

Orlando



POST MIDYEAR 2017

CREATING THE FUTURE

13 FEBRERO 2018

AMBULATORY CARE PRACTICES

Manuel Vélez Díaz-Pallarés
Hospital Universitario Ramón y Cajal
13 de febrero de 2018

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Clinical Meeting & Exhibition

Sunny Days and Seniors: When Less Is Better in Medication Management

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Stop the Benzodiazepines: Identifying High-Risk Patient Populations to Successfully Taper These Medications

Kristina Ward, Pharm.D., BCPS, BCPP
Clinical Pharmacy Specialist – Mental Health
Northern California VA Health Care System
Martinez, CA

¿Según las revisiones sistemáticas cuál de los siguientes efectos adversos tiene una relación causal dudosa con el uso de benzodiazepinas?

1

Fractura de cadera

2

Accidentes de tráfico

3

Deterioro cognitivo irreversible

4

Caídas



¿Cómo se define la desprescripción?

- El proceso planeado de reducir o eliminar medicamentos que ya no aportan beneficio o que están causando daño. El objetivo es reducir la carga de medicamentos o daño a la vez que se mejora la calidad de vida.

Patient Case: Think-Pair-Share

Identify medications that our patient is taking that may have contributed to her fall.

- HCTZ
- Metoprolol
- Lisinopril
- Zolpidem
- Insulin glargine
- Glyburide
- Acetaminophen
- Levothyroxine
- Paroxetine

Prescripción inapropiada ¿qué es?



- El uso de un fármaco con un perfil beneficio/riesgo **desfavorable** para un paciente concreto por:
 - No tiene indicación/Otra indicación/Contraindicado
 - Demasiado tiempo...o demasiado poco
 - Posología diferente a la recomendada (edad, función renal, etc)
 - Elevado riesgo de RAM / Interacciones / Duplicidad
 - Innecesariamente caro
- Un paciente que
 - NO recibe un fármaco INDICADO** para la prevención o el tratamiento de la enfermedad

Pilares de la desprescripción

- Mayor riesgo
- Simplificación o reducción más fácil
- Preferencias del paciente
- Decisión colaborativa

PRIORIZAR

Metodología

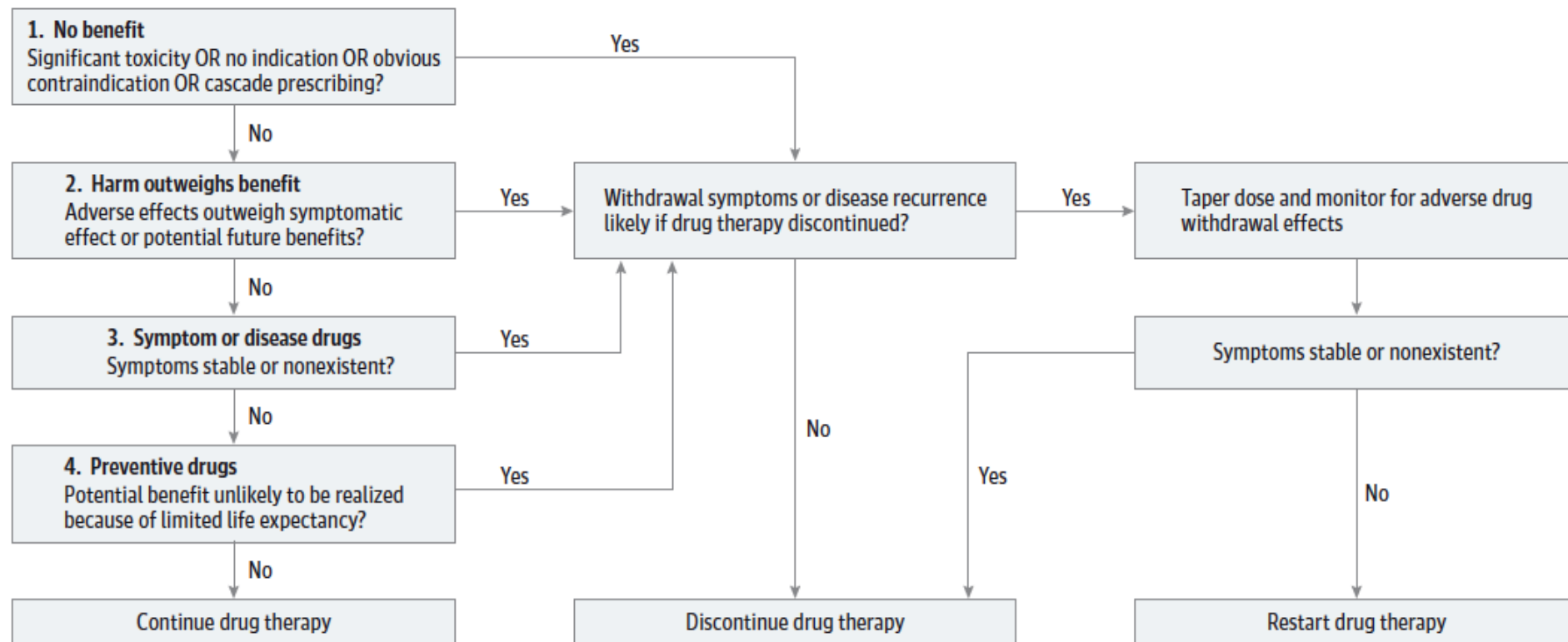
- Cada cambio / reducción de forma escalonada
- Comunicar y dejar por escrito los cambios que se realicen
- Monitorizar al paciente

Reducing Inappropriate Polypharmacy

The Process of Deprescribing



Figure. Algorithm for Deciding Order and Mode in Which Drug Use Could Be Discontinued

