

Disability and medical management of natural latex sensitivity claims

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In 1995 a latex allergy case incurred a cost of \$220,000 within the first year of the claim. A number of factors were thought to contribute to the cost of these claims. In 1996 Michigan Health & Hospital Association Service Corporation identified and implemented protocols to intervene early with latex sensitivity claims. The average cost per case has decreased dramatically since the implementation of the protocols. Decreasing the frequency and the average cost of latex sensitivity claims through the identification, treatment, and return to work of legitimate latex sensitivity cases has been the focus. Equally important was to minimize the impact of latex sensitivity on the life of the health care worker. In 1999 and subsequent years, data from glove- or latex-related claims that began from 1996 were analyzed. Latex sensitivity-related claims were sorted as lost-time claims and medical-only claims from the Michigan Health & Hospital Association Service Corporation claims database. The average cost per claim and the frequency of latex-related claims were identified. The average cost of latex-related lost-time claims has decreased significantly; however, the frequency in lost-time claims has been consistent. Health care workers consistently were returned to work successfully. Implementation of latex-sensitivity protocols is effective in the reduction of the average cost of latex-related claims and the impact of those claims on the lives of health care workers. This has been afforded through the confirmation of the diagnosis of latex sensitivity, followed by the implementation of a method to evaluate the physiologic response to the workplace objectively. (*J Allergy Clin Immunol* 2002;110:S129-36.)

Key words: Latex, claim, cost, worker, spirometry

In 1995, I received my first natural rubber latex (NRL) sensitivity referral. The case was almost 1 year old when I received it, and the total cost that had been incurred was \$220,000, which included both paid medical expenses and reserves set aside to cover future claim costs. Anytime a claim totals this amount, one takes notice; even more so when the claim is only 1 year old. What makes this more difficult to justify was that \$220,000 was incurred before the diagnosis of an NRL sensitivity was confirmed. It became evident that there is a need to be

Abbreviations used

FTE: Full-time equivalent

FVC: Forced vital capacity

MHASC: Michigan Health & Hospital Association Service Corporation

NRL: Natural rubber latex

very aggressive in the way that NRL cases are managed to control cost. The goal in managing the NRL sensitive claim is dual: (1) to prevent the impact of this condition on the lives of those who are diagnosed and (2) to protect the employer who is usually responsible for the costs that are associated with these claims.

The Michigan Health & Hospital Association Service Corporation (MHASC) is a solely owned subsidiary of the Michigan Health and Hospital Association, a trade association for health care organizations in Michigan. MHASC is committed to providing health care organizations and their clients with workers' compensation insurance, medical treatment of occupational and nonoccupational disabilities, which includes loss prevention, industrial hygiene assessments, unemployment compensation, and other insurance products.

WHAT IS THE PROBLEM WITH THE NRL ALLERGY DIAGNOSIS?

Dealing with this diagnosis presents many challenges. These challenges include misdiagnosis, psychologic factors, information gaps, ineffective controls, limited knowledge, and future employment issues. Since my first NRL sensitivity case in 1995, the diagnosis of NRL sensitivity has been unable to be confirmed in approximately one third of the glove- and latex-related claims that have been received by the MHASC. Part of the problem is that a diagnosis of NRL sensitivity is frequently made by history alone. Many times physicians trust the health care worker with whom they work, so when patients arrive to be evaluated for symptoms of NRL sensitivity and says, "I think I have a latex allergy," the physician takes this at face value. Unfortunately, the United States medical model encourages disability, and physicians will typically ask the workers if they desire to return to work and use the response as the basis for declaring a disability or providing a release to return to work.

Furthermore, psychologic factors challenge us when there is a diagnosis of NRL allergy, because the thought of an allergy to NRL has serious implications. The potentially serious reactions, which include permanent disability and death, can loom over the health care worker who

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has a suspected allergy. Employers can magnify these concerns because of the liability or because they may be unable to control the environment.

Additionally, environmental control efforts may be expensive; many employers continue to buy the less expensive products, such as gloves with powder. However, the cost of powder-free gloves is decreasing, and this could be less of an issue in the future. Although employers should be compelled to do the "right thing" in preventing NRL sensitivity, they many times need fiscal reinforcement of their decision. Attention to analyzing and comparing the cost of having a health care worker with NRL sensitivity and the cost of preventing reactions can convince employers to select the more expensive powder-free latex gloves.

