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August 08, 2018

BOARD OF COMMISSIONERS OF
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VIA EMAIL

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ATTENTION: JACQUELINE GLYNN

Dear Ms. Glynn:

RE: RESPONSE TO INTERVENORS QUESTIONS

On behalf of Insurance Bureau of Canada, we enclose the responses of Viivi Riis to questions posed by the Board of Commissioners of Public Utilities.

We trust the enclosed is satisfactory.

Yours truly,

MARTIN WHALEN HENNEBURY STAMP

KEVIN F. STAMP, Q.C.
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HSM
Health Service Management
Viivi Riis MSc, BScPT

Aug 6 2018

Ryan Stein
Insurance Bureau of Canada
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Re: Response to Intervenors' Questions.

Question #1:

Requests a copy of a research paper cited in my report. The paper is attached.

Question #2:

Requests quantitative data to support the statement made in my report: *"Clearly this was a win-win. Insurers paid more for treatment but paid less overall for claims."*

This statement was based on the findings of the publication referenced in question #1 and which is provided with this letter. The data used in the analysis is described on page 451 of the paper. The data illustrates insurers paid more for treatment but less in overall claims and is described on page 454. Average cost per treatment prior to the reforms was \$53 and this increased to \$60.53 following the reforms. At 26 wks post-collision, average claim costs were \$1,238.30 prior to the reforms and following reforms decreased to \$1082.40. Refer to table 8

If there are other questions, please don't hesitate to forward those.

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A Survey of Injury Claims Data After Introduction of Injury Care Protocols in Alberta, Canada

Barbara Sulzenko-Laurie, BA (hons), Viivi Riis, MSc, and Elena Grubisic, MSc

Objective: To monitor the impact of auto insurance regulatory reforms on the no-fault injury claims experience of Alberta auto insurers. **Methods:** Retrospective file review and abstraction of data from individual auto insurer claim files. **Results:** Reforms were associated with change in diagnostic frequencies as well as higher health utilization, average cost per treatment episode, cost per claimant, claim closure rate, and reduced incidence of disputes. In spite of these positive indicators, over 40% of claims were still open at 6-month post-injury. **Conclusions:** Regulatory reforms in auto insurance systems may affect access to care, health utilization, costs, and outcomes. Stakeholders must continue to monitor the effect of regulatory change on health and insurance practices.

In Canada, the automobile insurance industry is highly regulated federally (for solvency) and provincially (for market conduct).^{1,2} Legislative and regulatory change may influence the cost of and/or procedures for making injury claims which, in turn, may influence injury claim behaviors and, also, administrative outcomes in auto insurance systems.^{3,4} On October 1, 2004, the government of Alberta, Canada, implemented a comprehensive package of changes to the province's automobile insurance system. These reforms were implemented through legislative and regulatory changes. These were developed through consultation with major stakeholders including health professional associations and the insurance industry, led by a consulting physician hired by the Alberta Superintendent of Insurance (the regulator). A major element of the reforms was a 4-fold increase (from \$10,000 to \$50,000) in the maximum expenditure for no-fault Accident Benefits (AB), which is similar to personal injury protection in the US. This type of coverage is available on a first party basis to persons injured in automobile collisions regardless of whether they are at fault for the collision or not. In addition, evidence-based treatment protocols (protocols) were implemented.⁵ The protocols set out broad treatment expectations during the first 12-week post-injury, for sprain and strain injuries as well as grade I and II Whiplash Associated Disorders (WAD), which account for the majority of traffic injuries.⁶ A principal objective of these changes was to bring to motor vehicle injury victims the benefit of research evidence on treating these injuries. The evidence suggested that early and active rehabilitation interventions may lead to faster recovery and less chance to develop chronic conditions.⁷⁻¹⁰ The evidence-based parameters of protocol treatment were developed collaboratively by stakeholders (stakeholders included representatives of provincial health regulatory colleges, provincial health professional associations, the national trade association for the insurance industry), led by the physician consultant retained by the insurance regulator.

