Grey Areas
A COMMENTARY ON LEGAL ISSUES AFFECTING PROFESSIONAL REGULATION
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Interesting Data, Bad Data and Useful Data

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As measurement tools, statistical analysis, and artificial intelligence gain prominence, regulators must consider when and how to use them.

A good example of interesting, but probably useless, data is the study demonstrating that practitioners who cheated on their spouses are more likely to engage in misconduct: https://www.sciencedaily.com/releases/2019/07/190730182434.htm. It is unlikely that regulators are going to return to the days when it was considered appropriate to investigate or discipline practitioners for adultery.

An example of "bad data" is some of the work done on predictive analysis for criminal behaviour that identified hotspots and times for violent criminal behaviour and even identified individuals likely to engage in (or be a victim of) such behaviour. Concerns quickly arose that the algorithms developed included considerations that would produce racial bias. And concerns also arose about how such information would affect law enforcement activities. See: https://www.smithsonianmag.com/innovation/artificial-intelligence-is-now-used-predict-crime-is-it-biased-180968337/.

A possible example of interesting and potentially useful data can be found in the recent study conducted by the Australian Health Practitioner Regulation Agency (AHPRA). The goal of the study was "to develop an algorithm for use by regulators in prospectively identifying practitioners at high risk of attracting formal complaints about health, conduct or performance issues." Using the administrative database of over 700,000 practitioners from 14 regulators over a six year period, the study analyzed the number of and primary issue for complaints against variables that included the following: "the period when each practitioner was registered as well as the practitioner's type of registration, age band, sex, profession, specialty and practice location."

The authors observed that the following groups had a higher risk of future complaints:

- Male practitioners,
- Practitioners over 35 years of age (the risk increasing with age),
- Practitioners practising in regional or remote areas,
- Practitioners with previous complaints (the risk rising significantly with each additional complaint), and
- Practitioners from some professions, especially medicine and dentistry, and specialties like obstetrics and gynaecology, psychiatry, surgery and general practice.

The tool was most reliable when the previous complaints related to "mental health, substance use, sexual boundaries and honesty".

The study assigned a value to each risk factor and was able to formulate an overall predictive risk score for each practitioner.

Of course, how this information is used constitutes a crucial issue. The authors recommend that the score

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could be used, when considering a new complaint, as a guide to whether remedial action might be warranted. The authors suggest that employing remedial intervention when the predictive score is in the moderate range might be more effective than doing so when the score is already quite high.

One can envision the information being used for proactive quality assurance programs as well. For example, practitioners with a high predictive score (or the characteristics that tend to raise the score) could be selected at an increased rate for practice reviews. In fact, this is already being done to a degree by some regulators who select (much) older practitioners for more frequent reviews.

While some of the variables are currently used for decisions on whether to refer a matter to discipline (e.g., prior complaints history) one can imagine some challenges if variables protected by human rights legislation (e.g., age, sex) are part of the score that results in a higher chance of being referred to discipline.

Another complicating factor is that the media or other groups who learn that a regulator has such data may pressure regulators to publicize the predictive scores about individual practitioners.

The authors identify a number of strengths to this research as compared to previous studies including:

- The large sample size used,
- That 16 professional categories were considered (two regulators were divided into a total of four categories),
- The identification of the complaints issues,
- Workloads were accounted for, so that groups tending to have heavy workloads were not over-included,
- Some predictors were time 'variable' to account for changes of risk over time, and
- All practitioners were included in the study, not just those who already had one complaint made against them.

The authors also identified some limitations in the study including the following:

- "First, we were not able to measure certain practitioner-level variables that are known to be related to complaint risk. These include patient volume, practice type, disciplinary history, and for doctors – performance issues during training and country of training."
- Complaints issues were recorded at the time the complaint arose and may not reflect the primary issue when the investigation was completed.
- "Third, while complaints are increasingly recognised as a potential marker of potential problems in care, not all complaints are associated with poor performance or wrongdoing." Similarly, there was no recognition of the degree of harm associated with each complaint.
- Multiple complaints for the same matter were each used as a separate complaint.

Even with these limitations, the study provides useful information for regulators. The study can found at: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4214-y.