denial were not included because the workers involved, generally speaking, are not treated through workers' compensation. Not all of the workers in the "universe" of 24,471 records lost time because of the injury, and not all received compensation of lost wages. (Only workers who lose more than five days are compensated for lost wages.) Everyone in the sample was treated for a work-related injury.

2. **Confidentiality and Survey Tagging:** The serial number on each survey provides the researcher with the demographic profile (age, gender, region and source of insurance), but not the identity of the respondent. Responses remain not only confidential, but also anonymous. The bureau code associated with each record identifies the respondent's insurer, but not the employer, except in the case of self-insured employers.

3. **Outcomes Measured**: The survey is designed to assess outcomes in four key areas:

   a. **Timely Access to Appropriate Care During the Week Following Injury**: Precious time can be lost during the first days if there is any kind of delay in getting the worker to an appropriate provider for diagnosis and treatment. The survey asks questions about first contacts with providers: What happened? When? Where? The study uses these four measurements as benchmark indicators of effective early contact:

      - *Percent of respondents who saw a provider within 48 hours*
      - *Percent who said that the doctor explained what was wrong with them*
      - *Percent who said that the doctor discussed treatment options with them*
      - *Percent who said that the doctor's initial diagnosis proved to be correct*

   b. **Informed Choice Regarding Treatment**: Act 57 placed limits on workers' freedom to choose a provider when it required workers to choose from an employer list of approved providers (where there was such a list) for 90 days. The law and subsequent regulations, however, also insisted that within the structure of the panel system, workers be allowed to make informed choices. Workers were to be informed of their rights and responsibilities soon after the injury and allowed to select a provider from the list. Employers or insurers were not to direct them to a specific provider. This is the reason the study includes these benchmark indicators:

      - *Percent who said workers' compensation rights and duties had been explained at the time of injury*
      - *Percent who reported that their right to select a provider was respected*

      Results from this study over the past 15 years have confirmed that these two issues are not just about observing the niceties of the law. These are critical elements for the proper functioning of the system.

   c. **Patient Satisfaction**: Patient satisfaction is an imprecise indicator of quality medical care, but it does at least establish a presumption for the adequacy and

timeliness of care received. The study looks at five indicators of patient satisfaction:

- *Percent who responded: overall "very satisfied" with care received*
- *Percent who responded: overall "very satisfied" or at least "satisfied" with care received*
- *Percent who said that care received under workers' compensation was "better than," or at least "the same as," care received through other types of medical coverage*
- *Percent who responded: "very satisfied" or "satisfied" with the doctors/health care providers most involved in treating the injury*
- *Percent of respondents who were satisfied with the timing of the return to work*

d. Prompt Return to Work: *Days lost per injury* will, for most stakeholders, be the most meaningful outcome because of its direct impact on cost. It is a hard number measurement of the effectiveness of medical care, but its validity depends on the assumption that other relevant factors, such as seriousness of injury and availability of alternate duty, are equal. The study uses three indicators to assess effectiveness relating to **prompt return to work:**

- *Average number of days lost from date of injury to return to work*
- *Percent of respondents who had returned to work at the time of survey completion*
- *Percent of respondents who, after returning to work, did **not** experience another lost-time injury:* A higher-than-expected rate of re-injury would indicate a pattern of premature return to work or inappropriate use of alternate duty

4. Delineation of Geographic Regions: For the purpose of discovering possible differences in access to quality health care relating to different locations, the study divided the commonwealth into six geographic regions. The *Southwest, Southeast* and *Philadelphia/Five County* regions include the majority of the larger population areas. The other three regions – *Northwest, Central* and *Northeast – ar*e predominantly rural. (See *Full Report*, page 4.)

B. PROVIDERS: Surveys were mailed to 1,800 providers in various specialties important for treating work-related injuries. They were asked about the extent of their involvement with employer panels, about the timeliness and accuracy of payments for workers' compensation patients and also about their experience in using the fee review process.

C. CARRIERS AND SELF-INSURED EMPLOYERS: The 37 carriers and self-insurers with the most claims represented in the injured worker sample were surveyed about their experience in securing qualified providers for their panels.

III. SURVEY OF INJURED WORKERS

A. THE RESPONSE

Ten thousand surveys were mailed to injured workers during the last week of December 2011. A total of 2,226 surveys were returned, with 93 percent received by Feb. 3. The timeframe ensured a period of at least 90 days between the dates of injury and survey completion. Seventy-three percent of respondents had returned to work. Forty-two percent described themselves as *fully recovered*, while 50 percent had *recovered to some degree, but with room for improvement*. The 22.3 percent response rate from a single mailing, with neither pre-notification nor follow-up, was above expectations. A modest inducement – a free Powerball lottery ticket – was offered to those who returned the survey by February 3.

As in the past, age significantly influenced the likelihood of response. Gender and region also affected response, but to a lesser extent.

	N. Universe	% Universe	N. Sample	% Sample	N. Resp.	% Resp.	Resp Rate
BY AGE							
Less than 31	5,158	21.1%	2,111	21.1%	231	10.4%	10.9%
31 to 40	4,946	20.2%	2,040	20.4%	266	11.9%	13.0%
41 to 50	6,292	25.7%	2,581	25.8%	527	23.7%	20.4%
More than 50	8,077	33.0%	3,268	32.7%	1,202	54.0%	36.8%
BY GENDER							
Women	7,801	31.9%	3,196	32.0%	797	35.8%	24.9%
Men	16,672	68.1%	6,804	68.0%	1,429	64.2%	21.0%
BY REGION							
CEN	2,272	9.3%	930	9.3%	271	12.2%	29.1%
NE	1,871	7.6%	718	7.2%	160	7.2%	22.3%
NW	875	3.6%	381	3.8%	84	3.8%	22.0%
PHL5	7,322	29.9%	2,983	29.8%	515	23.1%	17.3%
SE	7,177	29.3%	2,980	29.8%	719	32.3%	24.1%
SW	4,956	20.3%	2,008	20.1%	477	21.4%	23.8%

As can be seen from the above table, there are notable differences in response rates:

- Workers 51 and older are three times more likely to respond to the survey than those who are 30 or younger (37 percent vs. 11 percent).