With diagnostic tests and intervention still evolving, limited knowledge is a challenge in the control of the impact of NRL sensitivity. Incentives by governmental agencies or related organizations must be given to groups that are researching NRL sensitivity and its effects.

Finally, the question of disability becomes a challenge to us when efforts are made to determine the worker's ability to safely return to work after being diagnosed with sensitivity to NRL. Again, our reflex reaction can be to advise health care workers who are diagnosed with this condition that they cannot return to work, instead of exploring possible options to return the workers to their original work areas whenever possible.

MHASC PROTOCOL

The MHASC protocols for NRL- and glove-related claims begin with an evaluation by an occupational and environmental medicine physician who is experienced with diagnosing and treating NRL sensitivity. An occupational and environmental medicine physician with health care facility experience was identified and selected for experience with NRL allergy and knowledge of treating disabilities. Since 1996 the same physician has evaluated 92% of the 77 MHASC NRL- and glove-related claims. This physician evaluates the conditions of these individuals and is responsible for reviewing all reports from specialty evaluations. Having the same physician review specialists' reports provides consistent and objective oversight of these cases while the physician is directing work placement.

When an NRL allergy claim is received, MHASC seeks to clarify the diagnosis; this process begins with the worker being contacted by a nurse who takes a medical history, and the worker is scheduled for a physical assessment with an experienced physician. A baseline pulmonary function test with a screening spirometer establishes a baseline of the worker's lung function. The protocol for MHASC requests serologic testing with 2 methods that were established with the evidence by Kim et al¹ that indicated that 3% more positive serologic factors may be identified with these methods. The MHASC protocol approaches NRL sensitivity from the perspective that every effort is made to confirm the diagnosis.

Referrals are made, as appropriate, to an allergist, dermatologist, or otolaryngologist or for methacholine challenge testing.

Latex-specific IgE serologic testing

Seventy-seven glove- and latex-related claims have been received for disability treatment at MHASC (Table I). Twenty-two of these cases were confirmed, with a diagnosis of NRL sensitivity. Latex-specific IgE testing is recognized as only 1 piece of the diagnostic puzzle for these cases. Testing latex-specific IgE with 2 methods is desired and was established as part of the MHASC protocol in 1998. Table II shows the results of latex-specific testing of MHASC NRL- and glove-related claims. Thirty percent of these cases received positive results when they were tested with the CAPS brand (Pharmacia) of latex-specific IgE; 31% of these cases received positive results when they were tested with AlaSTAT (Diagnostic Products Group); and 10% of these cases received both tests, and both test results were positive. Thirty-eight percent of the MHASC cases had no serologic testing completed because this was not widely available before 1998, because testing was not indicated, or because the worker refused testing. In 8% of the cases, the brand of latex-specific IgE serologic testing was unknown. Interestingly, 3 persons had negative CAPS results and positive AlaSTAT results; however, only 1 of these cases of NRL sensitivity could be confirmed through history or other diagnostic evaluations.

NRL skin prick testing

Latex skin prick testing is frequently accomplished for MHASC NRL- and glove-related claims; sometimes these may be scheduled simultaneously with the initial occupational and environmental medicine physician evaluation, especially when the health care worker comes from a remote area of Michigan for the evaluation. The skin prick test is a crucial medical-legal tool that is sometimes referred to as the "gold standard in NRL allergy"; therefore, it is important to accomplish this test early in the evaluation process to minimize disability. Some researchers think that skin prick testing is dangerous if the worker's latex-specific IgE serologic test result is positive; however, literature indicates that anaphylaxis that is related to NRL sensitivity is rare.^{2,3} A formal bronchial challenge has been used only once as a diagnostic tool by an allergist for an MHASC claim. This was during the first MHASC NRL-sensitivity case in 1995.

