The Affect of Technology and Automation on Workers Compensation Claims Practices

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OF INSURANCE AND FINANCIAL SERVICES
ILLINOIS STATE UNIVERSITY
Adding Value to Industry

The Affect of Technology and Automation on Workers Compensation Claims Practices

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1 The Motivation For This Research Project

The escalating costs of workers compensation continues to be highlighted in the news. The rate of increase in indemnity (loss time) severity is running at more than three times wage inflation. The rate of increase in workers compensation medical severity has been running as much as 7 percent higher than medical inflation, as overall medical losses now exceed indemnity losses. Reserve deficiencies in 2003 totaled over 18 billion dollars. Before 2003, combined ratios had deteriorated for six consecutive years and 38 percent of the failed insurers in 2002 were active in workers compensation. In that same year, annual cost of unintentional workplace injuries and deaths exceeded $130 billion including wage and productivity losses, medical costs, and combined investigation and administrative expenses.

The problems are multi-faceted and complex, thus solutions are not likely to be simple. For example, consider just one complicating factor, venue. The Workers Compensation Research Institute reports that in Texas the main cost driver is chiropractic care, in Florida it is hospital costs, while in Illinois it is the cost of ancillary medical services. Besides venue, there are a host of other factors which drive workers compensation losses and administrative expenses.

Companies are struggling with identifying important cost drivers, and examining leverage points where they can apply tools and or new practices to help improve results. As the challenges pile up, the solutions seem slower to come. Information about how companies can improve effectiveness in managing costs has been limited. Underscoring the need for greater managerial knowledge is the fact that existing methods that do address some of the problems seem underutilized.

Part of the solution is likely to be in the form of better technology and enhanced utilization of existing technology. The need to better understand how technology could be most effectively used to address these issues was the primary motivation behind this research study.

2 The Research Project

One way in which companies are dealing with the issues is through the appropriate use of automation and new technology. The focus of the study conducted by the Katie School of Insurance at Illinois State University is how technology is being used to deal with the issues. Funding for the research was provided by Corporate Systems Inc. Johnny Mize, Corporate Systems' President and CEO, commented. "Claims management systems of tomorrow must address the needs and expectations of all the diverse parties interacting in the process." The industry needs comprehensive, independent, and objective research to help advance claims management forward."

The Katie School research project recognized that claims cost management is a "team sport" and for this reason the study takes a comprehensive, approach by combining interviews and surveys from insurers, TPAs, brokers, and risk managers across the multiple levels in the workers compensation claims process. The goal was to provide an

objective and holistic view of the entire claims management process identifying key problems and priorities, and interpreting desired solutions and best practices.

3 The Research Objectives

The objectives of the study included the following:

1. Determine the overall "points of pain" in workers compensation claims
2. Determine the extent to which different technologies were employed address the points of pain and improve outcomes
3. Determine the kinds of benefits companies attained from the use of these technologies
4. Determine what obstacles exist in implementing technologies

These objectives were the main focus of the research as it developed through the various phases.

4 The Research Phases

This project began in July 2003. Consistent with accepted research practice, the initial phases of the research project involved gathering information from existing literature, brainstorming with industry knowledge experts, and conducting structured interviews across multiple types of organizations at various levels of the organizations. This was followed by a pilot research survey with a limited number of participants. Finally, a national survey was conducted. This national survey ran from January through June of 2004.

5 Existing Research and Literature

In reviewing past articles, research and studies on claims technology, there were none that dealt specifically with the objectives of this project. However, a number of previous studies in the area of claims demonstrated that technology could be used to deal with a host of related issues. Other studies pointed out some of the obstacles encountered in implementing technology in claims.

5.1 The Potential Value of New Claims Technology

One study by Accenture, entitled *Unlocking the Value in Claims*, indicated that more than 40 percent of the claim handling process time is spent on non-core, routine administrative items that do not directly affect the quality or outcome of the claim. The study concluded that claims costs could be reduced by 15 percent while still keeping service quality standards high.

A British study by Visiongain, entitled *E-Claims Market Outlook*, found that 61 percent of the claim time was spent on unnecessary administration and paperwork. Examples of wasted time included time spent on communicating the status of the claim, and the time spent waiting or looking for paper files and documents. By reducing the time spent on these administrative tasks, companies can reduce loss adjusting expenses. The

Visiongain study also showed the usefulness of technology in improving accuracy (available software eliminated 98 percent of errors on medical bills) and improving claims processing speed (time spent resolving medical bill disputes dropped from 18 to 5 days with real-time interface). An article in *Risk Management Newsletter* reported that the cost of processing a workers compensation bill from $15 to $4 by combining automated bill repricing software, with web-based processing. Online access to claims information reduced the number of calls requesting status information.

An article in the July 2003 issue of *Claims Magazine* entitled "Paying Claims in the 21st Century" stated that the claims payment process still remains a very manual process in most organizations and an average single claim payment costs $50-$75 to process. Technology, when used, had been able to reduce cycle time, reduce payment errors, lower administrative overhead, prevent unnecessary file reviews, and increase the consistency of claim handling.

