Gruppo di ricerca geriatrica

09 settembre 2011

I Farmaci in Residenza Sanitaria Assistenziale

Corrado Carabellese

Lo scopo del protocollo è quello di definire le modalità di gestione dei farmaci e le soluzioni in dotazione, per quanto riguarda tutti gli aspetti inerenti a:

- approvvigionamento
- conservazione
- preparazione
- somministrazione
- controllo scadenze
- pulizia degli armadi

NOTA 55

Antibiotici iniettabili per uso extra-ospedaliero:

- cefamandolo
- cefonicid
- ceftezolo
- cefurossima
- cefmetazolo
- cefotetan
- cefoxitina
- cefodizima
- cefoperazone
- cefotaxima
- ceftazidima*
- ceftizoxima
- ceftriaxone
- cefepime*
- mezlocillina
- piperacillina
- ampicillina+ sulbactam
- piperacillina+ tazobactam*
- ticarcillina+ac. clavulanico*

- amikacina
- gentamicina
- netilmicina
- tobramicina

La prescrizione a carico del SSN degli antibiotici iniettabili per l'uso extra-ospedaliero è limitata alle seguenti condizioni:

- trattamento iniettivo di infezioni gravi delle vie respiratorie, delle vie urinarie, dei tessuti molli, intra-addominali, ostetrico-ginecologiche, ossee e articolari;
- trattamento iniettivo delle infezioni causate da microrganismi resistenti ai più comuni antibiotici, particolarmente nei pazienti immunocompromessi.

NOTA 56

Antibiotici per continuità ospedale-territorio:

- aztreonam
- ertapenem
- imipenem+ cilastatina
- meropenem
- rifabutina
- teicoplanina

La prescrizione a carico del SSN è limitata al trattamento iniziato in ambito ospedaliero e al successivo utilizzo in ambito territoriale da parte del medico di medicina generale per garantire la continuità terapeutica.

La prescrivibilità esclusiva in ambito ospedaliero è finalizzata al mantenimento dell'efficacia e alla contemporanea prevenzione dell'insorgenza di resistenza batterica ai principi attivi. La scelta di iniziare un trattamento ospedaliero con tali farmaci dovrebbe essere riservata alle infezioni gravi e in assenza di alternative terapeutiche. Ciò non impedisce, tuttavia, dopo la diagnosi e l'inizio del trattamento, il mantenimento della continuità assistenziale ospedale-territorio a carico del SSN, ove fosse necessario proseguire la terapia a domicilio.

MODALITÀ DI GESTIONE DEI FARMACI: I farmaci vanno custoditi sempre, nella confezione originale, dove sono riportati il n° di lotto e la scadenza, per lo stesso motivo non devono essere tagliati i blister delle compresse. I farmaci sono conservati nell'armadio dell'infermeria, nel frigo dell'infermeria , negli appositi carrelli distributori, carrello di emergenza.

RESTITUZIONE FARMACI SCADUTI: La resa dei farmaci scaduti va fatta alla Farmacia esterna in apposita scatola riportante la dicitura "farmaci non in uso".

DISTRIBUZIONE: La preparazione e la somministrazione/distribuzione dei farmaci viene fatta a cura degli infermieri professionali. Gli Infermieri si avvalgono della collaborazione degli OSS nella somministrazione.

SERVIZIO ASSISTENZA PROTESICA, INTEGRATIVA E MEDICINA COMPLEMENTARE ASL

FORNITURE ASL ALLA RSA:

Ortesi protesi (corsetti, busti, collari, minerve);
presidi per la deambulazione (calzature, plantari, tutori, staffe, protesi d'arto, carrozzina, ecc);
ausili e presidi per la locomozione (stabilizzatori, carrozzelle);
protesi acustiche, fonetiche e presidi per la comunicazione;
protesi oculari e presidi per non vedenti e ipovedenti;
Ausili per il controllo metabolico del Diabete;
Ausili per stomie;
Presidi per lesioni da decubito compresa la terapia vacuum;
Integratori alimentari
Presidi per il controllo della disfagia
Presidi Nutrizione enterale e parenterale compreso pompa e deflussori

A) per quanto concerne gli ospiti di Case di Riposo e di Istituti convenzionati ex art. 26 (R.S.A. e I.D.R.) i medesimi hanno diritto all’erogazione di presidi personalizzati.

Ministero della Salute

DIPARTIMENTO DELLA QUALITÀ

DIREZIONE GENERALE DELLA PROGRAMMAZIONE SANITARIA, DEI LIVELLI DI ASSISTENZA E DEI PRINCIPI ETICI DI SISTEMA

UFFICIO III

RACCOMANDAZIONE PER LA PREVENZIONE DEGLI ERRORI IN TERAPIA CON FARMACI "LOOKALIKE/SOUND-ALIKE"

Gli errori riferiti all'uso dei farmaci "Look-Alike/Sound-Alike", ossia farmaci LASA, possono causare danni anche gravi. Gli errori in terapia occorsi più frequentemente sono riferiti all'uso dei farmaci che possono essere facilmente scambiati con altri per la somiglianza grafica e/o fonetica del nome e per l'aspetto simile delle confezioni. Tali errori possono verificarsi in qualsiasi fase della gestione del farmaco sia in ambito ospedaliero che territoriale. La presente Raccomandazione si pone come strumento per la prevenzione degli eventi avversi dovuti ad errori in corso di terapia farmacologica con farmaci "Look-Alike/Sound-Alike".

Raccomandazione n. 12, agosto 2010

3. Ambiti di applicazione

COSA	La Raccomandazione si applica a tutti i **farmaci LASA** usati in ospedale e sul territorio.
A CHI	La Raccomandazione è rivolta a tutti gli **operatori sanitari** coinvolti, a vario titolo, nel processo di gestione del farmaco: in ospedale, nei servizi territoriali delle ASL, nelle Farmacie di comunità, negli studi dei medici di medicina generale e dei pediatri di famiglia nonché alle Direzioni delle Aziende sanitarie e farmaceutiche.
DOVE	La Raccomandazione può trovare applicazione in tutte le Strutture sanitarie, nelle RSA e nelle Case di riposo, negli Hospice, nelle Strutture private di riabilitazione e cura, negli Istituti penitenziari, sulle ambulanze, presso il domicilio del paziente e i grossisti di medicinali.
PER CHI	La Raccomandazione è a tutela di tutti i pazienti che necessitano di terapia farmacologia con farmaci LASA.