Until January 2000, the MHASC cases were referred to an allergist in the Detroit, Michigan, area who was known nationally for his expertise in NRL allergy and later to his partner. The Greer research latex reagent was available in the Detroit, Michigan area through Dr Dennis Ownby's office. When he moved out of the state, only the remaining stock was available. In January 2000 the available reagent expired and no further reagent was available. Latex skin prick testing is recognized as an important component to the thorough evaluation for the diagnosis of NRL allergy; after researching, MHASC began sending the latex- and glove-related cases to an allergist in Wind-

TABLE I. Latex/glove-related cases (n = 77 claims)

	Cases		Positive cases		Comment
	n	%	n	%	
Confirmed positive NRL sensitivity	22	29	—	—	
Confirmed diagnosis of contact dermatitis (no evidence of NRL sensitivity)	15	19	—	—	5% or 6% Unknown outcome; 2% or 3% cases were diagnosed as NRL sensitivity when original complaint was a reaction to vinyl gloves
Received NRL skin prick testing	45	58	16	33	In 4 cases, physicians made their own reagents; in 1 case, the diagnosis of NRL sensitivity was not confirmed
Tested for residual processing chemicals	26	38	15	58	Two cases had a dual diagnosis with NRL sensitivity

sor, Ontario, Canada, for testing. This protocol was based on the historic success that Canada had experienced with the use of a standardized NRL reagent.

Forty-five of the 77 NRL- and glove-related claims underwent latex skin prick testing (Table I). Thirty-six percent of those health care workers who were tested had a positive skin prick test result and a confirmed diagnosis of NRL sensitivity. In 6 cases, the health care worker selected the allergist, and these physicians made their own reagent using sterile saline solution in which a sterile latex glove had been soaked. All test results were reported as being positive for NRL allergy; however, in only 2 of these cases could NRL sensitivity be confirmed on the basis of serologic testing and symptom constellations. Contact with many different health care employers across Michigan has revealed that some of these health care organizations refer workers to an allergist for skin prick testing in their institution and that other employers refer workers to a dermatologist who is responsible for skin prick testing.

Glove challenge testing

Only 3 MHASC NRL- and glove-related claims have received a glove challenge test, a test that monitors the response to the actual gloves used by the health care worker. The disability treatment nurse makes arrangements so that the gloves that the worker is using are sent to the physician. One case had positive findings, and 2 cases had negative findings. One of the 2 negative glove challenge test results was the first NRL sensitivity case that MHASC received in 1995. Later, this first claim became their most costly NRL sensitivity claim, within the first year of inception.

Skin patch testing

Of the 77 NRL- and glove-related claims, 38% of the cases received skin patch testing to residual processing chemicals. Of this 38%, 58% tested positive for sensitivity to residual processing chemicals. Once the residual processing chemical that causes the reaction is identified, efforts are made to locate a glove that meets the requirement of the job and does not contain the substance to which the worker is sensitized.

Confirmed diagnosis of NRL sensitivity

MHASC has found that 26% of the NRL- and glove-related claims that are submitted could be confirmed with

TABLE II. Latex-specific IgE testing (n = 77 latex/glove-related claims)

Test	Positive test results	
	n	%
AlaSTAT ³²	10	31
CAPS ⁴⁰	12	30
Both tests ³¹	7	23
Test brand unknown ⁶	4	67
Negative CAPS and positive AlaSTAT ³¹	3	10
HyCor ¹	0	0
Negative CAPS and positive AlaSTAT ³¹	3	10

Note: No serologic test was performed for 29 claims (38%); 1 claim showed that CAPS was performed, but there were no results available.

a diagnosis of NRL sensitivity (Table III). Forty-five percent of the NRL- and glove-related claims that were received by MHASC were originally inappropriately diagnosed with "latex allergy." Also, we examined those claims in which NRL sensitivity was written as the diagnosis compared with those claims in which the diagnosis was written as "rule out latex allergy." For many claims "latex allergy" is quickly written as the diagnosis, based only on what the health care worker reports to the physician. Practitioners must be more hesitant in documenting this diagnosis without supporting objective medical evidence. The impact can be significant to the affected health care worker psychologically, and the financial impact to the employer likewise is significant.

