NATIONAL SCHOOL OF PUBLIC HEALTH
ATHENS SCHOOL OF HYGIENE 1929-1994

Η επίδραση της αύξησης της συμμετοχής στο κόστος στη συμμόρφωση στη θεραπεία:

εστίαση στους ασυμπτωματικούς χρόνιους ασθενείς

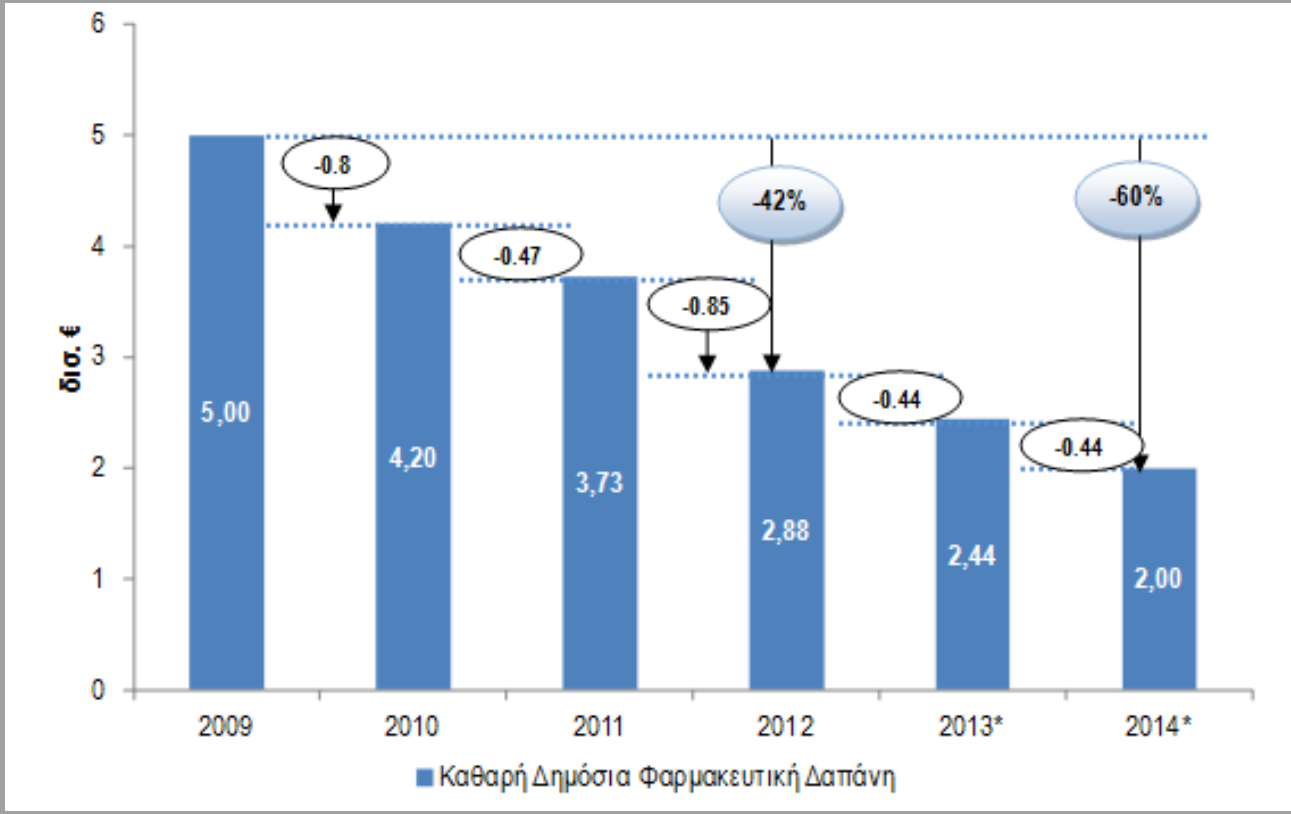
Κώστας Αθανασάκης BScHS, BScEcon, MSc, PhD
Οικονομολόγος Υγείας, Τομέας Οικονομικών της Υγείας, ΕΣΔΥ

Εισαγωγή: οδεύοντας στο αναπόφευκτο

- Η παρούσα οικονομική συγκυρία επιβάλλει περιοριστικές πολιτικές σε όλο το φάσμα της δημόσιας οικονομικής δραστηριότητας
- Ο τομέας υγείας, το 10% της κοινωνικής παραγωγής δύσκολα θα μπορούσε να αποτελεί εξαίρεση
- Η δημοσιονομική προσαρμογή απαιτεί σημαντική μείωση των βασικών μακροοικονομικών μεγεθών
  - Δημόσια δαπάνη υγείας <6% του ΑΕΠ
  - Φαρμακευτική δαπάνη ≈1% του ΑΕΠ
    - Σε μια χώρα με ήδη χαμηλές δημόσιες δαπάνες υγείας
    - Με σημαντική αναμενόμενη μείωση στις ιδιωτικές δαπάνες

Αγορά φαρμάκου

- Βασικός στόχος των προσδοκώμενων περικοπών:



Πηγή: ΙΟΒΕ: *Η ΦΑΡΜΑΚΕΥΤΙΚΗ ΑΓΟΡΑ ΣΤΗΝ ΕΛΛΑΔΑ: ΓΕΓΟΝΟΤΑ ΚΑΙ ΣΤΟΙΧΕΙΑ 2012*

Αγορά Φαρμάκου: Βασικές μεταρρυθμίσεις

1. Κατάρτιση θετικής λίστας. Βασικός στόχος η θέσπιση τιμών αναφοράς (ασφαλιστική τιμή ΕΟΠΥΥ)
2. Επέκταση της συνταγογράφησης με δραστική ουσία (απόφαση 18/11)

– Οικονομικός Στόχος: η μεταβολή (αύξηση) των ποσοστών συμμετοχής (cost-sharing)

- Μνημονιακή πρόβλεψη: επί αποτυχίας στόχου δαπάνης, δυνατότητα για περαιτέρω αύξηση