A July 2003 article *Insurance Networking News* reported on a study of 180 insurance executives. In this study the senior management cited the main reason for their own technology initiatives were because of inefficiencies related to aging systems and processes (44% of executives). Forty percent of the executives indicated that between 25 and 50 percent of their IT budget was devoted to maintenance of existing systems. As early as 2000, risk managers reported benefits related to predictive technologies in helping to identify and address fraud and abuse as was explained in an article entitled "Technology Sparks Innovation in Claims Management" in the *Risk Management Newsletter*. Today, the promise of these technologies still seems unmet for some reason.

5.2 Reasons for Lack of Utilization of Claims Technology

The existing studies also pointed to potential problems in the use of technology. A 2001 study by Conning & Company entitled *Adjusting to New Realities* found that record keeping and communications were still seen as the two primary uses for technology. Other uses, such as loss control and prevention were less likely to be considered as a use of technology in 2000. In the Conning Study, claims managers indicated that the Internet-based communications of claims was too impersonal and led to many misunderstandings. They also stressed their concern that some of the technology tools reduced the flexibility required to deal with the changing landscape of claims. A 2000 report by STAGA on risk managers' perceptions of web-enabled risk information indicated that some risk managers were uncomfortable with using the new technology and were concerned about losing their relationships that existed in the "traditional" system. Some of these attitudes and concerns may have changed in the past three years, and that provided another reason to conduct this study.

As a whole, the claims studies pointed to areas of potential benefit and outweighed concerns over the use of technology in claims, but more information is needed to flesh out the benefits and concerns, especially in the area of workers compensation.

6 The Interviews

Practitioners and executives at insurance carriers, third-party administrators (TPAs), brokers, and employer corporations were included in a series of structures interviews conducted by the Katie School in the summer and fall of 2004. Interviewees came from a broad group of presidents, chief information officers, senior vice presidents, claims managers, brokers, and risk managers. All of the interviews involved people who were familiar with the major issues and potential solutions related to workers compensation claims.

The interviews helped to determine the following:

- Key concerns and problems related to workers compensation claims management
- Potential and actual solutions to problems
- Benefits gained from implementing solutions
- Obstacles to implementing solutions
- Examples of "best practices" in achieving results.

The following information captures the findings from these interviews.

6.1 Key Concerns and Problems ("Points of Pain")

The first part of each interview detailed the concerns and problems ("points of pain") facing the participants. Nearly all of these fell into the following four broad categories:

- Environmental (and beyond the direct control of the participants)
- Human resources
- Operational/Administrative
- Loss costs

Although there were many commonalities especially among carriers and TPAs, several differences existed among the various groups as to the specific concerns and the extent to which the "pain" was felt.

6.1.1 Environmental

A number of issues surfaced which were found in the overall claims environment and driven by factors in which neither the participants nor their companies could directly control. The participants were affected by these and developed ways to address them. In many cases, technology was seen as a way to help mitigate the consequences of these factors. The issues mentioned by the participants (in order of frequency in which they came up in the interviews) were:

1. Rising medical costs
2. The complex and changing legal and regulatory environment (especially new laws such as HIPPA)
3. Lack of data standards and uniformity
4. Rising severity of claims

6.1.1.1 Solutions and Benefits

Barring legislative action, the companies can not directly impact the benefits levels provided in a given state. It also could not change the overall rate of medical inflation.

However, through improved claim processes and information they can deal with these issues better than their competitors. The use of automated medical bill repricing and provider payment, the appropriate use of nurse case managers and application of expert systems and rules-based engines to assist in better claims handling and in providing more information about “at risk” claims along with increased, detailed reporting of loss information were seen as viable ways to mitigate the costs of rising medical and indemnity payments.

6.1.2 Human Resources (HR) Issues

Undoubtedly the single most mentioned issue was adjuster turnover and lack of trained, qualified, personnel to handle workers compensation claims. This “point of pain” was felt by all participants across functions and at every level. Interviewees stated that claims were not handled effectively because of the frequent and untimely change of claim personnel. Concern was expressed because of the inability of the organization to be able to smoothly transition claim files to other adjusters following departures. There is also a general concern relating to the ability to attract qualified people to handle claims.

Trends toward centralization of claims offices and organization of claims teams around customers was seen as beneficial to customers, but had the effect of requiring adjusters to handle more jurisdictions than in the past. This created problems in helping adjusters to learn the various differences among the multiple jurisdictions. Several claim managers expressed concern that the job of adjuster had become too overwhelming.

6.1.2.1 Solutions and Benefits

The ability of the system to pull routine or non value-added jobs away from adjusters seemed to help address the talent concern to some extent. A few participants see extensive adjuster training as a solution to help adjusters feel more comfortable with their claim decisions. A few companies feel that technology (through flexible, customized exception reports) must be able to step in and help the supervisor “baby-sit” the file because the lack of adjuster talent is too pervasive.

