



THE HEALTHCARE JOURNEY CONTINUES

By Michael L. Frank

In a previous article, I described an innovative new course developed in 2012 at Columbia University which gave a multicultural class of 42 graduate students an overview of the actuarial profession and a flavor of what it is like to work as a health actuary or a health insurance professional ("A Global Perspective of the Health Insurance Market," February 2013, Issue 41). I taught the class jointly with my fellow principal at Aquarius Capital, Don Rusconi.

In 2013, we built upon the success of that first program. This year's course was similar to the one in 2012 except that we expanded four areas of learning:

- Study of international healthcare systems (10 New Countries);
- Impact of healthcare reform, known as the Patient Protection and Affordable Care Act (PPACA);
- Retiree health systems in the United States including research into retiree health valuations (e.g., GASB45); and
- Reinsurance.

As in the pilot year, the curriculum provided an overview of the healthcare insurance industry, including products, delivery systems, healthcare reform, reinsurance and capital markets with focus in the U.S. and international markets. Students were given traditional actuarial projects in pricing, reserving and underwriting as well as other projects and course work to understand sales, provider contracting, disease management/wellness programs, claims management and finance. The program also covered a professionalism component, including a review of actuarial standards of practice, traditional health actuarial projects, and other professionalism issues.

Study of International Healthcare Systems (10 New Countries)

Thirty-seven of the 40 students for the 2013 class were international students. As a result, the course was designed to study international healthcare systems as well as the U.S. healthcare system. In addition to the 10 countries selected by students for the 2012 program (Brazil, Canada, France, Germany, India, Japan, Singapore, South Korea, Sweden, and United Kingdom) this year's course incorporated Austria, Bermuda, Mexico, Netherlands, New Zealand, South Africa, Spain, Switzerland, Turkey and United Arab Emirates. Students were divided into teams of three to four to research their selected country's healthcare system and to provide research papers and power point presentations.

Each student taught the class for approximately 30 minutes about their allocated country's coverage, insurance system,

reinsurance, regulations, healthcare reform, market penetration and roles of actuaries. Students also networked with assistance from their professors with actuaries and insurance professionals in other countries to develop their research. As a result, some students obtained internships and eventually employment through the contacts they developed while working on the project.

Impact of Healthcare Reform (PPACA)

Given recent legislative changes, the course addressed healthcare reform and its impact in the market. Students were assigned research projects; the results were reported to the class. The 2013 course reflected the use of poll surveys to measure the impact of healthcare reform on consumers.

Time was spent concerning the implementation of PPACA. Specific areas included:

- Impact on commercial (fully insured vs. self-funding) and government programs (e.g., Medicare, Medicaid, etc.);
- Strategies pursued by insurance companies and HMOs including marketing, pricing strategy and operations;
- Impact of accountable care organizations (ACOs) as a result of healthcare reform;
- Impact of healthcare reform on other organizations serving the insurance industry including brokers, third party administrators, preferred provider organizations, disease management/wellness companies, technology companies, reinsurers, and private equity;
- Pay or play" strategies for corporations as well as the exploration and implementation of health insurance exchanges by insurance regulators and health plans;
- Claims audits, provider billing and wellness initiatives.

Retiree Health Systems and GASB45

We spent significant time assessing the Medicare system and health insurance programs available to retirees. Students explored all types of Medicare plans including Medicare Advantage and Medicare Supplement arrangements. They also reviewed retiree health valuation methods for other postemployment benefits (OPEB) including FAS106 (single employers), SOP92-6 (multi-employers) and GASB45 (municipalities).

In addition to learning about traditional actuarial formulas used to make retiree health valuations, students were involved in research projects to develop an understanding of methods used in the market and to summarize results revealing trends and benchmarks (averages). We wanted students to get a sense of the output results from valuation programs, since many actuarial firms are using them and they are "black boxes" to many students and practicing actuaries.

For the research, students gathered valuation reports prepared by 35 different actuarial firms drawn from 114 municipalities in 40 different states. The reports provided students with information about:

- Types of retiree benefits offered by municipalities nationwide;
- Types of assumptions and methodologies used by actuarial firms;

- Patterns of results so students obtained insights on what they could expect in results (e.g., benchmarks, ratios, etc.); and
- Most common report elements provided by practicing actuaries.

Highlights of the research were:

- **Actuarial Cost Methods:** 69.3 percent of all valuations reviewed reflected a selected actuarial cost method of projected unit credit, which is the most common valuation method used for GASB45. The second most common method was Entry Age Normal, which was used 24.6 percent of the time;
- **Discount Rates:** Discount rates varied widely with actuarial firms using discount rates (as low as 3 percent and as wide as 8.5 percent) as well as assumptions made for funded and unfunded retiree benefits programs. 28.1 percent of all municipalities evaluated had funded some portion of its retiree health benefits;
- **Healthcare Inflation (Trend) Rates:** Similar to discount rates, students were able to see a wide range of healthcare inflation rates (the average first year discount rate being 8.5 percent and the ultimate trend rate assumption averaging 4.92 percent);
- **Mortality Tables:** 69.0 percent of all valuations reviewed were based on the RP-2000 mortality table, while 71.9 percent of all valuations reviewed reflected some component of mortality improvement;
- 51 percent of the reports had splits for actives vs. retirees for both employee counts and unfunded accrued liability. For those reports splitting actives vs. retirees, active lives reflected 72.6 percent of the total employee count and 58.1 percent of the unfunded accrued liability.

Other trends and results were illustrated in aggregate form so that students could see trends and relationships between unfunded accrued liability, annual required contribution (ARC), pay-as-you-go amounts and net OPEB obligations. Students studied different options of presenting results to the end user. The overall goal for the research was to help students be more consultative with results and to be able to audit output for reasonableness when calculations are generated out of the actuarial "black box" (valuation program).

Reinsurance

The 2013 course once again included reinsurance. Back in the fall of 2012, we presented a three-day reinsurance course in the Dominican Republic and we incorporated material from that course into the 2013 Columbia University program. With an ever changing reinsurance market, we provided insights into health reinsurance as well as reinsurance for other product lines (e.g., life insurance, annuities, accident products, catastrophic coverages, property casualty products). Topics included actuarial, underwriting, claims, auditing, treaties, retrocession, captives and financial reporting, as well as an overview of history of reinsurance and its markets (e.g., various countries, top reinsurers by line of business).

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