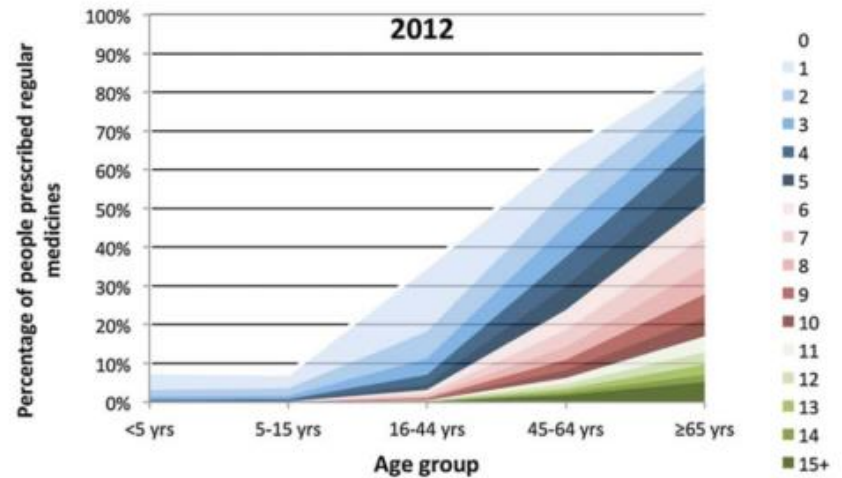
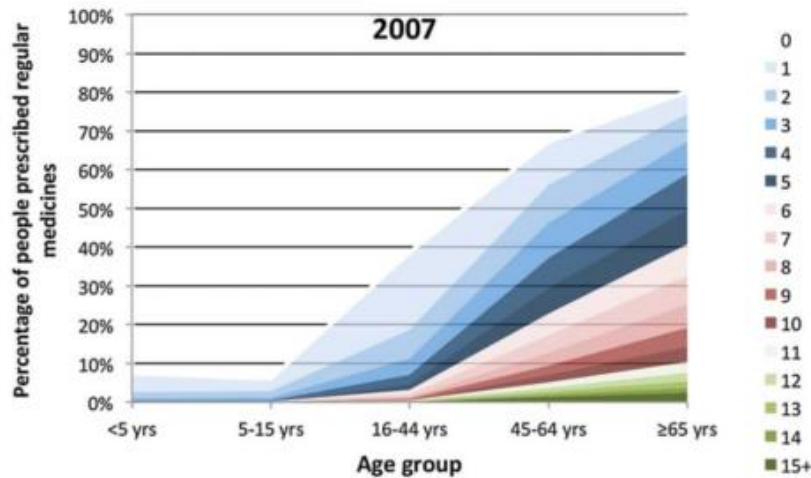
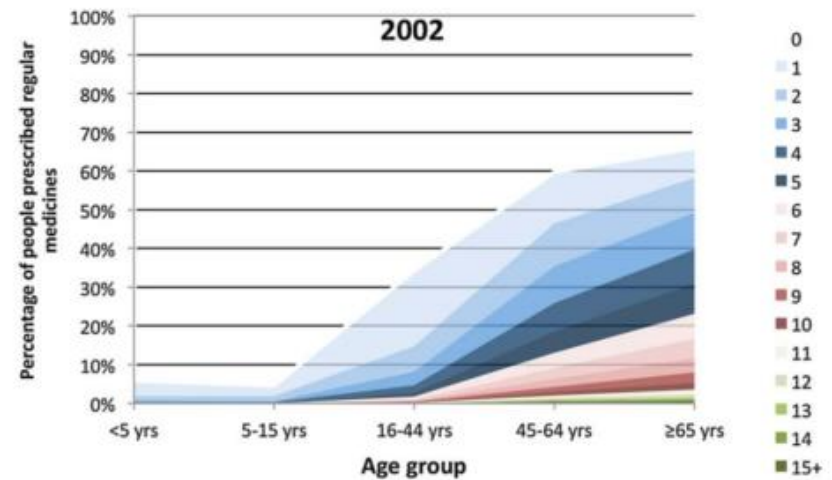
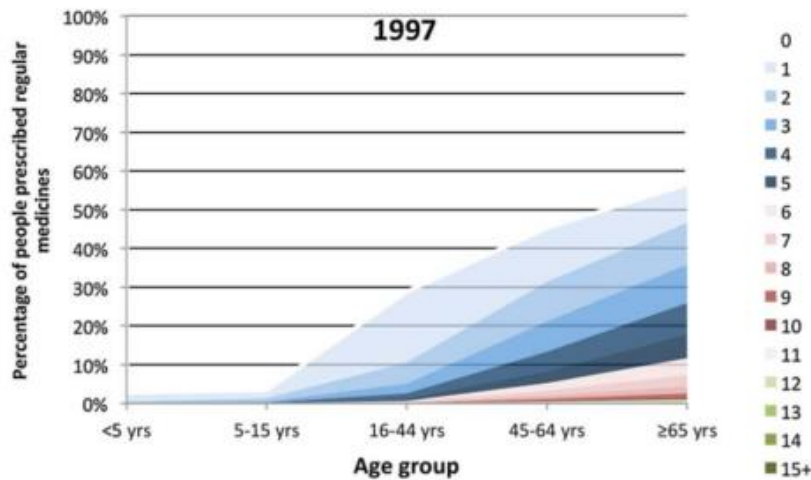


Guías de desprescripción

- <http://www.deprescribing.org/>
- Guías para:
 - 1. IBPs
 - 2. Antipsicóticos
 - 3. Antidiabéticos
 - 4. Benzodiazepinas



La polifarmacia y el envejecimiento



Moriarty F, Hardy C, Bennett K, et al. Trends and interaction of polypharmacy and potentially inappropriate prescribing in primary care over 15 years in Ireland: a repeated cross-sectional study. *BMJ Open* 2015;5: e008656.

Prescripción inapropiada ¿es frecuente en España?



	Prevalencia - criterios STOPP (%)	
	Internacional	España
Comunidad	21-69	21-51
Residencias	24-98	48-79
Hospital de agudos	16-77	25-58
Media estancia		53
	Prevalencia - criterios START (%)	
	Internacional	España
Comunidad	0-26	20-54
Residencias	34-42	29-74
Hospital de agudos	15-65	31-57
Media estancia		46

Esperanza de vida / longevidad

- Estatinas como profilaxis primaria en pacientes con una esperanza de vida < a 5 años
- Bifosfonatos en pacientes de bajo riesgo de fractura con una esperanza de vida < a 5 años

Sección A. Sistema cardiovascular

1. Antagonistas de la vitamina K, inhibidores directos de la trombina o inhibidores del factor Xa en presencia de fibrilación auricular crónica
2. AAS (75-160 mg/día) en presencia de fibrilación auricular crónica cuando los antagonistas de la vitamina K, inhibidores directos de la trombina o inhibidores del factor Xa están contraindicados
3. Anticoagulantes (AAS, inhibidores directos de la trombina)



5. Estatinas con antecedentes bien documentados de enfermedad vascular coronaria, cerebral o periférica, salvo que el paciente esté en situación de final de vida o su edad sea > 85 años

final de vida o su edad sea > 85 años

6. IECA en la insuficiencia cardiaca sistólica y/o cardiopatía isquémica bien documentada
7. Betabloqueantes en la cardiopatía isquémica
8. Betabloqueantes apropiados (bisoprolol, nebivolol, metoprolol o carvedilol) en la insuficiencia cardiaca sistólica estable



Cálculo de esperanza de vida



<https://eprognos>

IS YOUR PATIENT IN THE UNITED STATES?

