

## The Problem: Multiple Chronic Conditions

Today, the U.S. is witnessing an epidemic of persons with multiple chronic conditions (MCM), meaning that a growing number of Americans are now taking numerous prescription medicines on a daily basis, often see more than one prescriber, and thus are at significantly higher risk for drug-drug interactions, adverse events and medication errors. Examining the inter-relationship between multiple chronic conditions and poor medicine adherence, a new report from the National Council on Patient Information and Education (NCPIE) –*Accelerating Progress in Prescription Medicine Adherence: The Adherence Action Agenda* – underscores what is in store in excess morbidity, mortality and rising health care costs if action is not taken quickly to improve patient adherence among Americans living with multiple concurrent diseases. The following are some key findings.

### The Extent of the Problem

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Driven by the aging of the U.S. population and such risk factors as increased obesity, the number of people with multiple chronic conditions is increasing at a rapid pace. According to the latest estimates:

- The prevalence of MCC has increased significantly from 21.8% of the adult population in 2001 to 26.0% in 2010.<sup>1</sup> Thus, today an estimated one in four Americans has MCC, including one in 15 children.
- The heaviest burden of MCC is among Americans aged 65 and older, where 2012 data from the Centers for Medicare and Medicaid Services (CMS) finds that 68% of Medicare beneficiaries are being treated for at least two concurrent chronic illnesses – or 21.4 million individuals.<sup>2</sup> By 2020, it is projected that 81 million seniors will have MCC.<sup>3</sup>
- Recent data from the Centers for Disease Control and Prevention (CDC) now identifies the most common combinations of chronic diseases. Specifically, hypertension and arthritis as the most prevalent MCC dyad (combination of two chronic conditions) for both men and women and the combination of arthritis, diabetes and hypertension are the most prevalent MCC triad.<sup>4</sup>
- With the CDC data as the benchmark, in 2011, CMS categorized the most common combinations of chronic medical conditions and their prevalence among the Medicare population. In 2012, more than half of beneficiaries with MCC were being treated concurrently for high cholesterol and hypertension (52.9 % prevalence). Other common dyads were high cholesterol and ischemic heart disease (36.2% prevalence); high cholesterol and diabetes (32.3% prevalence); high cholesterol and arthritis (31.1% prevalence); and ischemic heart disease and hypertension (29.6% prevalence).

### The Cost of Multiple Chronic Conditions

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The major burden of multiple chronic conditions is borne by Americans aged 65 and over, where the prevalence and costs of have far-reaching implications for the health care system. New research finds that:

- Caring for the approximately 27% of Americans with MCC accounts for 66% of the nation's health expenditures<sup>5</sup> and is a major source of Medicare spending.

- Of the \$300 billion Medicare spent in 2010 on health care, the average cost per beneficiary was \$9,738.
- However, beneficiaries with six or more chronic conditions – roughly 14% of the Medicare population – cost \$32,658 or three times the national average.<sup>6</sup> In total, Medicare spent \$140 billion on the care of these individuals.
- Of the \$140 billion spent in 2010, CMS calculated that 60% of the patients with six or more chronic conditions required hospitalization, accounting for 55% of Medicare’s total spending on hospitalizations.
- Beneficiaries with six or more chronic conditions were also responsible for 63% of Medicare’s post-acute care costs in 2010 and had hospital admission rates that were approximately 30% higher than for other Medicare beneficiaries.<sup>7</sup>
- Further, CMS reported that 70% of Medicare beneficiaries with six or more chronic conditions went to the emergency room in 2010, over one-quarter had three or more ER visits, and 92% saw a physician with 46% requiring 13 or more visits.<sup>8</sup>

## The Challenge of Medication Adherence

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Patients with multiple chronic conditions take more prescription and OTC medicines than any other group, are seen by different prescribers, and often grapple with taking complex combinations of different medicines correctly. The following documents the extent of this challenge:

- According to CMS estimates, the average Medicare patient diagnosed with one chronic disease sees up to four different doctors while patients with five or more concurrent diseases see an average of 14 different physicians.<sup>9</sup>
- As a result, the concurrent use of multiple medications to manage coexisting chronic conditions (polypharmacy) is a common occurrence. According to CDC data, 76% of Americans aged 60 and over use two or more prescription drugs and 37% take five or more.<sup>10</sup> Other data find that 42% of patients aged 65 and older took five or more prescription drugs in 2012 with the average number of prescription medicines increasing from five to seven at age 85.<sup>11</sup>
- There is also a direct link between the number of medications taken by a patient and the risk of adverse drug reactions. Studies document a rise in the incidence of drug reactions from 6% in patients taking two medications a day to as high as 50% in patients taking five drugs a day.<sup>12</sup>

<sup>1</sup> Ward BW, Schiller JS. Prevalence of Multiple Chronic Conditions Among US Adults: Estimates From the National Health Interview Survey, 2010

<sup>2</sup> Federal Register, Vol. 78, No. 16, January 24, 2013, pp. 5182-5183

<sup>3</sup> Partnership for Solutions. Chronic Conditions: Making the Case for Ongoing Care: Robert Wood Johnson Foundation; 2002

<sup>4</sup> Ward BW, Schiller JS. Prevalence of Multiple Chronic Conditions Among US Adults: Estimates From the National Health Interview Survey, 2010. *Prev Chronic Dis* 2013;10:120203

<sup>5</sup> Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB, Blumenthal D. Multiple chronic conditions: prevalence, health consequences, and implications for quality, care management, and costs. *J Gen Intern Med* 2007;22(Suppl 3):391–395

<sup>6</sup> Centers for Medicare and Medicaid Services. Chronic conditions among Medicare beneficiaries. Chartbook, 2012 Edition

<sup>7</sup> Centers for Medicare and Medicaid Services. Chronic conditions among Medicare beneficiaries. Chartbook, 2012 Edition

<sup>8</sup> Centers for Medicare and Medicaid Services. Chronic conditions among Medicare beneficiaries. Chartbook, 2012 Edition

<sup>9</sup> Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB, Blumenthal D. Multiple chronic conditions: prevalence, health consequences, and implications for quality, care management, and costs. *J Gen Intern Med* 2007;22(Suppl 3):391–395

<sup>10</sup> Gu Q, Dillon CF, Burt VL. Prescription drug use continues to increase: U.S. prescription drug data for 2007-2008. NCHS data brief, no 42. Hyattsville, MD: National Center for Health Statistics. 2010

<sup>11</sup> IMS LifeLink. January 2013

<sup>12</sup> Lin, P. Drug interactions: A method to the madness. *Perspectives In Cardiology* 2004; 20(10), 20