. The pre-post evaluation of the TiTAN program documented significant increases in provider's knowledge and importantly the rates at which providers delivered the 5As evidence-based smoking cessation treatment to their patients. **Sustainability:** Based on the success of the TiTAN Crete project, our team has formed a partnership with four medical schools in Greece and Cyprus who will support the further scale-up of the TiTAN program in these two southern European countries. We have been successful in securing a grant from the Global Bridges 2016-2018 competition that will support this work.

1.0 PROJECT PURPOSE

1.1 Overall Goal

The goal of the TiTAN Crete project is to develop a network of trained GPs serving primary health care (PHC) providers in Crete, Greece that integrate treatment of tobacco dependence into daily clinical practice and become champions of tobacco control policy. This capacity development initiative was designed to support the creation of a new "node" of the Global Bridges network. The project involves the local adaptation of an evidence-based approach successfully applied in Canada, and post-training follow-up to enhance sustainability and network development.

1.2 Project Aims and Activities

The specific aims and activities undertaken as part of the TiTAN Crete project are summarized below.

Aim 1: To develop a multi-component tobacco treatment training program for PHC providers in Crete, Greece.

Activity 1.1: Develop a faculty of tobacco treatment experts, PHC providers, and stakeholders who will deliver tobacco treatment training to the PHC providers.

Activity 1.2: Create a curriculum/training program on tobacco treatment for PHC based on national and international experience and best practice guidelines.

Aim 2: To adapt and deliver the provider/practice resources to ensure maximal sustainability among PHC providers in Crete, Greece.

- **Activity 2.1:** Conduct a needs assessment with PHC providers in Crete.
- **Activity 2.2:** Produce a set of tools in Greek, which are designed to support the 3As model of tobacco treatment.
- **Activity 2.3:** Deliver advanced tobacco treatment training to the existing practice-based research network within PHC in Crete.
- **Activity 2.4:** Perform program evaluation to inform program refinement.
- **Activity 2.5:** Engagement of PHC practice networks for continued expansion of the Global Bridges tobacco treatment network in Greece.

2.0 PROJECT SCOPE

2.1 Background & Context

Greece has the highest smoking prevalence among members of the European Union, estimated at slightly above 38% of the adult population. (4) In 2011, smoking accounted for almost 200,000 hospital admissions (8.9% of the national total), with attributable hospital treatment costs calculated at over 554 million Euro, which represents 10.7% of the national hospital budget. (5). Notably though, despite this enormous burden to the healthcare system, our research has indicated that a significant percentage (44%) of tobacco users in Greece are interested in quitting in the immediate future. (6)

The European Tobacco Treatment Guidelines as well as other international guidelines recommend smoking status be documented among all patients and all current tobacco users be offered advice to quit and support with quitting including counseling and pharmacotherapy. (7,8) Primary care practitioners in Greece have access to a large number of tobacco users. However, despite the evidence supporting the efficacy of smoking cessation interventions, our team has documented a practice gap in the rates at which 5As smoking cessation interventions are delivered by primary-care practitioners. ^{10,11} This gap in clinical practice is especially true in developing countries or in countries under fiscal constraints, such as Greece. Moreover, previous research performed by our team has also indicated a significant lack of knowledge in terms of smoking cessation among GPs and health care professionals. The vast majority (95%) of PHC providers and family medicine residents have not received formal tobacco cessation training, offering an important opportunity to intervene and influence professional practice.

