63° CONGRESSO NAZIONALE SIGG

GLI ANZIANI: LE RADICI DA PRESERVARE

ROMA 28 novembre 01 dicembre 2018 Auditorium della Tecnica, Roma

Venerdì 30 novembre 2018

LA DEPRESCRIZIONE FARMACOLOGICA NELL'ANZIANO PLURIMORBIDO

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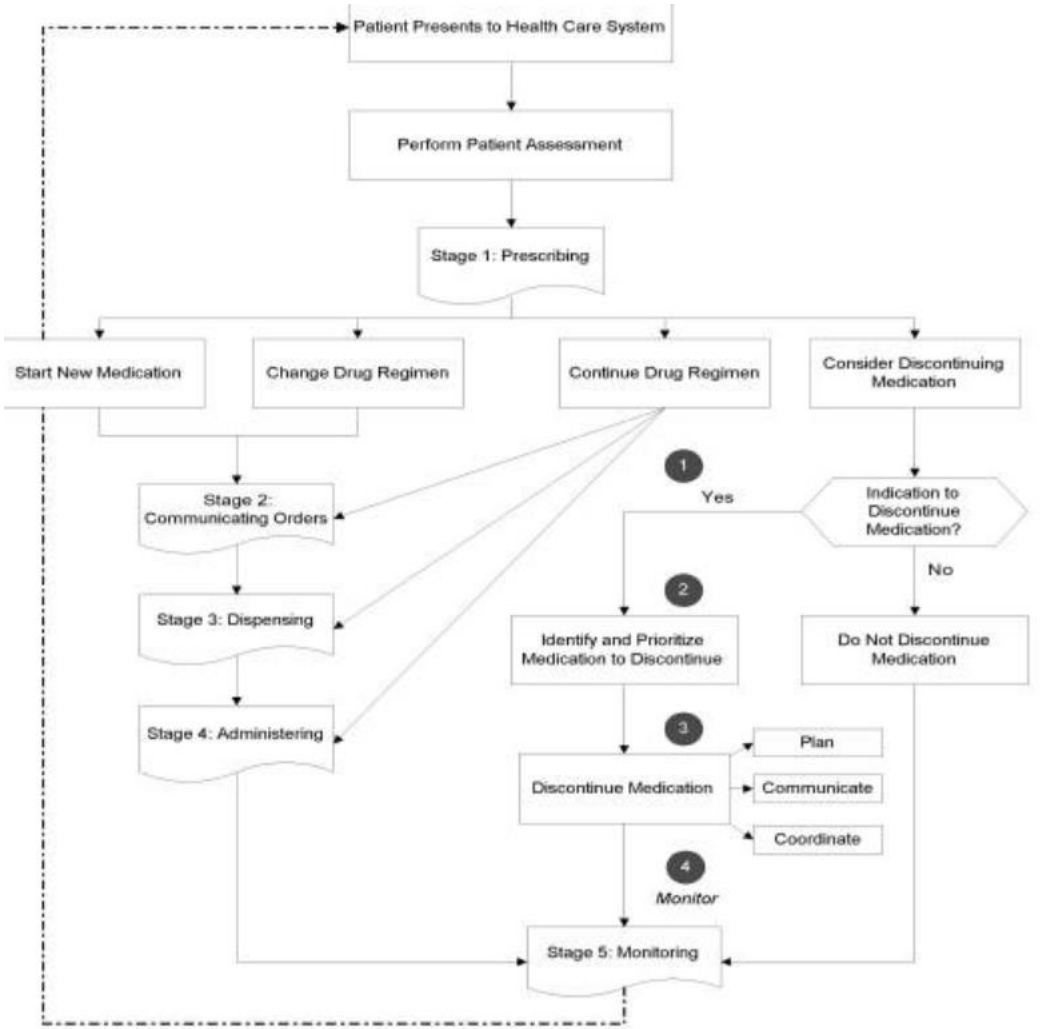
Department of Translational Medical Sciences, Naples, Italy
Past President of Italian Society of Gerontology and Geriatrics

SOCIETÀ ITALIANA DI GERONTOLOGIA E GERIATRIA

Discontinuing Medications: A Novel Approach for Revising the Prescribing Stage of the Medication-Use Process

Kevin T. Bain, PharmD[*,†], **Holly M. Holmes, MD**[‡,§], **Mark H. Beers, MD**[†,¶], **Vittorio Maio, PharmD, MS, MSPH**[#], **Steven M. Handler, MD, MS**[**], and **Stephen G. Pauker, MD**[††]