FARMACI STUPEFACENTI

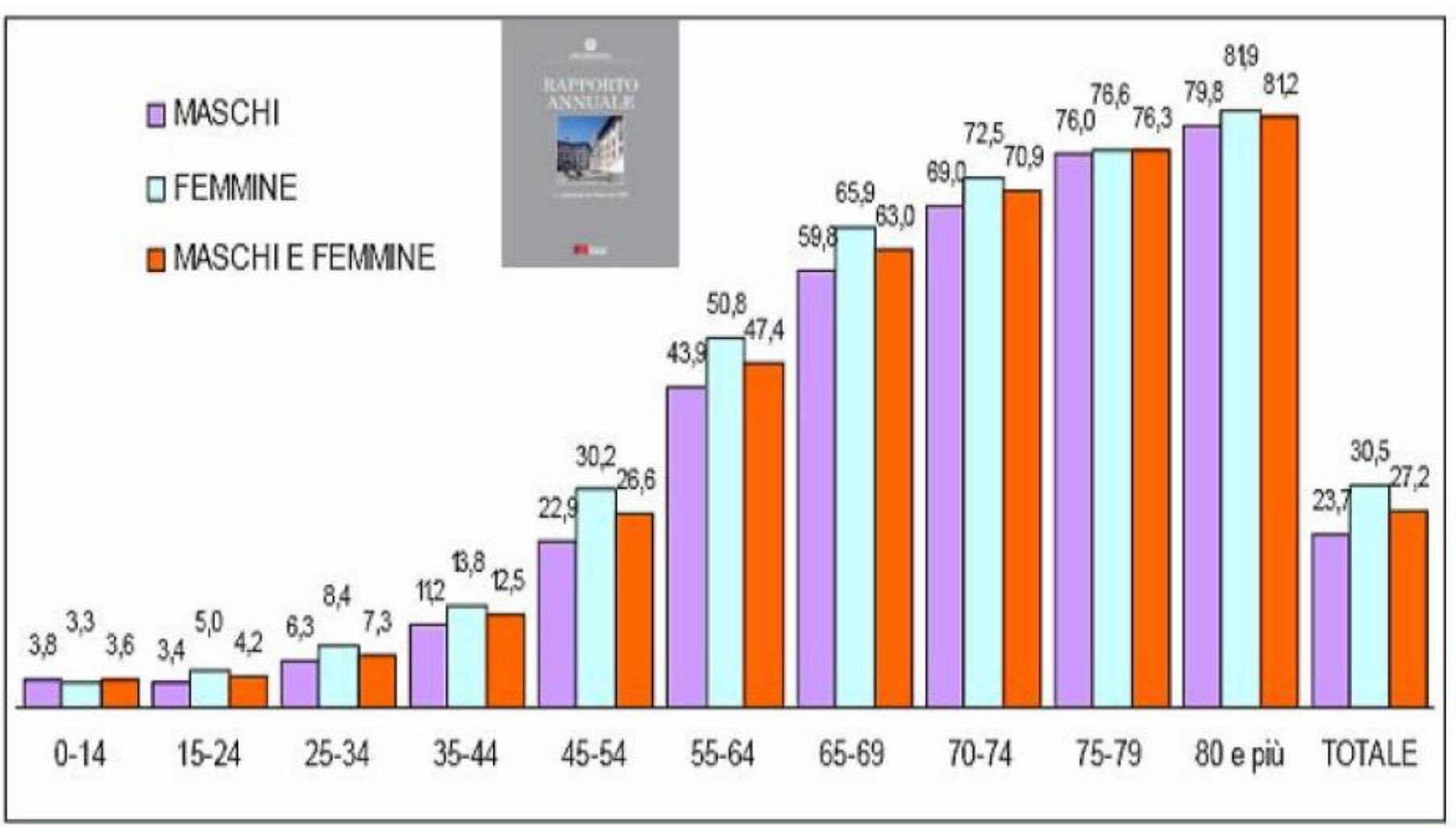
NORMATIVA DI RIFERIMENTO

- **D.P.R. n° del 09.10.1990, come modificato dalla legge n° 49 del 21.02.2006**
- **Art. 14 L.R. n° 46/83 comma 3.**
- **Circolare regionale H1.2001.0018440 del 15.03.2001**
- **Circolare regionale H1.2002.0025866 del 30.04.2002**
- **Circolare regionale H1.2006.0022151 del 27.04.2006**

FARMACOVIGILANZA
*d. Lgs 95 2003

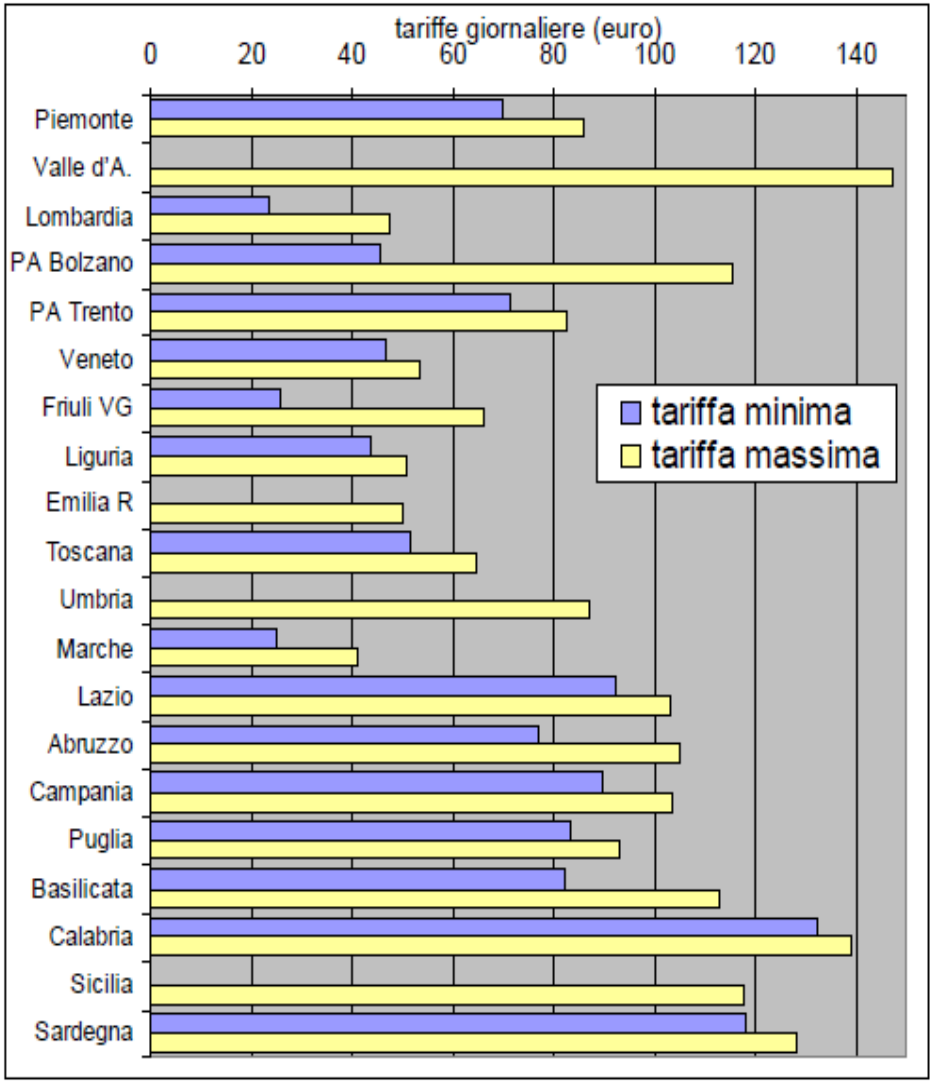
E' l'insieme delle attività il cui obiettivo è fornire, in modo continuativo, **le migliori informazioni possibili sulla sicurezza dei farmaci** permettendo cosi' l'adozione delle misure opportune **Farmacovigilanza** rare che i farmaci disponibili sul mercato presentino, nelle condizioni di utilizzo autorizzate, un **rapporto beneficio rischio favorevole** per la popolazione *

Popolazione per uso quotidiano di farmaci prescritti per classe d'età e sesso - Anno 2005



Il 19.6% della popolazione è responsabile del 60% spesa farmaci

Fig. 3 – RSA per anziani – importi tariffari regionali minimi e massimi



Regioni	tariffa	
	min	max
Piemonte	70,00	86,00
Valle d'Aosta	-	147,50
Lombardia	23,70	47,50
PA Bolzano (quota alberghiera)	45,60	115,40
PA Trento	71,40	82,90
Veneto (quota sanitaria)	46,87	53,57
Friuli VG (quota alberghiera)	26,00	66,00
Liguria	43,80	50,80
Emilia Romagna	-	50,26
Toscana	51,55	64,75
Umbria	-	87,20
Marche (quota alberghiera)	25,00	41,00
Lazio	92,40	103,40
Abruzzo	77,00	105,00
Campania	89,76	103,56
Puglia	83,61	92,90
Basilicata	82,08	112,80
Calabria	132,32	138,94
Sicilia	-	117,70
Sardegna	118,00	128,00