Adjuster scorecards indicating information such as benchmarks on time, lack of activity, reserve adequacy, age of claim, status of investigation, subrogation status, and 3 point contact used by supervisors to monitor individual adjuster performance were also indicated as solutions by several participants.

Online portals that help with medical, legal, and regulatory compliance were seen as effective but underutilized technologies for dealing with issues of adjuster turnover, file transition, or the issue of under trained and inexperienced adjusters. Attracting and retaining top quality adjusters is obviously a primary concern, but technology is perceived to have a role in addressing the current (and likely future) adjuster deficit.

6.1.3 Operational and Administrative Costs

The category with the greatest number of complaints, concerns, problems and potential solutions were those related to operational and administrative costs. Participants

recognized that the system was plagued by unnecessary expenses, often due to inefficient processes. Examples stated included the following:

1. The lost adjuster time spent responding to claimants, employers, supervisors, auditors, and medical providers calling and asking questions related to the status of the claim.
2. The lost time spent auditing medical bills, sending bills to be audited, and adjudicating differences in fees.
3. The time lost related to paper files such as tracking files, waiting for files, and sending files. (This seemed to be expressed more by carriers than by TPA interviewees.)
4. The inability of the various claims systems to work together and share data.

6.1.3.1 Solutions and Benefits

Fortunately, this category also seemed to generate the most potential solutions, of which technology plays an important role. Document imaging and "the paperless claim file" were cited as one of the best technology solutions. For those organizations that have electronic claim files these problems, for the most part, disappeared. The most highly touted benefit of electronic files was the efficiency of file sharing and file reviews. Several interviewees mentioned this as a "best practice" for their company.

The second most mentioned success story was the use of automation in the medical bill review process. Automation was used frequently in the assignment and turnaround of medical bills which were reviewed manually by a centralized medical bill review unit. A couple of interviewees stated that they had taken the next step and had eliminated manual reviews for bills but instead had the system check the bill and "adjudicate" it. Turnaround time for these completely automated bills could be as little as 3 days depending on how many bills were in the queue (and how many were hung up because they could not be matched to a file or had coding inconsistencies). The interviewees varied widely in their implementation of this advanced technology (5 percent of bills for one company up to 70 percent for another).

Providing user-friendly access to claim file information seemed to be the most popular solution for reducing unnecessary adjuster time on calls. Interviewees estimated between 10 and 20 percent savings on adjuster time due to online claim file access.

Overall, the need for some kind of expert system or rules-based engine was seen as a solution to help make the claim process both more efficient and also more effective in controlling loss costs. Exception reports were seen as helpful in identifying which files needed to be reviewed. This kind of report streamlined the claim *audit* process and reduced the number of files required for audit.

6.1.4 Loss Costs

The area in which the interviewees were focusing most of their attention is on loss costs. In addition to the environmental factors previously stated, late reporting was seen

as a significant contributor to loss costs. One company said that about 25 percent of claims have late reporting which increases claim losses. Estimates from participants are that that they could save 10 percent or more on losses with prompt reporting of claims.

6.1.4.1 Solutions and Benefits

Flexible, user friendly reporting options, as well as financial rewards and penalties, are viewed as having some potential to improve reporting.

Several claim managers complain that claim files seem to have no strategy ("Hope is not a strategy" as one put it) and they see the value in having some kind of a decision-facilitating tool to assist adjustors. The areas that they identified as solutions holding the most promise relate to:

- Decisions as to when to bring in a nurse case manager
- Decisions on which files have subrogation potential
- Decisions on which files have fraud potential
- Decisions on how to handle claims in different jurisdictions (even different locations within the same state).

6.2 Obstacles and Barriers to Implementing Technology and Process Changes

Interviewees cited a number of obstacles exist in implementing needed solutions. The obstacles were fairly similar among all participants. The most mentioned obstacle and the one considered the most serious is legacy systems. The inability of these systems to work with new technology and the cost to get these systems to integrate seemed to pose the most significant problem.

This was followed closely by another obstacle which many interviewees referred to simply as "resistance to change." This usually meant the inability of the existing workforce to adapt and successfully make a transition to new technologies and processes. A number of underlying causes such as fear of job loss, lack of ability to envision the benefits, and "technology phobia" were cited.

A number of risk managers did not trust the insurance carriers enough to adopt their systems even if their systems offered them what they needed. They feared getting tied to the carrier and loss of data ownership so they searched for other (oftentimes inferior) solutions to avoid this potential problem.

Carriers and TPAs claimed that commercial clients were not always sophisticated enough to use the systems they requested and consequently did not find value in the system.

6.3 Best Practices

Even after some prompting on what constituted a "best practice" the interviewees used the term in a variety of ways. The following were cited as some of the "best practices"

their companies had experienced related to the handling of workers compensation claims and affects and implementation of technology.

✶ One TPA stated that it reduced claim age by 10 percent and unnecessary claim adjuster time by 20 percent through use of an automated adjuster scorecard.