10. Is your patient engaging in physical activity once or more per week?

Select ▼

11. Because of health problems, does your patient have any difficulty with bathing or showering?

Select ▼

12. Because of health problems, does your patient have any difficulty with walking?

Select ▼

13. Did your patient report correctly today's condition?

14. What is your patient's self-reported health?

Your best guess of 10 year all-cause mortality risk

Suemoto all-cause 10 year mortality risk: 72%
Risk calculators cannot predict the future for any one patient because they cannot identify **who** will live and who will die.

your guess

- <=10%
- 11 - 20%
- 21 - 30%
- 31 - 40%
- 41 - 50%
- 51 - 60%
- 61 - 70%
- 71 - 80%
- 81 - 90%
- 91 - 100%

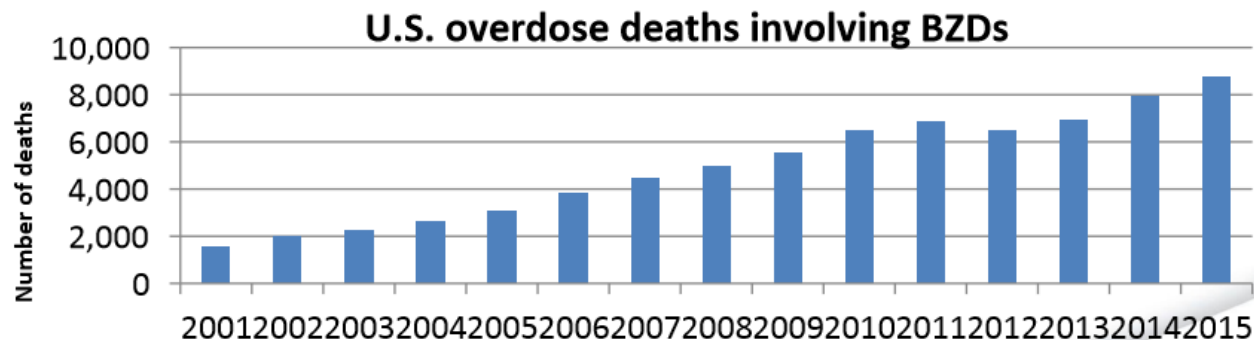
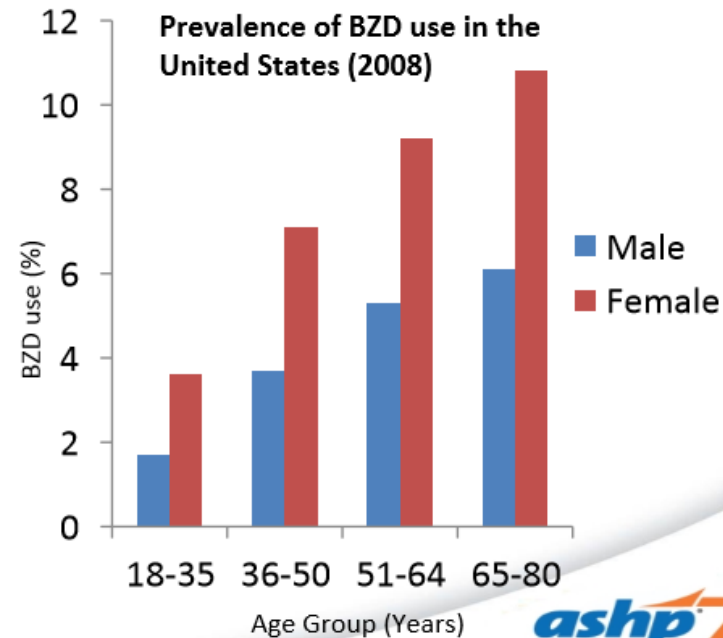
HOSPITAL

HOSPICE

El problema de las benzodiazepinas

- El número de adultos tomando una BDZ ha aumentado un 67% entre 1996 y 2013

- Sobredosis accidental (opioides)
- Deterioro cognitivo
- Depresión
- Desinhibición
- Caídas/r
- Tolerancia
- Accidentes



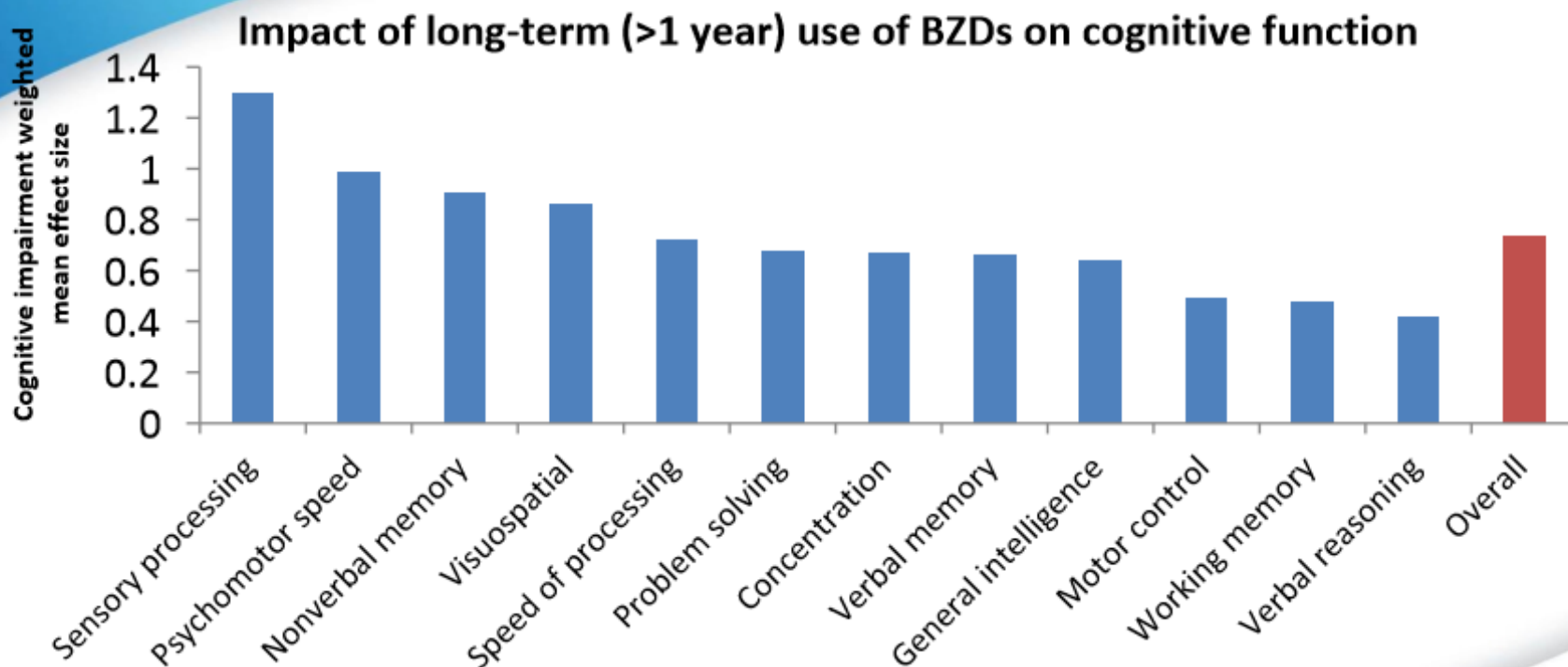
Bachhuber MA, et al. *AJPH*, 2016. 106(4):p. 686-8.