Although protocol treatment is available to all injured persons with qualifying injuries, ie, strains, sprains and WAD I & II, it is not mandatory. The decision to recommend treatment in or outside the protocols is typically exercised by the initiating health professional after initial assessment; however, the final decision, informed by the health professional, is made by the claimant.

Complementing the regulation that implemented treatment protocols, a separate regulation was also enacted that placed an upper limit of \$4000 (SCa 2004) on general damages (Pain and suffering award.) awards that could be sought by claimants with sprain/strain or WAD I or II injuries, provided the claimant's injury does not result in a "serious impairment" as this term is defined in regulation. ("serious impairment," in respect of a claimant, means an impairment of a physical or cognitive function

1. that results in a substantial inability to perform the
 - A. essential tasks of the claimant's regular employment, occupation or profession, despite reasonable efforts to accommodate the claimant's impairment and the claimant's reasonable efforts to use the accommodation to allow the claimant to continue the claimant's employment, occupation or profession,
 - B. essential tasks of the claimant's training or education in a program or course that the claimant was enrolled in or had been accepted for enrolment in at the time of the accident, despite reasonable efforts to accommodate the claimant's impairment and the claimant's reasonable efforts to use the accommodation to allow the claimant to continue the claimant's training or education, or
 - C. normal activities of the claimant's daily living,
2. that has been ongoing since the accident, and
3. that is expected not to improve substantially.¹¹

For persons wishing to assert their injury had resulted in serious impairment and therefore claim more than \$4000 in general damages, it was expected that they seek initial treatment in the protocols. Claimants who did not receive protocol treatment were not prevented from claiming in excess of \$4000 for general damages, but they bore the burden of proving that their choice of treatment did not adversely affect their health outcome. Protocol treatment also differs from non-protocol treatment in that it is available without prior insurer approval. Persons with sprain/strain and WAD I injuries were eligible on a pre-approved basis for up to 10 treatment visits, whereas those with WAD II were eligible for up to 21 treatment visits. The treatment authorized within the protocols was described in the regulation, discouraged passive treatment and promoted resumption of usual activities as soon as possible.⁵ Six months after implementation of the reforms, the insurance regulator also established maximum fees payable for services delivered in the protocols. For example, in April 2005, assessments were capped at \$100 (SCa 2005) and per treatment fees at \$35 and \$32 (SCa 2005), respectively, for physiotherapists and chiropractors. Before the fee caps, fees were negotiated between insurers and health facilities.

OBJECTIVE

The objective of this work was to monitor the impact of a package of auto insurance regulatory reforms on the no-fault injury

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claims experience of Alberta auto insurers at 12 weeks and 26 weeks of claims development based on comparisons with pre-reform metrics for similar claims. The study was undertaken for the purpose of identifying problems and unintended outcomes in the new claims environment to bring to the attention of the insurance regulator and health provider representatives.

Research Question

Is implementation of insurance reforms that include increased maximum expenditures, evidence-based treatment protocols, per-treatment fee caps, and restricted access to general damages awards associated with change in:

1. Injury classification by health providers?
2. Health care utilization?
3. Injury claim costs?
4. Duration of claims and incidence of disputes?

METHODS

The method used was retrospective claim file review for abstraction of data contained in individual claim files compiled by auto insurers for persons injured in automobile collisions. All data submitted for analysis were anonymized. Claims data were collected for three phases representing a) pre-reform or benchmark; b) immediate post-reform phase; and c) secondary post-reform.

Data Source and Study Design

Retrospective file review and analysis were conducted. Data were collected from individual auto insurer claim files from 10 automobile insurance companies representing more than 60% of the Alberta auto insurance market. All 10 companies participated in all three phases of the project, each contributing anonymized data for approximately 60 consecutive eligible claims for each phase. The three phases represent pre-reform (benchmark), immediate, and secondary post-reform periods.