Το cost-sharing ως εργαλείο φαρμακευτικής πολιτικής

- 1. Πολύ διαδεδομένο

Table 16 – Cost-sharing policies

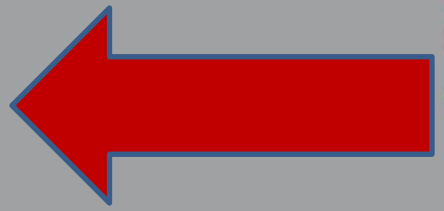
	Cost-sharing		Cost-sharing
Austria	Fixed	**Italy**	Fixed
Belgium	%	**Lithuania**	%
Bulgaria	%	**Latvia**	%
Cyprus	% (public sector)	**Luxembourg**	%
Czech Republic	%	**Malta**	No
Germany	%	**Netherlands**	Yes
Denmark	Fixed, %, deductible	**Poland**	%
Estonia	Fixed, %	**Portugal**	%
Greece	%	**Romania**	%
Spain	%	**Sweden**	%, deductible
Finland	Fixed, %	**Slovenia**	%
France	Fixed, %	**Slovakia**	Fixed, %
Hungary	Fixed, %	**United Kingdom**	Fixed
Ireland	No		

Sources: GÖG 2010, EGA 2011, Commission services (DG ECFIN).

- 2. Αποτελεσματικό, στη μείωση της φαρμακευτικής (όχι απαραίτητα και της συνολικής) δαπάνης
  - Μέσο ποσοστό συμμετοχής, πριν το 2009: ≈ 9%
  - Μέσο ποσοστό συμμετοχής σήμερα: >17%

Μετακύλιση της δαπάνης

- 3. Αλλά και άκρως επικίνδυνο!!!



Cost-sharing… side effects

Adherence to treatment is a commonly accepted prerequisite for achieving glycemic goal (A1C level ≤7%).[1] As a result of several factors,[15] much evidence reveals poor or partial adherence,[16-19] with one of the most important variables being the cost of treatment.[20,21] Specifically in the case of chronic diseases, patient cost sharing can lead to reduced consumption of essential drugs and consequently to poor adherence, adverse clinical outcomes, and increased costs.[22] This relationship has been documented for diabetes (eg, Karter et al,[22] Piette et al,[23] Mahoney,[24] Colombi et al[25]) and for other chronic conditions (eg, Joyce et al,[26] Gibson et al,[27] Gibson et al[28]).

Different studies show that patients use less of both essential and non-essential pharmaceuticals because of changes in cost-sharing (OECD 2008, Puig-Junoy et al. 2011, Manning et al. 1988). Decreased use of essential pharmaceuticals may negatively impact on health. Cost-sharing may also reduce medication adherence, leading to worse health outcomes (Cutler and Everett 2010).

Cost-sharing… side effects

REVIEW

Prescription Drug Cost Sharing

Associations With Medication and Medical Utilization and Spending and Health

JAMA. 2007;298(1):61-69

Results Increased cost sharing is associated with lower rates of drug treatment, worse adherence among existing users, and more frequent discontinuation of therapy. For each 10% increase in cost sharing, prescription drug spending decreases by 2% to 6%, depending on class of drug and condition of the patient. The reduction in use

Cost-sharing: ποιοι πλήττονται περισσότερο;

Demand Side Cost-Sharing and Prescription Drugs Utilization: Evidence From a Quasi-Natural Experiment*

Eva Hromádková† and Michal Zděnek‡

April 2013

Abstract

In this paper we investigate the effects of introduction of lump sum copayments on the utilization of prescription drugs by elderly patients. We make use of an unique dataset and analyze the policy change that implemented patient cost-sharing in the Czech Republic starting in 2008. After the introduction of copayments the number of prescriptions filled decreased by 29%. At the same time, however, total expenditures on prescription drugs dropped only in the first quarter of the postintroduction period and then returned to previous levels. This was partially due to behavioral responses of patients and physicians: strategic shift of prescription purchases to the time right before the introduction of reform, prescription of more packages on one prescription and an upward shift in the price composition of prescribed drugs. Moreover, patients in general decided to forego those types of drugs that did not cause immediate worsening of health status.

Co-payment: ποιοι πλήττονται περισσότερο;

Health Serv Res. 2011 Dec;46(6pt1):1963-85. doi: 10.1111/j.1475-6773.2011.01286.x. Epub 2011 Jun 20.

Does medication adherence following a copayment increase differ by disease burden?

Wang V, Liu CF, Bryson CL, Sharp ND, Maciejewski ML.

Division of General Internal Medicine, Department of Medicine, Duke University, Durham, NC, USA. virginia.wang@duke.edu

Abstract

OBJECTIVES: To compare changes in medication adherence between patients with high- or low-comorbidity burden after a copayment increase.

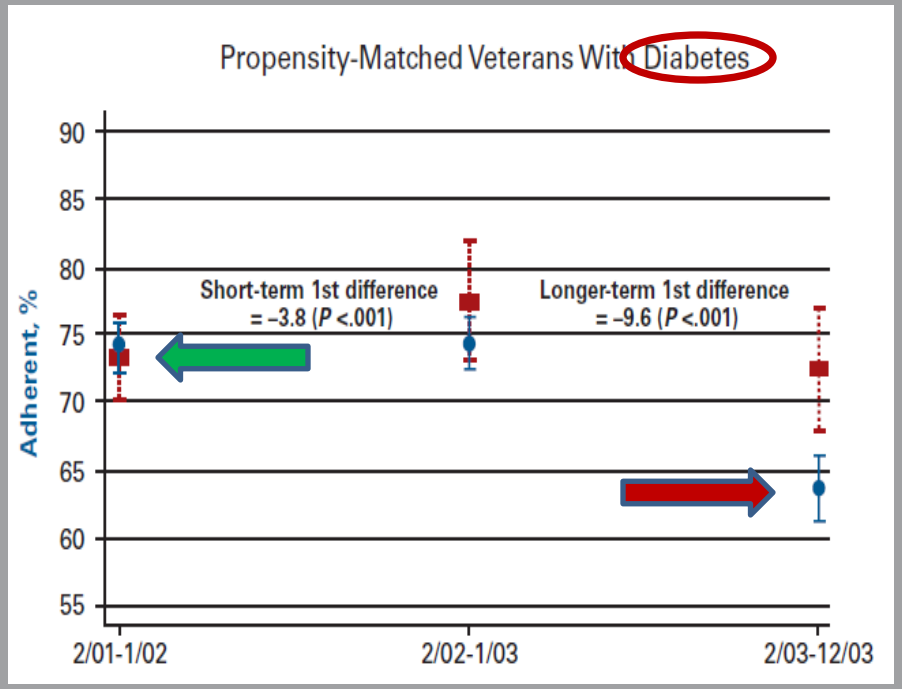
METHODS: We conducted a retrospective observational study at four Veterans Affairs (VA) medical centers by comparing veterans with hypertension or diabetes required to pay copayments with propensity score-matched veterans exempt from copayments. Disease cohorts were stratified by Diagnostic **Cost** Group risk score: low- (<1) and high-comorbidity (>1) burden. Medication adherence from February 2001 to December 2003, constructed from VA pharmacy claims data based on the ReComp algorithm, were assessed using generalized estimating equations.