This project will build on the significant experience of the University of Ottawa Heart Institute in influencing PHC provider behaviors and attitudes related to tobacco control, an approach known as the Ottawa Model for Smoking Cessation and the experience and assets created as part of the TiTAN Crete Project (2014-2016). Two evaluations of the Ottawa Model for smoking cessation in primary care clinics (k=35) documented significant increases in tobacco treatment delivery; an average 16-23% increase in rates of offering support (range 10-40%) and patient quit attempts.(9)

3.0 THE TITAN CRETE PROGRAM

3.1 Setting and Participants

The target audience for the TiTAN Crete program was the PHC professionals practicing in the catchment area of the Practice Based Research Network, a primary care provider group affiliated with the Clinic of Social and Family Medicine at the University of Crete. Providers were located in Heraklion, and the surrounding region, Crete, Greece. These practices serve a defined population of 135,761 residents of which 38% of adults are estimated to be tobacco users.^{6,15}

3.2 Theoretical Framework

Ajzen's the Theory of Planned Behavior (TPB) has been used to guide intervention design. ²⁵ Several tactics were employed within the training curricula to enhance uptake into practice which are grounded in behavioral change theory. Specifically the intervention program targeted: i) provider attitudes towards tobacco use and treatment, ii) the establishment of new social and clinical norms related to tobacco treatment in primary care practice settings (normative beliefs), iii) increasing providers perceptions about the ease of delivering tobacco treatment (perceived behavioral control), and iv) providers intentions to deliver 5As (ask, advise, assess, assist, arrange) treatments to patients.

3.3 The TiTAN Crete Intervention Program

The TiTAN Crete program has adapted the existing curricula and resources originally developed at the University of Ottawa Heart Institute (The Ottawa Model for Smoking Cessation) and which are specific to primary practice settings. To facilitate maximum uptake the intervention program was adapted to reflect: language; cultural appropriateness; local patient beliefs and attitudes regarding tobacco-use and cessation; local social and clinical norms; provider perceptions surrounding 5As delivery; and practice characteristics.

The intervention included a 1-day tobacco treatment training program for general practitioners, two booster education sessions and the dissemination of provider and patient resources. The booster



sessions and practice tools were designed to reinforce the adoption of the new practices.

Dr. Constantine Vardavas and Dr. Pareskevi Katsaounou at the Sept 2015 TiTAN Kick-off Training

TITAN CRETE TRAINING PROGRAM

Core Training: The TiTAN Crete training program consists of a one-day core session addressing tobacco use with patients in the context of a busy primary care practice setting. The training includes information regarding: the neurobiology of nicotine addiction; health effects of tobacco use; the role of primary care providers in motivating cessation; evidence-based tobacco treatment practices; techniques for delivering brief cessation advice; conducting a quit plan and follow-up visit; use of first-line cessation pharmacotherapy; motivational interviewing techniques; and, special populations. The curriculum design was designed to be 2/3 theory and 1/3 practical. The program employs teaching techniques including role-play and case-study approaches known to enhance practice change. The training program is based on evidence-based practices as outlined in the European Tobacco Treatment Guidelines.

Booster Sessions: Two booster 3-hour sessions were delivered 1- and 3-months after the core training. The booster sessions were designed to reinforce the adoption of new practice behaviors and offer practical skills-based training focused on patients in the GP's own practice. Booster session #1 will focus on conducting initial and follow-up smoking cessation visits for patients ready to quit. Booster session #2 focussed on cognitive behavioral counseling techniques.



4.0 EVALUATION METHODS

4.1 Evaluation Design

A pre-post, evaluation design was employed. All providers were surveyed before, immediately after the TiTAN training and again 4-months later to assess changes in provider satisfaction, knowledge, attitudes, intentions. From each of the participating practices, a cross-sectional sample of eligible tobacco users was recruited before and after the 'Tobacco treatment TrAining Network in Crete' (TiTAN-Crete) intervention program was implemented to assess changes in the tobacco treatment outcomes of interest in both intervention and control practices.

4.2 Data Sources/Collection

All providers completed a survey pre and post intervention. In addition a sample of consecutive patients were screened for eligibility in the waiting rooms of all participating GP offices. Eligible patients who agreed to participate in the study provided informed consent and completed the survey at the end of their clinic appointment (exit survey). The survey will collect information about both outcome and predictor variables. Four months following implementation of the intervention program a second cross-sectional sample of patients was recruited and completed exit surveys in all intervention practices.

