

Research Critique Worksheet:

Title of Article: Prevalence of Adherence to Treatment in Homebound Elderly People in Primary Health Care

Author(s): Juan Ca ´rdenas-Valladolid,1 Carmen Marti ´n-Madrado,2 Miquel A. Salinero-Fort,3 Enrique Carrillo de-Santa Pau,2 Juan C. Aba ´nades-Herranz2 and Carmen de Burgos-Lunar2 on behalf of the PATER Group

Journal: Drugs Aging Mo/Yr: 2010 Pages: 614-651

Reviewer: Rachel Sankoff and Erin Price Mentor: David Elliott Date: 10-19-2011

Level I Research Design	Level II Research Design	Level III Research Design	MAJOR FINDINGS/STRENGTHS/LIMITATIONS
<p><u>Purpose of study:</u></p> <p><u>Research Questions:</u></p> <p><u>Research Variable:</u></p> <p><u>Research Design (Qualitative Non-experimental):</u></p> <p>Ethnography</p> <p>Phenomenology</p> <p>Grounded Theory</p>	<p><u>Purpose of study:</u> To estimate the prevalence of therapeutic adherence, using the Morisky-Green test, in homebound elderly patients taking polypharmacy (defined as use of four or more drugs), and to study the factors associated with adherence.</p> <p><u>Research Questions/Associative Hypothesis:</u> Therapeutic adherence in homebound elderly patients with polypharmacy is influenced by varying patient and caregiver factors</p> <p><u>Independent Variable:</u> age; sex; level of education; responsibility for the preparation and administration of drugs; chronic comorbidities; visual perception, auditory perception, and the level of cognitive deterioration, level of independence, Knowledge of the disease</p> <p><u>Dependent Variable(s):</u> dependent variable was therapeutic nonadherence as a dichotomous variable</p> <p><u>Research Design (Quantitative Non-experimental):</u></p> <p>Descriptive cross sectional</p> <p>Correlational (ex post facto)</p> <p>Comparative</p> <p>Case-control</p> <p>Cohort</p>	<p><u>Purpose of study:</u></p> <p><u>Research Questions/Causal Hypothesis:</u></p> <p><u>Independent Variable(s):</u></p> <p><u>Dependent Variable(s):</u></p> <p><u>Research Design (Quantitative Experimental):</u></p> <p>True Experimental (Random Controlled Trial)</p> <p>Quasi-Experimental</p>	<p><u>Findings:</u></p> <ul style="list-style-type: none"> 65% of patients had good levels of adherence according to the Morisky-Green test 33% of those evaluated for knowledge of their disease states had adequate knowledge of their diseases The largest patient-related barrier to adherence in homebound elderly patients taking four or more drugs was <u>impaired hearing</u> The largest caregiver-related burden to adherence in homebound elderly patients taking four or more drugs was a <u>large caregiver burden</u> The average number of drugs taken by the homebound elderly studied in the study was 9.3 (SD 3.6), ranging from the minimum of 4 and maximum of 23. 45% of caregivers experienced intense burden Severe inability to carry out basic activities of daily living were reported in 52% of patients 3% of caregivers were found to have at least some cognitive impairment <p><u>Strengths:</u></p> <ul style="list-style-type: none"> Variety of tests used to assess factors associated with adherence Tests were used to collect hard to define data <p><u>Limitations:</u></p> <ul style="list-style-type: none"> Some of the tests used in the study originated in other countries and are not commonly used in the United States Many P-values for the study were not significant

SAMPLE	MAJOR TOOLS (Quantitative) Level II-III Research Design	Systematic Reviews/Meta-analysis/Guidelines	QUALITY OF EVIDENCE
<p>Number (N): 327</p> <p>Type of sampling plan: systematic sampling with a random start from the total number of homebound patients taking four or more drugs in Health care area 4 of Madrid autonomous region, Spain.</p> <p>Age: of patient was 85.5 caregiver was 61.1</p> <p>Gender: 67% female 33% male</p> <p>Health status: 82% had some type of chronic co morbidity. 47/4% had some complications of disease: stroke, heart failure, MI, A fib and retinopathy. severe inability to carry out basic ADLs was identified in 52.3% of the patients while 23.2% were shown to have moderate incapacity.</p> <p>Diagnosis: Homebound elderly patient with polypharmacy (4 or more drugs)</p> <p>Other: mean number of drugs taken by elderly homebound individual was 9.3</p> <p>SETTING</p> <p>Type: Acute care hospital Community Nursing Home Other- mult-centered homebound</p> <p>Location: Urban Rural</p>	<p>Name(s): #1 <u>Pfeiffer questionnaire-level of cognitive deterioration</u> A</p> <p>#2 <u>Katz Index- level of independence</u></p> <p>#3 <u>Batalla test- Knowledge of the disease</u></p> <p>#4 <u>Zarit Caregiver Burden Interview- level of burden carried by caregivers</u></p> <p>#5 <u>Morisky-Green test-Nonadherence to treatment</u></p> <p>Reliability: #1 <u>Excellent</u></p> <p>#2 <u>Excellent</u></p> <p>#3 <u>Good</u></p> <p>#4 <u>Fair</u></p> <p>#5 <u>Good</u></p> <p>Validity: #1 <u>Excellent</u></p> <p>#2 <u>Good- not sensitive to small increments of decline in activities of daily living</u></p> <p>#3 <u>Fair- indirect test of disease state knowledge; validated only in arterial hypertension, DM, and dyslipidemia</u></p> <p>#4 <u>Good</u></p> <p>#5 <u>Fair- self reported</u></p>	<p>Systematic Review: Research Question:</p> <p>Independent Variable(s):</p> <p>Dependent Variable(s):</p> <p>Meta-Analysis: Research Question:</p> <p>Independent Variable(s):</p> <p>Dependent Variable(s):</p> <p>Guidelines: Purpose:</p> <p>Clinical Question:</p>	<p>Evidence Rating: Level I: Evidence from a systematic review or meta-analysis of mostly randomized controlled trials (RCT, experimental studies) or evidence-based clinical practice guidelines based on systematic reviews of experimental studies that are RCTs Level II: One well-designed RCT (true experimental study) Level III: Well-designed controlled trial without random assignment to group (quasi-experimental study) Level IV: Well-designed case-control or cohort study Level V: A systematic review of descriptive and qualitative studies (non-experimental quantitative or qualitative studies) Level VI: One descriptive or qualitative study (non-experimental quantitative or qualitative)</p> <p>Feasibility: Could this practice change be implemented easily in your organization and with minimal resources? <u>Yes</u> <input checked="" type="checkbox"/> <u>(only when indicated)</u> <u>No</u></p> <p>Benefit/Risk: Would the benefits of this practice change outweigh the risks to patients? <u>X</u> <u>Yes</u> <u>No</u></p> <p>Comments: Conclusions: Poor therapeutic adherence in homebound elderly patients receiving polypharmacy is a serious problem affecting one of every three individuals concerned, and is directly related to caregiver burden, regardless of age, sex, cognitive status or number of drugs administered.</p>