We examined the number of claims that were diagnosed as contact dermatitis that was unrelated to NRL sensitivity and found that 15% to 20% of the reported NRL- and glove-related MHASC claims were diagnosed appropriately as such. No cases of contact dermatitis were misdiagnosed. Another 9% of the cases had an unknown outcome because no evaluation had been completed. It was interesting to note that 2 cases were diagnosed as NRL sensitivity when the original complaint was a reaction to wearing latex-free or vinyl gloves.

Returning employees to work

Generally, if the employer is cooperative, almost every employee with the diagnosis of NRL sensitivity can return to work. The occupational medicine physician has generally released workers to return to work, and in many instances, the worker is instructed to simply avoid wear-

TABLE III. Cases diagnosed with NRL sensitivity (45% unable to confirm NRL sensitivity)

Cases	n	%
Diagnosed originally as NRL sensitivity (31%)		
Diagnosed appropriately as NRL sensitivity	10	13
Unable to confirm diagnosis of NRL sensitivity	14	18
Diagnosed originally to rule out NRL sensitivity (40%)		
Confirmed NRL sensitivity	10	13
Unable to confirm NRL sensitivity	21	27
Contact dermatitis not related to NRL sensitivity; original diagnosis confirmed	15	20
No diagnostic work-up completed	7	9
Total confirmed NRL-sensitivity claims	77	100

TABLE IV. Employees returned to work (23 confirmed cases of NRL sensitivity)

Status	Cases	
	n	%
Returned to work	9	39
No lost time	7	30.4
Refused to return to work*	4	17.3
Employer reassigned work (permanent)	2	9
Employer would not allow return to work	1	4.3
Employer accommodated workers at some point during disability	8	35

*Later, a person who returned to work refused to continue working.

ing NRL gloves. Those workers for whom the diagnosis of NRL sensitivity is confirmed may additionally need to be accommodated at work in an area in which coworkers wear powder-free, low latex protein gloves. MHASC has returned to work more than one third of their NRL sensitivity cases. Return to work was accomplished in 39% of the 23 confirmed cases of NRL allergy (Table IV). One individual who returned to work later refused to continue working, although there was no confirmation that she could not work in the environment. The reports of reactions were inconsistent with NRL sensitivity. In 17.3% of the cases, the individual refused to return to work. Reassignment by the employer was decided as the plan of action in 9% of the cases, and in 4.3% of the cases the employer would not return the NRL-sensitive worker back to the workplace. In 35% of the 22 confirmed cases of NRL sensitivity, the worker worked in an accommodated capacity at some point during the life of the claim.

Protective measures are implemented once individuals report that they have had a reaction to gloves or that they have NRL allergy.^{4,5} Health care workers are advised to avoid latex before the diagnosis of NRL sensitivity is confirmed or ruled out. When individuals return to work, many cases have been monitored on an ongoing basis by the employer for any further reactions to the new gloves that have been provided or to the work environment.

MHASC has established a process that hinges on early reporting and confirmation of the diagnosis of NRL sensitivity, followed by objective documentation of symptoms. Accurate diagnosis is imperative; however, the confirmation of the initial diagnosis when the claim was received

could not be substantiated 46% of the cases. Of those 46% of cases, 26% of the cases were diagnosed appropriately with NRL sensitivity, and 20% of the cases were appropriately diagnosed with contact dermatitis that was unrelated to NRL sensitivity. To close the diagnostic loop, MHASC began scheduling all NRL- and glove-related claims for evaluation by the same occupational medicine physician who had experience with NRL allergy. During the initial evaluation, the occupational medicine physician completes a thorough medical history, a physical assessment, a baseline pulmonary function test, and latex-specific IgE serologic tests, by 2 methods. The occupational medicine physician makes recommendations regarding the claim, which are then accomplished. At times, the worker is sent to various specialties (such as allergists, dermatologists, respiratory therapists, and/or an ear, nose, and throat physician). When the evaluation is completed, the resulting reports are funneled back through the occupational medicine physician, who has the responsibility of addressing disability on the basis of all the information. The identification of a physician who has the expertise to evaluate the condition and who effects a timely return to work for the health care worker has resulted in lives that have been restored and claim costs that have been controlled.