- The response rate from four of the regions was close to 23 percent, but *central* region was significantly higher (29 percent), and the *Philadelphia/Five County* region was significantly lower (17 percent).

Disparate response rates can distort statewide averages. Workers in the 30 and younger group returned to work five weeks earlier than the rest of the population, but would have less impact on the statewide average because of their particularly low response rate. The statistical process of *weighting* compensates for under-representation and over-representation of various segments of the population. Weighted results offer a more accurate estimate of the experience of all Pennsylvania's injured workers, rather than only the 2,226 who answered the survey. Unless otherwise indicated, the results displayed for injured workers are weighted results.

B. OVERALL RESULTS

After more than five years of generally flat results, this year's numbers represent a significant breakthrough. Results from the 2010 study showed improvement in the outcomes relating to **informed choice,** but little movement for any of the other outcomes. This year's results showed an improvement of two or more percentage points on all outcomes relating to **timely access to appropriate care** and **patient satisfaction.** Seven of the outcome measurements (underlined and in bold) are the best results recorded in the 15 years of the medical access study.

		2011	2010	2009
1	**Timely Access to Appropriate Care – First Week**			
	Seen by a doctor within 48 hours	87.2%	85.4%	88.1%
	Doctor explained diagnosis	**84.2%**	81.1%	82.5%
	Doctor discussed treatment options	**74.3%**	63.9%	64.9%
	Initial diagnosis correct	**64.5%**	61.7%	62.4%
2	**Informed Choice**			
	WC rights/duties explained at time of injury	70.0%	70.8%	61.4%
	Right to select provider respected	66.9%	66.4%	63.0%
3	**Patient Satisfaction**			
	Overall, very satisfied with care	**44.5%**	42.4%	42.6%
	Overall, very satisfied or satisfied with care	**87.6%**	85.2%	84.9%
	WC same as or better than other health care	**87.2%**	83.5%	82.7%
	Very satisfied or satisfied with doctors/health care providers	88.2%	New in 2011	
	Satisfied with timing of return to work	**71.4%**	69.5%	70.9%
4	**Prompt Return to Work**			
	Days lost per injury - mean	60.6	63.0	55.5
	Percent RTW at time of survey completion	73.1%	73.1%	65.7%
	Percent without other injury after RTW	93.8%	92.2%	94.7%

The breadth of the improvement indicates substantial progress, rather than just a statistical blip. The 2010 and 2011 studies use the same processes for sample selection and survey mailing. The survey questions are the same, with only the addition of several new items, which would not, however, have an impact on any of the above

measurements. The results are comparable, except for the added measurement, *Very satisfied or satisfied with doctors/health care providers.*

C. RESULTS BY POPULATION SEGMENT (UNIVARIATE ANALYSIS)

The study used 11 factors to identify differences in access to quality care as experienced by various segments of the worker population. *Univariate analysis* considers variables one-by-one to assess the relationship between variable and end results. Seven variables deal with the health care delivery process, while four deal with general work environment and demographic factors. The variables are listed roughly in order of their importance as differentiating factors.

Health Care Delivery Process	Demographic or Work Environment Factors
1. Rights and benefits explained 2. Use of provider panels 3. Type facility for initial treatment 4. Type provider for initial treatment 5. Type insurance: carrier/self-insured 6. Lost time and return-to-work status 7. RTW: same job or alternate duty	8. Union vs. non-union status 9. Age 10. Gender 11. Geographic region

The following section highlights important differences uncovered by this analysis. (For complete results, see the full report, pages 32-37. Differences are statistically significant if the probability-Value (*p*-Value) is 0.05 or less. A value of 0.05 or less indicates a non-chance – or statistically significant – relationship between the factors. The smaller the *p*-Value, the stronger the evidence of a non-chance relationship. *P*-Values of greater than 0.05 are considered *not significant*, or *N.S*.

Variables Relating to the Health Care Delivery Process

1. **Explanation of Rights and Duties at the Time of Injury.** One of the key questions on the survey is: *"Did someone from your company or the insurance carrier explain to you your medical treatment rights and duties under workers' compensation within the first few days after your injury?"* The responses serve as a benchmark indicator of the care taken to inform the injured worker regarding rights and responsibilities. This is the variable with the strongest relationship to desired outcomes. This does not mean that there is a direct relationship of cause-and-effect. Workers given good information upfront probably do make better patients, but the study makes use of this practice primarily as a *benchmark indicator*. Employers and insurers who are good at informing their people upfront are also more likely to have well organized delivery systems. The 70 percent of the injured workers who received this information at the time of injury reported superior results on all outcome measurements.

Rights & Duties Explained	YES	NO	*p*-Value
Seen by doctor within 48 hours	88.3%	84.6%	.0167
Doctor explained diagnosis	87.2%	76.8%	<.0001

Doctor discussed treatment options	78.6%	64.2%	<.0001
Initial diagnosis, in retrospect, was correct	70.4%	50.7%	<.0001
Right to select provider respected	68.7%	62.7%	.0050
Overall, very satisfied with care	50.4%	30.3%	<.0001
Overall, very satisfied or satisfied with care	91.1%	79.2%	<.0001
WC same as or better than other health care	91.0%	78.3%	<.0001
Very satisfied or satisfied with doctors and providers	90.9%	82.1%	<.0001
Satisfied with timing of return to work	76.9%	56.9%	<.0001
Days lost per injury – mean / median	56.2 / 30	71.0 / 40	
Percent RTW at time of survey completion	75.7%	67.0%	<.0001
Without other injury after RTW	95.1%	90.5%	.0007
N =	**1,559**	**668**	

2. **Use of Provider Panels.** This variable deals with two other important issues addressed in the survey: (1) Did the employer have a list of providers, and (2) Did the employer respect the worker's right to select from the list? Depending on the answers to these questions, respondents were divided into three groups:

   - **Proper Access to Panel**: Forty-six percent had employers with provider lists who did **not** attempt to direct their employees to specific providers. Respondents who checked the box *"I was sent to the nearest available hospital or E.R. because it was an emergency,"* were included in the ***proper access to panel*** group because the employers' actions taken in exigent circumstances are usually not a violation of the workers' right to choose.