4.3 Measures

Program Adoption: Participation in TiTAN-Crete Global Bridges training program components; use of Global Bridges Project Toolkit.

Provider Knowledge: Provider knowledge of evidence-based tobacco treatment guidelines was assessed using a brief 5-10 item knowledge assessment developed by project team.

Theory of Planned Behavior Constructs: Attitudes, Beliefs, Control Beliefs, Subjective Norms, Normative Beliefs, Perceived Behavioral Control, Intentions in next 6-months) related to tobacco treatment delivery were assessed using pre-post intervention provider survey.

Provider Satisfaction and recommendations for improvement: The post-assessment provider survey examined key themes related to program satisfaction, and sustainability including: quality of TiTAN training program, quality of TiTAN support materials, feasibility of maintaining tobacco treatment delivery in 80% of patients, barriers, suggestions for improvement, suggestions for continued engagement of primary care practitioner network.

Provider Performance in the Delivery of Cessation Treatments: Performance in the delivery of each of the 5As was assessed via exit interview with eligible patients. The survey asked participants to respond either "yes" or "no" or "don't know" regarding whether their PHC provider asked them about their smoking status (ask); advised them to quit smoking (advise); assessed their readiness to quit (assess); provided assistance with quitting (assist); prescribed pharmacotherapy, provided self-help materials, and arranged follow-up support (arrange).

5.0 PERFORMANCE REPORT

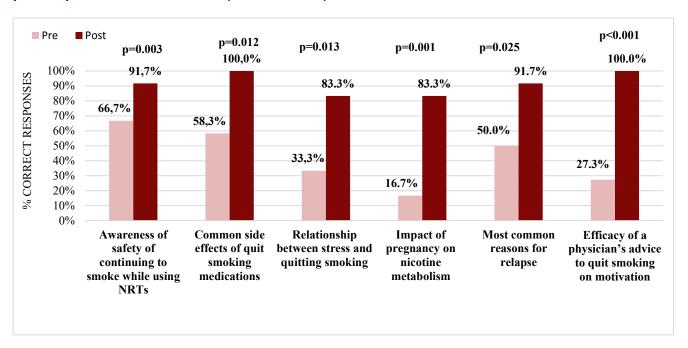
5.1 Provider Training

A total of 52 primary care providers (16 general practitioners and 36 family medicine residents) participated in the TiTAN Crete Training Program in September 2015. Two booster sessions were held. The first included two sessions in October and November 2015 and the second occurred in January 2016. The booster sessions were attended by 90% of the GP participants.

5.2 Provider Knowledge

The Global Bridges TiTAN-Crete project has provided some of the first high quality data to characterize knowledge, attitudes, and rates of tobacco treatment in Greece. Provider knowledge of evidence-based tobacco treatment practices was found to be very low when measured at baselines. Significant increases in knowledge were documented in 6/13 of the knowledge domains between the pre and post assessment (See Figure 1).

Figure 1: Provider reported knowledge of evidence-based smoking cessation practices prepost Implementation of TiTAN (Providers=14)



5.3 Provider Satisfaction

Post-CME surveys documented very high levels of satisfaction among primary care provider who participated in the GP training program with rates of satisfaction being 4.7/5 and the majority of providers identifying the training exceeded their expectations. In addition to surveys conducted, a focus group session was held in November 2016 with participating GPs to solicit feedback on their experience from the program, including components of the program that were most helpful and areas they would recommend be changed or added to enhance the success of the program.

5.4 Delivery of Evidence-Based Smoking Cessation Treatments

At baseline we identified a significant practice gap in the rates at which 5As smoking cessation interventions are delivered by PHC practitioners with 44.8% of patients reporting their PHC provider provided brief advice to quit in the previous 12-month. Furthermore, rates at which assistance with quitting was delivered were very low: 17.8% for assist with quitting; 1.7% for prescribing pharmacotherapy; 5.4% of provide self-help materials; and 2.5% for arranging follow-up.