Serial spirometry testing as a useful tool

Serial spirometry is a useful tool in assessing the individual's response to the workplace objectively. Serial spirometry helps to document pulmonary obstruction or restriction, while simultaneously affording the opportunity to document other objective findings. Measurement of lung function and assessment of the worker's condition, followed by documentation, provide a useful scientific approach to help in the identification of environmental effects. Physical assessment of the worker and an assessment of the environment to offer insight into other possible causes of symptoms occur simultaneously. With the use of this comprehensive assessment process for workers as they return to the workplace, cases that were previously described as having symptoms of NRL sensitivity later were discovered to have symptoms of vocal cord dysfunction. In 2 of the 3 MHASC vocal cord dysfunction cases, anxiety was identified as the trigger. This approach also allows for appropriate accommodation once detailed information is collected and is reviewed by a physician with expertise in the interpretation of pulmonary function testing and toxicologic and environmental conditions and who can focus on the treatment of disabilities.

Serial spirometry is a series of screening pulmonary function tests that measure forced vital capacity (FVC), FEV₁, FEV₁ expressed as a percentage of the FVC, the ratio of FVC/FEV₁, and the mean forced expiratory blood flow during the middle half of the FVC. A pulmonary function test that includes a blood flow volume loop is preferred to identify coughing. The series of pulmonary function tests occur over the course of either 3 consecutive days or 3 days over the course of a 5-day work week.

After the completion of serial spirometry testing, physical assessments, and the monitoring of the workers'

response in the workplace, a trained occupational and environmental medicine physician reviews the documented findings. When workers have been prescribed an inhaler pre- and postmedication pulmonary function testing are completed during workplace monitoring when the symptoms are reported. In the event of severe worker anxiety or reports of serious life-threatening reaction, return to work with a physician observing the worker (instead of a nurse) has been used as a way of reassuring the individual that all possible safety measures are being observed. This is costly. The average cost range to accomplish physician-observed return to work has been from \$6,000 to \$10,000; however, when you compare this to paying indemnity for life, this option is more desirable.

In 22 MHASC cases, serial spirometry was recommended, and 10 of these cases were diagnosed with NRL sensitivity. In 54.5% of the cases, serial spirometry results was negative (Table V). Approximately 14% of those individuals who were tested had serial spirometry testing with positive results, relating symptoms to the workplace. Some individuals did not show up for serial spirometry testing or refused it. This occurred in 9% of the MHASC cases, and their workers' compensation claims were disputed. In 23% of the cases, the employers decided that they did not want to complete serial spirometry testing in the workplace. The employers declined the completion for various reasons. Some employers did not want to pay for this expense. Some health care employers did not have the resources to accomplish screening pulmonary function tests. This was due to the unavailability of the equipment or the lack of trained staff to complete the tests. Other employers were concerned regarding the unknown and did not want to risk that their employee might have a reaction. There was 1 MHASC case in which a peak flow meter was used instead of pulmonary function tests; however, this was a predecessor of the established MHASC serial spirometry protocol. The peak flow meter is considered less desirable, because it is more difficult to verify effort and reproducibility.

THE COST OF NRL SENSITIVITY CLAIMS

Glove- and NRL-sensitivity claims are expensive. From 1995 until 2000, the MHASC has had 37 lost-time claims and 202 medical-only claims (Fig 1). Lost-time claims are defined in the Michigan Workers' Compensation Act as those cases that have missed 8 days or more of work. Medical-only claims are those cases in which only medical expenses paid and no indemnity has been paid. The total incurred cost for the 37 lost-time NRL-sensitivity and glove-related claims was \$791,890 (Table VI), or an average cost of \$21,402 each. The total incurred cost of the 202 medical-only claims was \$88,752, or an average cost of \$439 each. The diagnosis of NRL allergy was considered in 76% of the MHASC latex- and glove-related claims that were received for medical treatment.

The MHASC services approximately 100 hospitals and 100 long-term care facilities across the state of Michigan.

TABLE V. Serial spirometry testing outcomes*

Outcome	Cases	
	n	%
Serial spirometry negative	12	54.5
Cases with positive results†	3	13.6
Refused or did not show for serial spirometry	2	9
Serial spirometry not completed, although recommended	5	23

*Twenty-two cases of serial spirometry were ordered; only 11 of these cases had a confirmed diagnosis of NRL sensitivity.