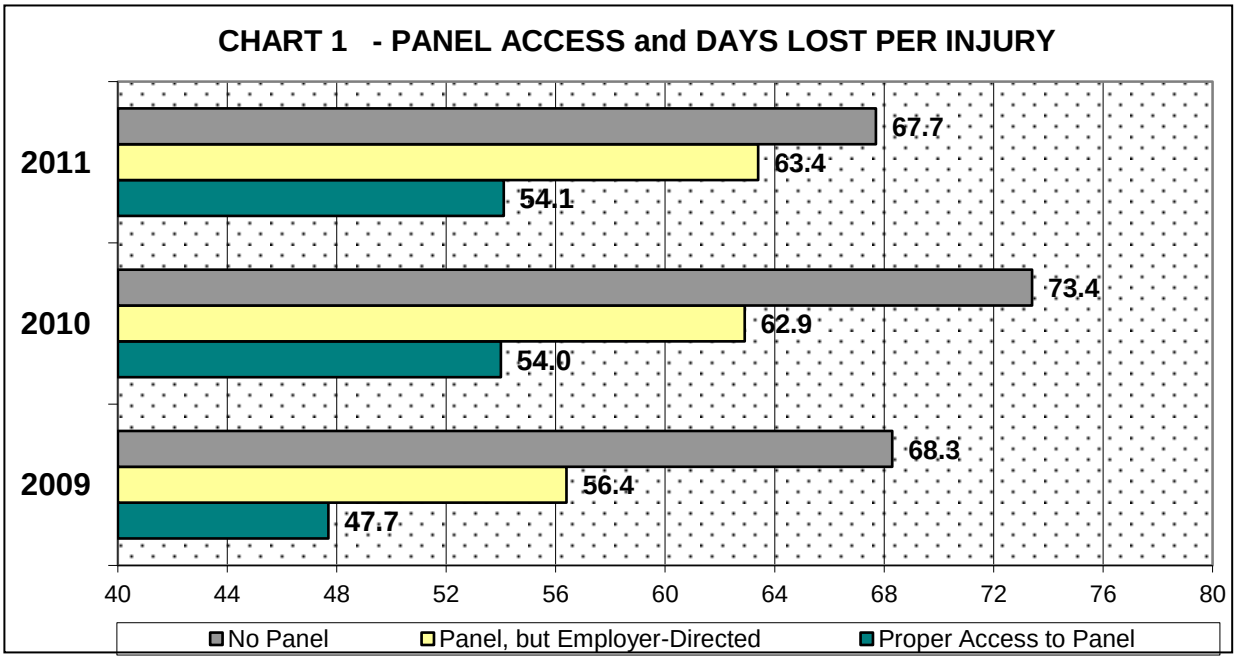
   - **Employer Panel, but Directed Treatment**: Twenty-one percent had employers with provider lists, but who directed their people to specific providers.

   - **No Panel**: Thirty-three percent said their employers did not *"have a list of doctors and health care providers."* If there was such a list, the respondent was not aware of it.

	Proper Access To Panel	**Panel but Employer Directed**	**No Panel**	***p*-Value**
Doctor discussed diagnosis	88.2%	81.5%	80.0%	<.0001
Initial diagnosis proved to be correct	71.2%	56.5%	60.4%	<.0001
WC rights/duties explained at injury	79.6%	76.0%	52.5%	<.0001
Overall, very satisfied	48.7%	41.8%	40.0%	.0009
Overall, very satisfied or satisfied	91.4%	85.9%	83.9%	<.0001
WC same or better than other health care	90.9%	85.3%	86.4%	<.0001
Satisfied with timing of return to work	75.4%	73.4%	64.2%	<.0000
Days lost per injury - mean / median	54.1 / 30	63.49 / 40	67.7 / 40	

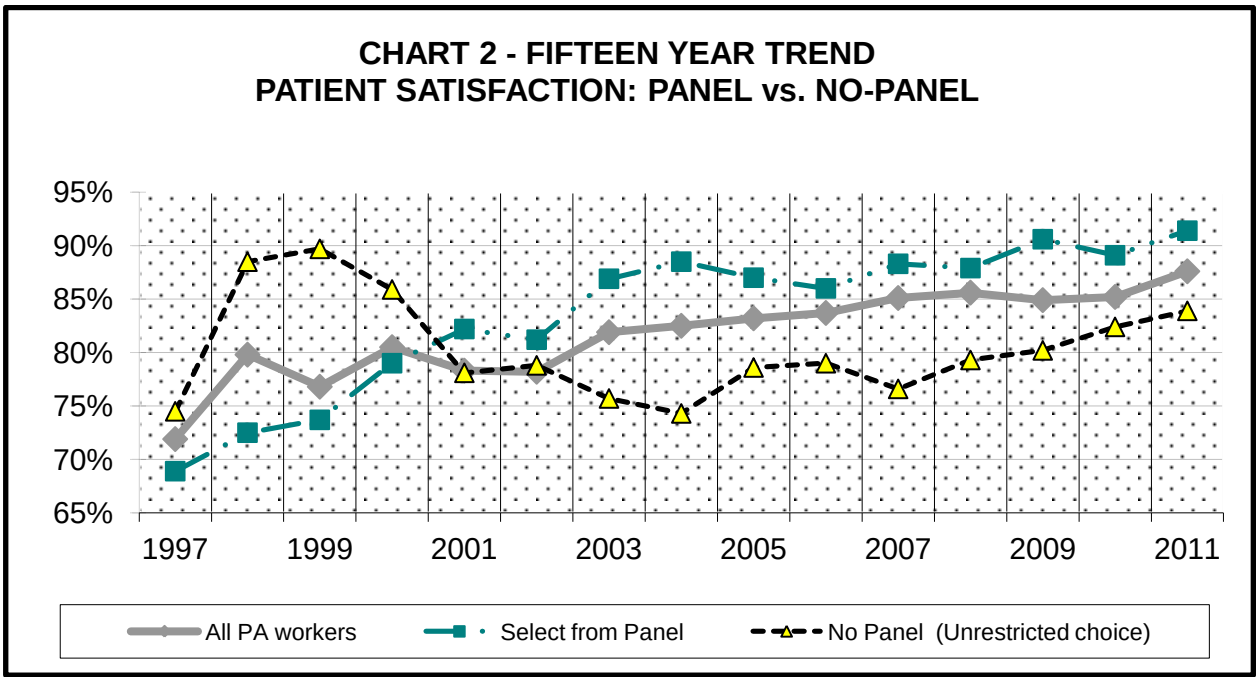
Percent RTW at time of survey completion	77.3%	71.3%	69.1%	.0004
N =	**1,162**	**574**	**656**	
% of Responses	**46.3%**	**20.9%**	**32.9%**	