✶ One large carrier s has doubled productivity of claims handled through an automated assignment of claims which applied the right resource (clerical, technical, nurse, etc) to each individual claim.

✶ One TPA reduced average loss dollar payment in one year from $19, 418 to $18, 938 through improved processes.

✶ A carrier stated that it has had the most success with implementing technology when it they roll out changes quickly and with senior management leading the charge. Allowing implementation to take more than six months draws out the transition pain for too long.

✶ One carrier and a TPA reduced medical bill review time from 30 days to 10 days through use of electronic, automated submission to central bill review unit. One carrier stated that it was able to save $25 per bill which gave them a total savings of $7 million annually.

✶ The “paperless file” has speeded up claim review process by 70 percent at some companies and all companies with such technology report considerable savings, travel, review time and audit quality (as system helps to target claims needing most attention).

✶ One risk manager said that his company saved several million dollars by identifying a trend in eye injuries early on. Technology and exception reports helped with this.

✶ Outsourcing incident reporting to an outside firm increased timeliness of reporting by 25-35 percent for one company.

The above were just a few of the examples provided by interviewees.

6.4 Conclusions from Interviews

In general the interviewees expressed similar views on their “points of pain, on what solutions were needed, and on what obstacles existed to implementing solutions. They varied widely in their implementation of technology solutions and in their perceived benefits in the use of technology. All of the interviewees expressed hope over the potential that technology holds but the overriding sentiment was one of concern over the many environmental forces they feel helpless to address.

7 The Pilot Study

Following the literature review and a number of interviews, a short survey was given in October of 2004 to about 100 participants at the Corporate Systems Users conference in Las Vegas.

Participants in the pilot study placed high importance on improving such things as reserve practices, data accuracy, adjuster communications, return-to-work programs, and the ability analyze and forecast trends in order to better allocate scarce resources to safety and loss control efforts. Participants suggested some of the following ways to address these issues:

- Better overall decision-making through rules-based engines
- Better early intervention in the claims through predictive technologies
- Increased use of informational reports that help identify trends
- Exception reports for management
- Penalizing companies (or departments) for late loss reporting (or rewarding them for prompt loss reporting)
- Outsourcing and automating medical bill audit functions
- Attracting and retaining good claim adjusters
- Better measuring claim activities to see if they achieve the desired outcomes
- Data mining
- Business process outsourcing

Some of the reported obstacles to implementing solutions include:

- Cost of investment in new technology and the cost of training to use it
- Legacy systems and processes
- Lack of data standardization
- Lack of awareness of extent of the problems or the availability of ways to handle problems
- Unwillingness to make changes
- Uncertainty over who owns the claims information

8 The National Survey

Following the pilot study, a national survey instrument was drafted and circulated to industry practitioners to make sure that questions were clear and that the instrument captured useful information that could help companies better understand the issues and the affect that technology has had on workers compensation claims processes and the future it might hold.

This national survey is divided into the following six parts:

A. Key Problems and Concerns
B. Classification of responder (including experience for companies and combined ratio for carriers.)
C. Perceived usefulness and utilization of 30 different claims technologies
D. Outcomes and benefits realized from technology implementation

E. Barriers and obstacles to implementing claim technology
F. Workers compensation claims management technology decision-making

Each of these parts had multiple items. The survey had approximately 100 question items in total.

8.1 Research Targets

The national survey was distributed to three groups.

1. Insurance carriers with Net Written Premium exceeding $10 million in workers compensation coverage
2. Fortune 1000 companies
3. Third party administrators (Top 20)

The response rate for the first two groups exceeded 25 percent. The response rate for the TPA group exceeded 50 percent.

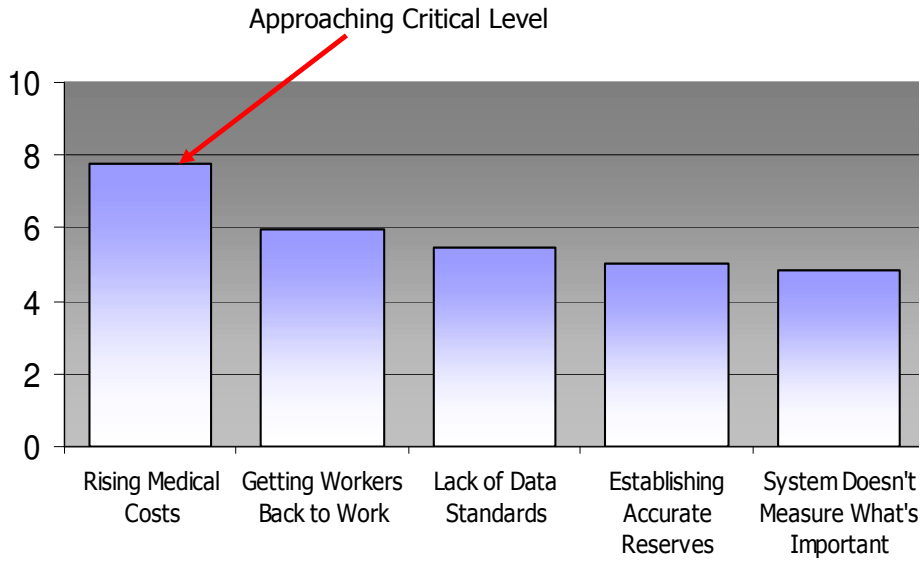
8.2 Points of Pain: Key Problems and Concerns