†Two cases were positive for NRL sensitivity; in 1 case the NRL-sensitivity diagnosis could not be confirmed.

TABLE VI. Total incurred cost

	Lost time	Medical only
Claims (n)	37	202
Total cost incurred to date (\$)	791,890	88,752

Surprisingly, to date only 1 NRL- and glove-related case has been seen from long-term care. In theory, we would expect to see at least 6% of this population, as comparable to studies regarding the incident of latex sensitivity in the general population. The MHASC workers' compensation insurance programs covered 74,496 hospital full-time equivalents (FTEs) in 2000, which were the source for the reported NRL- and glove-related claims. Minimally, the same numbers of employees are potentially covered in the MHASC programs. FTEs could have several part-time individuals comprising 1 FTE, so actually a larger population would be expected to be included in this number. In 1996 it was estimated that approximately 100,000 FTEs from hospitals were covered at the MHASC. If you examine all 77 reported NRL- and glove-related claims and compare that to the minimum number of FTEs (74,496 employees) the incidence rate would only be 0.1% of health care workers. If you consider that, in only 22 cases, the diagnosis of NRL sensitivity was confirmed, then the incident rate is less than 0.035% of health care workers. The 0.03% is much less than what is reported in the literature.^{1,4-7} This is a conservative estimate, and there are likely to be more employees than 74,496, so the incident rate is likely to much less than this.

Fig 1 shows the number of NRL- and glove-related claims that were received at MHASC from 1996 through 2000. The number of lost-time claims have not changed significantly over multiple years; however, as the year 2000 data matures, a few more cases are expected. Lost-time claims information has been tracked at the MHASC since 1996 on NRL- and glove-related claims.

The average cost of MHASC NRL- and glove-related lost-time claims decreased dramatically from \$38,077 in 1996 to \$4,298 in 2000 (Fig 2). The claim data lags behind by approximately 2 years, which means that generally the last 2 years of cost and frequency data can be expected to double.

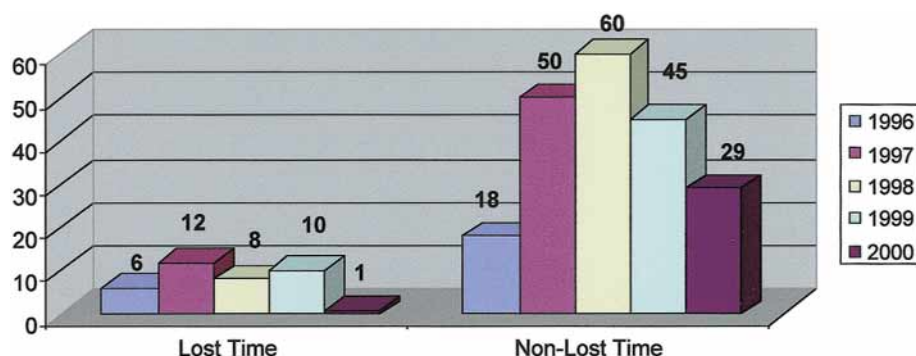


FIG 1. Number of latex/glove-related claims.

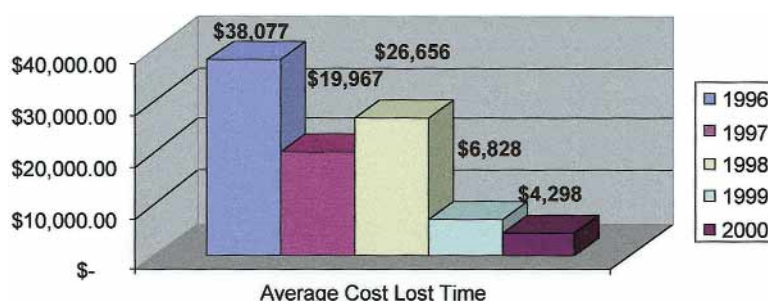


FIG 2. Average cost of lost-time latex/glove-related claims.