Fig. 4 – RSA – criteri di inclusione di alcune Categorie di costo nelle tariffe regionali delle RSA

	Personale infermieristico	Personale medico	Farmaci	Prestazioni specialistiche
Piemonte	incl nella Tariffa	a carico della ASL (MMG)	a carico della ASL (fornitura diretta)	a carico della ASL
Valle d'Aosta	incl nella Tariffa	incl nella Tariffa e continuità assistenziale	a carico della ASL (fornitura diretta)	a carico della ASL
Lombardia	incl nella Tariffa	incl nella Tariffa	incl nella Tariffa	a carico della ASL
PA Bolzano	a carico della ASL	a carico della ASL	a carico della ASL	a carico della ASL
PA Trento	incl nella Tariffa	incl nella Tariffa	a carico della ASL (fornitura diretta)	a carico della ASL
Veneto	incl nella Tariffa	incl nella Tariffa	a carico della ASL	a carico della ASL
Friuli VG	a carico della ASL	a carico della ASL	a carico della ASL	a carico della ASL
Emilia R	incl nella Tariffa	a carico della ASL	a carico della ASL	a carico della ASL
Liguria	incl nella Tariffa	incl nella Tariffa	a carico della ASL (fornitura diretta)	a carico della ASL
Toscana	incl nella Tariffa	a carico della ASL (MMG)	a carico della ASL (anche fornitura diretta)	a carico della ASL
Umbria	a carico della ASL	a carico della ASL	a carico della ASL	a carico della ASL
Marche	Assistenza Diretta: a carico della ASL Assist. Indiretta: incl nella tariffa	Assistenza Diretta: a carico della ASL Assist. Indiretta: incl nella tariffa	a carico della ASL	a carico della ASL
Lazio	incl nella Tariffa	a carico della ASL (MMG)	a carico della ASL	a carico della ASL
Campania	a carico della ASL	a carico della ASL	a carico della ASL	a carico della ASL
Puglia	incl nella Tariffa	incl nella Tariffa o a carico della ASL (MMG)	a carico della ASL (fornitura diretta per le RSA pubbliche)	a carico della ASL
Calabria	incl nella Tariffa	incl nella Tariffa	a carico della ASL	a carico della ASL
Sicilia	incl nella Tariffa	incl nella Tariffa	a carico della ASL	incl nella Tariffa?
Sardegna	incl nella Tariffa	Tariffa (medico della RSA) + MMG e continuità assist.	a carico della ASL	Incl nella Tariffa le prestazioni "di base", le altre a carico della ASL

inappropriatezza

•Drugs Aging. 2010 Sep 1;27(9):747-58.

Potentially inappropriate drug prescriptions and risk of hospitalization among older, Italian, nursing home residents: the ULISSE project.

Ruggiero C, Dell'Aquila G, Gasperini B, Onder G, Lattanzio F, Volpato S, Corsonello A, Maraldi C, Bernabei R, Cherubini A; ULISSE Study Group.

Potentially inappropriate medications in older patients increase the risk of adverse drug events, which are an important cause of hospital admission and death among hospitalized patients. Little information is available about the prevalence of potentially inappropriate drug prescriptions (PIDPs) and the related health adverse outcomes among nursing home (NH) residents.

A total of 1716 long-term residents aged >or=65 years participating in the ULISSE. A PIDP was defined according to the most recent update of the Beers criteria.

Almost one out of two persons (48%) had at least one PIDP and almost one out of five had two or more PIDPs (18%). Residents with a higher number of PIDPs had a higher likelihood of being hospitalized. **Compared with residents without PIDPs, those with two or more PIDPs at baseline had a higher probability of being hospitalized (hazard ratio 1.73; 95% CI 1.14, 2.60) during the following 12 months. Risk of PIDP was positively associated with the total number of drugs and diseases, but negatively with age. PIDPs defined according to specific conditions (n = 780; 55%) were slightly more frequent than PIDPs based on single medications irrespective of specific indication (n = 639; 45%).**

CONCLUSIONS:

PIDP is a significant problem among Italian NH residents. There is an urgent need for intervention trials to test strategies to reduce inappropriate drug use and its associated adverse health outcomes.

J Clin Pharm Ther. 2011 Feb;36(1):33-44.

Inappropriate prescribing in older residents of Australian care homes.

Stafford AC, Alswayan MS, Tenni PC.

The incidence of inappropriate prescribing is higher amongst the older age group than the younger population. Inappropriate prescribing potentially leads to drug-related problems such as adverse drug reactions. We aimed to determine the prevalence of inappropriate prescribing in residents of Tasmanian (Australia) residential care homes using Beers and McLeod criteria. METHODS: Patient demographics, medical conditions and medications were collected from medical records. The patients who fulfilled either Beers or McLeod criteria were identified and the characteristics of these patients were then compared. RESULTS: Data for 2345 residents were collected between 2006 and 2007. There were 1027 (43.8%) patients prescribed at least one inappropriate medication. Beers criteria identified more patients (828 patients, 35.3%) as being prescribed inappropriate medication compared with McLeod criteria (438 patients, 18.7%). Patients taking psychotropic medication/s, more than six medications or diagnosed with five or more medical conditions were more likely to be prescribed an inappropriate medication (P<0.001). The most frequently identified inappropriate medications included benzodiazepines, amitriptyline, oxybutynin and non-steroidal anti-inflammatory drugs.

Fick DM, Cooper JW, Wade WE, Waller JL, Maclean JR, Beers MH.
Updating the Beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel experts. Arch Intern Med. 2003; 163:2716-2724

alprazolam (Xanax)amiodarone (Cordarone)amitriptyline (Elavil)amphetaminesanorexic agentsbarbituratesbelladonna alkaloids (Donnatal)bisacodyl (Dulcolax) carisoprodol (Soma)cascara sagradachlordiazepoxide (Librium, Mitran)chlordiazepoxide-amitriptyline (Limbitrol)chlorpheniramine (Chlor-Trimeton)chlorpropamide (Diabinese)chlorzoxazone (Paraflex)cimetidine (Tagamet)clidinium-chlordiazepoxide (Librax)clonidine (Catapres)clorazepate (Tranxene)cyclandelate (Cyclospasmol)cyclobenzaprine (Flexeril)cyproheptadine (Periactin) lorazepam (Ativan)Mmeperidine (Demerol)meprobamate (Miltown, Equanil)mesoridazine (Serintil)metaxalone (Skelaxin)methocarbamol (Robaxin)methyldopa (Aldomet)methyldopa-hydrochlorothiazide (Aldoril)methyltestosterone (Android, Virilon, Testrad)mineral oilNnaproxen (Naprosyn, Avaprox, Aleve)Neoloidnifedipine (Procardia, Adalat)nitrofurantoin (Macrodantin)Oorphenadrine (Norflex)oxaprozin (Daypro)oxazepam (Serax)oxybutynin (Ditropan) diazepam (Valium)dicyclomine (Bentyl)digoxin (Lanoxin)diphenhydramine (Benadryl)dipyridamole (Persantine)disopyramide (Norpace, Norpace CR)doxazosin (Cardura)doxepin (Sinequan)Eergot mesyloids (Hydergine)estrogensethacrynic acid (Edecrin)Fferrous sulfate (iron)fluoxetine (Prozac)flurazepam (Dalmane)Gguanadrel (Hylorel)guanethidine (Ismelin)Hhalazepam (Paxipam)hydroxyzine (Vistaril, Atarax)hyoscyamine (Levsin, Levsinex) pentazocine (Talwin)perphenazine-amitriptyline (Triavil)piroxicam (Feldene)promethazine (Phenergan)propantheline (Pro-Banthine)propoxyphene (Darvon) and combination productsQquazepam (Doral)Rreserpine (Serpalan, Serpasil)Ttemazepam (Restoril)thioridazine (Mellaril)ticlopidine (Ticlid)triazolam (Halcion)trimethobenzamide (Tigan)tripelennamine

BEERS CRITERIA
Criteria for Potentially Inappropriate Medication Use in Older Adults: Independent of Diagnoses or Conditions.