Inclusion Criteria

Each insurance company provided data on consecutive eligible claims. Consecutiveness served as a proxy for randomness. Eligible claims were those for persons whose primary injury was identified as WAD I, WAD II, and/or non-WAD soft tissue injury (ie, sprain or strain) with or without the secondary conditions of temporomandibular joint disorder, psychological diagnoses, or chronic pain. Insurers report

that these three secondary diagnoses are commonly associated with soft tissue injuries in Alberta, and were included to ensure the sample was reflective of the environment. Data were not collected on claims where a) there was evidence of a primary diagnosis other than soft tissue injury as described above or b) where the secondary diagnosis was not one of the three identified above.

Sample

The pre-reform claims group (group A) represents benchmark data, which were abstracted for the initial 12- and 26-week post-injury on 580 eligible claim files with dates of accident on or after April 1, 2003. The immediate post-reform claims group (group B) provided data, for the period immediately after the reforms, and these data were abstracted for 12 weeks of experience on 548 eligible claim files with dates of accident on or after October 1, 2004. The secondary post-reform claims group (group C) supplied data reflecting the secondary post-reform period in which per treatment fee caps were implemented; these data were abstracted for 12 and 26 weeks of experience on 627 claim files with dates of accident on or after May 1, 2005. Data were analyzed for the 12-week post-injury period for all three claims groups, whereas 26-week data were analyzed for the benchmark (group A) and secondary post-reform (group C) groups (Table 1).

Study Measures

Injury Classification by Health Providers

Claims for treatment services are submitted on a standard claim form in which the treating health professional is required to provide a diagnosis or description of injury/ies. The protocol outlines diagnostic criteria for sprains, strains, or WAD I and WAD II injuries, which are shown in Tables 2 to 4. Injury or diagnosis data were extracted from the first and subsequent claim forms submitted by treatment providers on behalf of the claimant.

Health Care Utilization

Health care utilization data were calculated by totaling all insurer paid treatment episodes (visits) to health professionals including physicians, medical specialists, and rehabilitation providers such as physical therapists, chiropractors, massage therapists etc, from the date of accident to the end of the time period reported.

Injury Claim Costs

Injury claim costs were calculated by totaling all costs incurred for medical and rehabilitation costs during the time

TABLE 1. Demographic Data for Groups A, B, and C

| Gender | Number | Percentage | Average | Min | Max | Std. Dev. |
|--|--------|------------|---------|------|-------|-----------|
| Group A: pre-reform—52 wks of data accident on or after April 1, 2003 | | | | | | |
| Female | 323 | 55.7 | 38.2 | 1.0 | 82.0 | 13.9 |
| Male | 257 | 44.3 | 39.6 | 10.0 | 80.0 | 15.6 |
| Total | 580 | 100.0 | 38.9 | 1.0 | 82.0 | 14.7 |
| Group B: immediate post-reform—12 wks of data accident on or after October 1, 2004 | | | | | | |
| Female | 335 | 61.1 | 38.9 | 6.7 | 98.9 | 16.0 |
| Male | 213 | 38.9 | 37.3 | 7.3 | 84.4 | 15.2 |
| Total | 548 | 100.0 | 38.2 | 6.7 | 98.9 | 15.7 |
| Group C: secondary post-reform—26 wks of data accident on or after May 1, 2005 | | | | | | |
| Female | 371 | 59.2 | 37.3 | 0.2 | 105.4 | 17.2 |
| Male | 256 | 40.8 | 40.2 | 0.6 | 103.7 | 18.8 |
| Total | 627 | 100.0 | 38.5 | 0.2 | 105.4 | 17.9 |