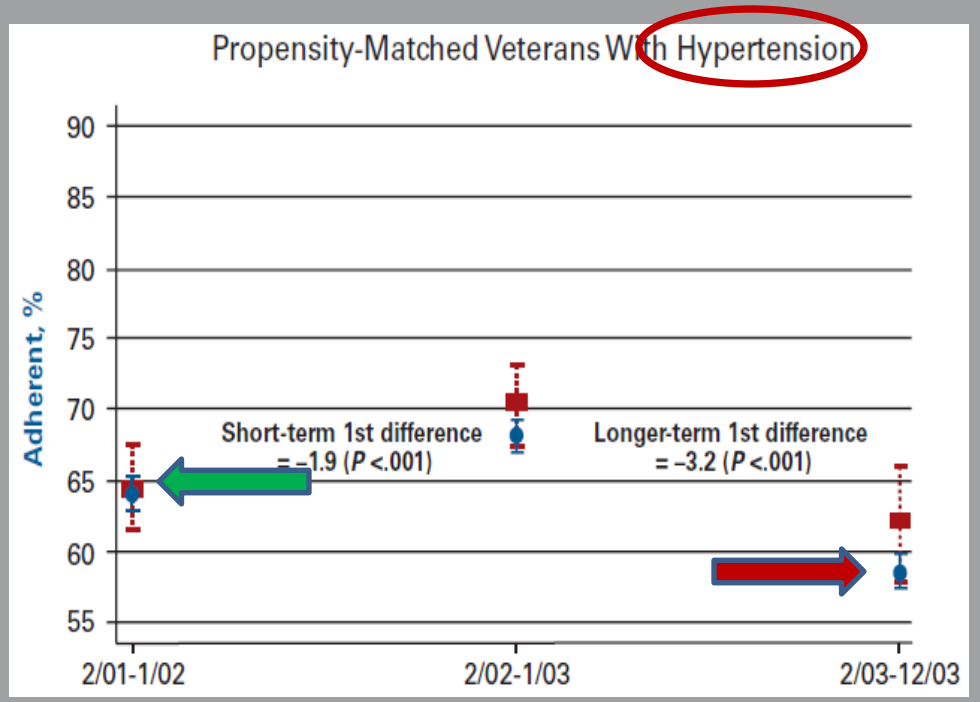
RESULTS: Veterans with lower comorbidity were more responsive to a U.S.$5 copayment increase than higher comorbidity veterans. In the lower comorbidity groups, veterans with diabetes had a greater reduction in adherence than veterans with hypertension. Adherence trends were similar for copayment-exempt and nonexempt veterans with higher comorbidity.

CONCLUSION: Medication copayment increases are associated with different impacts for low- and high-risk patients. High-risk patients incur greater out-of-pocket costs from continued adherence, while low-risk patients put themselves at increased risk for adverse health events due to greater nonadherence.

(Am J Manag Care. 2010;16(1):e20-e34)

Increasing Copayments and Adherence to Diabetes, Hypertension, and Hyperlipidemic Medications





Exempt from copay Must pay copay

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EFFECTS OF COST SHARING ON ADHERENCE

Impact of Statin Copayments on Adherence and Medical Care Utilization and Expenditures

Teresa B. Gibson, PhD; Tami L. Mark, PhD, MBA; Kirsten Axelsen, MS; Onur Baser, PhD; Dale A. Rublee, PhD; and Kimberly A. McGuigan, PhD, MBA