I criteri di Beers prevedevano tre categorie di prescrizione inappropriata:

“farmaci da evitare sempre” in quanto poco efficaci e non sicuri;

“farmaci inappropriati” quando prescritti sopra un certo dosaggio;

“farmaci inappropriati” quando prescritti per una durata eccessiva.

•Drugs Aging. 2006;23(4):333-43.

Use of inappropriate medications and their prognostic significance among in-hospital and nursing home patients with and without dementia in Finland.

Raivio MM, Laurila JV, Strandberg TE, Tilvis RS, Pitkälä KH.

Although the Beers criteria have been frequently utilised to describe the use of inappropriate medications in various elderly populations, less is known about the use of such medications among patients with dementia, and nor have many studies dealt with their impact on mortality or use of healthcare services.

Mortality data as well as days in acute hospital were obtained from central registers and all area hospitals during 2 years of follow-up.

The entire population was old and frail (mean age 86 years, 82% females), 60% had dementia and 36.2% received at least one potentially inappropriate drug (PID). No differences existed in the proportion of users of PIDs among those 60% of patients with dementia compared with those without. The most common PID was temazepam, with 14% of all patients on high doses. Other commonly used PIDs were oxybutynin and dipyridamole. Amitriptyline was more commonly used among patients without dementia (4.7%) compared with those with dementia (0.8%). **Nevertheless, in this very old and frail study population, use of inappropriate drugs did not predict mortality or use of health services.**

CONCLUSION:

Use of PIDs is common in nursing homes and hospitals in Finland but has no impact on mortality or hospital admissions. Use of high-dose temazepam as a hypnotic accounted for most of the high use of PIDs.

•Am J Geriatr Pharmacother. 2010 Dec;8(6):562-70.

Incident use and outcomes associated with potentially inappropriate medication use in older adults.

Dedhiya SD, Hancock E, Craig BA, Doebbeling CC, Thomas J 3rd.

Most studies of potentially inappropriate medication (PIM) use among older adults have focused on prevalence rather than incidence.

A retrospective analysis was conducted using Indiana Medicaid enrollment and administrative claims files. Individuals were included if they were Medicaid eligible and aged ≥65 years as of January 2003 and received nursing home services in each month of 2003 or until death in 2003. Individuals also had to receive nursing home services from October 2002 through December 2002 for inclusion in the sample. To focus analysis on incident PIM use, individuals who received any PIM prescription medication from October 2002 through December 2002 were excluded from the sample, as were those not prescribed any new medication in 2003. PIMs were identified using the 2003 Beers criteria. Associations between incident PIM use and hospitalization and mortality were assessed using logistic regression models after controlling for other risk factors. Potential selection bias was examined using bivariate probit models. The study sample consisted of 7594 individuals (mean age, 83.07 years). A majority of the sample was female (76.5%), white (89.7%), and widowed (58.8%). Most individuals received care in nursing homes located in urban areas (5306 [69.9%]) and in the central region of Indiana (2838 [37.4%]). One-year incidence of PIM use was 42.1%. Incident PIM users were more likely to be hospitalized (odds ratio [OR] = 1.27; 95% CI, 1.10-C1.46) and more likely to die (OR = 1.46; 95% CI, 1.31-C1.62) in the 12 months after first receiving a PIM than nonusers, even after adjusting for demographic and clinical risk factors.

CONCLUSIONS:

Incident PIM use was high among these elderly Indiana Medicaid residents of nursing homes. Individuals who began use of a PIM were at a higher risk of hospitalization and of dying.

•Int Psychogeriatr. 2011 Mar 28:1-8. [Epub ahead of print]

Psychotropic drug use in relation to mental disorders and institutionalization among 95-year-olds: a population-based study.

Lesén E, Carlsten A, Skoog I, Waern M, Petzold M, Börjesson-Hanson A.

The prevalence of psychotropic drug use is high among the elderly, but research on how psychotropic drugs are used among individuals aged 90 years and older is limited. An increased knowledge on this topic may contribute to improved prescribing patterns in this vulnerable population. The aim of this study was to assess the use of psychotropic drugs in relation to mental disorders and institutionalization among 95-year-olds and to identify use of potentially inappropriate psychotropic drugs.Methods: All 95-year-olds born in 1901-1903 living in nursing homes or community settings in Gothenburg, Sweden were invited to participate. The response rate was 65% and 338 95-year-olds were examined (263 women, 75 men). Psychotropic drug use in relation to mental disorders and institutionalization was assessed. Information on drug use was collected primarily from multi-dose drug dispensing lists. Participants were examined by trained psychiatrists using the Comprehensive Psychopathological Rating Scale and a battery of cognitive tests. Dementia, depression, anxiety and psychotic disorders were diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, third edition, revised (DSM-III-R).

Sixty percent of the 95-year-old participants used psychotropic drugs; hypnotics were most common (44%). Potentially inappropriate psychotropics were observed in one third (33%). Antidepressants were used by 7% of the participants without dementia who fulfilled criteria for a depressive disorder, while 56% used hypnotics and 30% used anxiolytics**. Conclusions: The high prevalence of psychotropic drug use and the nonspecific nature of these treatments among 95-year-olds indicate a need for improvement in prescribing patterns.**

Situazioni specifiche

•Drugs Aging. 2008;25(6):445-54.

Compliance with medication in nursing homes for older people: resident enforcement or resident empowerment?

Hughes CM.

Compliance with medication has been frequently cited as a problem for patients living in community settings. **However, there has been little commentary on compliance issues for residents in nursing homes.** This is probably due to the assumption that residents will receive their medication on a regular basis and administration will be supervised and, therefore, compliance is not perceived to be a problem. However, regular compliance may not always be appropriate if the medication has not been reviewed for appropriateness and this 'enforced' compliance may give rise to side effects or adverse effects. Residents may also be exposed to 'erratic' compliance because of inconvenient administration times for staff or difficult and time-consuming administration instructions. **This may have clinical implications for residents who require medication at regular intervals, e.g. those who have Parkinson's disease.** Enforced or erratic compliance is at odds with shared decision making, which is being promoted as a way of empowering patients. It could be argued that because of a high degree of cognitive impairment, it is not appropriate for nursing home residents to become involved in decision making about medications. However, the nursing home population is heterogeneous in nature and the assumption should not be made that all residents are incapable of becoming more involved in some aspects of their own care. **A greater focus on resident-centred care may promote more empowerment and autonomy, both generally and with respect to compliance with medication in particular, in nursing home residents.**

•Drugs Aging. 2009;26(6):505-17.

"I just take what I am given": adherence and resident involvement in decision making on medicines in nursing homes for older people: a qualitative survey.

Hughes CM, Goldie R.

Adherence to medication is generally considered to be poor in many patient groups, but little is known about adherence to medication in the nursing home setting. It is also unclear if residents in nursing homes are involved in decision making about medication.

Eight GPs and 17 residents participated in semi-structured interviews and nine nurses participated in two focus groups (n = 4; n = 5). The main theme that emerged was control, which was manifested in many ways. Both groups of healthcare professionals needed to maintain control of prescribing or administration of medication in order to ensure safety, quality and continuity of care. All residents accepted control without question, reported that they were adherent to medication and had little involvement in prescribing decisions or administration of their own medicines. Although the healthcare professionals thought that more involvement in decisions around medication would contribute to resident autonomy and empowerment, it was also recognized that this could adversely affect control within the nursing home.

