

4075.6] Association Between Health Literacy and Liquid Medication Dosing Errors by Low SES Parents of Young Children

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BACKGROUND: While low health literacy (HL) has been linked to poor medication self-management and poor health outcomes in adults, there has been limited study of HL and medication dosing errors by at-risk parents of young children.

OBJECTIVE: To study the relationship between parent HL and liquid medication dosing errors, and determine whether HL is associated with dosing error beyond choice of dosing instrument.

DESIGN/METHODS: Enrollment took place in an urban public hospital pediatric ER. *Inclusion criteria:* child 30d-8y, primary caregiver, English/Spanish spoken, daily dose liquid medicine prescribed. *Dependent variable:* Dosing error (>25% deviation from prescribed dose), direct observation ~1-2 wks after ER visit. *Primary predictor:* caregiver HL (TOFHLA). *Potential confounders:* sociodemographics (caregiver country, language, SES, education; child age), child health-related experience/behavior(regular provider, chronic medication, use of standardized dosing instrument). Data was collected as part of a study to assess an intervention to enhance medication counseling. Multiple logistic regression analysis was performed to adjust for potential confounders and randomization status.

RESULTS: 83 caregivers were assessed. 80.7% were Hispanic, 62.7% non-US born, 75.9% low SES (Hollingshead 4 or 5), 34.9% non-HS graduates, and 28.0% with marginal/inadequate HL. 16.9% of caregivers used a non-standardized dosing instrument. In adjusted analysis, inadequate caregiver HL was associated with medication dosing error, even after adjusting for use of a standardized dosing instrument (also related to dosing error); see Table.

CONCLUSIONS: While use of a standardized dosing instrument was associated with decreased dosing errors, caregiver HL remained significantly associated even after adjusting for instrument use, suggesting that additional strategies above and beyond the use of standardized dosing instruments should be considered, particularly with low HL parents.

		Dosing Error		p-value*	AOR	95% CI
		Yes	No			
Health Literacy	Inadequate	50.0%	50.0%	0.02	15.1 †	1.2, 188.0
	Marginal	38.5%	61.5%		6.8 ‡	0.7, 61.9
	Adequate	15.3%	84.7%		(Ref)	
Standardized Dosing Instrument	No	64.3%	35.7%	<0.001	13.9	1.7, 113.0
	Yes	14.5%	85.5%		(Ref)	

*Chi-square; †Adjusted OR for inadequate vs. adequate HL; ‡AOR for marginal vs.

adequate HL

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