TABLE 2. Diagnostic Criteria for Strains¹⁴

| | First Degree Strain | Second Degree Strain | Third Degree Strain |
|------------------------------------|---------------------------|---------------------------------------|--|
| Definition of the degree of strain | Few fibres of muscle torn | About half of muscle fibers torn | All muscle fibers torn (rupture) |
| Mechanism of injury | Overstretch or overload | Overstretch, overload or crushing | Overstretch or overload or crushing |
| Onset | Acute | Acute | Acute |
| Weakness | Minor | Moderate to major (reflex inhibition) | Moderate to major |
| Disability | Minor | Moderate | Major |
| Muscle spasm | Minor | Moderate to major | Major |
| Swelling | Minor | Moderate to major | Moderate to major |
| Loss of function | Minor | Moderate to major | Moderate to major (reflex inhibition) |
| Pain on isometric contraction | Minor | Moderate to major | None to major |
| Pain on stretch | Yes | Yes | Not if it is the only tissue injured; however, other structures may suffer first degree or second degree injuries and be painful |
| Joint play | Normal | Normal | Normal |
| Palpable defect | No | No | Yes (if detected early) |
| Range of motion | Decreased | Decreased | May increase or decrease depending on swelling |

TABLE 3. Diagnostic Criteria for Sprains¹⁴

| | First Degree Sprain | Second Degree Sprain | Third Degree Sprain |
|------------------------------------|--|---|--|
| Definition if the degree of sprain | Few fibres of ligament torn (partial tear, no instability or opening of the joint) | About half of ligament torn (partial tear with some instability indicated by partial opening of the joint on stress manoeuvres) | All fibres of ligament torn (complete tear with complete opening of the joint on stress manoeuvres) |
| Mechanism of injury | Overstretch | Overstretch | Overstretch |
| Onset | Acute | Acute | Acute |
| Weakness | Minor | Minor to moderate | Moderate to major |
| Disability | Minor | Moderate | Moderate to major |
| Muscle spasm | Minor | Moderate | Moderate to major |
| Swelling | Minor | Moderate | Moderate to major |
| Loss of function | Minor | Moderate to major | Moderate to major (instability) |
| Pain on isometric contraction | None | None | None |
| Pain on stretch | Yes | Yes | Not if it is the only tissue injured; however, other structures may suffer first degree or second degree injuries and be painful |
| Joint play | Normal | Normal | Normal to excessive |
| Palpable defect | No | No | Yes |
| Range of motion | Decreased | Decreased | May increase or decrease depending on swelling. Dislocation or subluxation possible |

TABLE 4. Diagnostic Criteria for WAD I and WAD II¹⁰

| WAD I | WAD II |
|--|--|
| Complaints of spinal pain, stiffness, or tenderness | Same as WAD I and; |
| No demonstrable, definable, and clinically relevant physical signs of injury | Demonstrable, definable, and clinically relevant physical signs of injury including <ul style="list-style-type: none"> ● Musculoskeletal signs of decreased range of motion of the spine, and ● Point tenderness of the spinal structures affected by the injury |
| No fracture to or dislocation of the spine | No demonstrable, definable, and clinically relevant neurological signs of injury |

periods reported. The costs reported do not include income replacement or disability payments or costs of independent medical examinations (IME).

Duration of Claims and Incidence of Disputes

Claim duration was calculated based on day of accident and date of claim closure. The number of closed claims was calculated

at 12- and 26-week post-injury. Disputes were not directly tracked, but the frequency of IMEs was used as a proxy. Insurers use IMEs to obtain a second medical opinion pertaining to a claimant's eligibility for recommended medical and rehabilitation benefits, eg, treatment or disability benefits. IME frequencies were calculated by totaling the number of separate IMEs per claimant paid for by an insurer in the period of time for which data were collected.

Analysis

The *t* test was applied to the sample data to determine whether there was a difference in means and/or proportions for exposure to health services, cost per treatment as well as overall claims costs, and claims closure rates.

RESULTS

Injury Classification by Health Providers

A trend was evident to less frequent diagnoses of WAD I from 36.7% in the pre-reform sample (group A) to 15.9% and 7.8%, respectively, in the immediate (group B) and secondary (group C) post-reform samples. WAD II incidence increased from 45.7% to 73.4% to 84.2%, respectively, (Table 5).

Health Utilization

After treatment protocols became available on October 1, 2004, use of protocol treatment increased from 85.4% in group B to 91.4% in group C. There was an increase in the average number of

health care episodes per person during the 12-week post-injury period, from 11.5 in group A to 11.6 and 13.5, respectively, in groups B and C (Table 6).