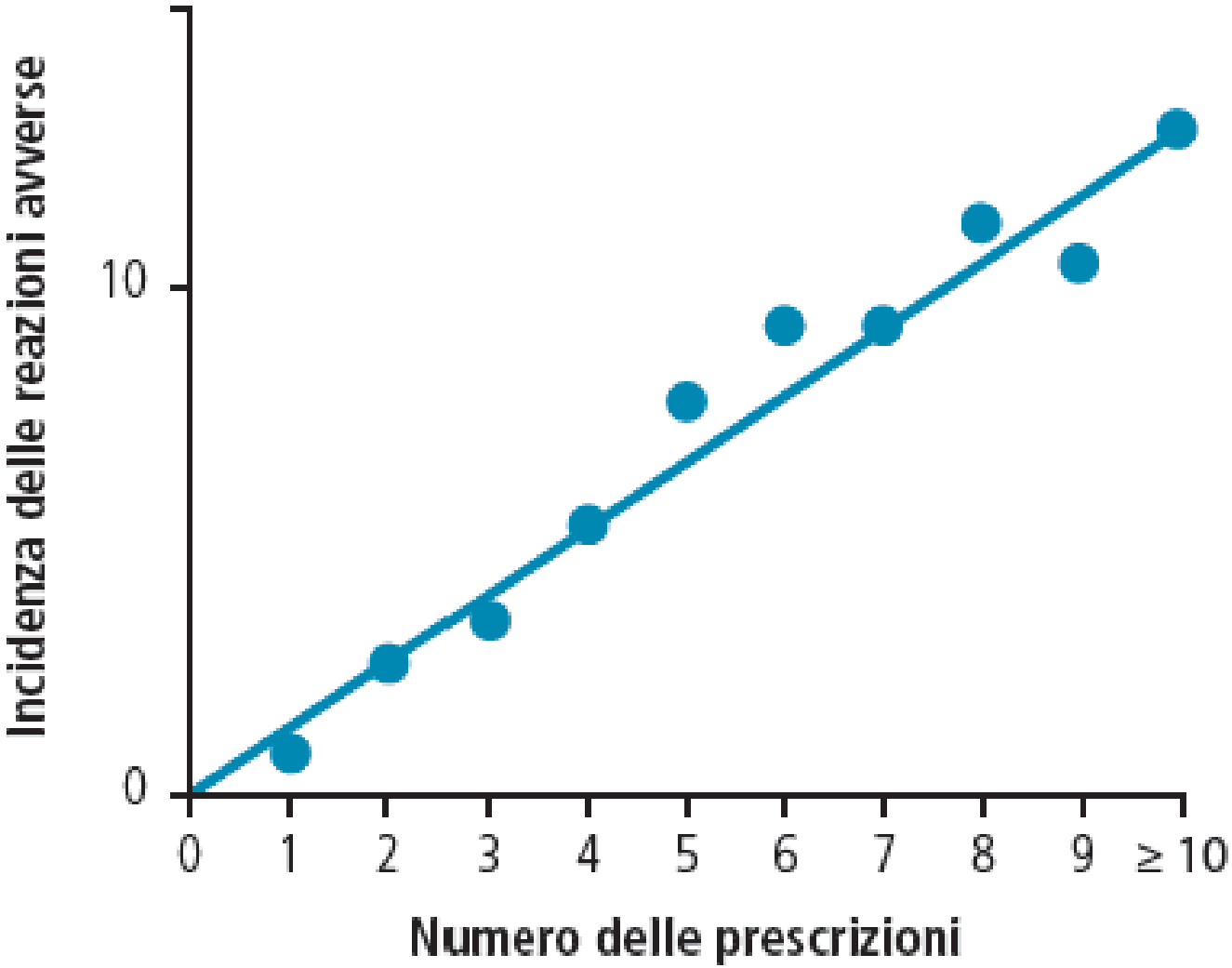


J Am Geriatr Soc. 2008 October ; 56(10): 1946–1952. doi:10.1111/j.1532-5415.2008.01916.x.

Deprescribing

Un processo sistematico di identificazione e 'discontinuazione' di farmaci o regimi farmacologici in circostanze in cui evidenti o potenziali effetti negativi ne superino i benefici correnti e/o potenziali, tenendo conto degli obiettivi di cura, del livello di funzionamento, della aspettativa di vita, dei valori e preferenze del singolo paziente.

Scott IA, et al. Reducing Inappropriate Polypharmacy: The Process of Deprescribing. JAMA Internal Medicine, 2015.



PU Carbonin et al. JAGS 1991 Data from GIFA, SIGG, Italy

The Polypharmacy Problem

- Community dwelling older adults:
  - 90% > 1med
  - 40% > 5meds
  - 12% > 10meds

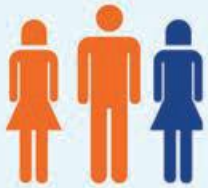
- One third of hospitalizations in older adults are medication-related

Gurwitz JH et al. JAMA. 2003;289(9): 1107-1116.

Volume 18 • Issue 3 • March 28, 2018

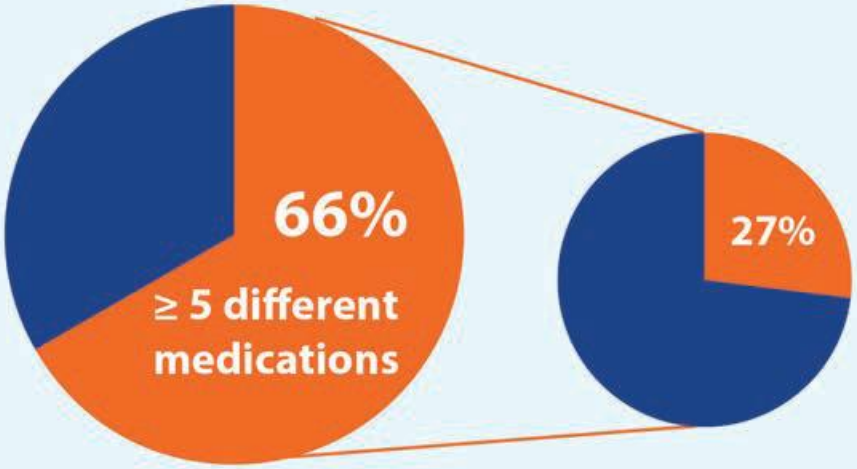
Deprescribing: Managing Medications to Reduce Polypharmacy

How many prescription medications are Canadian seniors taking?



