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Examining the Evidence: Blood, Guts, ASOPs and Delivery System Reform

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Health care reform's first stage, insurance reform, has now become business as usual and health actuaries have thrived. The Affordable Care Act (ACA), Medicare risk, and Medicaid managed care are well matched to actuaries' skills in quantifying and assimilating complex financial and benefit rules. Many of us can relax and work in actuarial silos—at least for now.

The second stage, care delivery system reform, promises to make Americans healthier and happier and at a lower cost, at least according to the Triple Aim.¹ Care delivery reform is about value, data and transparency—for example, determining which hospitals and doctors are really good, and what makes them good, so others can learn from them. Care delivery reform is another natural match for actuaries. While the profession is quite comfortable working with the payer industry's mega-data and financial managers, this second stage tests actuaries' adaptability outside traditional silos, answering new questions and serving new clients.

Silo-breaking is not for soloists. For these new challenges, actuaries will need help from other professionals. Other professionals will also seek help from actuaries. A medical director might ask an actuary for help demonstrating the value (or not) of an intervention administered by a vendor. Actuaries will ask non-actuarial professionals for key insights; for example, an actuary charged with evaluating virtual colonoscopy as an alternative to colorectal cancer screening by optical colonoscopy might ask a clinical researcher about the importance, or not, of very small polyps. Given this two-way street, we need to quickly learn what we don't know as a profession and as individuals—and size up what others don't know.

The care delivery system seeks actuaries because of our knowledge and skills. We've seen a growth in work with provider systems, pharmaceutical companies and policy consultants. However, this sometimes does not end well for actuaries or their employers. The mechanics of working with delivery system issues may appear familiar to actuaries, but the different contexts can be a trap for the unwary. For example, the authors recently reviewed a report where an actuary using a familiar claims

database greatly understated the prevalence of an ambiguously described clinical syndrome. Clinical or epidemiological insight would have helped to avoid the problem. Our skills from the silo can turn to embarrassment when the context changes.

PROFESSIONALISM: DO YOU STAY IN THE SILO—OR NOT?

Of course, actuaries rely upon the work of other professionals, inside and outside of their organizations. Actuarial precepts and standards require actuaries to assume individual responsibility for actuarial work products. How do actuaries responsibly incorporate the work of non-actuaries, especially medical or delivery system experts?

Many health actuaries will, sooner or later, run into a project where blood and guts just can't be ignored. Actuaries, with little to no clinical training, would then (hopefully) engage with clinical professionals who often have little to no mathematical training. For the actuary, neither working without clinical input nor blindly trusting clinical professionals is a good option.

The authors routinely work on clinically focused and multidisciplinary projects with people who challenge but respect one another across disciplines. We have learned that “many years of actuarial experience” or “the ASOPs say ...” will not discourage clinicians from questioning us. Everybody takes responsibility for the integrity of each other's work and that includes us, as actuaries, taking responsibility for clinical assumptions.

The Actuarial Standards Board (ASB) standards expect this type of inter-professional relationship—sort of. According to the standards, actuaries must generally take responsibility for the

ASOP 41, ACTUARIAL COMMUNICATIONS

3.4.3 RELIANCE ON OTHER SOURCES FOR DATA AND OTHER INFORMATION

An actuary who makes an actuarial communication assumes responsibility for it, except to the extent the actuary disclaims responsibility by stating reliance on other sources. Reliance on other sources for data and other information means making use of those sources without assuming responsibility for them. An actuarial communication making use of any such reliance should define the extent of reliance, for example by stating whether or not checks as to reasonableness have been applied. An actuary may rely upon other sources for information, except where limited or prohibited by applicable standards of practice or law or regulation. Further guidance on when such reliance is appropriate, and what the actuary's responsibilities are when such reliance is stated, is found in ASOP No. 23, Data Quality.

reasonableness of data, assumptions and methods provided or selected by others, including non-actuaries. An actuary, however, may elect to disavow responsibility for assessing reasonableness and simply “rely” upon others (see sidebar).

Compared to the ASB approach, we prefer the guidance of the International Committee of Medical Journal Editors (ICMJE) for defining the role of authors.² The ICMJE says that all authors must give final approval of the paper, agree to be accountable for all aspects of the work by (at a minimum) ensuring that questions related to the accuracy or integrity of the work are investigated and resolved, and have confidence in the integrity of the contributions of the co-authors. While the ICMJE acknowledges that co-authors will very often be responsible for specific portions of the work, all authors share global responsibility. A co-author or solo author cannot disclaim responsibility by stating reliance on others.

GETTING COMFORTABLE, BUT NOT TOO COMFORTABLE

So, how can a health actuary become comfortable with clinical care issues? The actuary will need to have an understanding of the topic’s vocabulary and science. Just-in-time Internet searches and conversations with co-authors are likely, even for clinical professionals. However, actuaries who use such rapid learning will already need to have knowledge of common scientific methods, literature searches, biological sciences and/or clinical practices. An actuary lacking the basic knowledge to readily grasp the clinical aspects of the project should reconsider whether he is qualified to play a leading role. Obtaining the necessary knowledge is never “beyond the scope of the assignment.”

Assumptions and methods that work quite well within routine, narrowly defined actuarial projects may not work well for more novel or broadly defined projects. Even datasets familiar to the actuary can present huge challenges when redeployed for use with therapeutics or the bio-sciences. We recently advised an actuary who was trying to estimate cost loads for obesity in connection with a mortality study. Recognizing that obesity is rarely coded in claims datasets, she tested using surrogates such as diabetes and developed an unusually high “burden of disease” estimate. A quick literature search informed the actuary that about half of diabetics are not obese—and led her to other methods.

Numbers about clinical care or health events should get the same scrutiny from actuaries as if they were reviewing “pure” actuarial work. In the authors’ experience, the techniques actuaries use to critically examine actuaries’ methods and assumptions also work well for reviewing input from clinicians and other non-actuaries.

Even basic numbers from the health literature need verification for both accuracy and context as a published number is not guaranteed to be the correct number, let alone generalizable to a new context. Numbers and risks are ours to examine, no matter the source.

Likewise, the vocabulary and communication styles that work well within the actuarial community don’t work as well outside the community. For example, non-actuaries understand “health service use” but not “utilization,” graphics may be more effective than tables in communicating with non-actuarial audiences, and a comprehensive report may need to be presented in layers with an abstract or an executive summary and then the report.

LEADERSHIP—CHALLENGING AND PRECARIOUS

Actuaries on multidisciplinary teams can lead through questioning. When someone’s contribution appears unsound, we should recognize it as a learning or teaching opportunity rather than asserting that they have made a mistake. The real issue may be as minor as differences in professional vocabularies. Or it may be that our fresh eyes and perspective have discovered an anomaly or a critical problem—or (our favorite!) that our actuarial gut sense was misinformed.

Working within a collegial, multidisciplinary team is both fun and hard, especially if the project involves new topics and professionals who have not previously worked together. Doing it well results in a superior work product and learning for everyone involved. ■

ENDNOTES

¹ Institute for Healthcare Improvement, “IHI Triple Aim Initiative: Better Care for Individuals, Better Health for Populations, and Lower Per Capita Costs,” [Online]. Available: <http://www.ihl.org/Engage/Initiatives/TripleAim/pages/default.aspx>. [Accessed June 15, 2015].

² <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>.



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