CONCLUSION:

Although adherence with medication was generally perceived not to be a problem in the nursing homes setting in this study, other findings raise major challenges for resident involvement in an important aspect of their own care. **Although there may be some residents, because of cognitive decline, who are unable to become involved in aspects of decisions about prescribing and self-administration, healthcare professionals providing care to these patients should strive to involve them as far as possible in their own care.**

•Scand J Prim Health Care. 2010 Sep;28(3):154-9.

Use of proton-pump inhibitors and their associated risks among frail elderly nursing home residents.

Teramura-Grönblad M, Hosia-Randell H, Muurinen S, Pitkala K.

The aim of this study is to investigate the use of proton-pump inhibitors (PPI) and their associated risks among frail elderly nursing home residents.

An assessment of residents (n = 1987, mean age 83.7 years) in all nursing homes in Helsinki was carried out in February 2003. Data included demographic characteristics, symptoms such as diarrhea, vomiting and constipation, use of various drugs, and medical diagnoses.

Altogether 433 residents were on PPIs. The factors associated with regular PPI use in univariate analyses included **poor functional status, higher number of comorbidities, higher number of medications and lactose intolerance. The users had suffered from a prior ventricular or duodenal ulcer, cancer and coronary heart disease more often than the non-users.** In accordance with our hypothesis, the users of PPIs more often had diarrhea (19.7%) than the non-users (12.9%) ($p < 0.001$), and they had a prior hip fracture (28.5%) more often than the non-users (19.4%) ($p < 0.001$). In logistic regression analysis the use of PPIs had an independent association with diarrhea (OR 1.60 (95% CI 1.20 to 2.15).

CONCLUSION:

Physicians should avoid unnecessary long-term use of PPIs, particularly among frail elderly long-term care patients.

G Gerontol 2009;57:78-86

Prevalenza e fattori di rischio della stipsi in una popolazione di anziani in RSA
Prevalence and risk factors of constipation among the elderly in nursing homes

M. Monti, M.C. Neri, F. Trecate*, R. Andreoni**, R. Bagarolo***
Direzione Medica RSA, Azienda di Servizi alla Persona "Pio Albergo Trivulzio", Milano; * Fondazione Don Gnocchi; ** RSA "S. Ambrogio", Milano; *** Direzione Medica, Istituto Don Orione, Milano

Obiettivi. **E stato condotto uno studio per valutare alcune variabili legate alla stipsi cronica che ha coinvolto 376 anziani (eta: 83,0) in sei RSA milanesi.**

Metodi. **I dati sono stati raccolti attraverso un'intervista ai pazienti e, ove non possibile, agli operatori e la compilazione di una scheda appositamente elaborata. Per ogni paziente erano registrati, oltre ai dati demografici e di autonomia motoria, il *Body Mass Index*, la comorbidita ed una serie di variabili collegate alla stipsi.**

Risultati. **E stato osservato che il 47% dei pazienti presentava stipsi e il 15% aveva feci di consistenza aumentata rispetto alla norma. Inoltre, la stipsi correlava significativamente con i principali fattori di rischio, quali la ridotta mobilita (64% negli allettati e 72% in chi faceva uso di carrozzina), la scarsa idratazione (67% nei soggetti con idratazione orale < 500 ml/die), la contenzione fisica (77%), la dipendenza nell'alimentazione (77%) e la dieta povera di fibre (56%). Il 60% dei pazienti usava abitualmente farmaci lassativi per os di cui il 33% con frequenza quotidiana. La stipsi influenza la probabilità di assunzione del lassativo (OR 1,2; I.C. 95% 0,9-1,4) ma non è determinante il fatto di non essere stitici per evitare l'assunzione del lassativo (OR 0,9; I.C. 95% 0,7-1).**

Conclusioni. **La stipsi è una criticità assistenziale frequentemente riscontrata in RSA ma spesso sottovalutata che, per evitare inadeguate pratiche cliniche e abuso farmacologico, richiede di implementare programmi formativi rivolti sia al personale di assistenza sia agli anziani, per migliorare gli stili di vita del paziente e le attività assistenziali abitualmente erogate.**

•J Am Med Dir Assoc. 2011 Jun;12(5):377-83. Epub 2010 Oct 2.

Potentially inappropriate prescribing of primarily renally cleared medications for older veterans affairs nursing home patients.

Hanlon JT, Wang X, Handler SM, Weisbord S, Pugh MJ, Semla T, Stone RA, Aspinall SL.

Inappropriate prescribing of primarily renally cleared medications in older patients with kidney disease can lead to adverse outcomes.

Potentially inappropriate prescribing of primarily renally cleared medications determined by estimating creatinine clearance using the Cockcroft Gault (CG) and Modification of Diet in Renal Disease (MDRD) equations and applying explicit guidelines for contraindicated medications and dosing.

The median estimated creatinine clearance via CG was 67 mL/min, whereas it was 80 mL/min/1.73m(2) with the MDRD. **Overall, 11.89% patients via CG and only 5.98% via MDRD had evidence of potentially inappropriate prescribing of at least 1 renally cleared medication. The most commonly involved medications were ranitidine, glyburide, gabapentin, and nitrofurantoin.** Factors associated with potentially inappropriate prescribing as per the CG were age older than 85 (adjusted odds ratio [AOR] 4.24, 95% confidence interval [CI] 2.42-7.43), obesity (AOR 0.26, 95% CI 0.14-0.50) and having multiple comorbidities (AOR 1.09 for each unit increase in the Charlson comorbidity index, 95% CI 1.01-1.19).

Potentially inappropriate prescribing of renally cleared medications is common in older VA NH patients. Intervention studies to improve the prescribing of primarily renally cleared medications in nursing homes are needed.

Terapia dopo ammissione NH

•J Am Geriatr Soc. 2002 Jun;50(6):995-1000.

Inappropriate prescribing before and after nursing home admission.

Dhalla IA, Anderson GM, Mamdani MM, Bronskill SE, Sykora K, Rochon PA.

To compare the prevalence of inappropriate prescribing before and after nursing home admission and to determine which patient and physician characteristics are associated with inappropriate prescribing in the nursing home setting.

For each patient in the cohort, a subset of the Beers criteria was used to characterize and compare the prevalence of inappropriate prescribing (as indicated by the prescription of one of 49 inappropriate drugs) before and after nursing home admission.

The proportion of patients receiving a prescription for at least one inappropriate drug decreased from 25.4% before nursing home admission to 20.8% afterward (P <.001). Most patients who had been prescribed an inappropriate agent before nursing home entry had that agent discontinued after admission. The most commonly prescribed inappropriate drugs after nursing home admission were strongly anticholinergic antidepressants (6.4%) and long-half-life benzodiazepines (5.9%). Patients younger than 85 were more likely to receive inappropriate drug therapy (odds ratio (OR) = 1.25, 95% confidence interval (CI) = 1.15-1.35) than those aged 85 and older. Other significant predictors were having more than one prescriber (OR = 1.40, 95% CI = 1.29-1.51), having a physician aged 50 or older (OR = 1.14, 95% CI = 1.05-1.23), having a male physician (OR = 1.20, 95% CI = 1.05-1.37), having a nonspecialist physician (OR = 1.23, 95% CI = 1.01-1.49), having a nonurban physician (OR = 1.13, 95% CI = 1.03-1.24), and having a physician practicing outside the greater Ontario metropolitan area (OR = 1.31, 95% CI = 1.19-1.51).

Am J Geriatr Pharmacother. 2005 Dec;3(4):246-54.

Potentially inappropriate prescribing before and after nursing home admission among patients with and without dementia.