Figure 1. Estimated Effects of Copayments on Statin Adherence, Continuing Users

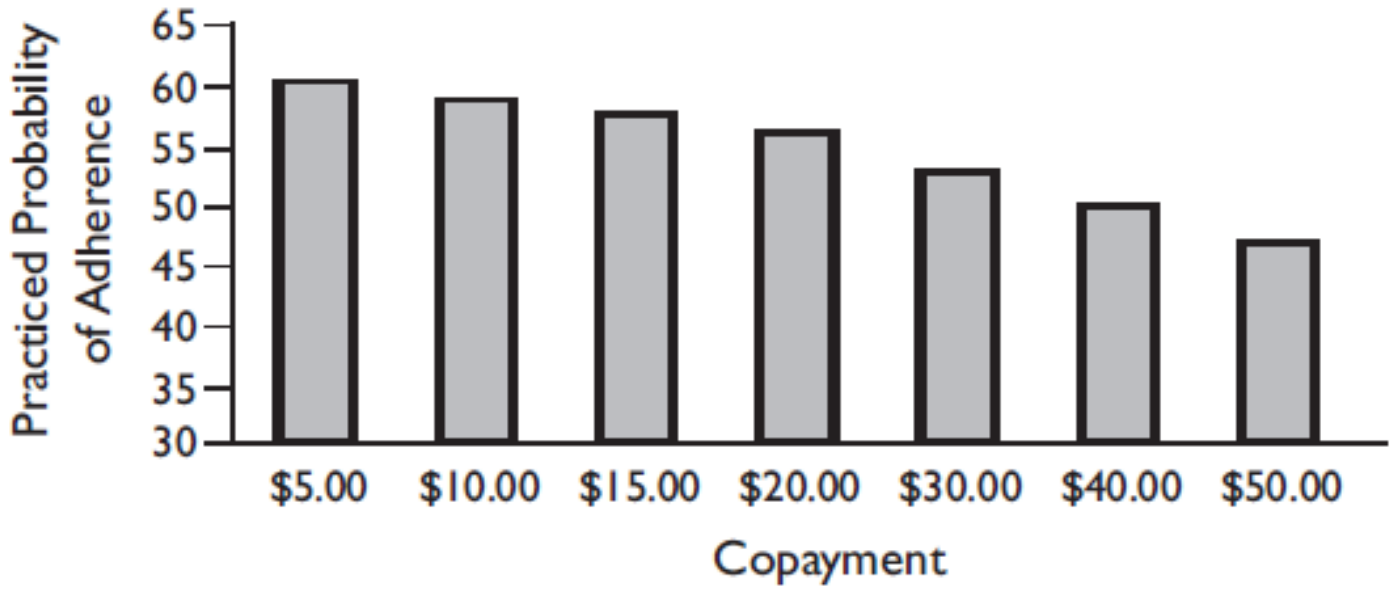

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Figure 3. Effects of Statin Adherence on ED Visits, Continuing Users

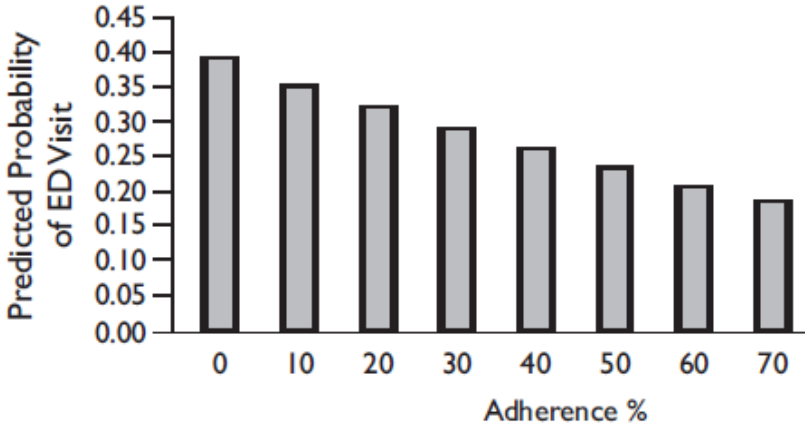
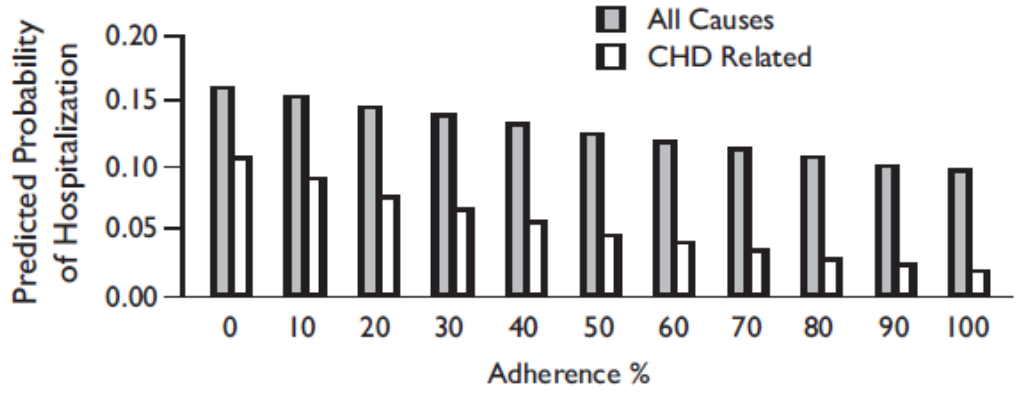


Figure 4. Effects of Statin Adherence on Hospitalization, Continuing Users



CHD indicates coronary heart disease.

Επίδραση στη συχνότητα εργαστηριακών εξετάσεων

Am J Manag Care. 2007 July ; 13(7): 408–416.

Effect of Cost-sharing Changes on Self-monitoring of Blood Glucose

Andrew J. Karter, PhD, Melissa M. Parker, MS, Howard H. Moffet, MPH, Ameena T. Ahmed, MD, MPH, James Chan, PharmD, PhD, Michele M. Spence, PhD, Joe V. Selby, MD, MPH, and Susan L. Ettner, PhD

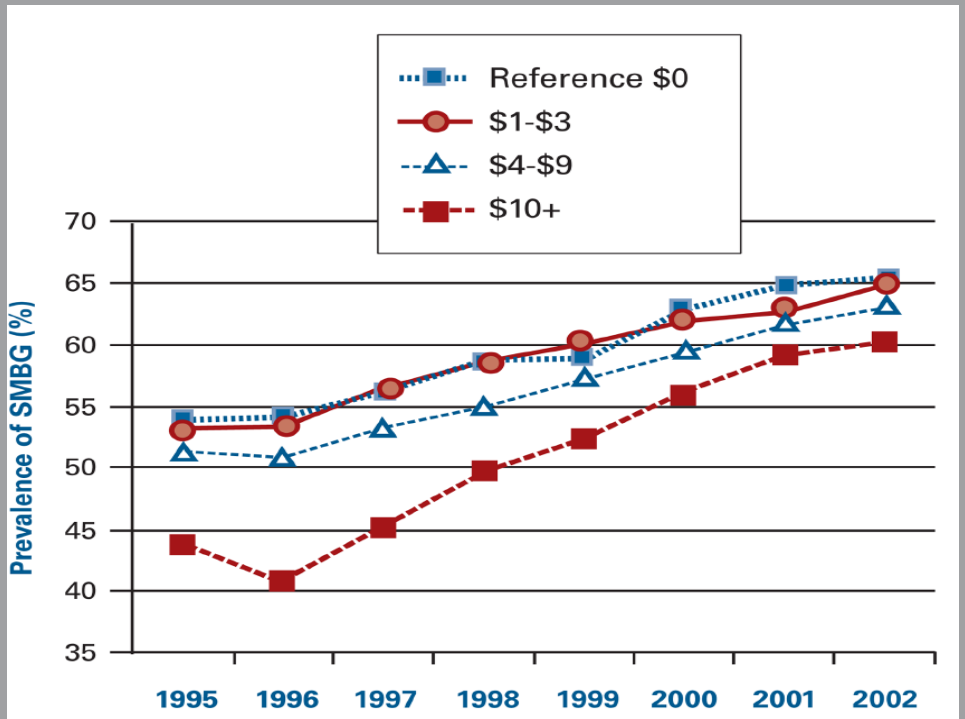


Figure. Prevalence of Daily Test Strip Utilization Stratified by Prescription Drug Copayment Among Kaiser Permanente Northern California Diabetes Registry Members*