2 out of 3 Canadians over the age of 65 take **at least 5** different prescription medications.

1 out of 4 Canadians over the age of 65 take **at least 10** different prescription medications.



Seniors taking ≥10 medications

20% of seniors age 65 to 74

32% of seniors age 75 to 84

39% of seniors age 85+

(CIHI 2014)

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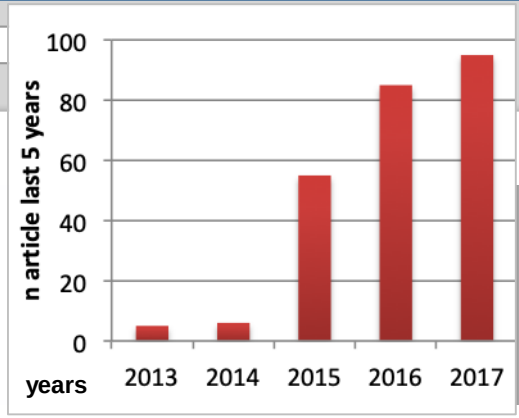

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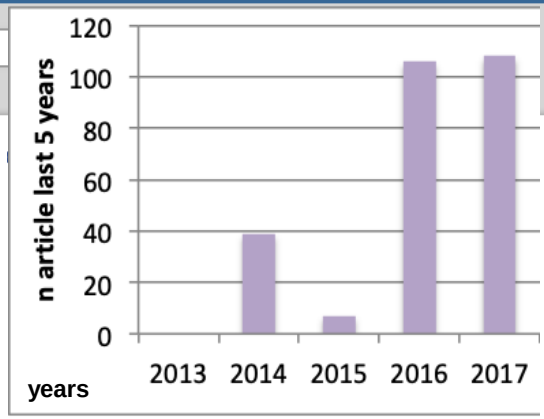

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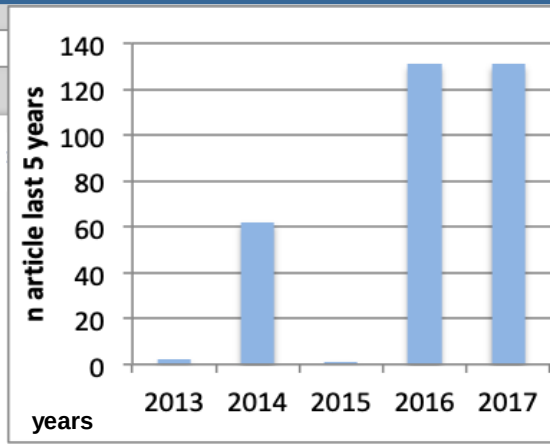

Sections

The Washington Post

‘America’s other drug problem’: Giving the elderly too many prescriptions

(August 15, 2016)

- “There are a lot of souvenirs from being in the hospital: medicines they may not need,” said David Reuben, chief of the geriatrics division at UCLA School of Medicine.

- “There are a lot of souvenirs from being in the hospital: medicines they may not need,” said David Reuben, chief of the geriatrics division at UCLA School of Medicine.

- “There’s a tendency in medicine every time we start a medicine to never stop it.” Ken Covinsky, UCSF

Consequenze della Polifarmacia e PIM(*)

- Incremento costi sanitari
- Reazioni Avverse
- Interazioni farmacologiche
- Non aderenza farmacologica
- Ridotto stato funzionale
- Sindromi Geriatriche: Delirium, Cadute, Incontinenza Urinaria

(*) Prescizioni potenzialmente inappropriate

Consequenze della Polifarmacia e PIM

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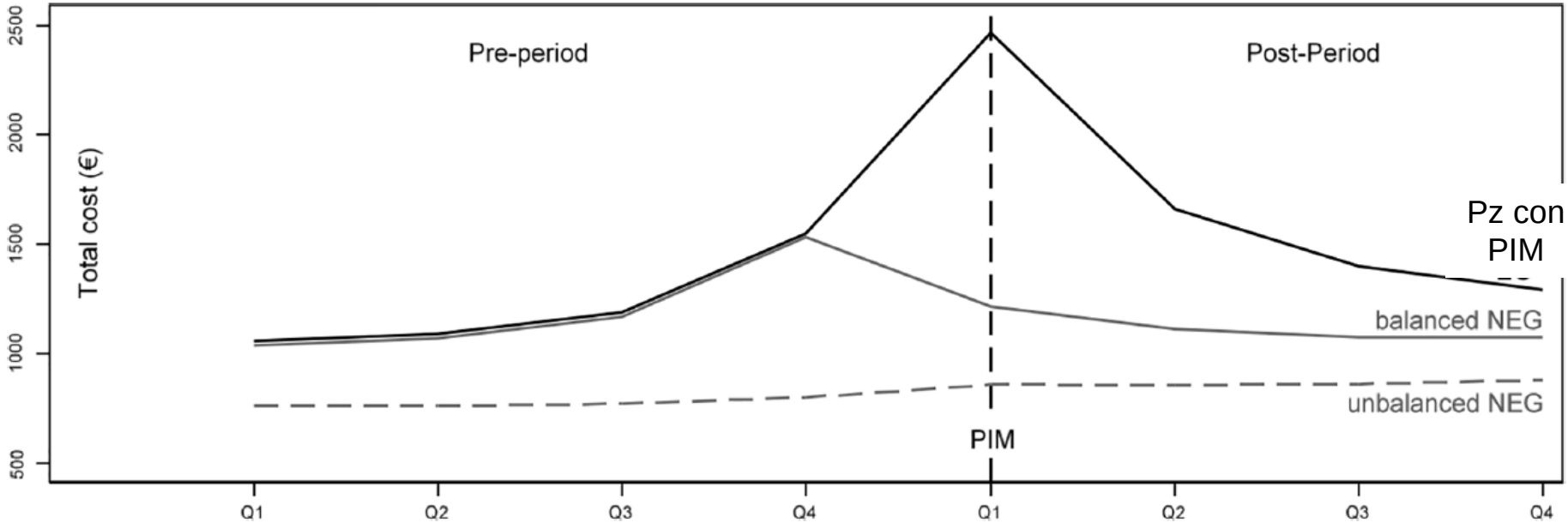
PLOS | ONE