The number of claimants who received payment of treatment expenses in the 12-week post-injury period increased significantly from group A to group B (76% to 89%; *P* = 0.0133) and from group A to group C (76% to 97%; *P* < 0.0001). However, the average number of treatment episodes during the 3- to 6-month post-injury period decreased from the group A value of 7.2 per claimant to 3.1 in group C (*P* < 0.0001).

Injury Claims Costs

By the secondary post-reform phase, average total medical and rehabilitation payments for the 12-week period post-injury period increased from \$555 in group A to \$818 per claimant in group C (*P* < 0.0001).

The average cost per treatment increased from \$50.1 in group A to \$70.00 in group B (Table 7). Six months after implementation of reforms, per treatment fee caps were introduced by the insurance regulator and by the secondary post-reform period (group C) average cost per treatment episode moderated to \$60.52 as compared to \$50.10 in group A (*P* = 0.002) (Table 7). The average medical rehabilitation cost per claim for the 26-week post-injury period increased from \$1238.30 in group A to \$1092.40 in group C (*P* = 0.0120) (Table 8).

TABLE 5. Incidence of WAD I vs WAD II Across Three Survey Phases

| Injury | Group A | | Group B | | Group C | |
|---------|---------|------------|---------|------------|---------|------------|
| | Number | Percentage | Number | Percentage | Number | Percentage |
| WAD I | 213 | 36.7 | 87 | 15.9 | 49 | 7.8 |
| WAD II | 265 | 45.7 | 402 | 73.4 | 528 | 84.2 |
| Non-WAD | 102 | 17.6 | 59 | 10.8 | 50 | 8.0 |
| Total | 580 | 100.0 | 548 | 100.0 | 627 | 100.0 |

TABLE 6. Health Care Episodes for 12- and 26-Week Post-Injury Periods

| Period | Health Care Episodes | | | | | | | |
|---------|----------------------|-----|-----|-----------|-------------|-----|-----|-----------|
| | First 12 wk | | | | First 26 wk | | | |
| | Average | Min | Max | Std. Dev. | Average | Min | Max | Std. Dev. |
| Group A | 11.5 | 0 | 55 | 10.3 | 18.7 | 0 | 102 | 17.5 |
| Group B | 11.6 | 0 | 53 | 8.1 | NA* | NA* | NA* | NA* |
| Group C | 13.5 | 0 | 41 | 7.6 | 16.6 | 0 | 97 | 12.0 |

*Only 12 weeks of data were available in Group B (immediate post-reform sample).

TABLE 7. Average Cost Per Treatment; Total Average Cost Per Claim; and Percentage of Sample With No Health Care Visits in the 12-Week Period Post-Injury

| Period | First 12 wk | | | | | | | | | |
|---------|--------------------|------|-------|-----------|----------------|------|--------|-----------|-----------------------|------------|
| | Cost Per Treatment | | | | Cost Per Claim | | | | No Health Care Visits | |
| | Average | Min | Max | Std. Dev. | Average | Min | Max | Std. Dev. | Number | Percentage |
| Group A | 50.1 | 1.8 | 656.2 | 59.8 | 746.9 | 10.0 | 3735.0 | 616.3 | 57 | 9.8 |
| Group B | 70.0 | 3 | 487 | 56.9 | 927.6 | 30.0 | 3564.4 | 599.9 | 23 | 4.3 |
| Group C | 60.52 | 13.3 | 1330 | 62.6 | 848.6 | 32.0 | 4711.0 | 477.9 | 16 | 2.6 |

Indicators at 12 wks.

TABLE 8. Average Cost Per Treatment; Total Average Cost Per Claim; and Percentage of Sample With No Health Care Visits in the 26-Week Period Post-Injury

| Period | First 26 wk | | | | | | | | | |
|---------|--------------------|------|-------|-----------|----------------|------|--------|-----------------------|--------|------------|
| | Cost Per Treatment | | | | Cost Per Claim | | | Incidence of Disputes | | |
| | Average | Min | Max | Std. Dev. | Average | Min | Max | Std. Dev. | Number | Percentage |
| Group A | 53.0 | 1.6 | 976.9 | 69.6 | 1238.3 | 23.0 | 6890.0 | 1146.3 | 119 | 20.5 |
| Group C | 60.53 | 13.3 | 1330 | 62.4 | 1082.4 | 32 | 7014 | 842.2 | 31 | 4.9 |

Indicators at 26 wks.