The survey asked respondents to rank 30 different claims issues on a scale of 0 to 10. 10 signified that a problem was critical, 5 indicated the problem was significant. The findings indicated that risk managers, carriers, and TPAs were most concerned with finding technology solutions to address the following top five problems:

1. Rising medical costs
2. Getting workers back to work
3. Lack of data standards
4. Establishing accurate reserves and
5. Lack of measurement of items that help improve performance

Exhibit 1 shows the level of concern that respondents had for the various issues.

Exhibit 1- Top Five Points of Pain



Organizations rated the importance of ways in which to address the points of pain listed above on a scale of 0 to 10 with 10 being “extremely important” and 5 being “somewhat important”. The following indicates rank order and average score of respondents for the various approaches to deal with the key issues:

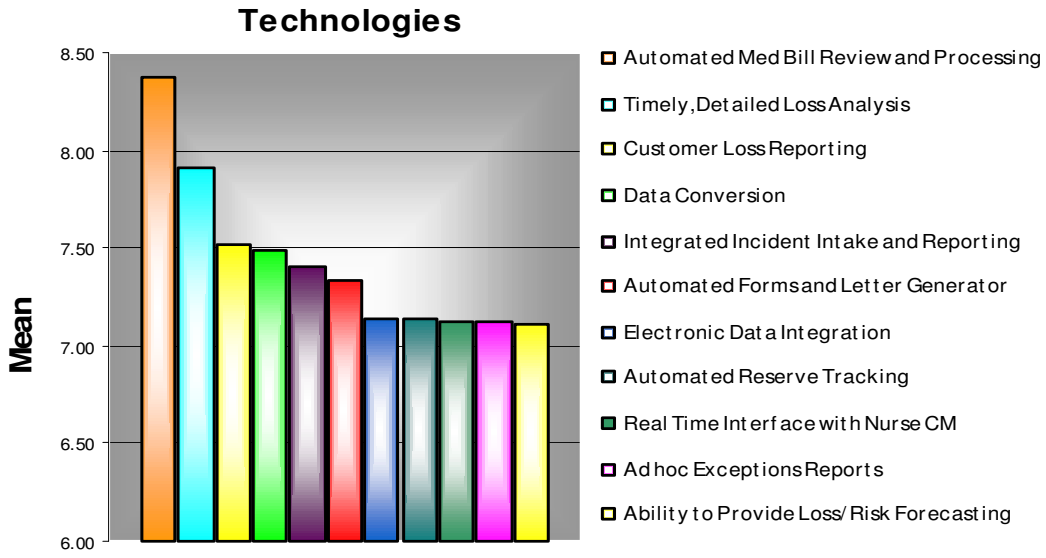
1. Reduce frequency and severity of losses (8.66)
2. Improve reserve accuracy (8.66)
3. Improve customer satisfaction (8.56)
4. Reduce loss costs (8.43)
5. Improve return-to-work results (8.4)
6. Monitor accuracy of medical provider payments (8.24)
7. Improve timeliness of incident reporting (8.19)
8. Improve accuracy of claim information (8.08)
9. Improve reporting of reserve changes (8.04)
10. Monitor timeliness in payments to medical providers (7.65)

Of particular interest was how technology was used to counter these various issues. In the case of rising medical costs, several technology capabilities seemed to be employed. In the case of establishing reserve accuracies, technology seemed to be less employed.

8.3 Perceived Usefulness and Level of Utilization of Technologies

The survey also probed the perceived usefulness and utilization of thirty different claim technologies. Exhibit 2 shows the findings from this set of survey items.