Jones, CM, et al. *JAMA*, 2013. 309(7): p. 657-659.

NIDA. National Center for Health Statistics, CDC Wonder. *National Overdose Deaths*

Deterioro cognitivo de las BZDs

BZDs and Cognitive Function



Barker, M.J., et al., CNS Drugs, 2004. 18(1): p. 37-48.

Markota M, et al., Mayo Clinic Proc, 2016. 91(11):p. 1632-39.

Bierman, E.J., et al., Int J Geriatr Psychiatry, 2007. 22(12): p. 1194-200.

Tannenbaum, C., et al., Drugs Aging, 2012. 29(8): p. 639-58.

Población de riesgo



1. Enfermos con enfermedad respiratoria crónica
2. Coadministración con opioides
3. Demencia
4. Ancianos (mayores de 65)
5. Estrés postraumático
6. Historia de abuso de sustancias



**No combinar opioides con
benzodiazepinas**

Papel en terapéutico de las BZDs



- Control sintomático rápido de:
 - 1 Ansiedad severa / ataques de pánico
 - 2. Insomnio
 - 3. Convulsiones
 - 4. Sdre. Abstinencia del alcohol / BDZs



No hay evidencia de que el uso crónico de benzodiazepinas mejore el insomnio o la ansiedad

Tapering doses

- No published evidence exists to suggest switching to long-acting BZRAs reduces incidence of withdrawal symptoms or is more effective than tapering shorter-acting BZRAs
- If dosage forms do not allow 25% reduction, consider 50% reduction initially using drug-free days during latter part of tapering, or switch to lorazepam or oxazepam for final taper steps

Recomendaciones para la deprescripción de benzodiazepinas INFAC 2013:

- Reducir la dosis total diaria entre un 10-25% en intervalos de 2 a 4 semanas, especialmente con los de vida media corta.
- Alternativa: sustituir por diazepam a dosis equivalentes y reducción gradual de diazepam entre 2 y 2,5 mg cada 2 ó 4 semanas.

La pauta de retirada consiste en una disminución de la dosis total diaria que tome el paciente, de entre un 10% y un 25%, según el grado de dependencia. La dosis resultante se mantendrá unas 2-3 semanas. La retirada se realiza con la misma benzodiazepina o sustituyéndola por una dosis equivalente de diazepam, que tiene una vida media larga y que está comercializado en varias dosis, lo que permite disponer de dosis distintas. El cambio a diazepam es también ventajoso en aquellos pacientes que presentan una fuerte dependencia psicológica a "la pastilla de dormir". Aunque debemos evitar las benzodiazepinas de vida media larga, el objetivo de esta sustitución es la retirada del fármaco y no el cambio de una benzodiazepina por otra¹⁵

1. Deprescribing.org
2. Boletín de Información Farmacoterapéutica del Navarra. Abril-Junio 2014
3. Recomendaciones del portal de Salud de Castilla y León.