Ένα διττό ζήτημα: συμμετοχή στο κόστος και screenign

Med Care. 2011 Sep;49(9):865-71. doi: 10.1097/MLR.0b013e31821b35d8.

Two-year trends in colorectal cancer screening after switch to a high-deductible health plan.

Wharam JF, Graves AJ, Landon BE, Zhang F, Soumerai SB, Ross-Degnan D.

(0.99 to 1.11), respectively].

CONCLUSIONS: Switching to a HDHP was associated with a downward trend in overall colorectal cancer screening rates after 2 years. Low SES HDHP members maintained stable rates, but substituted FOBT for colonoscopy and other **tests** now more widely recommended. Further research should investigate whether such reduced **adherence** to screening guidelines adversely affects health outcomes.

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Και πώς επηρεάζει η “ρύθμιση” το κόστος; περίπτωση 1: υπέρταση

Κατηγορία Υπέρτασης (mmHg)	Μέσο ετήσιο άμεσο κόστος ανά ασθενή (Ευρώ)
Στάδιο 1 (140-160)	854,19
Στάδιο 2 (160-180)	888,14
Στάδιο 3 (>180)	1.046,43

Αθανασάκης Κ, αδημοσίευτα δεδομένα

Και πώς επηρεάζει η “ρύθμιση” το κόστος; περίπτωση 2: σακαρώδης διαβήτης

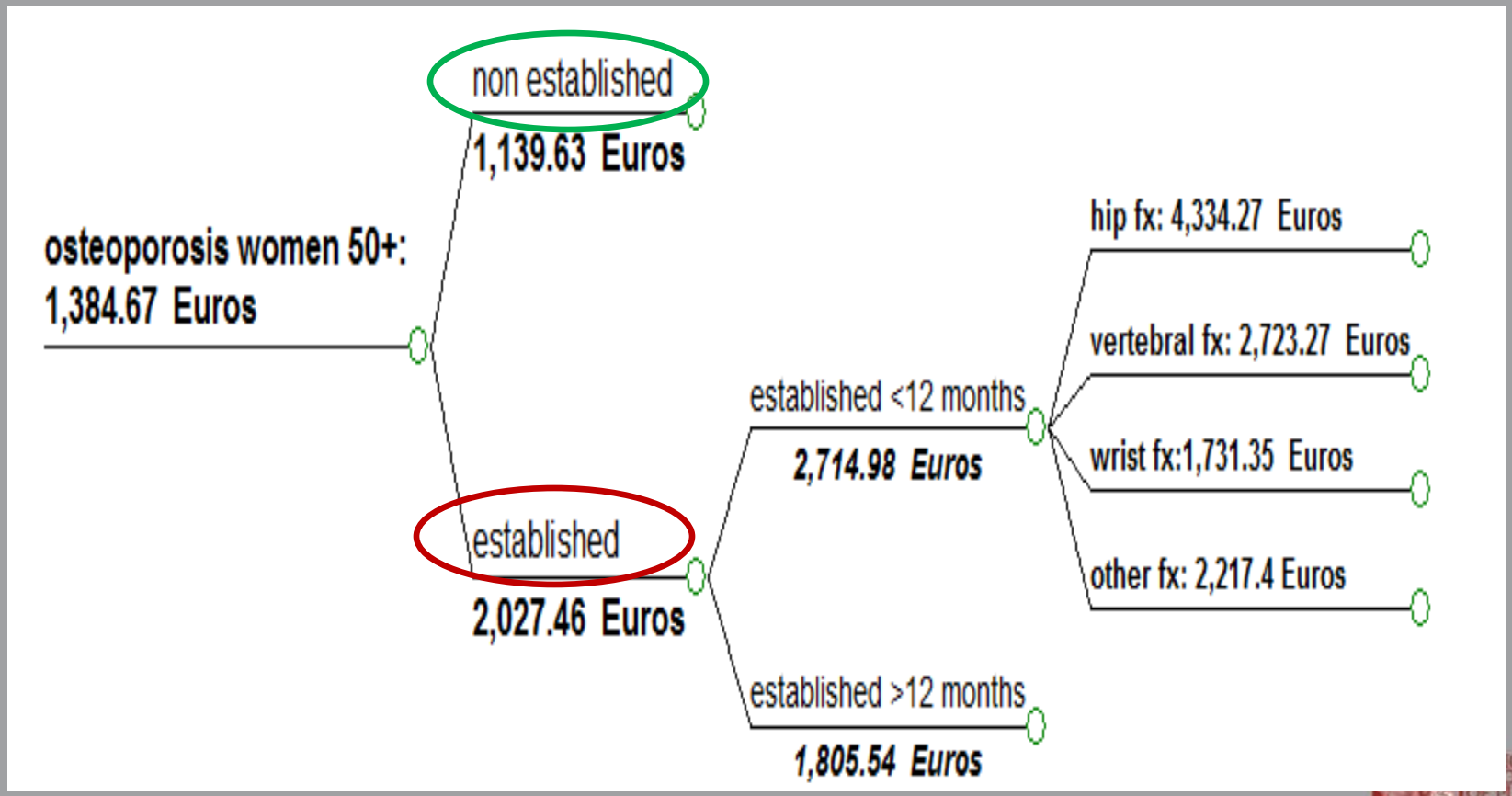
Συνολικό μέσο ετήσιο κόστος κατά ομάδα ασθενών με ΣΔτ2 και κατά κατηγορία δαπάνης

