

Evaluation of Interventions to Improve Management of Behavioural and Psychological Symptoms of Dementia (BPSD) in a Residential Care Facility

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Background

- BPSD occurs in 80% of nursing home residents with dementia
- Non-pharmacological measures are first-line treatment
- Antipsychotics increase absolute mortality rate by 1% in elderly people with dementia and are only effective for aggression, agitation, and psychosis
- Despite this, antipsychotic prescribing has increased from 37% in 2001/02 to 50.3% in 2010/11 in BC residential care facilities
- Recent interventions to improve BPSD treatment in VCH:
 - Feb. 2011: VCH guideline for antipsychotic use in BPSD
 - Dec. 2010: Quality Actions initiative to prompt pharmacists to make specific assessments in BPSD management
 - Number of pharmacist assessments increased from 52 in 2011 to 120 in 2012
- Aim: to assess whether these interventions have improved the management of BPSD in residential care

Methods

Design: Retrospective observational study

Population: Residents with dementia at a VCH residential care facility

Inclusion Criteria:

- Resident during 1 Jul – 31 Dec of 2010, 2011, or 2012
 - Pre-intervention: 2010; Post-intervention: 2011 and 2012
- Antipsychotic initiation during above time period; defined as:
 - New antipsychotic (AP) initiated in facility,
 - Re-initiation of AP on admission,
 - Re-initiation of previously discontinued AP therapy, or
 - Regular AP ordered when previously PRN

Exclusion Criteria:

- Antipsychotic ordered for less than 24 hours

Primary Outcome: To determine if the proportion of residents receiving appropriate initial antipsychotic therapy increased after implementation of above interventions

Secondary Outcome: To identify if re-assessment for efficacy and tapering of antipsychotics improved after implementation of above interventions

Statistical Analysis: Fisher's Exact Test, 1-sided

Appropriate initial antipsychotic: Consensus definition

All five criteria must be met for appropriateness

- Low dose initiated, or if re-initiated, dose maintained or decreased
- Target symptom documented
- Target symptom appropriate (aggression, agitation, psychosis)
- Non-pharmacological measures (NPM) documented prior to antipsychotic initiation
- NPM documented concurrently with antipsychotic initiation

Table 1. Baseline characteristics

Characteristic	2010 (n=22)	2011 (n=14)	2012 (n=13)	Total (n=49)
Age – average years	84	81	83	83
Male sex - %	55	50	23	45
Dosing frequency - %				
Regular	50	64	62	57
PRN	82	79	85	82
Reason for eligibility - %				
1. New antipsychotic (AP) in facility	14	29	23	20
2. Re-initiation of AP on admission	73	57	62	65
3. Re-initiation of previously d/c AP	5	7	15	8
4. Regular AP ordered, previously PRN	9	7	0	6

Table 2. Primary outcome: Appropriateness of initial antipsychotic therapy

Time period	Appropriate	P-value*
Pre-Intervention	2010 (n=22) 4 (18%)	0.567
Post-Intervention	2011 (n=14) 3 (21%)	
	2012 (n=13) 1 (8%)	0.374

Table 3. Secondary outcomes: Reassessments (R/A) for efficacy (within 8 weeks) and for taper (within 6 months)

Time period		R/A for efficacy			R/A for taper		
		n**	# R/A	P-value*	n**	# R/A	P-value*
Pre-intervention	2010	15	7 (47%)		15	12 (80%)	
Post-intervention	2011	14	9 (64%)	0.261	9	6 (67%)	0.397
	2012	12	10 (83%)	0.058	9	7 (78%)	0.640