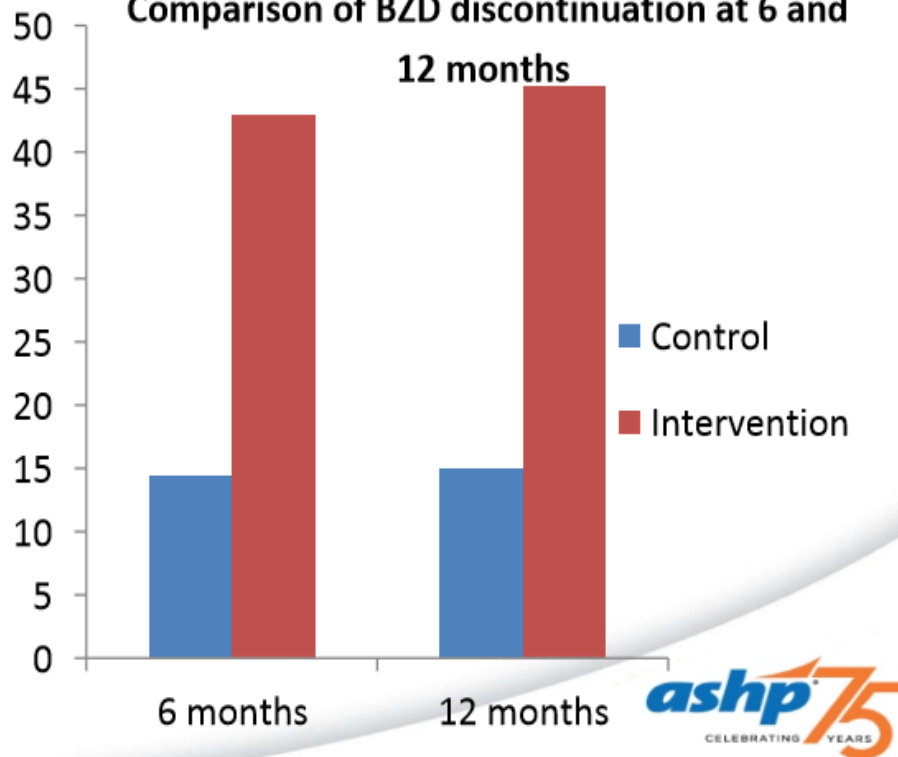
Estudios de desprescripción



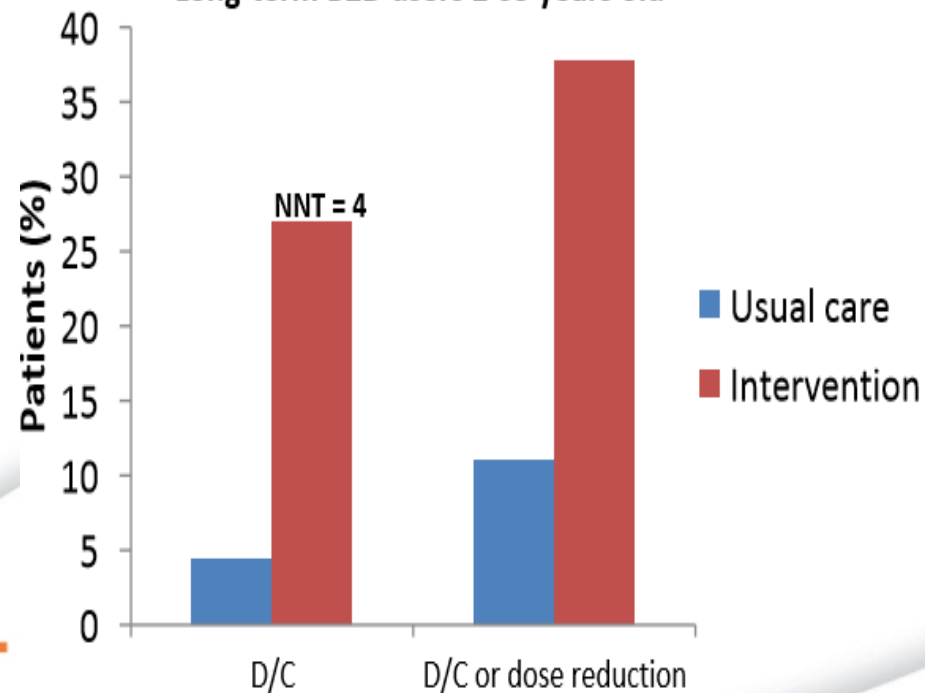
FMPOWER Trial

Brief intervention versus care as usual:

Comparison of BZD discontinuation at 6 and 12 months



Long-term BZD users ≥ 65 years old



Vicens C, et al., Br J Psychiatry, 2014. 204(6): p. 471-9.

Tannenbaum C, et al., JAMA Intern Med, 2014. 174(6):p 890-8.

Riesgos de las benzodiazepinas (I)



- Riesgo de rotura de cadera

Both BNZ, and Z-drug use respectively, were significantly associated with an increased risk of hip fracture (RR = 1.52, 95% CI 1.37-1.68; and RR = 1.90, 95% CI 1.68-2.13). Short-term use of BNZ and Z-drugs respectively, was also associated with the greatest risk of hip fracture (RR = 2.40, 95% CI 1.88-3.05 and RR = 2.39, 95% CI 1.74-3.29).

The literature review showed an increased risk of hip fractures in benzodiazepine users (RR = 1.4, 95 % CI 1.2-1.6)

- Accidentes de tráfico

The risk-benefit analysis of Z-drugs in the treatment of insomnia, particularly in the elderly, may not favor treatment due to the increased risks of falls and motor vehicle collisions. Prescribers should warn patients taking Z-drugs of minimum time thresholds before they operate machinery or drive motor vehicles.

BZDs approximately doubles the risk of motor vehicle accidents

- Donnelly K et al. Benzodiazepines, Z-drugs and the risk of hip fracture: A systematic review and meta-analysis. PLoS One. 2017 Apr 27;12(4):e0174730.
- Khong TP. Potential impact of benzodiazepine use on the rate of hip fractures in five large European countries and the United States. Calcif Tissue Int. 2012 Jul;91(1):24-31
- Gunja N. In the Zzz zone: the effects of Z-drugs on human performance and driving. J Med Toxicol. 2013 Jun;9(2):163-71
- R. E. Thomas. Benzodiazepine use and motor vehicle accidents. Systematic review of reported association. Can Fam Physician. 1998 Apr; 44: 799-808.

Riesgos de las benzodiazepinas (II)



- Caídas

The main group of drugs associated with an increased risk of falling was psychotropics: benzodiazepines, antidepressants, and antipsychotics

Exposure to BZDs was associated with a higher risk of falls in older adults, which is consistent with the results reported in the literature and previous reviews and meta-analyses. BZDs increase the risk of falling when used either as monotherapy or in combined therapies.

Adjusting for confounders, use of diazepam at admission was positively associated with a history of falls compared with all other benzodiazepine users (odds ratio 3.0; 95 % CI 1.1-8.5; p = 0.036).

- Hartikainen S. Medication as a risk factor for falls: critical systematic review. J Gerontol A Biol Sci Med Sci. 2007 Oct;62(10):1172-81.
- Díaz-Gutiérrez MJ. Relationship between the use of benzodiazepines and falls in older adults: A systematic review. Maturitas. 2017 Jul;101:17-22.
- Balloková A. Use of benzodiazepines and association with falls in older people admitted to hospital: a prospective cohort study. Drugs Aging. 2014 Apr;31(4):299-310

Riesgos de las benzodiazepinas (III)



- Deterioro cognitivo

Stronger links (between benzodiazepine therapy and cognitive decline) have emerged from studies examining longer- rather than shorter-acting benzodiazepines, longer rather than shorter durations of use, or earlier rather than later exposure.

Higher cumulative anticholinergic use is associated with an increased risk for dementia.

benzodiazepines provoke combined amnestic and non-amnestic impairments

An increased accumulative dose (zolpidem) might result in a significantly higher risk to develop dementia in patients with underlying diseases

- Picton JD. Benzodiazepine use and cognitive decline in the elderly. Am J Health Syst Pharm. 2018 Jan 1;75(1):e6-e12.
- Gray SL. Cumulative use of strong anticholinergics and incident dementia: a prospective cohort study. JAMA Intern Med. 2015 Mar;175(3):401-7.
- Tannenbaum C. A systematic review of amnestic and non-amnestic mild cognitive impairment induced by anticholinergic, antihistamine, GABAergic and opioid drugs. Drugs Aging. 2012 Aug 1;29(8):639-58.
- Mitsutaka Takada. Association between Benzodiazepine Use and Dementia: Data Mining of Different Medical Databases. Int J Med Sci. 2016; 13(11): 825–834.
- Hsin-I Shih. An Increased Risk of Reversible Dementia May Occur After Zolpidem Derivative Use in the Elderly Population. A Population-Based Case-Control Study. Medicine (Baltimore). 2015 May; 94(17): e809.

¿Según las revisiones sistemáticas cuál de los siguientes efectos adversos tiene una relación causal dudosa con el uso de benzodiazepinas?

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Deterioro cognitivo irreversible

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Caídas





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Transitions of Care Studies: Practical Lessons to Improve Inpatient and Outpatient Communications and Reduce Hospital Re-admission Rates

Pamela C. Heaton,
R.Ph., Ph.D.

University of
Cincinnati

Lauren Bloodworth,
Pharm.D., BCPS

University of
Mississippi

Sara E. Roszak,
M.P.H., M.A.

NACDS
Foundation

Eric Wright,
Pharm.D., M.P.H.