OPEN ACCESS

Citation: Heider D, Matschinger H, Meid AD, Quinzler R, Adler J-B, Günster C, et al. (2018) The impact of potentially inappropriate medication on the development of health care costs and its

RESEARCH ARTICLE

The impact of potentially inappropriate



both study groups was 401 €. The average effect of one additionally prescribed substance (other than PIM) on total health care costs was increased by an amount of 137 € for those being exposed to a PIM. In quarters 2-4 of the post-period, the differences between both study groups tended to decrease sequentially.

CONCLUSIONS: PIM use has an increasing effect on the development of health care costs. This cost-increasing effect of PIM use is moderated by the number of prescribed substances.

Consequenze della Polifarmacia e PIM

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Internal and Emergency Medicine
https://doi.org/10.1007/s11739-018-1941-8

IM - REVIEW

Polypharmacy in older people: lessons from 10 years of experience with the REPOSI register

Pier Mannuccio Mannucci[1] · Alessandro Nobili[2] · Luca Pasina[2] · REPOSI Collaborators (REPOSI is the acronym of REgistro POliterapie SIMI, Società Italiana di Medicina Interna)

Received: 29 June 2018 / Accepted: 27 August 2018

specialists with poor integration and inevitably treated with multiple medications. Polypharmacy (defined as the chronic intake of five or more drugs) is associated with increased risks of drug-drug interactions and related adverse effects, prescription and intake errors, poor compliance, re-hospitalization and mortality. With this background, the Italian Society of Internal Medicine chose to start in 2008 a prospective register called REPOSI (REgistro POliterapie SIMI, Società Italiana di Medicina Interna) in internal medicine and geriatric hospital wards.

medicine and geriatric hospital wards. The country wide register is an ongoing observatory on multimorbidity and polypharmacy in the oldest old, with the goal to improve prescription appropriateness and, thus to avoid potentially inappropriate medications. The main findings of the register, that has accrued so far, 7005 older patients throughout a 10 year period, are summarized herewith, with special emphasis on the main patterns of poor prescription appropriateness and related risks of adverse events.

Keywords Multimorbidity · Polypharmacy · Inappropriate prescription · Deprescribing · Medication reconciliation

Consequenze della Polifarmacia e PIM

- Incremento costi sanitari
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Archives of Gerontology and Geriatrics 77 (2018) 158–162

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journal homepage: www.elsevier.com/locate/archger

Effects of hyperpolypharmacy and potentially inappropriate medications (PIMs) on functional decline in older patients discharged from acute care hospitals

Paolo Fabbietti[a,*], Carmelinda Ruggiero[b], Federica Sganga[c], Sergio Fusco[d],

CONCLUSIONS: Hyperpolypharmacy, and to a lesser extent Beers violations predict functional decline in older patients discharged from acute care hospitals, whilst STOPP criteria are no longer associated with the outcome after adjusting for potential confounders. Hyperpolypharmacy is associated with functional decline independent of PIMs.

Keywords:
Comorbidity
Older adults
Potential inappropriate medications (PIMs)
Hyperpolypharmacy
Functional status

Aim: To comparatively investigate the effects of hyperpolypharmacy and potentially inappropriate medications (PIMs) on functional decline in older patients after hospital discharge.

Methods: Our series consisted of 733 patients aged ≥65 consecutively enrolled in a multicenter observational longitudinal study. PIMs were defined on the basis of updated versions of Beers and STOPP criteria. The occurrence of functional decline was defined as the loss of independency in at least 1 basic activity of daily living (BADL) from discharge through 3-month follow-up visit.

Results: After adjusting for several potential confounders, hyperpolypharmacy (OR = 2.20; 95%CI = 1.11–4.37) and Beers violations (OR = 1.99; 95%CI = 1.17–3.49) were significantly associated with functional decline, while STOPP (OR = 1.10; 95%CI = 0.64–1.88) and combined Beers + STOPP violations (OR = 1.72; 95%CI = 0.97–3.05) were not. In logistic regression models simultaneously including both hyperpolypharmacy and PIMs, hyperpolypharmacy was always associated with functional decline (OR = 1.98; 95%CI = 1.0–3.97 in the model including Beers violations; OR = 2.19; 95%CI = 1.11–4.35 in the model including STOPP violations; OR = 2.04; 95%CI = 1.02–4.06 in the model including combined Beers and STOPP violations). Beers violations (OR = 1.89; 95%CI = 1.09–3.28) also remained significantly associated with the outcome in this latter analysis, but not STOPP or combined Beers and STOPP violations.