Exhibit 2- Perceived Usefulness of Technologies

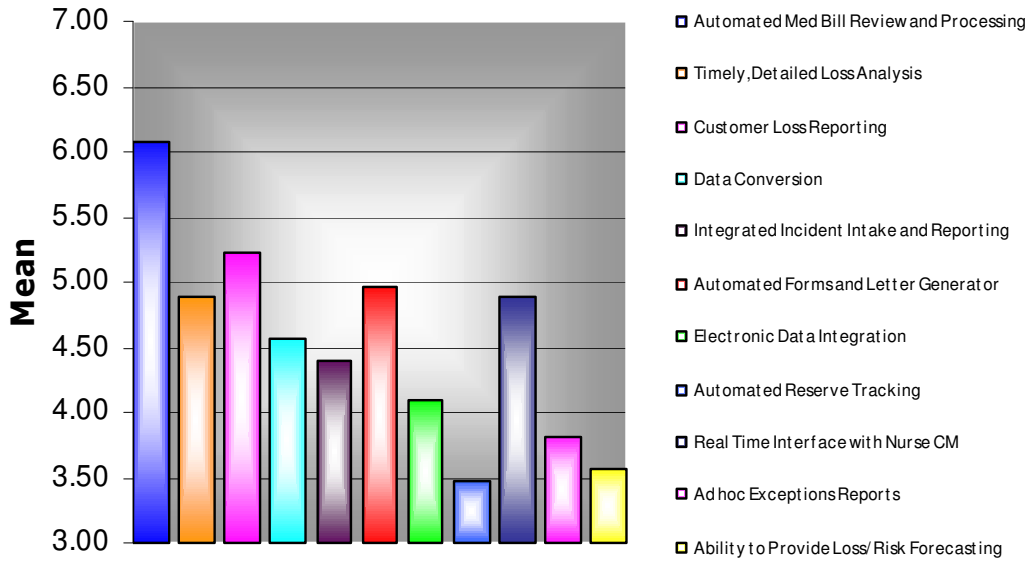


The highest rated technologies, in terms of perceived usefulness, were automated medical bill review and processing, timely, detailed loss analysis, customer loss reporting, data conversion, and integrated incident intake and reporting.

8.4 Utilization of Technology

Interestingly, utilization of technology did not necessarily follow perceived usefulness. For example, automated reserve tracking was the seventh highest rated in term of usefulness in dealing with the issue of reserve accuracy and reporting, but was one of the lowest in terms of actual utilization. This difference was mainly due to the lack of utilization at carriers. Exhibit 3 graphically illustrates the difference between perceived use and actual use by showing the technologies in the same order of perceived utilization as indicated in Exhibit 2, but Exhibit 3 shows actual utilization of the technology.

Exhibit 3- Actual Utilization of Technologies



8.5 Benefits

Perhaps the most insightful findings are related to the benefits received from the use of technology. Not surprising, technology helped organizations improve work force productivity and expense reduction. The overall average (mean) percentage benefits reported by respondents are as follows:

- Increase in Productivity of Claims Reviews and Audits (21%)
- Reduced Loss Costs (13%)
- Improved Return-to-Work (12%)
- Reduced Administrative Expenses (14%)
- Reduced Frequency and Severity of Losses (12%)
- Reduction in Claim Settlement Times (9%)

These overall results belie what is actually going on because there is great variability in the results achieved. These are illustrated in the various exhibits that follow.

Over one-third of organizations reported gains in productivity in claims reviews and audits showing gains ranging from 16 to 30 percent. Another 15 percent reported gains of over 30 percent. More than one third of organizations also reported reductions in administrative expenses of greater than 11 percent. These are traditionally expected gains from technology. Exhibits 4 and 5 show the distribution of gains in productivity and reduction of administrative costs respectively. The exhibits show the differences between carriers' gains and overall gains for all respondents.

Exhibit 4- Increase in Productivity of Claims Reviews and Audits Due to Technology