The **Proper Access to Panel** respondents reported the best outcomes on all measurements with significant differences. The 46 percent who enjoyed access to the panel system in the way it was supposed to work returned to work two weeks earlier than all others.



The fact that the *proper access to panel* group returns to work earlier than those in the *panel, but employer-directed* group is noteworthy. Employers and insurers who attempt to steer workers to particular providers presumably do so in the interest of moving the process along and getting people back to work as soon as possible. The intervention appears to have the opposite effect.

The fact that the *proper access to panel* group has, for the past nine years, been the high satisfaction group deserves comment. The 15-year history in Chart 2 captures the learning curve of insurers and employers in their progress with panels. During early years after implementation of Act 57, workers left to their own devices with no restrictions in choosing providers were the higher satisfaction group. Since 2003 the positions have been reversed.



A further indication of the effectiveness of the panel system is the panel provider retention rate. Eighty-six percent of the respondents in the **proper access to panel** group stayed with providers from the employer list throughout the course of their treatment.

3. **Type Facility – Initial Treatment.** The analysis reveals a problem regarding respect for the workers' right to choose. Sixty-seven percent of the injury or occupational health centers patients reported: *"My employer, or the insurance carrier, told me whom to see."*

	Injury Ctr.	E.R.	Prov. Office	*p*-Value
Initial diagnosis proved to be correct	55.5%	68.4%	70.8%	<.0001
Right to select provider respected	33.2%	85.6%	68.1%	<.0001
Overall, very satisfied with care	39.5%	44.4%	54.1%	.0001
Overall, very satisfied or satisfied	81.9%	89.6%	91.5%	<.0001
WC same or better than other health care	82.1%	89.3%	89.5%	<.0001
Very satisfied, satisfied with doctors/providers	83.8%	90.2%	90.1%	<.0001
N =	**651**	**1,228**	**323**	

The lower ratings on *correct initial diagnosis* and *patient satisfaction* reported by the injury center group are apparently influenced by failure to respect the employee's right to choose a provider. A breakdown between the injury center patients who *were told where to go*, and those whose rights were respected, reveals these differences:

Rights Respected: Injury/Occ. Health Center Patients:	**Yes**	**No**
Initial diagnosis proved to be correct	67.8%	50.7%
Overall, very satisfied with care	45.2%	37.1%

Overall, very satisfied or satisfied	89.7%	78.2%
WC same or better than other health care	88.8%	78.6%
Very satisfied, satisfied with doctors/providers	90.7%	79.8%
N=(no Response 10)	**216**	**425**

The outcomes from the YES group are higher than the Pennsylvania average. The outcomes from the NO group are lower than the Pennsylvania average. This is not to assert cause-and-effect, but it does suggest that employers and insurers who are careful to respect the right to choose, probably make more effective use of injury and occupational health facilities.

4. **Type Provider – Initial Treatment.** Respondents were asked to check as many boxes as applicable to indicate the types of provider who treated them during the first week. Responses put them in one of five groups depending on whether they were treated by:

   1. Occupational health physician(s), but no other physician specialist (22 percent of respondents)

   2. Emergency medicine physician(s) only (14 percent)

   3. Family doctor or general practitioner, but no other physician specialist (8 percent)

   4. One or more other physician specialists (48 percent)

   5. Health care providers other than physicians (9 percent)

   The analysis reveals significant differences on a number of outcomes, but it is difficult to draw meaningful conclusions because of the differences on kinds of injuries typically treated by the five provider categories. Patients treated by emergency medicine physicians only or family doctors/general practioners returned to work more quickly than the others, probably because the injuries were likely to be less serious. There are similarities between the outcomes reported by patients of *occupational health physicians* and those treated at *injury or occupational health centers,* as seen in the previous analysis. This is to be expected since most of the contact with these physicians took place at injury or occupational health centers.

	Occ Hlth	**E.M.**	**GP**	**Spec.**	**Other Prov**	***p*-Value**
Correct initial diagnosis	49.9%	61.8%	66.1%	73.9%	58.1%	<.0001
Right to select respected	47.5%	83.0%	70.6%	74.1%	56.3%	<.0001
Overall, very satisfied or satisfied	80.3%	91.6%	85.2%	91.0%	84.8%	<.0001
Days lost per injury – mean	64.7	50.5	47.1	64.0	59.7	
N =	**473**	**299**	**161**	**1,019**	**190**	

The survey asked about the length of wait time for referrals and appointments with specialist providers during the subsequent weeks following injury. Wait times were about the same as last year, with the longest wait times for neurosurgeons and neurologists.