Modified from Rosswurm 11/98; Revised Nunley 6/2008

SAMPLE	MAJOR TOOLS (Quantitative) Level II-III Research Design	Systematic Reviews/Meta-analysis/Guidelines	QUALITY OF EVIDENCE
<p>Number (N): 327</p> <p>Type of sampling plan: systematic sampling with a random start from the total number of homebound patients taking four or more drugs in Health care area 4 of Madrid autonomous region, Spain.</p> <p>Age: of patient was 85.5 caregiver was 61.1</p> <p>Gender: 67% female 33% male</p> <p>Health status: 82% had some type of chronic co morbidity. 47/4% had some complications of disease: stroke, heart failure, MI, A fib and retinopathy. severe inability to carry out basic ADLs was identified in 52.3% of the patients while 23.2% were shown to have moderate incapacity.</p> <p>Diagnosis: Homebound elderly patient with polypharmacy (4 or more drugs)</p> <p>Other: mean number of drugs taken by elderly homebound individual was 9.3</p> <p>SETTING</p> <p>Type: Acute care hospital Community Nursing Home Other- multi-centered</p> <p>homebound</p> <p>Location: Urban Rural</p>	<p>Name(s):</p> <p>#1 <u>Pfeiffer questionnaire-level of cognitive deterioration</u> ^A</p> <p>#2 <u>Katz Index- level of Independence</u></p> <p>#3 <u>Batalla test- Knowledge of the disease</u></p> <p>#4 <u>Zarit Caregiver Burden Interview- level of burden carried by caregivers</u></p> <p>#5 <u>Morisky-Green test-Nonadherence to treatment</u></p> <p>Reliability:</p> <p>#1 <u>Excellent</u></p> <p>#2 <u>Excellent</u></p> <p>#3 <u>Good</u></p> <p>#4 <u>Fair</u></p> <p>#5 <u>Good</u></p> <p>Validity:</p> <p>#1 <u>Excellent</u></p> <p>#2 <u>Good- not sensitive to small increments of decline in activities of daily living</u></p> <p>#3 <u>Fair- Indirect test of disease state knowledge; validated only in arterial hypertension, DM, and dyslipidemia</u></p> <p>#4 <u>Good</u></p> <p>#5 <u>Fair- self reported</u></p>	<p>Systematic Review: Research Question:</p> <p>Independent Variable(s):</p> <p>Dependent Variable(s):</p> <p>Meta-Analysis: Research Question:</p> <p>Independent Variable(s):</p> <p>Dependent Variable(s):</p> <p>Guidelines: Purpose:</p> <p>Clinical Question:</p>	<p>Evidence Rating:</p> <p>Level I: Evidence from a systematic review or meta-analysis of mostly randomized controlled trials (RCT, experimental studies) or evidence-based clinical practice guidelines based on systematic reviews of experimental studies that are RCTs</p> <p>Level II: One well-designed RCT (true experimental study)</p> <p>Level III: Well-designed controlled trial without random assignment to group (quasi-experimental study)</p> <p>Level IV: Well-designed case-control or cohort study</p> <p>Level V: A systematic review of descriptive and qualitative studies (nonh-experimental quantitative or qualitative studies)</p> <p>Level VI: One descriptive or qualitative study (non-experimental quantitative or qualitative)</p> <p>Feasibility: Could this practice change be implemented easily in your organization and with minimal resources? <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u> <input type="checkbox"/></p> <p>Benefit/Risk: Would the benefits of this practice change outweigh the risks to patients? <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u> <input type="checkbox"/></p> <p>Comments:</p> <p>Conclusions: Poor therapeutic adherence in homebound elderly patients receiving polypharmacy is a serious problem affecting one of every three individuals concerned, and is directly related to caregiver burden, regardless of age, sex, cognitive status or number of drugs administered.</p>

Modified from Rosswurm 11/98; Revised Nunley 6/2008