

Paul's Puzzle: A Fable for Actuaries

PAUL PLESIOSAUR WAS THE PRICING and reserving actuary at Raptor Health Plan, a small health maintenance organization located in his hometown of Pleistocene Crossing in the Rust Belt section of the Midwest. He had done very well at the state university, passing two actuarial exams and graduating with a 3.6 average. Although he could have taken a position with a national consulting firm, he was an only child and his parents were in failing health when he graduated from college. He was happy to have an actuarial job in town, not too far from his parents.

Raptor had been Paul's first job, and for the first six years he worked under a health actuary, Ptery Pterodactyl. In the late 1990s, Ptery struck it rich in soybean futures and retired. By this time, Paul had his associateship in the Society of Actuaries and was on track to get his fellowship. He attended several meetings a year to improve his actuarial knowledge and skills, regularly perused several insurance-related periodicals, and was active in the Actuaries' Club of the Rust Belt.

Paul had signed the annual actuarial opinion for Raptor's financial statements for three years. Paul was very happy with his position. He reported to the chief financial officer, Tyrone Tyrannosaurus, who was also an actuary, and the company was achieving high growth and profitability. Paul's salary was good, and the profit-sharing plan added a lot to his annual compensation.

Then one January, when Paul was reviewing Rap-



tor's claim data to set the liabilities for the annual statement, he found that the computer calculation of year-end claim liability was coming out much higher than he had expected. At that level, Raptor would show a significant loss, for the first time ever. Paul was very concerned and decided to come in on the weekend when he would be able to focus without interruptions on finding the problem in the calculation. The results just didn't seem reasonable.

Unfortunately, Paul wasn't able to find a problem in the calculation. The problem was in the claims themselves. The claims had started climbing in the

second quarter of the year, apparently because of several changes in the business that had coincidentally started at about the same time. Medical inflation had jumped, the maturing block of business was experiencing antiselection as healthier business left for a new competitor, there had been several premature babies with an average cost so far of \$300,000 each, and there had been a slowdown in claims payments owing to an upgrade of the claim-processing system. None of these had been reflected promptly in the previous calculations of claim liability, and their impact was now coming through all at once.

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On Monday, Paul went to see Tyrone (the CFO) with his analysis. Tyrone reacted just as Paul had feared. He said that Paul's analysis must be wrong and told him that as an actuary, he was certain that the results could not possibly be so far out of line with previous results. He told Paul to redo the work and get an answer that would show profitability for the year. If Paul didn't comply, he would be out of a job and Tyrone would sign the opinion himself.

Paul reviewed the Actuarial Standards of Practice and the Code of Professional Conduct and requested guidance from a member of the Actuarial Board for Counseling and Discipline (ABCD). He concluded that signing the lower estimate would violate his professional obligations as an actuary.

Here are some possible "solutions" to Paul's Puzzle:

Case A: Paul quits his job rather than reducing his estimate. By midyear, Raptor has become insolvent and is taken over by

the insurance department. Thirty million dollars in claims go unpaid because there isn't enough money. Paul and Tyrone are looking for new jobs.

Case B: Paul threatens to contact the state insurance department and the ABCD, and Tyrone backs down. By midyear, Raptor has become insolvent, but there is enough money to pay the claims and merge the operations into another health maintenance organization (HMO). Paul and Tyrone are looking for new jobs.

Case C: Paul threatens to contact the insurance department and the ABCD, and Tyrone doesn't back down. Paul alerts the insurance department and the ABCD, and Tyrone then backs down. By midyear, Raptor has become insolvent, but there is enough money to pay the claims and merge the operations into another HMO. Paul and Tyrone are looking for new jobs.

Case D: Paul agrees to reduce his estimate of the liability and signs the opinion. By

midyear, Raptor has become insolvent and is taken over by the insurance department. Thirty million dollars in claims go unpaid because there isn't enough money. Paul is looking for a new job but is having difficulty in interviews explaining why he signed for the inadequate amount. In addition, the ABCD has appointed an investigator to explore possible violations of the Code of Conduct by Paul and Tyrone.

Cases E through Z: A multitude of other possible actions and outcomes.

Simple Conclusion: There are a lot of possible outcomes to any situation, and nobody knows for sure what will happen.

Higher Moral: You can't always keep your job, but you should follow the rules of your profession without fail. If you break the rules to keep your job, you may end up without the job anyway and with a compromised or negative employment history.

Caveat: This fable is imaginary and isn't based on real people or events. ●

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