Zuckerman IH, Hernandez JJ, Gruber-Baldini AL, Hebel JR, Stuart B, Zimmerman S, Magaziner J.

This study was designed to describe changes in the prevalence of potentially inappropriate medication prescribing before and after nursing home admission, and to compare prevalence among residents with and without dementia.

Potentially inappropriate prescribing, as defined by the 1997 Beers criteria, was compared using Medicaid prescription claims for up to 12 months before and after admission to characterize monthly prescribing patterns.

A total of 372 (68%) residents, 334 (61%) were diagnosed with dementia at admission. Before nursing home admission, the mean monthly prevalence of potentially inappropriate medications for residents with and without dementia was 20% and 23%, respectively. After admission, the mean monthly prevalence increased to 28% among residents without dementia and decreased to 19% among residents with dementia. After admission, residents with dementia were 27% less likely than residents without dementia to receive a potentially inappropriate drug, although the difference did not reach statistical significance (prevalence ratio, 0.73; 95% CI, 0.53-1.01).

Inappropriate medication prescribing was similar before nursing home admission among patients with and without dementia. After admission, the prevalence was lower among residents with dementia, but it did not reach statistical significance.

•J Gen Intern Med. 2009 May;24(5):630-5. Epub 2009 Mar 17.

Medication discrepancies upon hospital to skilled nursing facility transitions.

Tjia J, Bonner A, Briesacher BA, McGee S, Terrill E, Miller K.

Failure to reconcile medications across transitions in care is an important source of harm to patients. Little is known about medication discrepancies upon admission to skilled nursing facilities (SNFs).

To describe the prevalence of, type of medications involved in, and sources of medication discrepancies upon admission to the SNF setting.

Patients admitted to SNF for subacute care.

Number of medication discrepancies, defined as unexplained differences among documented medication regimens, including the hospital discharge summary, patient care referral form and SNF admission orders.

Of 2,319 medications reviewed on admission, 495 (21.3%) had a medication discrepancy. At least one medication discrepancy was identified in 142 of 199 (71.4%) SNF admissions. The discharge summary and the patient care referral form did not match in 104 of 199 (52.3%) SNF admissions. Disagreement between the discharge summary and the patient care referral form accounted for 62.0% (n = 307) of all medication discrepancies. **Cardiovascular agents, opioid analgesics, neuropsychiatric agents, hypoglycemics, antibiotics, and anticoagulants accounted for over 50% of all discrepant medications.**

CONCLUSIONS:

Medication discrepancies occurred in almost three out of four SNF admissions and accounted for one in five medications prescribed on admission. The discharge summary and the patient care referral forms from the discharging institution are often in disagreement. Our study findings underscore the importance of current efforts to improve the quality of inter-institutional communication

•Int Psychogeriatr. 2010 Nov;22(7):1149-53. Epub 2010 Mar 4.

Changes to psychotropic medications in the six months after admission to nursing homes in Melbourne, Australia.

O'Connor DW, Griffith J, McSweeney K.

Nursing home residents are often prescribed large numbers of psychotropic medications. Previous studies suggest that antipsychotic medications are often unnecessary and can be withdrawn without ill effects. Depression, in contrast, is believed to be under-recognized and under-treated. A six-month audit was carried out of the antipsychotic, antidepressant, anxiolytic and hypnotic medications prescribed to 166 newly admitted residents of a convenience sample of seven nursing homes in Melbourne, Australia.

Over the six-month period, antidepressants were started in 6% of all cases and stopped in 2% of treated cases. Antipsychotics were added in 5% of all cases and stopped in 15% of treated cases. Residents were switched from one antidepressant to another in 5% of treated cases and from one antipsychotic to another in 4%. Benzodiazepine use was relatively modest.

incongruenza

•J Am Med Dir Assoc. 2009 May;10(4):252-7. Epub 2009 Jan 9.

A preliminary study of anticholinergic burden and relationship to a quality of life indicator, engagement in activities, in nursing home residents with dementia.

Kolanowski A, Fick DM, Campbell J, Litaker M, Boustani M.

(1) To describe the anticholinergic burden experienced by nursing home residents with dementia using the Anticholinergic Cognitive Burden (ACB) Scale; and (2) to determine the association of anticholinergic burden and engagement in activity.

Across 775 observations, subjects were active approximately 54% of the time, doing nothing 24% of the time, and asleep over 21% of the time. Seventy-one (81.6%) subjects were prescribed at least one drug with anticholinergic properties and 32 (36.7%) were prescribed at least one drug with severe anticholinergic properties. On average, subjects had a total ACB score of 2.55 (+/- 1.9). Mental status (MMSE) and dependency (PGDRS) were associated with engagement, but use of anticholinergic drugs was not.

CONCLUSION:

Nursing home residents are prescribed many drugs with anticholinergic properties. The ACB Scale has utility as a tool to alert practitioners to high anticholinergic burden, who can then use this information when choosing between equally efficacious medications. Further study using larger samples of persons with dementia in earlier stages of the disease, and use of intense measurement designs are needed to more clearly determine the association of ACB with quality of life indicators.

•J Am Geriatr Soc. 2009 Jul;57(7):1238-44. Epub 2009 Apr 17.

Concomitant use of anticholinergics with acetylcholinesterase inhibitors in Medicaid recipients with dementia and residing in nursing homes.

Modi A, Weiner M, Craig BA, Sands LP, Rosenman MB, Thomas J 3rd.

To evaluate the extent of concomitant use of anticholinergic and cholinesterase inhibitor medications in Medicaid recipients with dementia residing in nursing homes.

Indiana Medicaid recipients continuously eligible for Medicaid in 2004 aged 65 and older with dementia who were residing in nursing homes and taking cholinesterase inhibitors.

A large proportion (46.7%) of 3,251 Medicaid beneficiaries living in nursing homes and taking cholinesterase inhibitors received anticholinergics concomitantly.

Anticholinergics designated as Level 3, or having markedly anticholinergic adverse effects, accounted for most of the concomitant anticholinergic use. More than half (58.1%) of the individuals with concomitant anticholinergic use had 100 or more days of such use.

CONCLUSION:

Nearly half of Indiana Medicaid recipients with dementia residing in nursing homes who were taking cholinesterase inhibitors in 2004 were using anticholinergics concomitantly. Patterns of concomitant use in the population examined may assist practitioners in reviewing their prescribing decisions for this vulnerable population.

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•J Am Geriatr Soc. 2006 Oct;54(10):1516-23.

Polypharmacy and prescribing quality in older people.

Steinman MA, Landefeld CS, Rosenthal GE, Berthenthal D, Sen S, Kaboli PJ.

To evaluate the relationship between inappropriate prescribing, medication underuse, and the total number of medications used by patients.

Mean age was 74.6, and patients used a mean+/-standard deviation of 8.1+/-2.5 medications (range 5-17). **Use of one or more inappropriate medications was documented in 128 patients (65%),** including 73 (37%) taking a medication in violation of the Beers drugs-to-avoid criteria and 112 (57%) taking a medication that was ineffective, not indicated, or duplicative. **Medication underuse was observed in 125 patients (64%).** Together, inappropriate use and underuse were simultaneously present in 82 patients (42%), whereas 25 (13%) had neither inappropriate use nor underuse. When assessed by the total number of medications taken, the frequency of inappropriate medication use rose sharply from a mean of 0.4 inappropriate medications in patients taking five to six drugs, to 1.1 inappropriate medications in patients taking seven to nine drugs, to 1.9 inappropriate medications in patients taking 10 or more drugs (P<.001). In contrast, the frequency of underuse averaged 1.0 underused medications per patient and did not vary with the total number of medications taken (P=.26). Overall, patients using fewer than eight medications were more likely to be missing a potentially beneficial drug than to be taking a medication considered inappropriate.

