Does the International Classification of Primary Care Improve Sensitivity for Identifying Neuropathic Pain in a Primary Care Electronic Medical Record Database?

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CONTEXT:
• Neuropathic pain (NeP) is an important clinical syndrome which is not explicitly identified in commonly used clinical coding systems.
• Despite lack of direct coding, cases of NeP in primary care electronic medical records may be inferred based on diagnoses and medication use1,2.
• Unlike the International Classification of Diseases (ICD v9), the International Classification of Primary Care (ICPC v2) is designed to capture symptom diagnoses as well as pathologic diagnoses, and to record more than one diagnosis per patient encounter3. Both of these capabilities may improve our ability to identify patients with neuropathic pain compared to ICD coding alone.

OBJECTIVE:
• To ascertain whether ICPC increases the ability to identify NeP cases compared to ICD-9 coding alone.

DESIGN:
• Retrospective cohort study using a primary care EMR database containing the de-identified records of over 3000 patients with both ICD and ICPC coding recorded.

PATIENTS:
• 2784 adult patients with ≥2 in-office visits between October 2005 and June 2010.

OUTCOME:
• The number of patients identified as having certain NeP (based on a definitive NeP-causing diagnosis), or probable NeP (based on a possible NeP-causing diagnosis AND a prescription for a medication potentially used to treat NeP AND no alternative indication for the NeP prescription) utilizing ICPC + ICD versus ICD alone.

RESULTS:
• Certain NeP cases were an identical 115 (4.13%) whether ICPC + ICD or ICD alone were used.
• Probable NeP cases were 239 (8.95%) using ICPC + ICD compared to 255 (9.16%) using ICD alone.

CONCLUSIONS:
• The addition of ICPC coding does not increase sensitivity to neuropathic pain, but in fact led to a lower prevalence estimate for probable NeP by identifying more patients with an alternative diagnosis for a potential NeP prescription.

This poster is dedicated to the memory of Dr. Ian McWhinney (1926-2012), founding Chair of the Department of Family Medicine, Western University.