Conclusions: Hyperpolypharmacy, and to a lesser extent Beers violations predict functional decline in older patients discharged from acute care hospitals, whilst STOPP criteria are no longer associated with the outcome after adjusting for potential confounders. Hyperpolypharmacy is associated with functional decline independent of PIMs.

Logistic regression analysis of hyperpolypharmacy and PIMs to functional decline after discharge

	Crude analysis OR (95%CI)	Age and gender adjusted OR (95%CI)	Fully adjusted[e] OR (95%CI)
Polypharmacy[a]	2.04 (1.26–3.29)	2.37 (1.43–3.93)	2.20 (1.11–4.37)
BEERS criteria[b]	1.72 (1.16–2.55)	1.57 (0.98–2.22)	1.99 (1.17–3.49)
STOPP criteria[c]	1.88 (1.27–2.79)	1.69 (1.13–2.53)	1.10 (0.64–1.88)
Beers + STOPP criteria[d]	1.87 (1.23–2.86)	1.65 (1.07–2.55)	1.72 (0.97–3.05)

Archives of Gerontology and Geriatrics 2018;77:158–162

Come affrontare la polifarmacia?

- Utilizzare principi prescrittivi appropriati per età
- Minimizzare l’uso di farmaci potenzialmente inappropriati
- De-prescrivere quando possibile

Medicine • Volume 94, Number 24, June 2015

Medicine®

OBSERVATIONAL STUDY

OPEN

Impact of an Innovative Educational Strategy on Medication Appropriate Use and Length of Stay in Elderly Patients

Graziamaria Corbi, MD, PhD, Giovanni Gambassi, MD, Gennaro Pagano, MD, Giusy Russomanno, PharmD, Valeria Conti, PhD, Giuseppe Rengo, MD, PhD, Dario Leosco, MD, PhD, Roberto Bernabei, MD, Amelia Filippelli, MD, and Nicola Ferrara, MD

Abstract: To evaluate the impact of an educational strategy on

CONCLUSIONS Go to:

Controlled studies articulated through the use of "tools" computing should be planned in order to give a correct answer to the increasing need of prescription appropriateness in polypathology elderly patients who take several different drug treatments. On this basis, these data suggest that our educative/informative instrument may be useful in reducing the number of inappropriate prescriptions and length of hospitalization, especially in more severely ill patients and with a high number of used drugs, representing, therefore, an important approach in the management of elderly patients characterized by polypharmacotherapy and comorbidity.

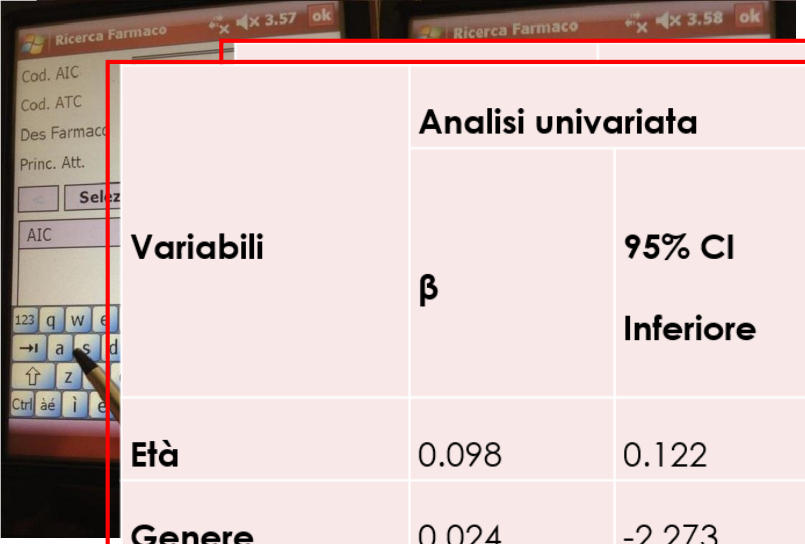
Assistant (PDA) device to check for PIMs.

Outcomes: The primary was the PIMs number, the secondary the length of stay.

Results: A total of 790 patients, 450 controls and 340 cases, were enrolled. According to the Beers criteria, 52.3% of the study population received $\geq$1 PIMs, 18.73% $\geq$2, and 2.4% $\geq$4 PIMs. A significant reduction of PIMs ($P = 0.020$) and length of stay ($P < 0.0001$) were seen in the intervention group. At multivariate analysis, PIMs significantly correlated with age, drugs number, and the intervention, and the length of stay significantly correlated with disease count, comorbidities, and intervention.

These data suggest that our educative instrument may be useful in reducing the PIMs number and length of hospitalization in elderly with a high number of drugs and comorbidities.

(*Medicine* 94(24):e918)



Variabili	Analisi univariata				Analisi multivariata			
	β	95% CI Inferiore	95% CI Maggiore	p value	β	95% CI Inferiore	95% CI Maggiore	p value
Età	0.098	0.122	0.734	0.006	0.041	-0.111	0.466	0.229
Genere	0.024	-2.273	4.664	0.499	---	---	---	---
Disease count	0.173	0.737	1,710	0.000	0.111	0.328	1.491	0.002
N° farmaci	-0.060	-1.050	0.076	0.090	0.002	-0.566	0.596	0.959
PIM	0.004	-1.627	1.818	0.913	---	---	---	---
Intervento	-0.310	-18.532	-11.978	0.000	-0.312	-18.244	-11.759	0.000
Severità CIRS	0.054	-1.334	10.104	0.133	---	---	---	---
Comorbilità CIRS	0.085	0.191	2.049	0.018	0.081	0.079	2.060	0.034