Inappropriate medication use and underuse were common in older people taking five or more medications, with both simultaneously present in more than 40% of patients. Inappropriate medication use is most frequent in patients taking many medications, but underuse is also common and merits attention regardless of the total number of medications taken.

•J Am Geriatr Soc. 2011 Aug;59(8):1412-1420.

Potential Underuse, Overuse, and Inappropriate Use of Antidepressants in Older Veteran Nursing Home Residents.

Hanlon JT, Wang X, Castle NG, Stone RA, Handler SM, Semla TP, Pugh MJ, Berlowitz DR, Dysken MW.

To examine prevalence and resident- and site-level factors associated with potential underuse, overuse, and inappropriate use of antidepressants in older Veterans Affairs (VA) Community Living Center (CLC) residents.

Three thousand six hundred ninety-two veterans aged 65 and older admitted between January 1, 2004, and June 3, 2005, with long stays (≥90 days).

Prevalence of potential underuse, inappropriate use, and overuse of antidepressants in residents with and without depression (as documented according to International Classification of Diseases, Ninth Revision, Clinical Modification, codes or Depression Rating Scale).

Selective serotonin reuptake inhibitors were the most commonly prescribed antidepressant. Of the 877 residents with depression, 25.4% did not receive an antidepressant, suggesting potential underuse. Of residents with depression who received antidepressants, 57.5% had potential inappropriate use due primarily to problems seen with drug-drug and drug-disease interactions. Of the 2,815 residents who did not have depression, 1,190 (42.3%) were prescribed one or more antidepressants; only 48 (4.0%) of these had a Food and Drug Administration-approved labeled indication, suggesting potential overuse. **Overall, only 17.6% of antidepressant use was appropriate (324/1,844). The only consistent resident factor associated with potential underuse and overuse use was taking an antipsychotic without evidence of schizophrenia** (underuse: adjusted relative risk ratio (ARRR)=0.56, 95% confidence interval (CI)=0.33-0.94; overuse: adjusted odds ratio=1.52, 95% CI=1.21-1.91). **Having moderate to severe pain** (ARRR=1.54, 95% CI=1.08-2.20) **and the prescribing of an anxiolytic or hypnotic (ARRR=1.33, 95% CI=1.02-1.74) increased the risk of potential inappropriate antidepressant use.**

interventi

J Multidiscip Healthc. 2011 Jan 11;4:9-13.

A multidisciplinary approach to improve drug therapy in nursing homes.

Davidsson M, Vibe OE, Ruths S, Blix HS.

Management of drug therapy in nursing home patients is challenging due to complex health problems, use of multiple medications, and age-related changes in pharmacokinetics and pharmacodynamics. The objective of this study was, first, to examine the effect of systematic medication reviews conducted by multidisciplinary nursing home teams on prescribing quality and, second, to evaluate if drug therapy changes were maintained over time. Patients in a large nursing home in Oslo, Norway, were prospectively followed during a 1.5-year period. Systematic comprehensive medication reviews were carried out and the identified drug-related problems (DRPs) were discussed at multidisciplinary team meetings. After 3 months, the patients' drug regimens were reviewed again to evaluate if drug therapy changes were maintained. Altogether, 93 patients were included (89% women, mean age 87 years). In total, 234 DRPs were identified in 82 patients, and 151 drug therapy changes were performed in 73 patients. The most common DRPs were 'drug treatment without a clear indication' (37% of all DRPs) and 'treatment with an inappropriate drug' (20%). After 3 months, 85 patients (91%) were available for follow-up. In these patients, 133 (88%) of the drug therapy changes were maintained, and the mean number of DRPs had decreased from 2.6 to 1.0 per patient ($P < 0.01$). We were able to demonstrate that medication reviews conducted by multidisciplinary teams were effective to improve the quality of drug treatment in nursing home patients by significantly reducing both number of drugs and number of DRPs. The large majority of drug therapy changes were maintained after 3 months.

Scand J Prim Health Care. 2010 Jun;28(2):82-8.

Multidisciplinary intervention to identify and resolve drug-related problems in Norwegian nursing homes.

Halvorsen KH, Ruths S, Granas AG, Viktil KK.

To describe an innovative team intervention to identify and resolve DRPs (drug-related problems) in Norwegian nursing homes.

Systematic medication reviews performed by pharmacists in 142 patients revealed altogether 719 DRPs, of which 504 were acknowledged by the patients' physician and nurses, and 476 interventions were completed. "Unnecessary drug" and "Monitoring required" were the most frequently identified DRPs. Drugs for treating the nervous system and the alimentary tract and metabolism were most commonly questioned.

CONCLUSIONS:

The multidisciplinary team intervention was suitable to identify and resolve drug-related problems in nursing home settings. Systematic medication reviews and involvement of pharmacists in clinical teams should therefore be implemented on a regular basis to achieve and maintain high-quality drug therapy.

•Drugs Aging. 2009;26(12):1013-28.

Interventions that can reduce inappropriate prescribing in the elderly: a systematic review.

Kaur S, Mitchell G, Vitetta L, Roberts MS.

Inappropriate prescribing of medicines may lead to a significant risk of an adverse drug-related event. In particular, prescribing may be regarded as inappropriate when alternative therapy that is either more effective or associated with a lower risk exists to treat the same condition. This review aims to identify interventions and strategies that can significantly reduce inappropriate prescribing in the elderly. The review is based on a search of electronic databases using synonyms of keywords such as 'elderly', 'interventions', 'optimized prescribing' and 'inappropriate prescribing' to identify reported interventions intended to improve inappropriate prescribing in the elderly. A total of 711 articles published in English were retrieved and considered. Of these, 24 original studies, involving 56 to 124,802 participants, met the inclusion criteria and were included in the systematic review. In 16 studies, the statistical power used to assess the impact of the intervention was >90% at a significance level of alpha=0.05. Various interventions were included in this study, such as educational interventions, medication reviews, geriatricians' services, multidisciplinary teams, computerized support systems, regulatory policies and multi-faceted approaches. Because of variability in assessment methodologies, mixed responses were found for education interventions aimed at improving inappropriate prescribing. For example, some studies did not assess what data were required to define whether a given level of intervention would be adequate, and others did not consider how many participants would be needed to demonstrate that a significant difference existed. Each of the three computerized support system interventions reported produced a significant enhancement in both prescribing and dispensing practices. Pharmacist interventions in community and hospital settings were evaluated in seven studies. However, variable criteria were used, with two studies using the Medication Appropriateness Index, another two studies using self-designed criteria for inappropriate prescribing, and the remaining three studies using Beers' criteria. A difficulty in assessing studies involving nursing home residents is that both consultant pharmacists and onsite pharmacist services may be involved, and, in one of the studies, only the role of the consultant pharmacist was considered. **One of the most effective interventions appeared to be multidisciplinary case conferences involving a geriatrician, which resulted in a number of examples of reduced inappropriate prescribing in both community and hospital settings.** As the effect of regulatory policies as an intervention is dependent on the target population involved, the effectiveness of this type of intervention was variable. Different strategies may be useful in reducing inappropriate prescribing in the elderly. It is not clear whether combined strategies undertaken simultaneously have a synergistic effect.

•J Am Geriatr Soc. 2002 Jun;50(6):1001-11.

Inappropriate medication prescribing in residential care/assisted living facilities.

Sloane PD, Zimmerman S, Brown LC, Ives TJ, Walsh JF.

To identify the extent to which inappropriately prescribed medications (IPMs) are administered to older patients in residential care/assisted living (RC/AL) facilities and to describe facility and resident factors associated with receipt of one or more IPMs.