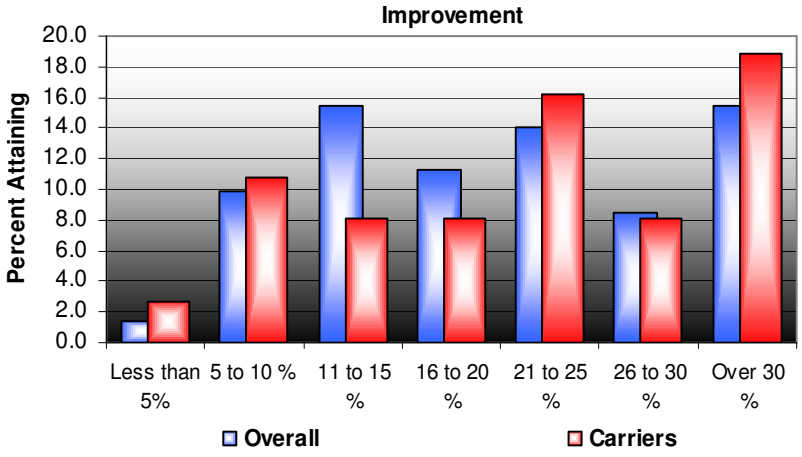


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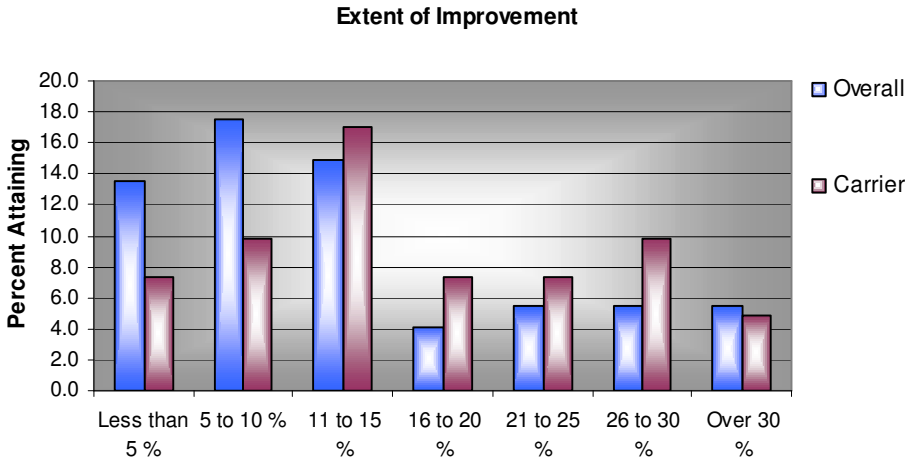
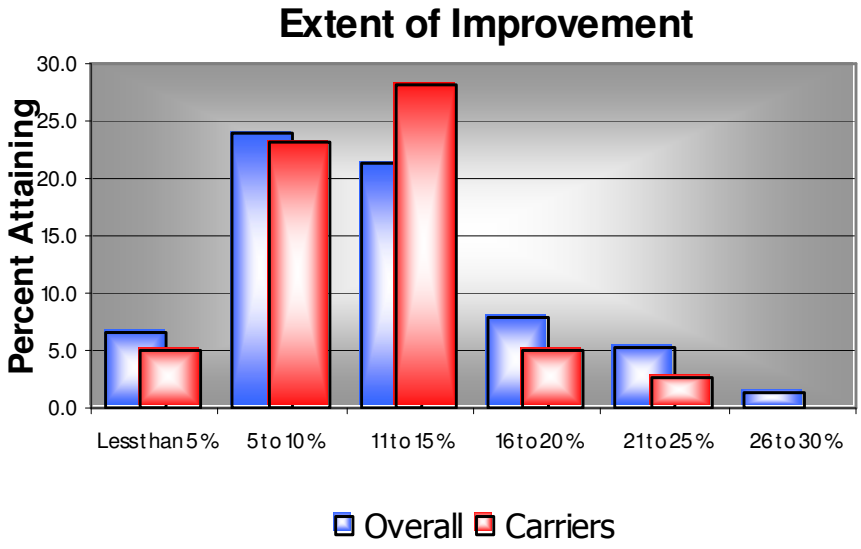
Exhibit 5- Reduced Administrative Expenses



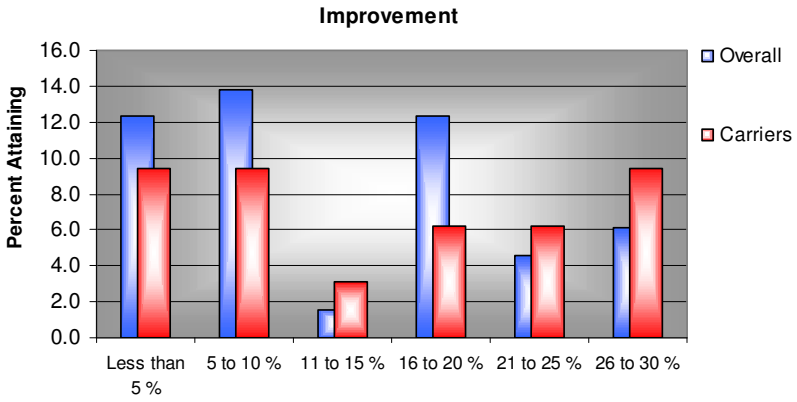
Perhaps, of greater interest, and greater value, is the potential that technology has to offer in the way of addressing losses. Over 35 percent of organizations reported reductions in loss costs between 5 and 15 percent. Similar reductions were reported in frequency and severity. Exhibit 6 shows the distribution of respondents reporting improvements.

Exhibit 6- Reduced Loss Costs Due to Technology



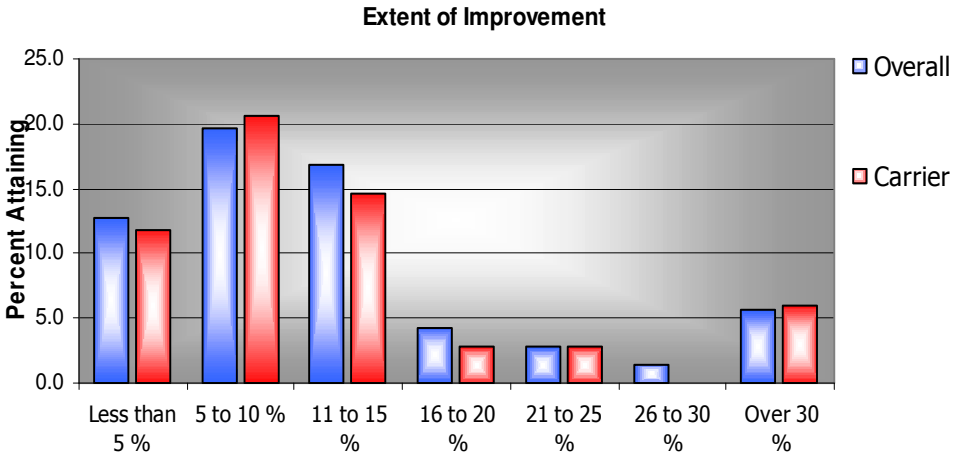
An interesting finding requiring additional analysis is the bimodal distribution of return-to-work benefits obtained, with several participants reporting significant improvements and several others reporting very little, see Exhibit 7. Possible explanations may include the size of the organization, the type of organization, the level of utilization of technology, or perhaps the utilization of nurse case managers, or lack of measurements of results. Further studies will examine that issue and explore claim practices used by those companies at either end of the spectrum to help explain this distribution.