Geisinger Health

- **Grupo intervención**

- **1. Cita a las 72 horas del alta hospitalaria**

- - Conciliación y revisión de la medicación prescrita
- - Identificación de PRMs
- - Consejo farmacéutico
- - Planning de medicación, lista de citas
- - Envío de fax de los resultados obtenidos a su MAP

- **2. Llamada telefónica a las 2 semanas.**

- - Medir el grado de aceptación de las intervenciones farmacéuticas

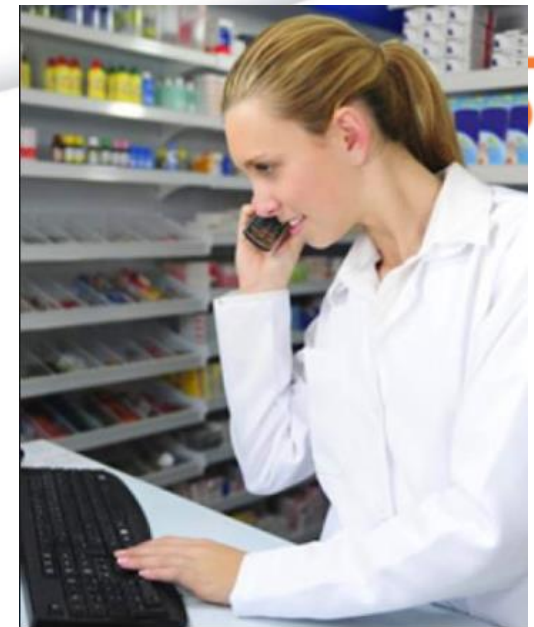


Results – 30 Day Readmissions

Measure	All Patients N=403	Intervention ITT N= 214	Control ITT N= 189	p-value ITT	Intervention PP* N=65	p-value PP
Inpatient Readmission Yes	45 (11.2%)	24 (11.2%)	21 (11.1%)	0.55	2 (3.1%)	0.04

NNT=12.5 patients

- **404 intervenciones en 62 de los pacientes**
- Las intervenciones más comunes:
 - 1. Monitorización (59)
 - 2. Inmunización (56)
 - 3. Necesita terapia (37)
 - 4. Técnica de administración (24)
 - 5. Terapia OTC (18)



- Acceptance Rates

- Total acceptance rate for all interventions not lost to follow up was 82.9%
- Patients accepted 85.6% of the 276 interventions that needed patient approval
- Prescribers accepted 74% of the 104 interventions that required provider consent

UNIVERSITY OF MISSISSIPPI

Objetivo

Mejorar los outcomes de los pacientes mediante la integración de farmacéuticos de hospital y de oficina de farmacia y otros profesionales durante el alta hospitalaria.

Criterios de inclusión

- IAM
- IC
- Neumonía
- EPOC

Allocation Process

- Patients targeted through the hospital computer database, Epic
- Daily reports allocated patients to the 4 diagnoses groups
- Control group managed by Honest Broker (study personnel blinded)

Distribution (control:intervention)

- 2:1 → 1:1 → 1:2

Study Duration: 12 months → 6 months

Criterios de exclusión

- No hablar inglés
- Problemas de comunicación
- Menos de 18 años

- **Grupo intervención**

- **1. Inpatient**

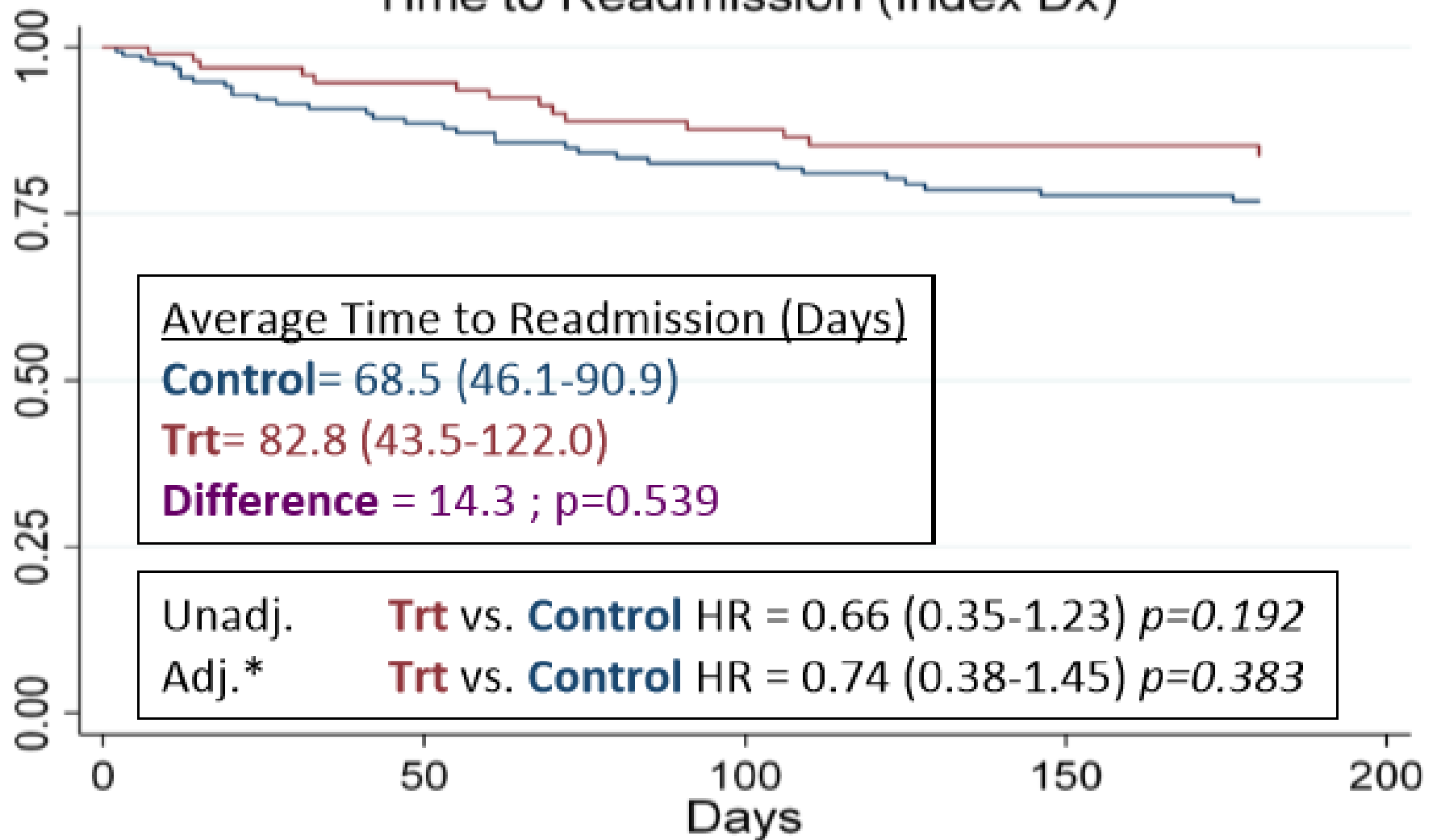
- - Colaborar en la historia clínica
- - Resolver discrepancias en el tratamiento
- - Educación farmacéutica
- - Organizar citas al alta
- - Dispensar 30 días de medicación
- - Planning de medicación, lista de citas