	Ρυθμισμένοι ασθενείς (€)	%	Μη ρυθμισμένοι ασθενείς (€)	%
Κόστος διαγνωστικών εξε	438,9	43,6	720,2	45,9
Κόστο	205,1	21,9	409,2	26,0
Κόστος φαρμακευτικής θεραπείας	339,5	34,5	441,5	28,1
Συνολικό μέσο ετήσιο κόστος	**983**	100,00	**1.569,9**	100,00

>50% υψηλότερο κόστος θεραπείας για τους μη ρυθμισμένους ασθενείς

Athanasakis et al. *Diabetic Medicine 2010*

Και πώς επηρεάζει η "ρύθμιση" το κόστος; περίπτωση 3: οστεοπόρωση



Athanasakis et al, *Value in Health, 2012*

Επίδραση της συμμετοχής στο κόστος: ένα παράδειγμα στην ψυχιατρική

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National Institutes of Health

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Am J Manag Care. 2007 Jun;13(6 Pt 2):335-46.

Effect of a medication copayment increase in veterans with schizophrenia.

Zeber JE, Grazier KL, Valenstein M, Blow FC, Lantz PM.

Veterans Affairs Health Services Research & Development: South Texas Veterans Health Care System (VERDICT), San Antonio, TX 78229-4404, USA. zeber@uthscsa.edu

Abstract

OBJECTIVE: To assess the effect of the 2002 Veterans Millennium Health Care Act, which raised pharmacy copayments from $2 to $7 for lower-priority patients, on medication refill decisions and health services utilization among vulnerable veterans with schizophrenia.

STUDY DESIGN: Quasi-experimental.

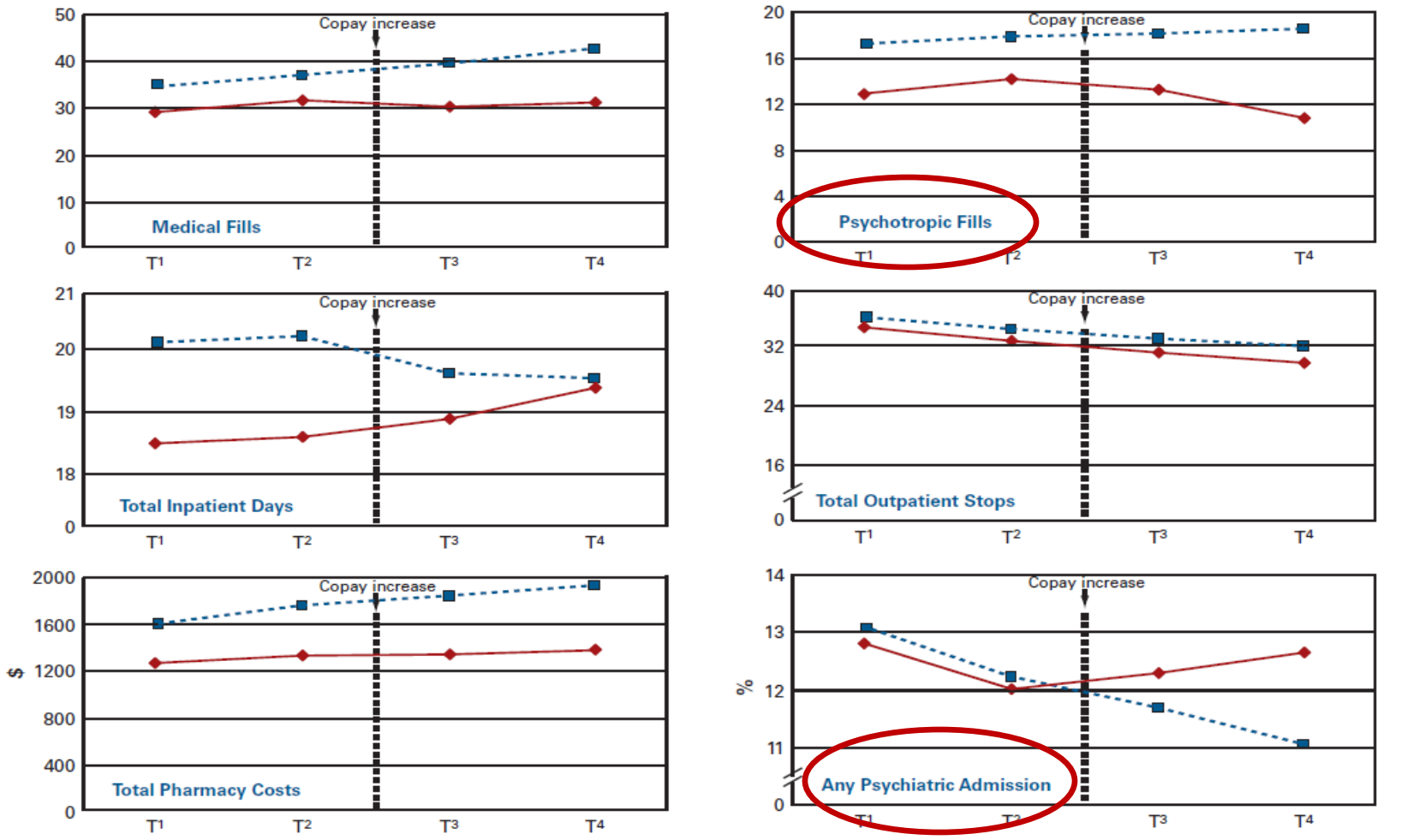
METHODS: This study used secondary data contained in the National Psychosis Registry from June 1, 2000, through September 30, 2003, for all veterans diagnosed with schizophrenia and receiving healthcare through the Department of Veterans Affairs (VA). Longitudinal, mixed models were used to observe changes in prescriptions, health services utilization, and pharmacy costs in veterans subject to copayments (N = 40 654) and a control group of exempt individuals (N = 39 983). Analyses controlled for demographics, substance abuse, non-VA utilization, and medical comorbidities. The Health Belief Model supported analytical criteria for factors directly related to medication adherence issues.