CI=Intervallo di Confidenza

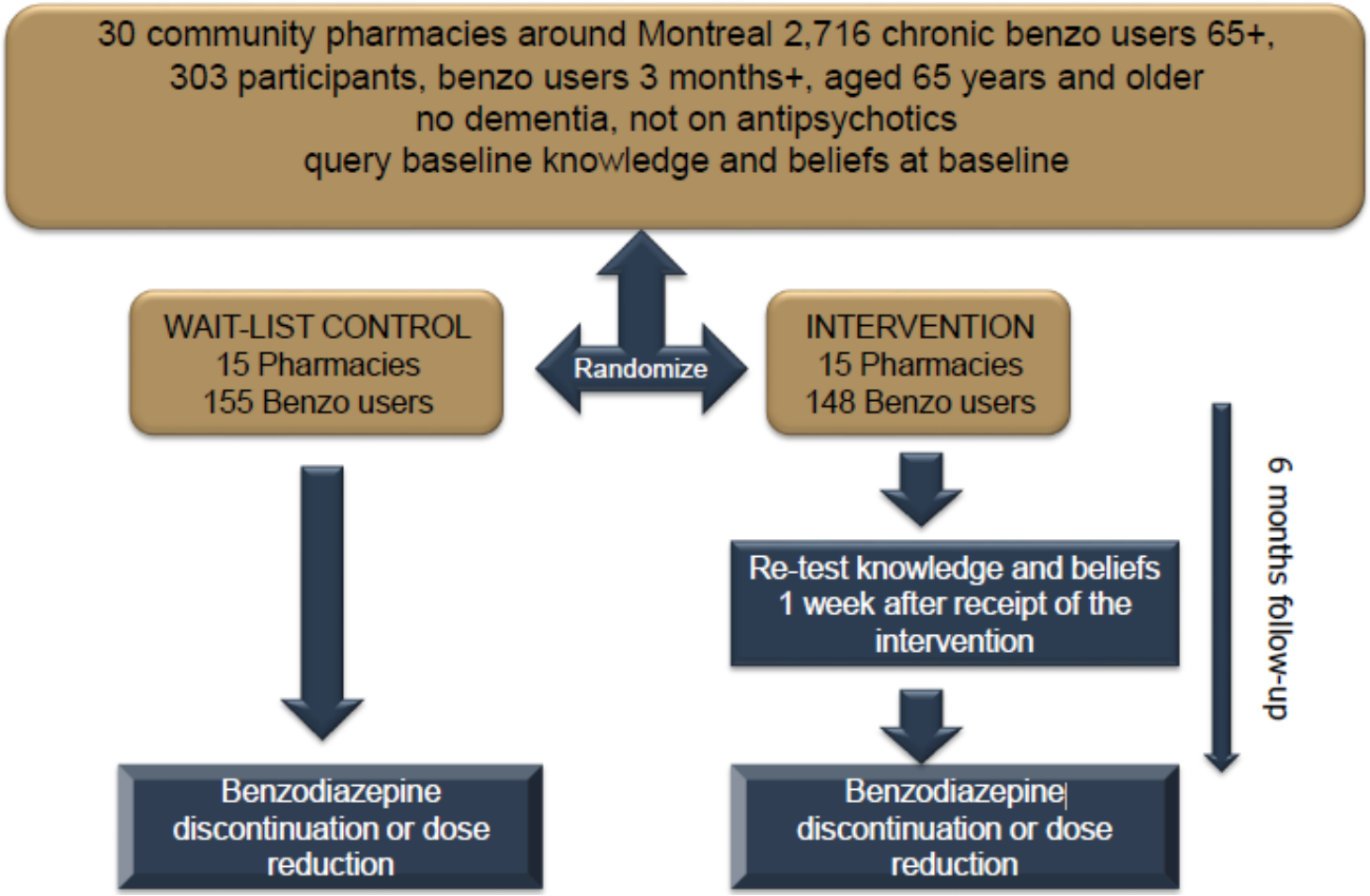
P Value si riferisce all'analisi univariata e multivariata verso la Durata di Degenza

Corbi et al, Medicine 2015

Reduction of Inappropriate Benzodiazepine Prescriptions Among Older Adults Through Direct Patient Education

The EMPOWER Cluster Randomized Trial

Cara Tannenbaum, MD, MSc; Philippe Martin, BSc; Robyn Tamblyn, PhD; Andrea Benedetti, PhD; Sara Ahmed, PhD

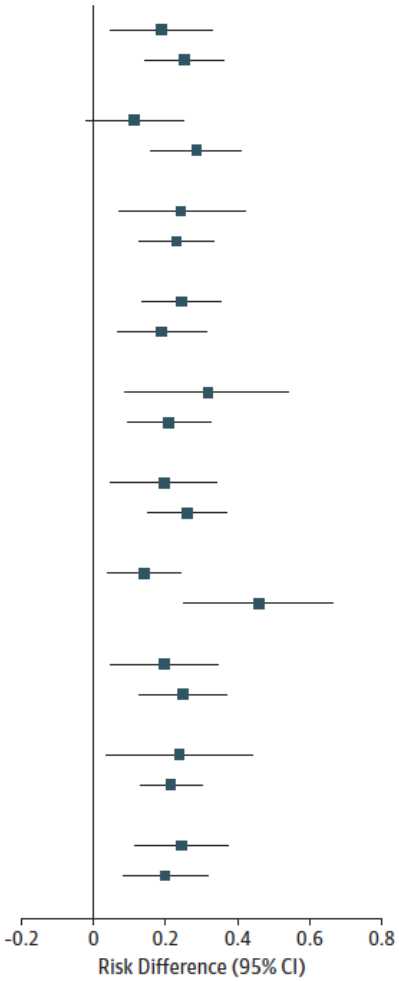


JAMA Intern Med. 2014;174(6):890-898. doi:10.1001/jamainternmed.2014.949

Reduction of Inappropriate Benzodiazepine Prescriptions Among Older Adults Through Direct Patient Education
The EMPOWER Cluster Randomized Trial