Following the TiTAN intervention significant increases in provider treatment rates across all of the 5As were documented. Figure 2 and 3 presents preliminary results of the pre and post assessment conducted as part of the TiTAN Crete project at the index visit (same day surveyed) and the 12-months prior to the index visit.

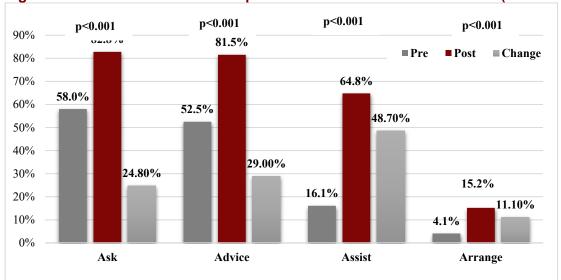
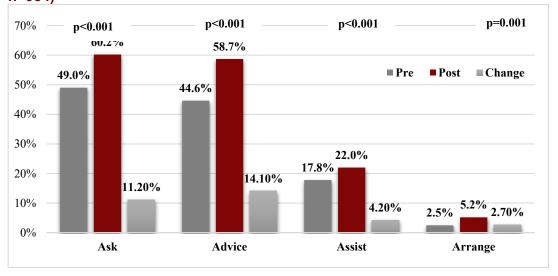


Figure 2: Rates of 5As Pre-Post Implementation of TiTAN at Index Visit (Providers=14, n=984)

Figure 3: Rates of 5As Pre-Post Implementation of TiTAN at 12 months Visit (Providers=14, n=984)



5.5 Provider Cessation

While not a primary objective of the Crete project, the project was able to support cessation among GPs who were tobacco users. ¾ GPs who reported tobacco use at baseline were quit at the follow-up. The GPs attribute their success with this quit attempt to the TiTAN program. We feel this is an important unintended outcome of the program as personal tobacco use among GPs is associated with lower rates of intervention with patients.

5.6 Dissemination Activities

The TiTAN team has delivered 11 presentations on the project at both local, European and International meetings and conferences. A list of presentations is found in section 5.0. Our team has published our evaluation protocol in Tobacco Prevention and Cessation. Two additional manuscripts reporting on the outcomes of the evaluation are in preparation and we hope to have these submitted in 2017.

5.7 Capacity Building Activities

Two student trainees have been working with the TiTAN Crete project. Ms. Mixaela Makrogiannakis successfully defended her master's in public health thesis in November 2016. Ms. Makrogannakis thesis examined characteristics of tobacco users identified in primary care practices as part of TiTAN Crete and examined predictors of readiness to quit. Ms. Charis Girvalaki is a PhD candidate who is looking at the overall evaluation outcomes of the TiTAN Crete project and will defend her thesis in 2017. Ms. Girvalaki has already used here experience with the TiTAN project to expand her involvement in European Tobacco Control activities and is currently involved as Coordinator of the EPACTT project, a European-based tobacco treatment training program for health care professionals.





6.0 PROGRAM ASSETS

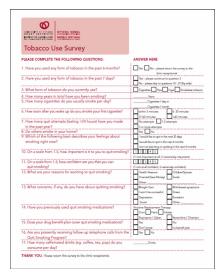
6.1 TiTAN Faculty & Curricula

A curricula including training slides and handouts have been developed in Greek as part of the TiTAN Crete project. We have also created a high-level faculty to deliver training in Greek which includes tobacco treatment experts as well as primary care practitioners.

6.2 TiTAN Provider Tools

Provider and patient tools were translated and adapted for use in primary care settings in Greece. The tool kit of resources which was distributed to providers includes: patient tobacco use survey; provider consult form; provider medication reference sheet; patient quit plan booklet; and, waiting room posters. The provider consult form uses a checklist style set-up and provides real-time reminders for conducting an initial smoking cessation visit and follow-up appointments. The TiTAN Crete tools are available online at www.titan.uoc.gr

Exhibit: TiTAN Provider Tobacco Use Survey, Consult Form and Quit Plan Booklet







TiTAN Website



TiTAN CRETE WEBSITE – www.titan.uoc.gr

6.3 TiTAN Clinical Video Series

An eight part video series was created as part of the TiTAN Crete training program. The videos offer primary care providers with examples of how the TiTAN Crete training techniques for ask, advise, assist and arrange can be employed in Clinical Practice. The videos feature two of the general practitioners from the University of Crete's primary care practice network (Professor Christos Lionis and Dr. Fotini Anastasiou, General Practitioner).