RESULTS: Total prescriptions and overall pharmacy costs leveled among veterans with copayments after the medication cost increase. However, psychiatric drug refills dropped substantially, nearly 25%. Although outpatient visits were unaffected, psychiatric admissions and total inpatient days increased slightly, particularly 10 to 20 months after the policy change. Factoring in additional copayment revenue, the VA realized a $14.7-million annual net revenue gain from this subpopulation alone.

CONCLUSION: These results suggest the new policy successfully reduced utilization and costs, with perhaps minimal clinical consequences to date. However, higher inpatient utilization resulting from cost-related nonadherence is troubling within an already high-risk and poorly adherent population, especially considering the reduction in psychiatric drug refills.

Επίδραση της συμμετοχής στο κόστος: ένα παράδειγμα στην ψυχιατρική

Figure. Adjusted Longitudinal Means, by Copayment Status



T^1, T^2, T^3, and T^4 represent four 10-month periods resulting from subdivision of the two 20-month periods before and after the copayment policy change. Blue lines indicate exempt. Red lines indicate copayment.

Και ένα μεθοδολογικό ζήτημα: συμμόρφωση και CEA

Value Health. 2009 Jun;12(4):489-97. doi: 10.1111/j.1524-4733.2008.00447.x. Epub 2008 Sep 9.

The clinical and economic burden of nonadherence with antihypertensive and lipid-lowering therapy in hypertensive patients.

Cherry SB, Benner JS, Hussein MA, Tang SS, Nichol MB.

Health Economics & Outcomes Research, IMS Health, Falls Church, VA, USA.

Abstract

OBJECTIVE: We sought to determine lifetime costs, morbidity, and mortality associated with varying adherence to antihypertensive and 3-hydroxy-3-methylglutaryl-coenzyme A reductase inhibitors (statin) therapy in a hypertensive population.

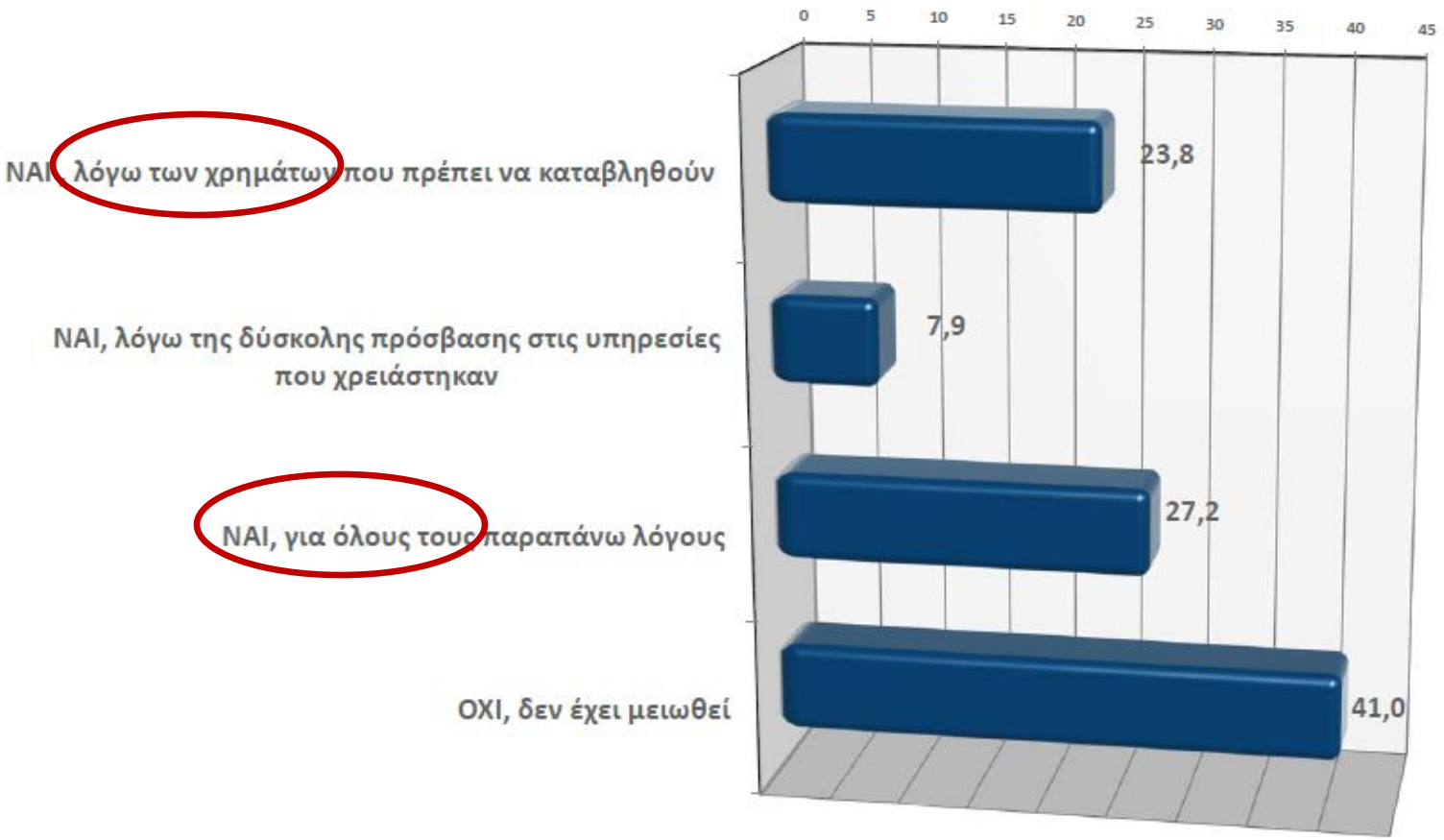
METHODS: A model was constructed to compare costs and outcomes under three adherence scenarios: no treatment, ideal adherence, and real-world adherence. Simulated patients' characteristics matched those of participants in the Anglo-Scandinavian Cardiac Outcomes Trial-Lipid-Lowering Arm and event probabilities were calculated with Framingham Heart Study risk equations. The real-world adherence scenario employed adherence data from an observational study of a US population; risk reductions at each level of adherence were based on linear extrapolations from clinical trials. Outputs included life expectancy, frequencies of primary and secondary coronary heart disease and stroke, and direct medical costs in 2006 US$. The incremental **cost** per life-year gained and incremental **cost** per event avoided were calculated comparing the three adherence scenarios.