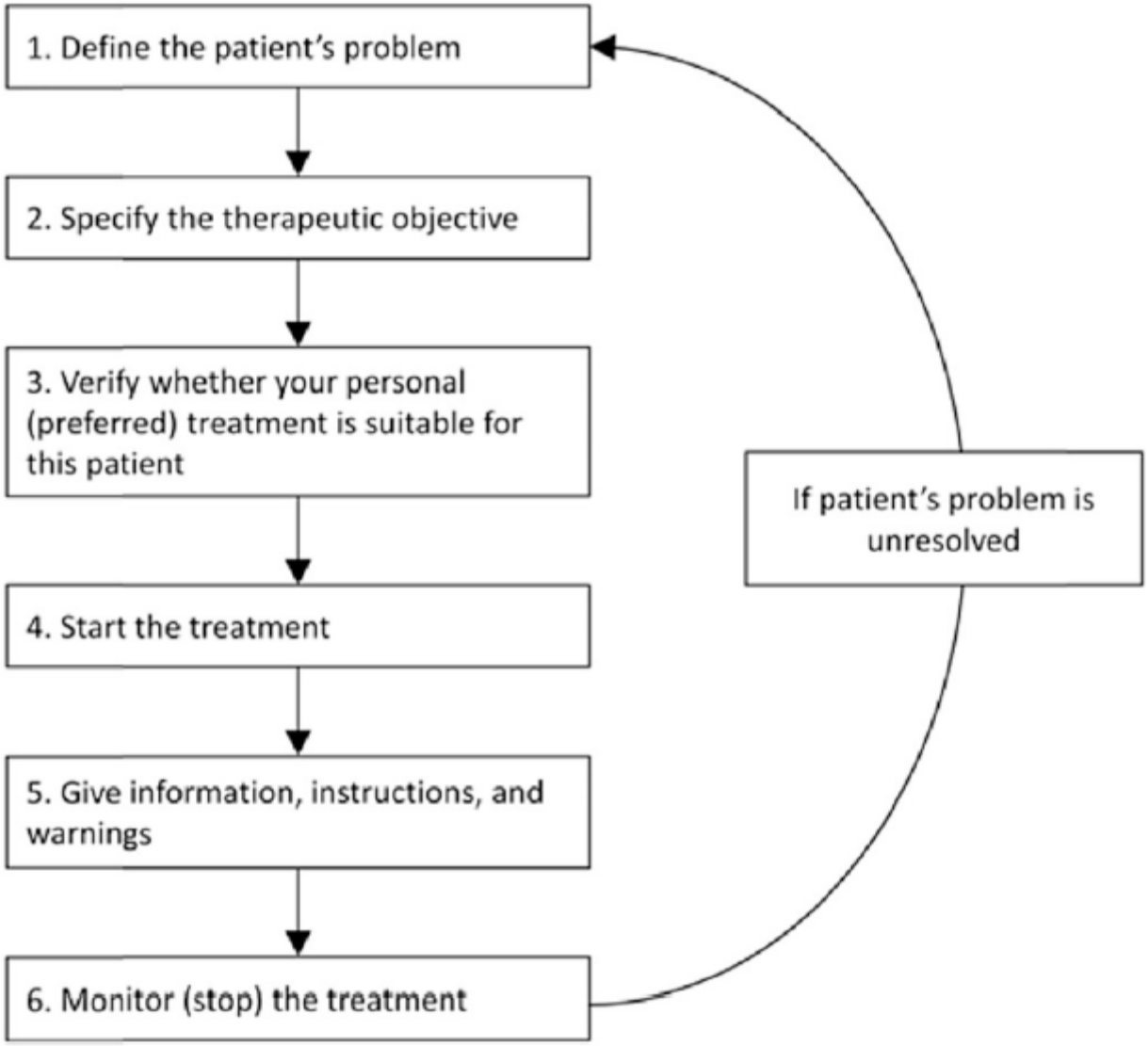
Cara Tannenbaum, MD, MSc; Philippe Martin, BSc; Robyn Tamblyn, PhD; Andrea Benedetti, PhD; Sara Ahmed, PhD

Subgroup	Risk Difference, (95% CI)	ICC
Sex		
Men	0.19 (0.06 to 0.32)	0
Women	0.25 (0.15 to 0.35)	0.022
Age, y		
≥80	0.11 (-0.01 to 0.24)	0
<80	0.29 (0.17 to 0.40)	0.038
Education level		
University or college	0.25 (0.08 to 0.41)	0.126
<High school	0.23 (0.14 to 0.32)	0.012
General health status		
Good to excellent	0.24 (0.15 to 0.345)	0
Poor to fair	0.19 (0.08 to 0.30)	0
Anxiety disorder		
Yes	0.32 (0.10 to 0.53)	0.150
No	0.21 (0.10 to 0.31)	0.010
Indication for benzodiazepine use		
Insomnia	0.20 (0.06 to 0.33)	0.030
Other reasons	0.26 (0.16 to 0.36)	0
Dose		
High (>0.8-mg/d equivalent dose)	0.14 (0.05 to 0.23)	0.010
Low (≤0.8-mg/d equivalent dose)	0.46 (0.26 to 0.66)	0.110
Previously attempted to cease benzodiazepine use		
Yes	0.20 (0.06 to 0.33)	0.020
No	0.25 (0.14 to 0.36)	0
Duration of benzodiazepine use, y		
<5	0.24 (0.05 to 0.43)	0
≥5	0.22 (0.14 to 0.29)	0
No. of medications		
<10	0.24 (0.13 to 0.36)	0
≥10	0.20 (0.10 to 0.31)	0