Specialty	Total Treated	2 Weeks Wait or Longer			4 Weeks Wait or Longer		
		N.	2011	2010	N.	2011	2010
Orthopedic Surgeon	919	269	29%	31%	126	14%	13%
Occupational Medicine	532	67	13%	10%	25	5%	1%
Physical Medicine & Rehab	505	145	29%	25%	59	12%	10%
Plastic Hand Surgeon	151	28	19%	24%	14	9%	11%
Neurosurgeon	93	48	52%	56%	27	29%	37%
Neurologist	81	48	59%	49%	27	33%	28%

5. **Source of Insurance Coverage.** The comparison between respondents working for carrier-insured employers and respondents working for self-insured or group self-insured employers revealed differences in patient satisfaction, but in none of the other outcome measurements. The carrier-insured group reported higher satisfaction.

	Carrier	SI/GSI	*p*-Value
Overall, very satisfied with care	45.9%	38.6%	.0069
Overall, very satisfied or satisfied with care	88.8%	82.7%	.0007
WC same as or betther than other health care	88.7%	81.1%	<.0001
Very satisfied or satisfied with doctors/health care providers	89.4%	83.6%	.0007
N =	**1,787**	**439**	

The study was also able to compare outcomes among insurers with large numbers of claimants in the sample. The 10 insurers with the most claimants account for 33 percent of the sample. Eight are carriers and two are self-insured employers. *(See Full Report, Table V, page 34.)* The analysis revealed an interesting pattern. Among the eight carriers, differences on most outcome measurements take place within a narrow range, with, however, one notable exception. Results for respecting the employee's right to select a provider run the gamut from 45 percent to 80 percent. The comparison of results between the two self-insured employers revealed wider differences, and in particular, on the issue of respecting the employee's right to select a provider.

Self-Insured Employer	#1	#2
Doctor explained diagnosis	89%	77%
WC rights/duties explained at injury	60%	86%
Right to select provider respected	39%	83%
Overall, very satisfied with care	29%	40%
Satisfied with timing of return to work	39%	83%
N =	**74**	**96**

There would appear to be a wide variety of practices in the matter of respecting the employee's right to choose a provider, at least among the individual insurers included in this analysis.

6. **Lost Time and Return-to-Work Status.** This analysis examines the relationship between return-to-work status at the time of survey completion and outcomes. The respondents who answered survey questions regarding time lost and return to work have been broken down into these five groups:

1	No lost time (medical only, no lost wage compensation)	10%
2	Lost time week or less & RTW (medical only, no lost wage compensation)	16%
3	Lost time greater than week up to a month & RTW (compensation for lost wages)	21%
4	Lost time greater than month and since RTW (compensation for lost wages)	35%
5	Lost time and not yet RTW at time of survey completion	18%

These were the most notable differences among the five groups:

	No Lost Time	**Week or less**	**> Week to Month**	**Month or More**	**No RTW**	***p*-Value**
Seen by doctor within 48 hours	92.0%	96.0%	88.9%	85.0%	78.8%	<.0001
Initial diagnosis proved to be correct	70.9%	74.1%	74.6%	64.3%	43.1%	<.0001
WC rights/duties explained at injury	71.4%	67.9%	71.4%	76.6%	58.7%	<.0001
Overall, very satisfied	53.6%	44.9%	46.7%	48.7%	32.8%	<.0001
Overall, very satisfied or satisfied	92.0%	87.3%	88.9%	98.6%	82.5%	.0033
N =	**208**	**332**	**436**	**741**	**377**	

Results from respondents who had not yet returned to work are significantly lower than all others on several items. Forty-one percent said rights and responsibilities had not been explained to them at the time of injury; only 43 percent reported receiving a correct initial diagnosis. The pattern of differences on the item *seen by doctor within 48 hours* is noteworthy and has remained the same for several years. Delay in getting to the first provider visit correlates to the delay in returning to work – longer to the first appointment, longer to return to work. For delays of more than 48 hours, respondents were asked the reason. The most frequently cited reason was employee underestimation of the injury, but there also were several system-related factors:

Reason for Delay	**Frequency Cited**
Employee takes responsibility: understimated injury, procrastinated, etc.	73
Long wait for appointments with listed or recommended specialist	37
Problem in getting insurer approval for an appointment	32
Injury occurred on a weekend or holiday	12
Misinformation or provider list inaccessible or not communicated	10
To get specialist appointment, had to first go to injury/occ. health center	7
Other comments	67

7. **Return to Work Assignment: Same Job/Alternate Duty.** This analysis compares three groups: (1) those who returned to their regular jobs; (2) those who returned to an alternate, or "light duty," assignment with physician-prescribed restrictions; (3) those who had not yet returned to work. The purpose for bringing workers back early to an interim assignment is to facilitate rehabilitation and speed the day when the worker will be able to return to full duty. The survey responses relating to alternate duty are not easy to interpret. On measures of satisfaction, the alternate duty respondents are a lower satisfaction group. On measures of satisfaction, they are about the same as respondents who had not returned to work:

	Same Job	**Alt. Duty**	**No RTW**	***p*-Value**
Overall, very satisfied with care	50.8%	40.7%	32.8%	<.0001
Overall, very satisfied or satisfied with care	91.8%	83.7%	82.5%	<.0001
WC same as or better than other health care	90.4%	83.7%	84.1%	<.0001
Satisfied with timing of return to work	82.2%	61.7%	N/A	<.0001
N =	**888**	**700**	**377**	

Thirty-eight percent of the *alternate duty* respondents said that they were brought back too early: 21 percent reported dissatisfaction with the alternate duty. These were the most frequently-cited problems:

- Light duty was non-existent, not really light duty or doctor's restrictions were ignored.
- Early return to light duty seen as having delayed healing.

The negative feedback, however, comes from a minority of alternate duty respondents. Most of the data indicates that for the great majority, the use of alternate duty was productive. Seventy-nine percent were very satisfied or satisfied with their assignments. Sixty-six percent said that employers had accommodated doctor's restrictions, with another 24 percent giving employers credit for being able to "somewhat" accommodate restrictions.