The majority of RC/AL patients were taking five or more medications; 16.0% of these patients were receiving IPMs. The most common IPMs were oxybutynin, propoxyphene, diphenhydramine, ticlopidine, doxepin, and dipyridamole. In multivariate analyses, using generalized estimating equations, IPM use was associated with the number of medications received, smaller facility bed size, moderate licensed practical nurse turnover, absence of dementia, low monthly fees, and absence of weekly physician visits.

IPMs remain a problem in long-term care, but rates in these RC/AL settings compare favorably with those reported for other frail older populations, suggesting that use of medications with severe adverse effects may be waning. Regular physician facility visits may improve prescribing, as will attention to high-risk groups such as individuals on multiple medications.

CONSUMO DI ALCUNI PRODOTTI INSERITI NEL PRONTUARIO INTERNO DAL 1.1.2002 AL 31.08.2002.

	Prima Unità	Seconda Unità	Terza Unità	Quarta Unità	Primo Piano	Secondo Piano
Sol. Fis. 100 cc.	350	354	494	340	390	960
Sol. Fis. 500 cc.	533	732	473	840	495	860
Mepral	3388	540	3247	3472	2319	3750
Motilium scir.	108	18	136	94	308	81
Motilium cpr	1940	2460	90	960	990	2760
Zantac cpr	2320	2220	2400	5080	2280	3960
Ranidil scir.	69	25	45	27	50	32
Fitostimoline garze	3020	4570	7010	5540	1260	1870
Fitostimoline crema	234	353	634	172	63	59
Duo-derm placche	65	120	50	205	415	215
Iruxol pom.	38	102	185	95	22	22
Rocefin	345	251	511	375	385	665
Claforan	20	66	108	42	30	---
Tenacid	113	20	49	30	20	20
Unasyn	53	40	189	150	80	70

	Prima Unità	Seconda Unità	Terza Unità	Quarta Unità	RSA 1° Piano	RSA 2° Piano
Fluoxeren cps	60	----	156	288	228	120
Seropram gtt	7	----	4	----	----	15
Zoloft cps	----	----	----	375	195	135
Entumin gtt	14	34	25	9	----	----
Serenase gtt	6	64	107	76	32	91
Talofen fiale	24	42	20	42	----	36
Talofen gtt	22	74	50	93	27	44
Risperdal sol.	38	9	16	24	19	54
Disipal cpr	----	----	600	----	----	1100
Halcion cpr	700	920	1540	1080	460	1300
Lexotan gtt	28	62	36	47	40	96
Serpax cpr	560	410	1020	720	220	1800
Tavor cpr 1 mg	1320	1040	1780	1280	760	1200
Tavor gtt	29	150	47	39	4	9

CONSUMO PRODOTTI INSERITI NEL PRONTUARIO INTERNO
PRIMO TRIMESTRE 2006.

	U.M.	1^ Unità	2^ Unità	3^ Unità	Settore Verde	Settore Giallo	Settore Rosso	Primo Piano	Second o Piano	TOT
Sol. Fis. 100 cc.	FC	26	98	-	196	147	196	245	245	1153
Sol. Fis. 500 cc.	FC	100	180	140	240	100	260	180	240	1440
Mepral	FL	910	1120	910	294	1918	644	1050	1792	8638
Motilium scir.	FC	54	59	49	2	50	24	34	42	314
Zantac cpr	CPR	240	240	940	100	740	1080	360	680	4380
Ranidil scir.	FC	12	6	61	4		38	12	6	139
Fitostimoline garze	GZE	600	1950	1550	20	260	20	690	790	5880
Fitostimoline crema	TU	70	255	210	8	5		133	113	794
Duo-derm placche	GZE			100	35	105	25	185	130	580
Iruxol pom.	TU		104	10		8	2	118	102	344
Rocefin	FL	75	155	180	30	180	111	121	202	1054
Claforan	FL		63	95			48	15	78	299
Tenacid	FL		20	10	6	40	59	64	110	309
Unasyn	FL		10	80	17	70	94	31	33	335
Ciprofloxacina	CPR	65	125	110	75	65	155	105	165	865
Augmentin	BU	216	252	180	96	180	180	240	336	1680
Bisolvon	FC	5	11	31	2	15	24	7	7	102
Fluimicil	CPR	220	160	360		40	280	120	200	1380
Cpr. per dentiere	SC	20	78	33	45	26	37	25	32	296
Detergente Ospiti	FC	42	84	66	90	60	72	36	72	522
Guanti P	PA	9500	11000	8500	18000	13500	9500	5000	6000	81000
Guanti M	PA	16500	20000	20000	20000	20000	18000	9500	20000	144000
Guanti G	PA	3000	4000	2000	15000	8000	9000	6000	7000	54000
Clisma Fleet	PZ	580	920	860	600	320	460	580	540	4860

Seropram gg.	FC	4	2	5	5	7	3	13	22	61
Zoloft cps	CPR	225	60	150	255	150	195	510	585	2130
Fluoxeren cps	CPR	56	84						224	364
Serenase gg	FC	39	44	20	38	6	26	32	31	236
Talofen gg	FC	8	14	40	17	23	2	31	62	197
Seroquel 25 cps	CPR	300	1320	810	480	660	150	1590	2640	7950
Seroquel 100 cps										0
Halcio cps	CPR	380	600	240	620	400	420	200	1200	4060
Lexotan gg	FC	7	59	24	32	15	5	25	24	191
Tavor 1 mg cps	CPR	60	700	480	620	620	280	320	520	3600
Tavor 2.5 cps	CPR	480	300	60	520	260	600	700	1000	3920
Tavor gg	FC		16	5	8		2	10	6	47
Nutridrink	PZ		150		60	150	180	150	510	1200

Distribuzione consumo farmaci (confezioni) dal Gennaio ad Agosto 2011 in Nucleo Alzheimer (20 pl) e Nuclei (60 pl)

FARMACO	NUCLEO ALZHEIMER	NUCLEI RSA
Augmentin cpr	10	34
Ceftriaxone fl	44	330
Klacid cpr	3	15
Ciprofloxacina cpr	5	27
Unasyn fl		50
Tenacid fl	18	148
Levoxacin cpr	20	49
Tazocin fl		105
Fisiologica 100 cc	28	475
Fisiologica 500 cc	142	1950
Glucosata 500 cc	252	620

FARMACO	NUCLEO ALZHEIMER	NUCLEI RSA
Aricept cpr	43	8
Exelon cerotto	22	4
Memac cpr	10	
Prometax cpr	11	
Mirtazepina cpr	2	16
Sertralina cpr	21	20
Citalopram cpr	38	59
Xeristar cpr	8	11
Triazolam cpr	5	41
Serenase gg	2	20
Serpax cpr		15
Sereupin cpr	34	
Trittico gg	43	6
Trittico ac 75	42	43
Alprazolam	61	
Bromazepam gg	4	16
Lorazepam	87	90
Talofen gg	65	18
Talofen fl	11	1
Seroquel 100 cpr	37	17
Seroquel 25 cpr	63	102

FARMACO	NUCLEO ALZHEIMER	NUCLEI RSA
Simvastatina cpr	8	36
Zoton cpr	258	923
Lasix cpr	30	137
Nimesulide bs	11	32
Tora-dol fl	10	22

Distribuzione costo medio postoletto giornaliero dei prodotti farmaceutici di Rsa della Lombardia anno 2010:

Integratori: 0,22 € (0.03-0,49)
Farmaci: 2,50 € (1,4-3,0)
Parafarmaci: 0,81 € (0,35-1,07)

Distribuzione costo medio postoletto giornaliero dei prodotti farmaceutici di Rsa della Lombardia anno 2011:

Integratori: 0,18 € (0.02-0,33)
Farmaci: 2,23 € (1,6-2,7)
Parafarmaci: 0,77 € (0,45-1,1)