Exhibit 7- Improved R-T-W Due to Technology



A similar, but less dramatic split was also found in the reduction of frequency and loss severity from the use of technology. The results are illustrated in Exhibit 8. Again, additional analysis is required, especially of those organizations at either end.

Exhibit 8- Reduced Frequency and Severity of Losses



8.6 Lack of Measurement

Another interesting finding was the lack of organizations actually measuring improvements on items rated as "important". Remarkably, of those organizations measuring results (and that leaves out a number of organizations) only half of the organizations measured *their improvement* in return-to-work results. For those 50 percent of companies measuring improvement in return-to-work, more than one in five reported improvements exceeding 16 percent. Following the adage, "what gets measured gets done", the lack of measurements may turn out to be a primary reason that some peer group organizations perform better than others. The following list indicates the percentage of respondent organizations measuring the given item. This relationship between what is measured and the benefits attained deserves more study. The following indicates the percentages of respondents measuring the various items.

- Reduce frequency and severity of losses (72.5%)
- Improve reserve accuracy (72.3%)
- Improve customer satisfaction (66.7%)
- Reduce loss costs (73%)
- Improve return-to-work results (50%)
- Monitor accuracy of medical provider payments (62%)
- Improve timeliness of incident reporting (83.9%)
- Improve accuracy of claim information (52.3%)
- Improve reporting of reserve changes (71.2%)
- Monitor timeliness in payments to medical providers (66.1%)

8.7 Obstacles in Implementing Technology

Respondents rated obstacles to implementing technology on a scale of 0-10, 10 being a "serious impediment". Fortunately, there were no obstacles reported that were close to be considered a "serious impediment." The following were the top five listed obstacles, with their overall mean scores on this item:

1. Legacy systems and processes (5.44)
2. Level of investment to immediate payback (4.96)
3. Lack of data standardization (4.66)
4. Lack of information on resulting benefits (4.6)
5. Variation across geographic areas (4.24)

One category of obstacles, lack of willingness of adjusters to learn new technology was mentioned in the interviews but was not found to be a top five obstacle overall.

8.8 Study Conclusions

According to what respondents indicated were key issues, and based on how they planned to respond to those issues it appears that certain technologies are underutilized. This is highlighted even further by the differences between perceived usefulness and actual use of technology capabilities. The most dramatic example seems to be in the underutilization of technology to help address reserving concerns.

Not surprisingly, improvements in results from various practices are not fully measured. This is consistent with several reports an articles related to insurance claims in general. The problem with not measuring improvements is that it becomes difficult to determine what practices are working and what are not. Given the information which is now able to

be captured and analyzed this seems like an area that offers great potential for improvement. One potential obstacle to including more measurements is the perception that claims personnel are already deluged with reports and benchmarks that they can't understand or control. An overall reexamination of what is measured and reported would benefit most organizations and allow the organizations to focus on the measurements that truly count.

Technology provides benefits to most organizations. This does not come as a surprise for most people who have followed the trends. However what is a bit more surprising is that benefits go beyond the "traditional" Improvements in productivity and expense management expected in using technologies. This study shows that improvement in these areas are indeed experienced at high levels, but improvements in losses are also significant for many companies. This finding is deserving of greater attention to the role of technology in these areas.

9 Future Required Research Studies

Differences among customers, TPAs, and carriers in terms of how they perceived the points of pain, how they use technology, and what level of benefit they get from technology would be of interest and importance. Equally, examining the size of the organization against these items could yield valuable information.

Relationships between many of the variables need to be examined. For example, correlations between benefits received and technology utilization would be important to know. Also correlations between experience mods for customers, and combined ratios for carriers and extent of technology utilization could be interesting.

As mentioned earlier, an examination of why some companies get better results than others on such items as return-to-work and reductions in loss costs could prove to be invaluable.

The Katie School and sponsoring organization plan to continue to probe further into these issues to provide managerial knowledge for the industry.

10 About The Research and Sponsoring Organizations

The Katie School at Illinois State University provides top talent to the industry through its leading undergraduate program. It also adds value to the industry by providing top flight industry-focused research and professional education. The study contact person is Jim Jones, Executive Director of the Katie School at Illinois State University, (309) 438-7754. Primary researchers on the project were Jim Jones and Michael Williams, Ph.D., professor Illinois State University.

Corporate Systems, the sponsoring organization, is a 36 year old company that offers P&C risk information management, claims lifecycle management and medical cost management automation. Corporate Systems seeks to add value by providing scalability, reliability, data security, and customer responsiveness.