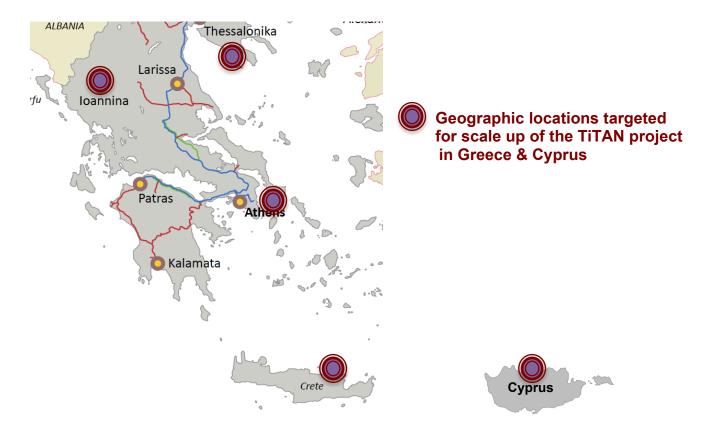
TiTAN Crete Video Case Studies featuring Dr. Fotini Anastasiou, GP, Heraklion

6.4 TiTAN GP Network

The GP Network who participated in the TiTAN Crete program remains engaged in tobacco treatment and will remain connected to project collaborators moving forward. We have committed to continue to provide further training and resources to support the GPs with addressing tobacco use with their patients.

7.0 SUSTAINABILITY & PROGRAM EXPANSION

Building on the success of the TiTAN Crete project, partnerships have been established with four Medical Schools in Greece and Cyprus to support the further scale-up of the TiTAN program to a larger network of PHC providers in the Mediterranean. This phase of the TiTAN network's development has been funded through a second grant from Global Bridges. The project will provide leadership and coordination for the dissemination of both a professional training program and practice tools that are tailored to support busy Primary Care Providers with integrating evidence-based tobacco dependence treatment into their practice routines as well as increase the number of tobacco control champions working in Greece and Cyprus. The overall goal of the TiTAN Greece & Cyprus initiative is to expand the Global Bridges Tobacco Treatment Training Network in the WHO Europe region through a focus on primary health care (PHC) providers in Greece and Cyprus. The target for the TiTAN-Greece & Cyprus Project is to train 300 PHC providers and residents who are associated with the community-based PHC networks of the medical schools in four geographic regions in Greece (Crete, Athens, Ioannina, Thessaloniki) and Cyprus.



8.0 LIST OF PUBLICATIONS AND PRODUCTS

TiTAN Toolkit Resources (in Greek):

TiTAN Crete Webiste: http://www.titan.uoc.gr

Patient Tobacco Use Survey http://www.titan.uoc.gr/pdfs/TiTAN_Crete_ereyna%20_12OCT2015.pdf

Provider Smoking Cessation Consult Form: http://www.titan.uoc.gr/pdfs/151014-Smoking_consult_form.pdf

Patient Quit Plan Booklet: http://www.titan.uoc.gr/pdfs/151113-Final-Booklet.pdf

Waiting Room Posters: http://www.titan.uoc.gr/pdfs/Titan Crete GP practice poster.pdf

Provider Reference Sheet – Nicotine Replacement Therapies:

http://www.titan.uoc.gr/pdfs/NRT_brochure_8oct2015.pdf

Provider Reference Sheet - Cost of Quit Smoking Medications:

http://www.titan.uoc.gr/pdfs/cost_of_meds_greek.pdf

TiTAN Clinical Video Series

Advice to Quit (Patient Not Ready to Quit) - https://www.youtube.com/watch?v=mTY6kBfdMWY

