Risk-based predictive modeling using administrative claims data to predict health care costs and other patient outcomes has revolutionized the financing, management and delivery of health care. The Centers for Medicare & Medicaid Services (CMS) was a pioneer in recognizing the need for practical methods to assess medical risk and adjust payments to health plans for the underlying health of their Medicare enrollees. The urgency increased with studies documenting that Medicare was actually losing money in the Medicare risk contracting program because plans attracted “favorable selection.” Medicare has used risk adjustment with increasing sophistication and weight since 2000, affecting 100 percent of health plan payments for the first time in 2007.

For two decades, a team of researchers and analysts headed by Arlene S. Ash, Boston University School of Medicine, Randall P. Ellis, Boston University Department of Economics, and Gregory Pope, RTI International has provided the technical and practical tools for the wide-spread use of risk adjustment in health care management and financing.

The risk adjustment story has many heroes, with CMS administrators and staff being its original and steadfast champions and with early help from the Alpha Center. Research teams at Brandeis and Boston Universities, RTI International, Johns Hopkins, RAND, the University of California, Kaiser, and Harvard have made important, continuing contributions. Additional lead developers and disseminators of risk adjustment include Barbara Starfield and Jonathan Weiner of Johns Hopkins, Richard Kronick of the University of California, San Diego, and Melvin Ingber and John Kautter of RTI International. Several companies have extended the tool set, producing “industrial strength” software that facilitates national and international adoption by governments, as well as mainstream use by health care actuaries, health plan administrators and medical directors. What made the DCG story unique was its focus on developing a practical tool to facilitate fair and efficient health plan competition.

Drs. Lisa I. Iezzoni and John Z. Ayanian of Harvard Medical School provided key clinical support for Medicare’s Diagnostic Cost Groups (DCG) modeling framework. CMS now uses such models for paying plans, monitoring quality and assessing programs.

Many constituencies in U.S. health care and internationally now rely on predictive models.
Risk-Based (continued)

for financial and medical management. Applications include assessing the financial risk of populations; determining fair and efficient payments to health care providers and insurers; profiling provider efficiency and quality; calculating savings to share with more efficient providers; evaluating the effectiveness of innovations for improved care delivery; and focusing care management strategies and planning on the patients most likely to experience preventable hospitalizations. Risk adjustment is part of all current health policy reform discussions.

DxCG now serves over 350 government, commercial and academic clients. Principally through the work of Drs. Ellis and Ash and founding CEO Marilyn Kramer, DxCG has adapted its methods to enable the German government to make risk adjusted payments for health care providers through their “sickness funds.”

What is health services research?

Health services research is the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and populations.

— AcademyHealth, June 2000

RESOURCES

Further Reading


WEB SITES

The Centers for Medicare and Medicaid Services
http://www.cms.hhs.gov/MedicareAdvtgSpecRateStats/06_Risk_adjustment.asp

DxCG, inc.
www.dxcg.com


Society of Actuaries (SOA)