*P-value calculated between 2010 and the time period listed

** n eligible for reassessment

Figure 1. Number of criteria met for appropriateness

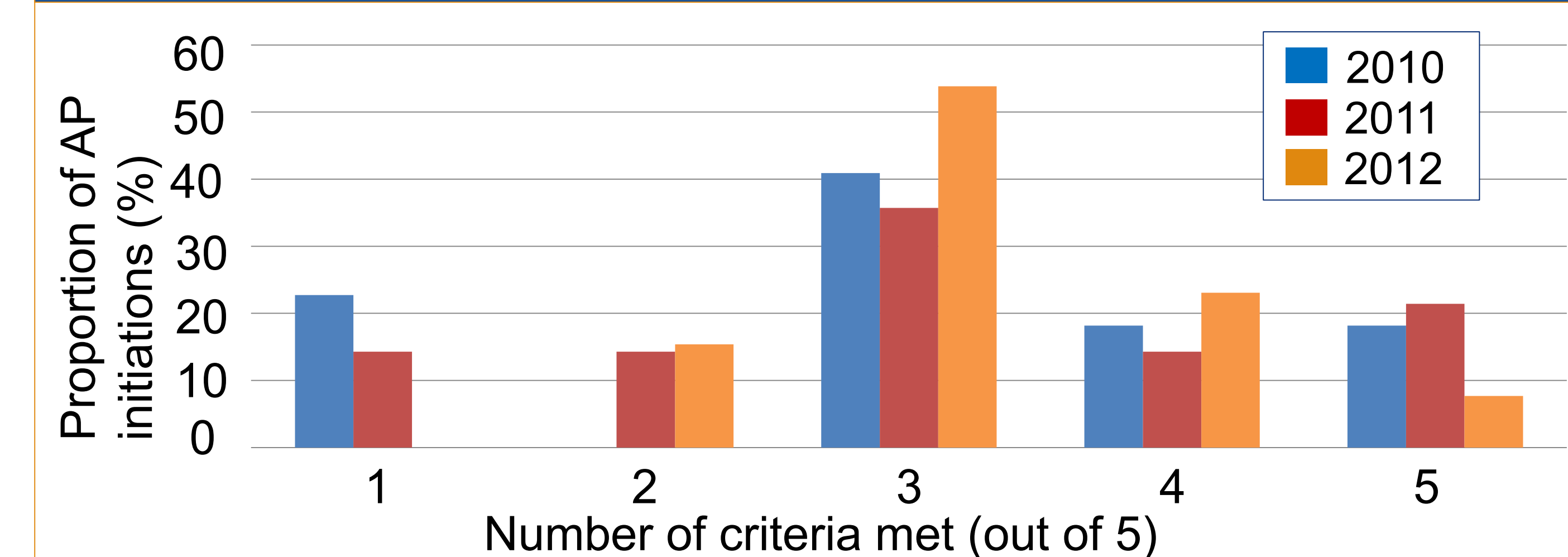
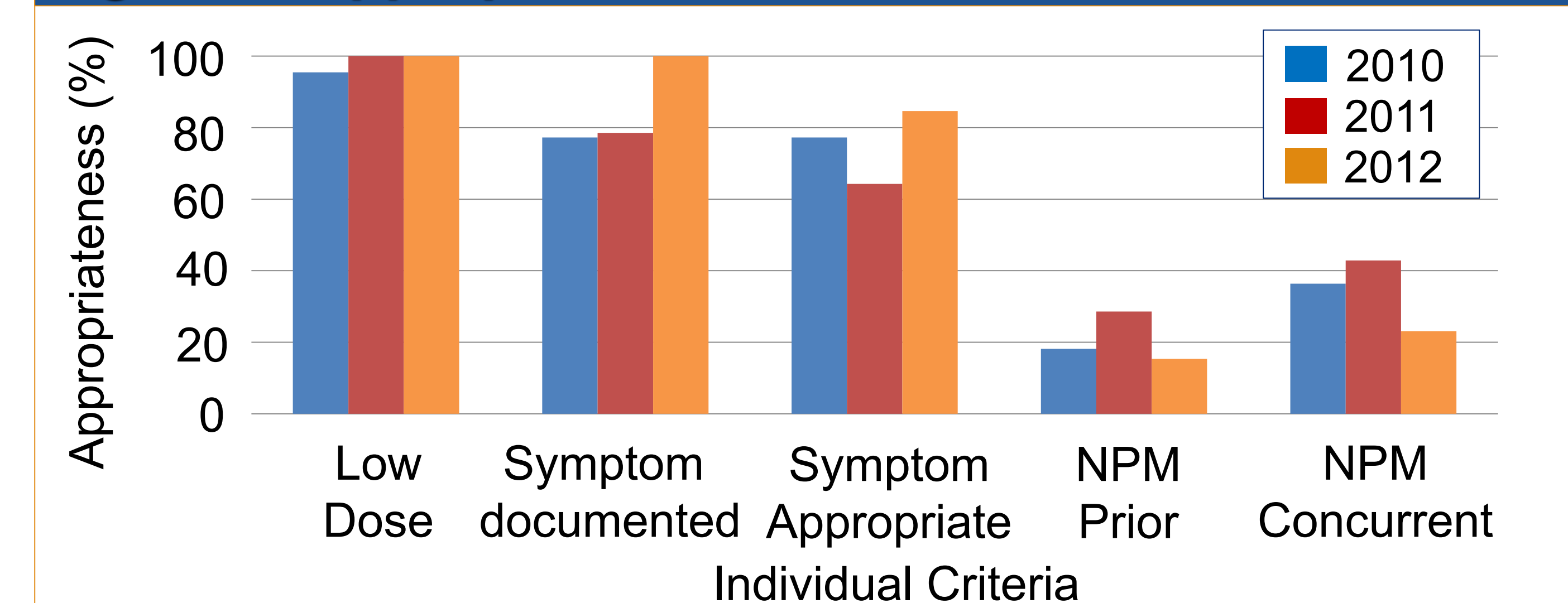


Figure 2. Appropriateness of individual criteria



Results

- No statistical difference was observed in appropriateness of initial antipsychotic pre- and post-intervention implementation
- Lack of NPM was largest contributor for inappropriateness
- Trend towards increased rates of R/A for efficacy after intervention implementation

Strengths and limitations

- Strengths**
- Pilot study to define and evaluate appropriateness of antipsychotic initiation
- Limitations**
- Single-site study, small sample size
 - Dementia incidence and antipsychotic prevalence in residents with dementia was not evaluated
 - Limited by charting quality and continuity of care from previous facilities in newly admitted residents

Conclusions

- Our study failed to show an increase in appropriateness of antipsychotic pre- and post-intervention implementation
- Future directions should focus on improving implementation of NPM to improve management of BPSD