- **2. Outpatient**

- - Llamadas a las 48 horas, 9 días y 25 días
- - Revisión de la medicación
- - Resolución de síntomas
- - Visitas face-to-face a los 4-7 días y a los 90



Time to Readmission (Index Dx)



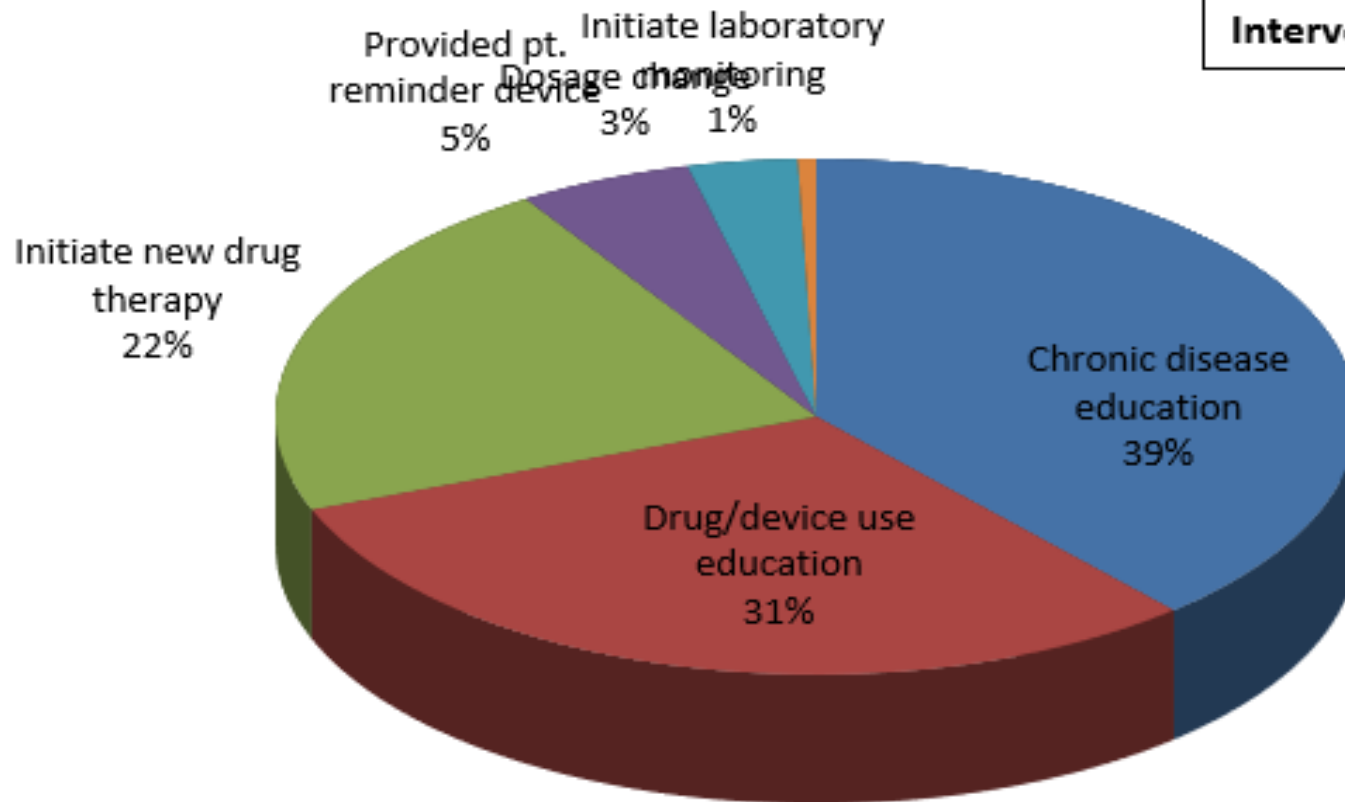
All Cause Readmission Rates and Odds Ratios for Trt vs Control

	Unadjusted			Adjusted*		
	Control	Trt	OR	Control	Trt	OR
30 Day	18.1%	8.3%	0.41 p=0.035	16.2%	10.5%	0.59 p=0.242
60 Day	26.3%	20.0%	0.69 p=0.242	24.5%	22.5%	0.89 p=0.725
90 Day	33.0%	26.0%	0.71 p=0.234	31.0%	29.5%	0.93 p=0.815
180 Day	43.8%	40.0%	0.84 p=0.514	41.3%	43.7%	1.12 p=0.706

*Adjusted for age, sex, race, dx, and type of insurance

Most Common Interventions by Pharmacists

Number of Interventions = 453



Geisinger Legacy



Objetivo

Determinar el impacto de la intervención de farmacéuticos hospitalarios y de OF en pacientes de alto riesgo



Criterios de inclusión

- IAM
- IC
- Neumonía
- EPOC
- Diabetes

Y además....

- Alta en uno de los 4 hospitales participantes
- Farmacia participante en el estudio

- **Grupo intervención**

1. Inpatient

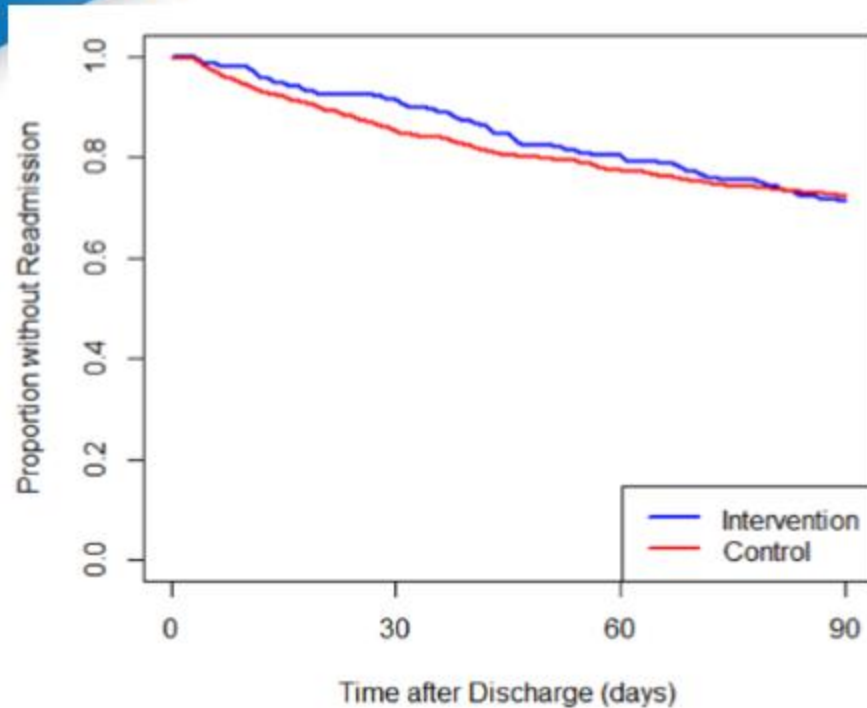
- - Conciliación farmacéutica al ingreso
- - Conciliación farmacéutica al alta
- - Consejo farmacéutico al alta
- - Comunicación directa vía mensaje con el farmacéutico de OF