TABLE 9. Comparison of Claim Closure Rate in Benchmark and Secondary Post-Reform Samples

| Claims Open | | |
|-------------|-------------|-------------|
| Week | Group A (%) | Group C (%) |
| 0 | 100.0 | 100.0 |
| 2 | 99.0 | 100.0 |
| 4 | 97.8 | 99.2 |
| 6 | 96.7 | 97.9 |
| 8 | 95.5 | 96.8 |
| 10 | 93.6 | 93.3 |
| 12 | 91.7 | 88.2 |
| 14 | 89.5 | 78.8 |
| 16 | 86.7 | 71.0 |
| 18 | 85.2 | 62.0 |
| 20 | 81.6 | 57.4 |
| 22 | 77.9 | 53.3 |
| 24 | 73.8 | 46.3 |
| 26 | 71.0 | 41.5 |

Comparison of open claims over time.

Duration of Claims and Incidence of Disputes

The time to claim closure during the first 12-week post-injury remained at similar levels across the three groups, with between 88.2% and 91.7% of claims reported as open at 12 weeks. However, in group C, 41.5% of claims were still open at 26-week post-injury, as compared to 71.0% open at this stage in group A (Table 9).

In group A, IME expenses were paid in 14.7% and 20.5% of cases in the 12 and 26-week post-injury periods, respectively. In group C, IME frequencies decreased to 0.6% and 4.9% in the same post-injury periods. While the incidence of IMEs declined, average payment per IME increased dramatically.

DISCUSSION

Injury Classification by Health Providers

A higher frequency of WAD II diagnoses after reforms may be associated with the availability or economic incentive of up to 21 treatments without insurer approval for WAD II injuries. This contrasts with other injuries covered by the reforms, including WAD I, where just 10 treatments are authorized. A tendency toward lower numbers of WAD I diagnoses has also been noted in Ontario (B. Sulzenko-Laurie, personal communication, 2005), where regulations can also be construed to contain a financial incentive for the WAD II diagnosis over WAD I. It is also possible that the regulation pertaining to caps on general damages awards may have affected health professional decisions to seek more care

where possible for their patients, but the data available do not inform that hypothesis.

Health Utilization

There was a steady decline over the three periods in the portion of claimants who were reported not to be receiving health services in the initial weeks after their injury. This suggests the reforms succeeded in the goal of improving access to care for injured persons and is promising in light of the scientific literature's support for early intervention, when required, for soft tissue injuries.^{6,7}

Injury Claim Costs

By the second post-reform survey, overall health costs in the first 12-week post-injury were considerably higher than in the pre-reform period because relatively more people are reported to have received comparatively more care. This was also viewed as a positive outcome, because it supported the objectives of the reforms to improve access to care. However, for the entire 26-week period, there was a small but statistically significant drop in average costs in the post-reform period, perhaps reflecting a higher rate of closed claims and the lower average number of treatment visits in the latter part of this period.

There was greater variation in the average claim cost at 26-week post-injury for the benchmark sample in comparison with the secondary post-reform group (SD, \$1146 and \$842, respectively). Decreased variability in costs may reflect the fact that health professionals increasingly utilized protocol treatment, which facilitated consistency among health care providers in the treatment of WAD injuries.

Duration of Claims and Incidence of Disputes

The considerable increase in claim closures during the 13- to 26-week post injury period is notable, even though it falls short of some information from the academic literature regarding the normal course of recovery, with or without treatment, from soft tissue injuries.^{6,12} Although there is debate as to whether or to what extent insurance claims duration can be seen as a proxy for recovery, time-to-claim-closure is commonly used as an outcome in automobile insurance and workers' compensation studies. Further, there is evidence from other studies that time to claim closure is associated with a more favorable health status.¹³ The increased claim closure rate at 6-month post-injury is seen as positive, because this was a stated goal of the reforms; however, the fact that more than 40% of soft tissue claims were reported as open at 6 months is indicative of the need for ongoing improvements that might involve the health care, insurance, and legal systems.