RESULTS: Mean life expectancy was 14.73 years (no-treatment scenario), 15.07 (real-world adherence), and 15.49 (ideal adherence). The average number of cardiovascular events per patients was 0.738 (no treatment), 0.610 (real-world adherence), and 0.441 (ideal adherence). The incremental **cost** of real-world adherence versus no treatment is $30,585 per life-year gained, and ideal adherence versus real-world adherence is $22,121 per life-year gained.

CONCLUSIONS: Hypertensive patients taking antihypertensive and statin therapy at real-world adherence levels can be expected to receive approximately 50% of the potential benefit seen in clinical trials. Depending on its **cost**, the incremental benefits of an effective adherence intervention program could make it an attractive value.

Ορισμένα συμπεράσματα

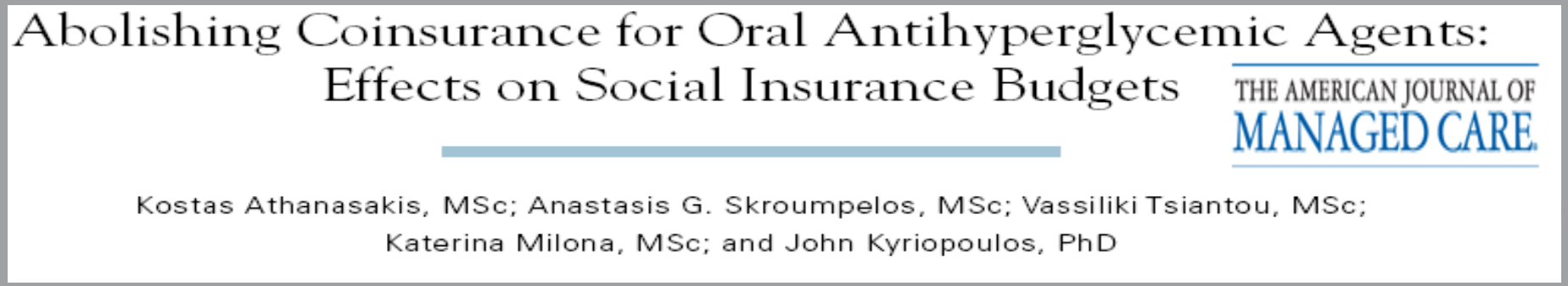
Θεωρείτε ότι έχει μειωθεί η χρήση υπηρεσιών υγείας από εσάς ή την οικογένειά σας τους τελευταίους 12 μήνες;



Πηγή: ΕΣΔΥ – Καπα Research 2012

Ορισμένα συμπεράσματα

1. Η πλειονότητα της βιβλιογραφίας και
2. η νέα τάση στα ασφαλιστικά συστήματα (Value based insurance design)
   - Συντείνουν στην αναθεώρηση των ποσοστών συμμετοχής και την προσεκτική τους εφαρμογή με βάση σειρά κριτηρίων
- Ελληνικά δεδομένα (αναλύσεις κόστους-οφέλους) υποστηρίζουν αυτή την τάση


Abolishing Coinsurance for Oral Antihyperglycemic Agents: Effects on Social Insurance Budgets

THE AMERICAN JOURNAL OF MANAGED CARE

Kostas Athanasakis, MSc; Anastasis G. Skroumpelos, MSc; Vassiliki Tsiantou, MSc; Katerina Milona, MSc; and John Kyriopoulos, PhD

Display Settings: Abstract

Am J Manag Care. 2012 May;18(5):265-74.

Medication adherence changes following value-based insurance design.

Farley JF, Wansink D, Lindquist JH, Parker JC, Maciejewski ML.

Division of Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC 27599-7360, USA. jffarley@unc.edu

Abstract

OBJECTIVES: To determine whether participation in a **value-based insurance design** (VBID) program was associated with improved medication **adherence** in 8 drug classes 2 years after implementation and to examine whether **adherence** changes varied by baseline **adherence**.

STUDY DESIGN: We used a pre-post quasi-experimental study design with a retrospective cohort of 74,748 enrollees using 8 different therapeutic classes of medications to treat diabetes, hypertension, hyperlipidemia, or congestive heart failure.

METHODS: Brand-name medication copayments were lowered (from tier 3 to tier 2) for all enrollees, while generic copayments were waived only for employers who opted into the VBID program. Medication **adherence** of VBID program participants and nonparticipants 12 months before and 12 and 24 months after program implementation were estimated on 8 propensity-matched cohorts using generalized estimating equations, as well as on subgroups stratified by baseline **adherence**. **Adherence** was measured using the medication possession ratio (MPR) from medication refill records.

RESULTS: VBID was associated with improved medication **adherence** ranging from 1.4% to 3.2% at 1 year, which increased to 2.1% to 5.2% 2 years following VBID adoption. **Adherence** changes were most notable among patients who were nonadherent (MPR <.50) before VBID implementation.

CONCLUSIONS: Population-based implementation of VBID can improve **adherence** to medications to treat cardiometabolic conditions, particularly for previously nonadherent patients. VBID guidelines being developed in response to healthcare reform should account for the heterogeneity in patient response to VBID programs.

Ορισμένα συμπεράσματα

- Ο περιορισμός των συμμετοχών στη φροντίδα υγείας είναι βασικός παράγοντας συμμόρφωσης
  - Αλλά όχι ο μόνος
- Οι ασθενείς χρειάζονται επιπλέον κίνητρα ή μέτρα προκειμένου να συμμορφώνονται στην αγωγή
- Η λύση της διαχείρισης των νοσημάτων (disease management) αποτελεί την πλέον ολοκληρωμένη πρόταση

NATIONAL SCHOOL OF PUBLIC HEALTH

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