2. Outpatient

- - 5 citas con farmacéutico OF (día del alta, a los 7 días y mensualmente (3)
- - Educación farmacéutica

	Intervention (ITT) (n=615)	Comparison (ITT) (n=3075)	p- value		Intervention (PP) (n=187)	Comparison (PP) (n=935)	p- value
30 day all-cause rehospitalization, N (%)	92 (15%)	461 (15%)	0.98		16 (9%)	138 (15%)	0.02
30 day ED visit (including IP transfers), N (%)	142 (23%)	659 (21%)	0.36		37 (20%)	207 (22%)	0.48
Post-hospital death within 30 days, N (%)	18 (3%)	145 (5%)	0.049		4 (2%)	46 (5%)	0.10
Composite all-cause rehospitalization, ED or death at 30 days, N (%)	158 (26%)	847 (28%)	0.35		42 (22%)	265 (28%)	0.09

Results - Readmissions among per-protocol patients over 90 days



	Hazard Ratio (Intervention vs. Comparison) [95% CI]	p-value
Readmissions		
30 day	0.56 [0.33, 0.94]	0.02
60 day	0.84 [0.59, 1.20]	0.29
90 day	1.01 [0.75, 1.35]	0.94

Outcomes Analysis – 30 Day All-Cause Readmissions

	Intervention	Comparison	P-Value	Number Needed to Treat
Cincinnati	2 (3.1%) N = 65	21 (11.1%) N = 189	0.04 (PP)	12.5
Mississippi	8.3%* N = 96	18.1%* N = 160	0.035	10.2
Geisinger	16 (9%) N = 187	138 (15%) N = 935	0.02 (PP)	16.1

*Unadjusted

Impact of pharmacist home visits on the readmission rate of a community health system



HIGHLIGHTS

ashp MIDYEAR 2017

3-7 DECEMBER

ORLANDO, FLORIDA

Tuesday, Dec 5 2:30 PM - 4:00 PM

Primary Author(s): Amy Lemieux - Staff Pharmacist, Hallmark Health System, Wakefield, Massachusetts

Purpose: One in five Medicare patients is readmitted to a hospital within 30 days of discharge. The length of stay of readmitted patients is on average longer than the length of stay of hospitalized patients with the same diagnoses and patient satisfaction rates are much lower in patients that require readmission. With nearly two-thirds of post discharge adverse events attributed to medications, it is a reasonable hypothesis that pharmacists have an integral role preventing unnecessary hospital readmissions. This examines how pharmacist home visits impacted the readmission rate of the target population on a care transition team.

Methods: This is a retrospective cohort study comparing the readmission rate of patients with intervention by pharmacy to patients without intervention by pharmacy from January 28th 2015 to January 28th 2017. The primary endpoint was to determine whether a difference exists in hospital readmission rates at 30 days post discharge between patients who were contacted by a pharmacist and those that were not. Secondary endpoint was to determine if there was a difference in outcomes between patients that were contacted via phone versus those patients that were visited in their home by a pharmacist. Patients were included if they were 60 years of age or older with Medicare and admitted to a community health system. Patients were excluded if they had been hospitalized in the prior six-month period. Each discharged patient's medication list was reviewed by a pharmacist, who performed medication therapy management assessment to identify any drug related issues that could potentially lead to readmission. Any high risk patients identified by the pharmacy designees were called and a home visit was offered. In addition, both Transition Facilitators and Nurse Practitioners submitted referrals in response to patient request or following identification of drug related issues. If a patient was readmitted within 30 days, the process was repeated.

Results: From January 28th, 2015 to January 28th, 2017 4096 patient encounters were recorded in the Care Transition Program. If a patient was readmitted within the 30 day period following discharge or after six months, they were counted as a new encounter. Several patients required multiple home visits for a total of 167 home visits recorded for a total of 517 pharmacy outreaches completed (32.3% home visits and 67.4% phone consults). Of the 4096 patients, 436 patients were readmitted within a 30 day period. This did not include Emergency Room Visits or Observation Visits and represents a 10.64% readmission rate. Of the 4096 patients, 460 patients were outreached by pharmacy (11.2%). Of the 460 patients, 350 received phone consults and 110 received pharmacy home visits. Several patients required multiple home visits for a total of 167 home visits. There was a total of 517 pharmacy outreaches completed (32.3% home visits and 67.4% phone consults). In the two year study period, 28 patients were readmitted following pharmacy outreach representing a 6% readmission rate. Following a pharmacy home visit, 4 patients were readmitted, representing a 0.9% readmission rate. The primary endpoint will be evaluated using Chi-square test at the level of significance $\alpha=0.05$.

Conclusion: Pharmacists have an opportunity prevent unnecessary hospital readmissions through pharmacy home visits. Many readmissions are preventable and result in unnecessary health expenditures estimated at nearly 17 billion dollars annually. The addition of a pharmacist on a care transition team impacted the readmission rate of our target population. The readmission rate appeared considerably lower when a pharmacist performed a home visit as compared to a phone call (0.9% versus 6%). This novel use of a pharmacist has the potential to change the traditional role of the pharmacist on a care transition team to include pharmacist home visits.

Mensajes de fuerza



- Como farmacéuticos debemos revisar las indicaciones de todos los fármacos que un paciente tiene prescritos, en particular aquellos cuyo balance beneficio / riesgo pueda ser más dudoso.
- Especial atención a la prescripción de benzodiazepinas, incluso aquellas pautadas bajo indicación y durante cortos periodos de tiempo, especialmente en poblaciones de riesgo: ancianos, enfermos con enfermedad respiratoria crónica, pacientes con demencia, historia de abuso de sustancias, coadministración con opioides, o estrés postraumático.
- Debemos impulsar el uso de nuevas tecnologías como apoyo en las transiciones asistenciales con el fin de mejorar la comunicación entre profesionales y así obtener mejores resultados en salud en los pacientes.

- ICC: Insuficiencia Cardíaca Cognitiva
- EPOC: Enfermedad Pulmonar Obstructiva Crónica (COPD)
- IAM: Infarto Agudo de Miocardio
- IC: Insuficiencia Cardíaca