JAMA Intern Med. 2014;174(6):890-898. doi:10.1001/jamainternmed.2014.949

The process of rational prescribing set out in the WHO Guide to Good Prescribing



Res Social Adm Pharm. 2018. pii: S1551-7411(18)30777-0. doi:10.1016/j.sapharm.2018.08.014.

deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Algorithm

September 2016

Why is patient taking a PPI?

If unsure, find out if history of endoscopy, if ever hospitalized for bleeding ulcer or if taking because of chronic NSAID use in past, if ever had heartburn or dyspepsia

Indication still unknown?

- Mild to moderate esophagitis or
- GERD treated x 4-8 weeks (esophagitis healed, symptoms controlled)

- Peptic Ulcer Disease treated x 2-12 weeks (from NSAID; *H. pylori*)
- Upper GI symptoms without endoscopy; asymptomatic for 3 consecutive days
- ICU stress ulcer prophylaxis treated beyond ICU admission
- Uncomplicated *H. pylori* treated x 2 weeks and asymptomatic

- Barrett's esophagus
- Chronic NSAID users with bleeding risk
- Severe esophagitis
- Documented history of bleeding GI ulcer

Recommend Deprescribing

Strong Recommendation (from Systematic Review and GRADE approach)

Decrease to lower dose (evidence suggests no increased risk in return of symptoms compared to continuing higher dose), or

Stop and use on-demand (daily until symptoms stop) (1/10 patients may have return of symptoms)

Stop PPI

Continue PPI

or consult gastroenterologist if considering deprescribing

Monitor at 4 and 12 weeks

If verbal:
- Heartburn
- Dyspepsia
- Regurgitation
- Epigastric pain

If non-verbal:
- Loss of appetite
- Weight loss
- Agitation

Use non-drug approaches
- Avoid meals 2-3 hours before bedtime; elevate head of bed; address if need for weight loss and avoid dietary triggers

Manage occasional symptoms
- Over-the-counter antacid, H2RA, PPI, alginate prn (ie. Tums®, Rolaids®, Zantac®, Olex®, Gaviscon®)
- H2RA daily (weak recommendation – GRADE; 1/5 patients may have symptoms return)

If symptoms relapse:

If symptoms persist x 3 – 7 days and interfere with normal activity:

1) Test and treat for *H. pylori*

2) Consider return to previous dose

Farrell B, Pottie K, Thompson W, Boghossian T, Pizzola L, Rashid FJ, et al. Deprescribing proton pump inhibitors. Evidence-based clinical practice guideline. *Can Fam Physician* 2017;63:354-64 (Eng), e253-65 (Fr).

deprescribing.org

Institut de recherche Bruyère Research Institute

open Ontario Pharmacy Research Collaboration

Deprescribing

Un processo sistematico di identificazione e 'discontinuazione' di farmaci o regimi farmacologici in circostanze in cui evidenti o potenziali effetti negativi ne superino i benefici correnti e/o potenziali, tenendo conto degli obiettivi di cura, del livello di funzionamento, della aspettativa di vita, dei valori e preferenze del singolo paziente.

Scott IA, et al. Reducing Inappropriate Polypharmacy: The Process of Deprescribing. JAMA Internal Medicine, 2015.

Barriere alla “Deprescribing”

- Clinical complexity
- Time constraints
- Multiple prescribers
- Incomplete information
- Ambiguous / changing goals of care
- Uncertainty about benefits/ harms or continuing or stopping certain meds
- **“More is better” philosophy**

Scott IA, et al. Reducing Inappropriate Polypharmacy: The Process of Deprescribing. JAMA Internal Medicine, 2015.

5 Passi per il Deprescribing

1) Revisione critica di tutti i farmaci assunti dal paziente e le motivazioni della assunzione
2) Considerare il rischio complessivo di danno indotto da farmaci nei singoli pazienti per modulare la deprescrizione.
3) Valutare per ciascun farmaco il rapporto rischio/beneficio

5 Passi per il Deprescribing

4) Dare priorità allo sospensione di farmaci che presentano il rapporto beneficio / danno più basso e la più bassa probabilità di reazioni avverse da sospensione o sindromi da rimbalzo della malattia

5) Implementare un regime di interruzione e monitorare attentamente i pazienti per migliorare i risultati o prevenire l'insorgenza di effetti avversi.

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ROMA 28 novembre 01 dicembre 2018 Auditorium della Tecnica, Roma

Venerdì 30 novembre 2018

GRAZIE PER L'ATTENZIONE

Nicola Ferrara, MD
University of Naples "Federico II"
Department of Translational Medical Sciences, Naples, Italy
Past President of Italian Society of Gerontology and Geriatrics

SOCIETÀ ITALIANA DI GERONTOLOGIA E GERIATRIA