

## PREVALENCE AND CORRELATES OF URINARY INCONTINENCE IN COMMUNITY DWELLING OLDER LATINOS

### Hypothesis / aims of study

The prevalence of urinary incontinence (UI) has shown significant variability in the literature and is reflective of the definition and sampling methodologies used as well as the age group, ethnicity and gender being studied [1]. Latinos represent 15% of the United States population and are the fastest growing group of Americans over 60 years of age [2]. Our aim was to measure the prevalence of UI in older Latinos, and to identify sociodemographic, physical, and psychosocial correlates in order to prioritize care aimed at improving quality of life (QoL).

### Study design, materials and methods

We analyzed baseline data from a cross sectional study of 572 older Latinos living in the greater Los Angeles area participating in *Caminemos*, a randomized trial of a behavioural intervention to raise walking levels. Participants were recruited from 27 community-based senior centers between August 2005 and August 2007; inclusion criteria were age greater than 60, self declared Latino ethnicity, ability to communicate verbally in English or Spanish, exercise frequency less than 20 minutes 3 times/week and pedometer reading less than 3500 steps/week. Of 1,217 potential participants, 572 (47%) met eligibility criteria and completed a baseline survey as well as a series of physical performance measures (balance, strength, gait and endurance) from the National Institute on Aging performance battery. UI was measured using the International Consultation on Incontinence item: "How often do you leak urine?" Participants who responded anything other than "never" were classified as having UI. Potential correlates of UI were measured using previously-tested instruments: age, gender, level of education, body mass index (BMI), history of smoking, physical performance measures, use of assistive ambulatory devices (cane, walker, or wheelchair), physical activity index (Yale Physical Activity Survey), cognitive function (Modified Mini Mental State Exam, 3MS), activities of daily living impairment (ADL Summary Scale), medical co-morbidities (Charlson Index), physical and mental health-related QoL (HRQoL, Medical Outcomes Study 12-item Short Form Survey), and depressive symptoms (5-item Geriatric Depression Scale). Bivariate and multivariate logistic regression analyses were performed.

### Results

Mean patient age for this study was 73.1 years (range 60-93). Seventy-seven percent of the participants were female and 22.9% were male. The overall prevalence of UI was 26.9%, with 29.5% of women and 18.3% of men reporting leakage ( $p < 0.01$ ). Of patients reporting incontinence, 16.2% reported daily incontinence and 10.7% reported weekly incontinence. Female gender, lower physical performance score, use of assistive devices, less physical activity, worse cognitive function, greater ADL impairment, greater medical co-morbidity, lower HRQoL, and presence of depressive symptoms were all associated with increased risk of UI on bivariate analysis (Table 1). Multivariate regression analysis revealed that having lower cognitive function (OR=0.72, CI 0.56-0.93), greater medical co-morbidity (OR=1.89, CI 1.44-2.49), and a less physical activity (OR=0.77, CI 0.60-0.98) were independently associated with UI. A strong trend was noted between UI and decreased physical HRQoL (OR=0.78, CI 0.59-1.02), however this did not maintain significance in all multivariate models.

### Interpretation of results

UI is a highly prevalent condition among older Latinos utilizing community senior centers in the greater Los Angeles region. Cognitive impairment, greater medical co-morbidity, and low physical activity index are each independently associated with UI.

### Concluding message

Further work is needed to determine the extent to which UI in this group is modifiable; interventions to decrease UI in this group may represent an important opportunity to enhance QoL among older Latinos. In particular, initiation of an exercise program may be an opportunity to improve UI, as the physical activity summary index is the most readily modifiable correlate of UI identified in this analysis.

**TABLE 1: Odds Ratio (OR) and 95% Confidence Interval (CI) for Urinary Incontinence (n=572)**

| Variables  | Bivariate Model<br>OR (95% CI) | Multivariate Model<br>OR (95% CI) |
|--|--------------------------------|-----------------------------------|
| Age  | 1.02 (0.99, 1.05)              | 1.02 (0.98, 1.05)                 |
| Gender (Female vs. Male)                             | <b>1.86 (1.14, 3.04)</b>       | 1.33 (0.74, 2.38)                 |
| Summary Physical Performance Score †                 | <b>0.71 (0.58, 0.86)</b>       | 0.97 (0.75, 1.25)                 |
| Use of Assistive Devices (Any vs. None)              | <b>2.39 (1.59, 3.58)</b>       | 1.18 (0.68, 2.06)                 |
| Yale Physical Activity Summary Index †               | <b>0.66 (0.53, 0.82)</b>       | <b>0.77 (0.60, 0.98)</b>          |
| Cognitive Function †                                 | <b>0.70 (0.58, 0.83)</b>       | <b>0.72 (0.56, 0.93)</b>          |
| Activities of Daily Living Impairment (Any vs. None) | <b>2.59 (1.76, 3.79)</b>       | 1.32 (0.78, 2.21)                 |
| Medical Co-morbidity                                 | <b>1.91 (1.57, 2.32)</b>       | <b>1.89 (1.44, 2.49)</b>          |

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|--|--------------------------|-------------------|
| HRQoL Physical Component Summary †                       | <b>0.63 (0.52, 0.76)</b> | 0.78 (0.59, 1.02) |
| HRQoL Mental Component Summary †                         | <b>0.69 (0.58, 0.83)</b> | 0.98 (0.76, 1.26) |
| 5-item Geriatric Depression Scale ( $\geq 2$ vs. $< 2$ ) | <b>2.65 (1.63, 4.33)</b> | 1.28 (0.75, 2.17) |

Bold indicates significant at  $p < 0.05$ . HRQoL, health related quality of life.

† Point estimates based on continuous scores, standardized using weights with a mean of zero and standard deviation of one.

## References

1. Nygaard I, Barber MD, Burgio KL, Kenton K, Meikle S, Schaffer J, Spino C, Whitehead WE, Wu J, Brody DL; Pelvic Disorders Network. Prevalence of symptomatic pelvic floor disorders in US women. JAMA. 2008;300(11):1311-1316
2. Bernstein R. Minority population tops 100 million. U.S. Census Bureau News. 2007; <http://www.census.gov/Press-Release/www/releases/archives/population/010048.html> Accessed March 25, 2009

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| <i>Specify source of funding or grant</i>               | <b>Funding: National Institute on Aging</b>  |
| <i>Is this a clinical trial?</i>                        | <b>No</b>  |
| <i>What were the subjects in the study?</i>             | <b>HUMAN</b>   |
| <i>Was this study approved by an ethics committee?</i>  | <b>Yes</b>   |
| <i>Specify Name of Ethics Committee</i>                 | <b>University of California, Los Angeles Office for Protection of Research Subjects Institutional Review Board (IRB)</b> |
| <i>Was the Declaration of Helsinki followed?</i>        | <b>Yes</b>   |
| <i>Was informed consent obtained from the patients?</i> | <b>Yes</b>   |