Because measures have been implemented to decrease the cost of lost-time cases that are related to NRL- and glove-related claims, medical-only claims have increased slightly. The average cost of NRL- and glove-related medical-only claims increased from \$219 in 1996 to \$692 in 2000 because of the more complete evaluation of all MHASC NRL- and glove-related claims (Fig 3). In total, a slight increase of \$483 from 1996 to 2000 was felt to be an acceptable risk when compared with the almost \$34,000 decrease in lost-time claims.

PSYCHOSOCIAL ISSUES

There are many potential psychosocial issues that come in to play when an individual is diagnosed with an NRL allergy. An aggressive approach in addressing the psychosocial issues can prevent a costly claim. To maintain homeostasis, it is always important for health care workers to return to their original department, whenever possible.

Although it is important to educate the worker who is diagnosed with an NRL allergy, it is equally important to offer reassurance, being careful not to use terminology that will frighten the individual unnecessarily. Some well-meaning medical providers emphasize the life-threatening anaphylactic reaction; however, anaphylaxis caused by NRL allergy is rare.^{1,2} Sometimes this is sensationalized, to emphasize a point. Some employee health professionals actually discourage the health care worker who has been diagnosed with NRL allergy from returning to work and provide instruction in a manner

that more often expresses the employee health nurse or professionals' fears and emotions. The NRL-sensitive individual must be reassured that all possible safety measures are being taken when they return to work. Qualified medical personnel who monitor diagnosed employees when they return to the work place can accomplish this.

The treating physician often provides direction to the employer regarding work status. It is important that the individual who has been diagnosed with NRL allergy has a treating physician; however, one should use caution when using these restrictions as the sole basis for making a decision not to return an individual to work. To keep things in perspective, the patient is the physician's customer and ultimately the source of the physician's income, so often the physician complies with requests that workers make of them. An objective, independent physician who is knowledgeable about NRL sensitivity is critical. MHASC has observed that 57% of the NRL- and glove-related claims that are received contain a diagnosis of NRL allergy, even though the diagnosis could not be confirmed.

NRL sensitivity can be costly to the employer. We have attempted to examine what NRL sensitivity costs the employer since 1996 and to challenge employers to reduce or control the exposure to NRL. Many publications have estimated that 6% of the general population has an NRL allergy and that approximately 10% to 12% of the health care worker population is at risk for the development of NRL allergy.^{1,3-5} Examining this conservatively, one might expect 60 health care workers to be diagnosed with NRL sensitivity in every 1000 employ-

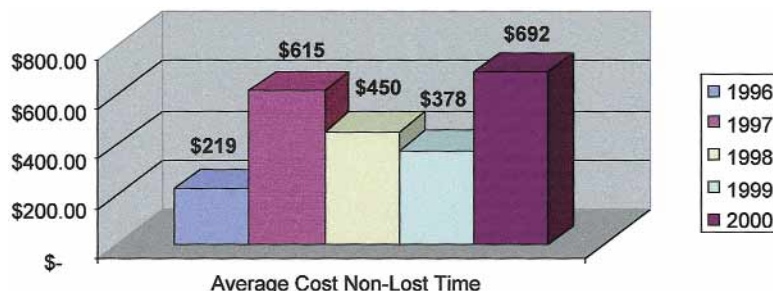


FIG 3. Average cost of medical-only latex/glove-related claims.

ees, which is thought to be the average hospital size in Michigan. If the average NRL- and glove-related claim cost is \$21,402 (as the MHASC claim data suggested for all years from 1996 through 2000), an average hospital could expect to spend \$1,284,120 for NRL-sensitivity claims for the life of those employees. It is also important to note that this figure increases as new employees are hired, because likewise you would expect that 6% of the new employees would also be at risk. Even though the MHASC data suggest that the incidence of NRL sensitivity is 0.03%, much less than the 6% that the literature implies,^{1,4-7} I do not wish to suggest that employers should rest on their laurels and not continue to implement efforts to reduce and control exposures to NRL. It only takes 1 costly claim to justify any efforts the health care organization implements to prevent exposure.