Variables Relating to Demographic and Work Environment Factors

8. **Union/Non-Union Status.** The analysis revealed few differences. Union members scored lower on satisfaction and averaged an additional seven days lost:

	Union	**Non-Union**	***p*-Value**
WC same as or better than other health care	84.5%	88.3%	.0144
Days lost per injury – mean / median	65.7 / 40	58.6 / 30	
N =	**651**	**1,575**	

9. **Age.** The results reveal one clear age-related pattern. Older workers remained out of work longer. The *51 and older* group is more likely to be satisfied with care received, but

there is no consistent pattern between age and satisfaction across the age-by-decade groups.

	<31	**31–40**	**41–50**	**> 50**	***p*-Value**
Overall, very satisfied	41.3%	39.8%	38.5%	52.7%	<.0001
Days lost per injury – mean / median	48.3 / 23	62.6 / 40	62.4 / 40	72.3 / 45	
N=	**415**	**435**	**603**	**774**	

10. **Gender.** As in past years, women returned to work more quickly than men. They were also less satisfied with the timing of the return to work.

	Women	**Men**	***p*-Value**
Satisfied with timing of return to work	65.7%	74.3%	.0003
Days lost per injury - mean / median	56.3 / 30	62.7 / 35	
N=	**735**	**1,491**	

11. **Geographic Region.** The analysis by region revealed few significant differences. The analysis was originally included due to a concern that access to medical resources might be a problem in the less-densely populated regions of the state. This has generally not proven to be the case.

D. FINDINGS: MULTIVARIATE ANALYSIS OF POPULATION SEGMENTS

Many of the variables used in the previous section have a significant influence on each other. Multivariate analysis considers the impact of the factors both on each other and on outcomes. It is the most rigorous test of statistical significance. The multivariate analysis was applied to four of the 14 outcome measurements:

- *Likelihood that workers will receive a correct initial diagnosis*: This is the most significant differentiating facotr of the four measurements relating to timely access to appropriate care.
- *Likelihood that workers will be very satisfied with the medical care received*: This outcome is important as a distinguishing indicator of high quality programs.
- *Likelihood that workers will be very satisfied or satisfied with the medical care received*: This is the more global indicator of patient satisfaction.
- *Days lost per injury*: This indicator is important because it is most directly related to total costs.

In the multivariate analysis three predictor variables were included that pertain to the health care delivery process and that involve all or most of the respondents. These were the variables:

- Rights and duties explained? (Yes vs. No)

- Proper access to panel? [proper panel access vs. all others (i.e. panel + employer directed treatment or no panel)]

- Type of facility - initial treatment (injury center vs. all others)

The results were the same for three of the outcomes tested. Workers are more likely to: (a) receive a correct initial diagnosis; (b) be *very satisfied* with care received*;* or (c) be *very satisfied or satisfied* with care received, if they:

- Are informed of rights and duties at time of injury, and receive initial treatment at an emergency medicine facility or at a provider's office.

- Have proper panel access

- Receive initial treatment at an emergency medicine facility or at a provider's office.

Respondents are more likely to return to work more quickly if they: (1) are informed of rights and duties at time of injury and (2) have proper panel access. After adjusting for explanation of benefits and proper access to panel, type of facility was not found to be statistically significant.

E. COMMENTS FROM INJURED WORKERS

The survey included an optional section inviting written comments regarding:

1. **Excessive or unreasonable delay in access to medical resources.** Four hundred and ten respondents checked off at least one of the following areas where they experienced delay:

	Frequency
• Diagnostic tests (mostly MRI)	265
• Referrals to, or appointments with, specialists and other providers	238
• Prescription medications	145

Two-thirds of these respondents, nevertheless, indicated overall satisfaction with care received.

2. **Other comments whether positive experience or problem encountered.** Seven hundred twenty-two responded to an open-ended question, inviting other comments.

   - One hundred thirty-six respondents offered comments of appreciation and praise, often naming specific physicians or other providers for their caring and their competence.

   - Five hundred seventy-five offered comments about problems encountered, many of them having to do with delay in one form or another. In order to extract useful information from this wealth of anecdotal data, research team analysts examined the comments to identify recurring themes. These were the problems most frequently mentioned:

PROBLEMS RELATING TO DELAY	FREQUENCY
• Delay in getting treatment because employee underestimated injury	58
• Long wait to get appointment with listed or recommended specialist	37
• Delay in getting appointments because of obstacles in getting insurer approval	36
• Delay in receiving proper treatment because of missed diagnosis or wrong diagnosis	17
• Respondent minimized injury or returned to work before ready to avoid losing pay	15
• Delay because injury occurred on or before a weekend or holiday	12
• Delay in getting appointment with specialist; required to go first to injury/occupational health center or other designated provider	10
• Provider list inaccessible or not communicated, or providers too far away	10
• Delay or denial relating to insurer approval to see appropriate specialist	6
• Delay or denial relating to diagnostic procedures, especially more costly ones	5
• Delay in getting appointments because of problems in finding specialists to accept WC patients	4

OTHER TYPES OF PROBLEMS	FREQUENCY
• Suffered pain, disability longer than necessary because of missed diagnosis or wrong diagnosis	17
• Physical therapy hindered, rather than helped, recovery	10
• Respondent not informed or misinformed regarding rights	10
• Treatment received to date has not helped	8
• Respondent terminated when returned to full duty	6
• Employer told worker to use sick days, vacation time or family leave time for work-related injury	5
• Employer tried to avoid reporting the injury	5
• Problems in getting medical bills paid	5
• Employer would not give time off to be treated for the work-related injury	4

IV. SURVEY OF PROVIDERS

A. SURVEY RESPONSE

Surveys were sent to 1,800 providers addresses in specialties important for the treatment of work-related injuries and ilnesses. The survey addressed the following areas:

- The extent of provider involvement with workers' compensation employer panels
- Timeliness and accuracy of payment received for treating workers' compensation patients

Two hundred seventy providers who treated workers' compensation patients in the past three years answered the survey, representing these specialties:

	N. Responses	% of Responses
Orthopedic surgery	46	19%
Physical medicine and rehabilitation	28	10%
General surgery	27	10%
Chiropractic	24	9%
Family medicine	21	8%
Physical/occupational therapy	21	8%
Plastic/hand Surgery	18	7%
Occupational medicine	14	5%
Pharmacy	14	5%
Neurology	12	4%
Ophthalmology	10	4%
Neurosurgery	9	3%
Psychiatry/psychology	8	3%
Anesthesiology/pain management	5	2%
Other	8	3%

Two hundred thirty-six responses came from individual providers and 33 from providers who were responding for the other members of the practice involved in treating workers' compensation patients.