Advice to Quit (Patient Not Ready to Quit) - https://www.youtube.com/watch?v=HSm cgvynWw

Advice to Quit (Cut Back to Quit) - https://www.youtube.com/watch?v=kRQpDyl2whM

Quit Plan Visit - https://www.youtube.com/watch?v=7xQxtlpoEro

Follow-up Visit - https://www.youtube.com/watch?v=9XIDyBAK7cM

Follow-up Visit - https://www.youtube.com/watch?v=hk4OEy7lpKk

Follow-up Visit – https://www.youtube.com/watch?v=gR06lx64EUU

Publications

Girvalaki C., Papadakis S., Vardavas C., Pipe A., and C. Lionis. Tobacco treatment TrAining Network in Crete (TiTAN-Crete): protocol for a controlled before-after study. Tobacco Prevention and Cessation 2016;2:57.

Presentations:

- C. Girvalaki, Final Results of the TiTAN Crete Project. Primary Care Practice Network, University of Crete, Heraklion, Greece, November 10 2016.
- S. Papadakis, C.Girvalaki, C. Vardavas, A. Pipe, and C. Lionis. The implementation of 5As model for tobacco treatment delivery in primary care settings in Greece. 18th Pancretan Medical Conference, Rethymnon, Crete, 4-6 November 2016

Vardavas C. TiTAN Crete - Tobacco treatment TrAining Network in Crete. Round table discussion on European research projects, public health and primary health care: The 6th Hellenic Forum for Public Health & Social Medicine, Athens, Greece, 1 November, 2016.

- C. Girvalaki, Update on the TiTAN Crete Project. European Network on Smoking Prevention Networking Meeting, Ljubljana, Slovenia, October 18 2016.
- S. Papadakis, C.Girvalaki, C. Vardavas, A. Pipe, and C. Lionis. 5As (Ask, Advise, Assess, Assist, Arrange) tobacco treatment delivery in primary care settings in Greece. European Respiratory Society, London, September 6th 2016.

Girvalaki C., S. Papadakis, C. Vardavas, A. Pipe, and C. Lionis.. Change in primary care physician knowledge on smoking cessation after a brief training intervention. European Respiratory Society, London, September 4th, 2016.

Lionis C., S.Papadakis, C. Girvalaki, C. Vardavas. Prevalence of Tobacco Use and Profile of Tobacco Users in Primary Care Practices in Greece. WONCA, Copenhagen, June 16th2016.

Vardavas C., S. Papadakis, C. Girvalaki, A. Pipe, C. Lionis. "TiTAN CRETE— Tobacco Treatment Training Network in Crete". Global Tobacco Summit, Rochester, New York, USA, May 29th 2016.

C. Girvalaki, Update on the TiTAN Crete Project. European Network on Smoking Prevention Networking Meeting, Brussels, Belgium, April 7-9 2016.

Tsiligianni, I. S. Papadakis, C. Vardavas, C. Girvalaki, A. Pipe, and C. Lionis. Study protocol of the TiTAN Crete project: Development of a Tobacco treatment TrAining Network in Crete IPCRG 8th World Conference, Amsterdam, 25-28 May 2016.

C.Girvalaki, C. Lionis. TITAN CRETE, An educational intervention to integrate smoking cessation treatment in daily clinical practice in Primary Health Care, in Crete. 27ο συνέδριο Hellenic association of Social pediatrics and Health care, Sparti-Monemvasia, Greece, 9-10 October 2015.

Girvalaki C, Saridaki A, Papadakis S, Vardavas C, and C Lionis.. Study protocol of the TiTAN Crete project: Development of a Tobacco treatment TrAining Network in Crete, Greece. European Respiratory Society, Amsterdam, Netherlands, September 27th 2015.