IMEs are used by insurers to obtain second medical opinions in a variety of situations that usually involve conflicts or lack of clarity around diagnosis and/or treatment recommendations. The proportion of cases that attracted independent examination costs declined over the three studies, which may suggest that the AB claims environment became less disputatious. If so, this could be, in

part, attributable to the active involvement of the professional associations and regulatory bodies in providing advice to individual providers with regard to appropriate/inappropriate practices under the still-new rules. Although a significant drop was seen in IME usage following the reforms, this was associated with an increase in the average cost of IMEs. It is difficult to pinpoint the reason for these effects and a variety of factors may be considered. Treatment within protocols is available on a pre-approved basis, which effectively makes health providers and insurers partners during the early treatment period. Also, the protocols offer guidance on the type of treatment that the claimant will receive, providing insurers with some reassurance that evidence-based care was being delivered, which may have increased insurer confidence about the reasonableness of health expenses being claimed. In the later stages post injury, the average cost of IMEs increased. This may be the result of greater complexity in the issues at dispute for the relatively few cases where IMEs were conducted in the later period.

Limitations

In the immediate post-reform survey, only 12 weeks of data were collected for each claim when compared to 12 and 26 weeks for the baseline and secondary post-reform surveys. Consequently, comparisons of the immediate post-reform survey results with the benchmark are only possible for data collected for the 12-week post-injury period. It is also possible that some of the outcomes, eg, claim costs and closures, reported for the 26-week periods could change with the passage of more time. Another factor not considered directly in these surveys is the effect that changes made to the tort side of the standard auto insurance product may have had on the findings reported in this study. Finally, the study relied wholly on time-to-claim-closure as a proxy measure of the protocols' success, as medical assessments of the study subjects were not possible.

CONCLUSIONS

The statistically significant decline in WAD I and increase in WAD II diagnoses has emerged as an ongoing result of the reforms. This finding is disturbing insofar as it may be indicative of the influence of economic factors in some diagnostic determinations being made in the automobile insurance health sector. Between the benchmark and secondary post-reform periods, the portion of claimants who are not reported to be receiving health services in the initial weeks after their injury declined significantly, suggesting the reforms succeeded in improving access to health services. At the same time, overall health costs per claimant and the number of health care visits in the first 12 weeks are higher than in the pre-reform period, in both cases by statistically significant amounts. The proportion of cases attracting IME costs has declined over the three surveys, which may suggest that the AB claims environment has become less disputatious. If so, this may reflect the observed trend in the post-reform period for providers to diagnose post-injury neck pain cases as WAD I or WAD II, and then keep the course of treatment within preauthorized protocols for these conditions, because in these cases neither the diagnosis nor the treatment regimen would generally be questioned by the insurer. In Alberta, there is active engagement by health professional associations and regula-

tory bodies in providing appropriate advice to their members/registrants in regard to the automobile insurance regulatory environment. These findings may speak to the importance of such organizations taking a more active role in communicating with and educating their members and registrants.

The increase in claims closures during the 13- to 26-week post-injury period is also encouraging. The juxtaposition of higher acute health care costs and an increased claim closure rate at 6 months supports the view that investment in appropriate acute care may pay dividends through reduced disability in the long term. However, the fact that more than 40% of soft tissue claims are being reported as open at 6 months remains a cause for concern. Consequently, if the results achieved to date are to be sustained and improved on, it will be important to continue monitoring the system's administrative indicators and also to examine the content of care being provided for these injuries and its effects for patient/claimant recovery. Despite more health care resources being available and used under the reforms, it appears that many people are still not recovering sufficiently to close their claims even after an extended period of time.

ACKNOWLEDGMENT

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