B. FINDINGS FROM THE PROVIDER SURVEY

1. **Involvement with Employer Panels:** About half of providers responding, either for themselves or for the practice, indicated that a significant number of workers' compensation patients:

• Less than 5 percent of patients	132
• From 5 percent to 25 percent of patients	106
• More than 25 percent of patients	32

   Two-thirds of the respondents indicated participation with one or more employer panels within the past three years, with very little change. Less than 2 percent of panel participants indicated decreased involvement for voluntary reasons. One hundred seventy-eight of those responding indicated that they had participated in one or more employer panels within the past three years. Nine providers, however, made specific comments regarding their unwillingness to serve on panels where a reduction of, or discount from, the workers' compensation fee schedule is required as a condition of participation.

2. **Timeliness of Payment**: Providers and billing managers were asked to identify one or more payers who, in their experience, were most likely **not** to pay within the required 30 days. They were also asked to name insurers or third-party administrators who, in their experience, were the most likely to pay accurately and on time. Because the questions deal with general estimates rather than hard data, the results have validity

only as an indicator of payer *reputation* within the provider community. This being said, the data for the past two years reflects a notable improvement in the matter of on-time payment. There were 60 percent more commendations for promptness rather than citations for delay. The list of prompt payers named by 10 or more respondents is longer than the list of those named as late payers by 10 or more respondents.

3. **Repricing and Accuracy of Payment:** Providers were asked about accuracy and consistency of repricing in comparison to previous years. The responses were similar to last year's. Sixty-six percent reported no change, while 20 percent saw incremental improvement. Providers were given a check list to identify the most prevalent problems regarding inaccurate or inconsistent repricing. These were the percentage of respondents identifying the most prevalent issues:

• Downcoding	23%
• Late payment	23%
• Underpayment	15%
• Incorrect application of bundling/unbundling	15%
• Other	10%

Among the "other" repricing issues cited, the most frequently mentioned were:

• Network or "PPO" discounts taken, when the provider does not participate	9
• The CompServices repricer downcodes excessively and improperly	5

4. **Regarding Application for Fee Review Process:** The survey included three questions relating to the fee review process:

   - *Are you aware that the fee review process is the only dispute resolution process provided by the Workers' Compensation Act?* Seventy-three percent answered *yes.*

   - *Have you made use of the application for fee review process to resolve problems regarding payments?* Forty-four percent answered *yes.*

   - ***If yes,*** *did the process help resolve the problem?* Thirty-four percent answered *yes.*

   This year's survey included two questions about the *resource account* of the Health Care Service Review Division. The resource account (ra-li-bwc-@state.pa.us) was created to provide easier email access to the bureau for questions regarding fee review or utilization review. The *resource account* can also serve as a bridge between fee review and the compliance department to assist providers who have received a positive response to a fee review but have not received reimbursement 30 days after the date of the determination. These were the questions:

   - *Did you know that providers who received a positive fee review judgment, but have still not received payment, can email their concerns to ra-li-bwc-hcsrd@state.pa.us?* Twenty-two percent answered *Yes*.

   - *Did accessing this resource help recover payment for your practice?* Fourteen percent answered *Yes.*

C. FINDINGS FROM THE COMPARISON OF WORKERS' COMPENSATION WITH OTHER FEE SCHEDULES

The comparison of the 2011 workers' compensation fee schedule with Medicare, managed care and automobile insurance payments for 52 commonly used CPT codes revealed the following:

1. **Workers' Compensation vs. Current Medicare:** The workers' compensation payments were, on average, 53 percent higher than current Medicare:

   - Twenty-two procedures had fees that were more than 25 percent higher than Medicare.
   - Thirty-six procedures had fees that were more than 10 percent higher than Medicare.
   - Thirteen procedures had fees that were lower than Medicare.
   - Six procedures had fees more than 10 percent lower than Medicare.

   Workers' compensation pays higher on most surgical procedures. Most of the codes paying approximately the same as, or less than, the Medicare rate were office visits and injection procedures. Workers' compensation payments were, on average, 58 percent higher than Medicare for the same procedures.

2. **Workers' Compensation vs. Auto Insurance (=110 percent of current Medicare):** The workers' compensation fee schedule was, on average, 39 percent higher than auto insurance:

   - Eighteen procedures had fees that were more than 25 percent higher than auto insurance.
   - Twenty-four procedures had fees that were more than 10 percent higher than auto insurance.
   - Nineteen procedures had fees that were lower than auto insurance.
   - Six procedures had fees that were more than 10 percent lower than auto insurance.

3. **Workers' Compensation vs. Sample Managed Care:** The workers' compensation fee schedule was, on average, 63 percent higher than the sample managed care fee schedule.

   - Thirty-two procedures had fees that were more than 25 percent higher than the sample managed care.
   - Forty procedures had fees that were more than 10 percent higher than the sample managed care.
   - Seven procedures had fees that were lower than the sample managed care.

- Two procedures had a fee that was more than 10 percent lower than the sample managed care.

Last year, the workers' compensation fee schedule was, on average, 52 percent higher than the sample managed care fee schedule.

V. SURVEY OF INSURERS

Surveys were sent to the 37 carriers and self-insured employers with the most claims represented in the sample of injured workers. Ten organizations responded to the survey.

Insurers and employers were asked about difficulty in securing qualified panel providers within a reasonable distance of workers' homes in specialties important for treating job-related injuries. Six insurers cited problems in one or more areas of specialization. The most frequently mentioned difficult specialties were neurology, neurosurgery and dental.