HOW TO RESPOND TO THE NRL-SENSITIVE WORKER

Before any employee reports a work injury or illness, the employer needs a clear reporting process that requires immediate implementation, no later than 24 hours after the workers' knowledge of a health condition. A policy that specifically states that any incident is to be reported immediately, with an explanation to all employees during new hire orientation and annual safety training, is critical. Once the workers' symptoms are reported, they should have a complete medical evaluation by a physician with expertise in NRL sensitivity who understands disability treatment. Physicians who enable the worker to be disabled unnecessarily are doing a great injustice to those individuals who have been diagnosed because of the complex psychosocial issues with which these individuals are faced and because of the strain that is put on the public programs that are designed to care for these individuals. The impact of NRL sensitivity is mammoth in size, and practitioners must avoid diagnosing workers frivolously.

When a worker receives a diagnosis of NRL sensitivity, the individual must receive information about the condition in the same way that any other individual who is exposed to a hazard receives risk communication. The United States Environmental Protection Agency has established cardinal rules for risk communication.⁸ These 7 cardinal rules can be used as a basis for communicating with the worker who has been diagnosed with

NRL sensitivity: (1) accept and involve the individual as a legitimate partner, (2) plan carefully and evaluate your efforts, (3) listen to specific concerns, (4) remain honest, frank, and open, (5) coordinate and collaborate with other credible resources, (6) meet both the employer's and the workers' needs (written by the United States Environmental Protection Agency as meet the needs of the media), and (7) speak clearly and compassionately. You should avoid voluntary risk, emotional appeals, or a comparison of lifestyle risks (such as, "You are just as likely to have an anaphylactic reaction as being hit by a car as you are walking on the sidewalk"). Do compare the individual to groups and to National Institute for Occupational Safety and Health guidelines and literature. Be sure to preserve trust with the worker who reports NRL sensitivity by always remaining neutral and credible when communicating with the worker. Trust can be maintained by communication that is proactive and timely and when the appropriate individual communicates it.

Workers with NRL sensitivity need the facts; the information should be presented with the use of visual aids and written information. Because information is still evolving with NRL sensitivity, it becomes a challenge to keep up to date on the new information. Follow-up sessions with workers who report NRL sensitivity should be conducted in a timely manner, and delays in the completion of a thorough evaluation to confirm the diagnosis should be avoided.

To return individuals who have received a confirmed diagnosis of NRL sensitivity to work, the best approach is to reduce or control the exposure to NRL in the environment before there is a need to do so. Once a health care worker has a confirmed diagnosis of NRL sensitivity, a valuable window of opportunity has already been lost. A reduction of the exposure to NRL proteins is ideal, and the implementation of NRL reduction efforts before a claim is made should be each employer's goal. When an NRL sensitivity has been reported early and appropriate medical intervention has been instituted (including case management by a nurse with expertise in handling NRL sensitivity), these efforts offer the most impact in controlling any disability and costs that are associated with these types of claims. Physicians must focus on making the medical decisions by preparing a "release to return to work slip" that specifies the needs of the worker; the employer must be allowed to make the employment decisions regarding

work placement within those written directives. The determination of the individual's ability to work must be balanced with an experienced and objective independent medical examination. Whenever possible, employers must do everything they can to return the NRL-sensitive workers to their original departments. When the employer hesitates or refuses to return the workers to work in their original departments, the message that is conveyed to the workers is greater than words. This can reinforce disability syndrome as the individual spirals down the path of no return to a life that is dominated by the condition. Reinforcement and reassurance that safety measures have been taken when the NRL-sensitive worker is ready to return to work are critical. As discussed earlier, safety measures could include conducting serial spirometry, monitoring physiologic responses through vital signs, and assessing the workers' lungs, skin, ears, nose, and throat or an industrial hygiene assessment of the work area (although MHASC uses latex air sampling on a limited basis because of related limitations).

Although the diagnosis of NRL sensitivity is frustrating and it can appear as if there is little that can be done, opportunities do exist to control disability and cost, while a high quality of life for the individual who is diagnosed with NRL sensitivity can be preserved. In summary, early intervention that begins with an experienced disability management nurse and a physician with experience equally in diagnosing NRL sensitivity, diagnostic testing interpretation, and the treatment of disability is critical. Remember

that return to work is an opportunity in almost every case, with the use of objective means to observe and document the individuals' response to the workplace environment.

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