VI. DISCUSSION OF FINDINGS

A. FROM THE SURVEY OF INJURED WORKERS

The global results from this year's study are encouraging. After several years of flat results, the research team had become resigned to the prospect that this was about as good as it was going to get. This year's broad-based improvement in outcome for both **timely access to appropriate care** and **patient satisfaction** indicates significant progress. Upward movement by 2.5 or more percentage points for outcomes that were already in the mid-eighties, is difficult to achieve.

There was also improvement, though less obvious, for the outcome, *Days Lost per Injury*. The increase in *Days Lost* from 55.5 to 63.0 from 2009 to 2010 (displayed in the table on page 6) is not as ominous as it may appear. The increase was the result of the study using a different method of sample selection, rather than actual change in workplace conditions. The improvement of 2.5 days from last year to this year's study, represents progress, even if only incremental.

The analysis of results from different segments of the injured worker population offers a clear profile of the programs that consistently produce the best outcomes. The half of the population associated with the best outcomes relating to **timely access to appropriate care, satisfaction** and **prompt return to work** report these three elements:

- They are properly informed of their rights at time of injury.
- Their employers offer them a list of approved providers.
- Their right to choose a provider from the list is respected.

As seen in the table and chart on page 8, the **proper panel access** group had superior outcomes in all categories, including prompt return to work. These respondents came back to work two weeks earlier. Respect for panel providers has also come a long way from the early years of Act 57 panels. In 2011:

- Ninety-one percent of **proper panel access** respondents were very satisfied or satisfied with the doctors and providers most involved with their care.

- Eighty-six percent of those treated by panel providers stayed with panel providers throughout the course of their treatment.

The analysis also points to situations where improvement is both possible and desirable.

- Twenty-one percent of the respondents who had not returned to work at the time of survey completion reported a delay of more than two days before the first provider contact. Underestimation of the injury was the reason most frequently given. The *underestimated* injuries ended up costing both claimants and employers many months of lost time. Employers and insurers need to continue stressing the importance of immediate reporting of all injuries, and initiation of contact with an appropriate provider without delay, rather than the alternative of "wait and see" or self-treatment.

- An optional section of the survey invited comment concerning *"excessive or unreasonable delay in getting timely access"* to treatment. Eighteen percent of respondents cited one or more instances of delay, but it must be emphasized that these are very "soft" data. It is a judgment call as to whether the situations cited really qualify as *excessive or unreasonable* delay. Two-thirds of the respondents citing these delays still rated their overall experience as satisfactory. What is clear, however, is that unnecessary delay for any reason – whether poor communication, claimant non-compliance or provider backlog – can be costly. Those who have responsibility for administering the system need to continually search out and eliminate the causes of delay.

- Two-thirds of the respondents treated at injury or occupational health centers were directed to go there, rather than allowed to choose. This group reported below-average outcomes for *Initial Diagnosis Correct* and *Patient Satisfaction*. The other third of these patients, who were allowed to choose, reported above-average results. It should be pointed out that the 78.2 percent rate for overall satisfaction reported by respondents who were directed to go to the facility, while significantly lower than the Pennsylvania average, is by no means abysmal. As can be seen from the 15-year history of patient satisfaction (seen on Chart 2), the state average for overall patient satisfaction did not climb above 80 percent until 2003.

- The comparison of results among the 10 insurers with the most compensable claims in the analysis by **type of insurance coverage** reveals the same pattern of *comparatively* lower outcomes for patient satisfaction and low outcomes for *right to choose respected*. Respect for the right to choose emerges as the main most important variable. Employers and insurers responsible for these groups may need to modify current practices, or at minimum, better communicate to employees that they actually do have the right to choose.

This year's study, together with those of previous years, confirms the importance of two issues: (1) informing employees about rights and responsibilities at the time of injury, and (2) allowing them to make informed choices regarding providers. These are not just issues of regulatory correctness. The effective functioning of the system depends upon these two critical elements.

B. FROM THE SURVEY OF PROVIDERS

The survey of providers for the past two years presents a picture of a mostly stable situation. This year, only 2 percent of the panel participants reported reduced

involvement with employer panels for voluntary reasons. The most frequently cited reason by far for turning down invitations to serve on employer panels was the requirement by some insurers to accept discounted fee reimbursement as a condition of participation. The law does not prohibit such agreements, but in the eyes of the bureau, they are "side agreements" with no official standing. Providers do continue to voice concerns regarding the fee schedule itself, but the practice of discounting reimbursement on the part of some insurers appears to be the more prevalent barrier to provider participation in panels.

The fact that the workers' compenstion fee schedule is *on average 53 percent higher than current Medicare* appears more favorable than may actually be the case. Seven of the eight most frequently used office visit CPT codes pay close to, or even below the Medicare fee. A Workers' Compensation Research Institute study published this year *(WCRI Medical Price Index for Workers' Compensation, Fourth Edition*, Rui Yang & Olesya Fomenko) compares medical costs for 25 of the states with fee schedules. For most service categories, Pennsylvania ranks from the slightly below mid-point to mid-point of the pack (pp.122-130), but for the category, "Professional Evaluation and Management," Pennsylvania is sixth from the bottom (p.123).

There has been notable improvement in provider-payer relationships over the past two years regarding on-time -- or at least almost-on-time -- payment. Names that used to figure prominently on the list of most frequently cited late payers, now appear on the list of those receiving commendation for prompt payment. Repricing, however, because of incorrect or inconsistent application, continues to be a source of irritation. The most frequently cited problems were: (1) downcoding; (2) incorrect application of bundling; and (3) taking network or "PPO" discounts without provider participation.

CONCLUSIONS AND RECOMMENDATIONS

The 2011 data indicate that workers continue to have sufficient access to timely and appropriate treatment. The most promising action areas to improve access would appear to be: (1) working to persuade the *no-panel employers* to establish panels and (2) educating the panel employers who direct their people to specific providers to understand the benefits of doing what the law requires.