2/5/2004

COMMONWEALTH OF MASSACHUSETTS

NORFOLK, SS.

SUPERIOR COURT OF THE
TRIAL DEPARTMENT
CIVIL ACTION NO. 02-01159A

MARCIA RHODES, HAROLD RHODES, INDIVIDUALLY, HAROLD RHODES, ON BEHALF OF HIS MINOR CHILD AND NEXT FRIEND, REBECCA RHODES
Plaintiffs

- v -

CARLO ZALEWSKI, DRIVER LOGISTICS, PENSKE TRUCK LEASING CORP., AND BUILDING MATERIALS CORP. OF AMERICA, D/B/A GAF MATERIALS CORP.
Defendants,

- v -

TOWN OF MEDWAY, and JERRY MCMILLAN'S PROFESSIONAL TREE SERVICES, INC.,
Third-Party Defendants.

PLAINTIFFS' ANSWERS TO EXPERT INTERROGATORIES

Pursuant to Rule 33 of the Massachusetts Rules of Civil Procedure, Plaintiffs, Marcia Rhodes, Harold Rhodes and Harold Rhodes on Behalf of His Minor Daughter and Next Friend, Rebecca Rhodes, respond to Expert Interrogatories.

GENERAL OBJECTIONS

1. Plaintiffs object to the disclosure of any information protected by any recognized privilege against disclosure, including, but not limited to, the psychotherapist-patient privilege, the attorney-client privilege and the attorney work-product doctrine.

2. Plaintiffs object to any interrogatory that purports to require anything beyond that which is required by Rule 33 of the Massachusetts Rules of Civil Procedure.

3. Plaintiffs object to any interrogatory that requires one or more conclusions of law.

ANSWERS

Subject to the foregoing definitions and objections, and without waiving the right of Plaintiffs to object to the admissibility, publication or other use of any response or information derived therefrom, Plaintiffs respond as follows:

INTERROGATORY NO. 1

Please state your name, date of birth and residential address.

ANSWER

The plaintiffs object to the request for their dates of birth as it is not relevant nor likely to lead to the discovery of relevant information in the context of an expert interrogatory.

Marcia Rhodes; 11 Janock Road, Milford, MA 01757;

Harold Rhodes; 11 Janock Road, Milford, MA 01757; and

Rebecca Rhodes; 11 Janock Road, Milford, MA 01757.

INTERROGATORY NO. 2

For each person you intend to call as an expert witness at the trial of this matter, please state:

a. his/her name and address;

b. his/her qualifications;

c. the subject matter on which the expert is expected to testify; and

d. the substance of the facts and opinions to which the expert is expected to testify and a summary of the grounds of each opinion.

ANSWER The Plaintiffs may call one or more of the following expert witnesses:

1. James C. Bayley, M.D. Longview Orthopedics, 100 Hospital Road, Suite 3C, Leominster, MA 01453. (978) 534-6333. Dr. Bayley is the orthopedic surgeon who treated and

operated on Marcia Rhodes at UMASS Medical Center. He will testify in accordance with Mrs. Rhodes' previously produced medical records and reports concerning her spinal cord injury. The plaintiffs reserve their right to call another orthopedic surgeon at trial in the event that Dr. Bayley, who is currently on active military duty in Iraq, is unavailable for either a videotaped deposition or trial testimony.

2. Norman E. Biesaw, M.D. UMASS Medical Center, 33 Oak Ave., Worcester, MA 01605 (508) 334-8544. Dr. Biesaw is an orthopedic surgeon who treated Marcia Rhodes on follow-up visits when Dr. Bayley was unavailable. He will testify in accordance with Mrs. Rhodes' previously produced medical records and reports concerning her spinal cord injury.

3. Nicholas Mastroianni, M.D. 14 Asylum St., Box 177, Milford, MA 01757-2203, 508-473-3124. Dr. Mastroianni is an orthopedic surgeon who has treated Marcia Rhodes for fractures in her lower extremities from late 2002 to the present. He will describe his treatment and opine that the fractures are causally related to her spinal cord injury.

4. Cynthia Collins, M.D. UMASS Medical Center, 370 Main Street, Worcester, MA 01608. (508) 334-1000. Dr. Collins was Mrs. Rhodes' attending doctor in the trauma unit at UMass Medical Center on January 9, 2002. Dr. Collins will testify in accordance with Mrs. Rhodes' previously produced medical records and reports concerning all of the injuries suffered as the result of the accident, related complications and the course of her recovery at UMASS.

5. Trooper Jaworek. Massachusetts State Police, Commercial Vehicle Enforcement Section, 906 Elm St., Concord, MA 01742 (978-369-1004). Trooper Jaworek will testify consistent with the Driver Vehicle Examination Report, MAPP00002455, he completed upon examining the tractor-trailer involved in the January 9, 2002 accident.

6. Trooper O'Hara. Massachusetts State Police, Collision Analysis and Reconstruction Section, 458 Maple Street, Danvers, MA 01923, (781-848-7634). Massachusetts State Police, Collision Analysis and Reconstruction Division, find will testify in accordance with the Accident Reconstruction Report, No. 10.02, that he completed in July, 2002.

7. Elizabeth Roaf, M.D. 189 May Street, Worcester, MA 01602 (508) 791-6351. Dr. Roaf is the physiatrist who oversaw Mrs. Rhodes' rehabilitative care at Fairlawn Rehabilitation Hospital, and who has continued to treat her since her discharge. She will testify in accordance with Mrs. Rhodes' previously produced medical records and reports, and will opine that Mrs. Rhodes has complete sensory and motor paralysis, a condition that is permanent and irreversible, as well as permanent impairment of her bowel and bladder function. Dr. Roaf will also opine that, due to her paralysis, Mrs. Rhodes will require substantial durable medical equipment for the remainder of her life, as well as medical supplies and frequent contact with medical treatment providers, including physical therapists, and personal care attendants. Dr. Roaf will testify that Mrs. Rhodes has already experienced a number of secondary disabling conditions that are commonly associated with paraplegia, including decubitus ulcers, depressed mood, higher risk of lower extremity fractures, upper extremity tendonitis and bursitis, and an increased propensity for urinary tract infections, diabetes, heart disease and hypercholesterolemia.

8. Donna M. Krauth, M.D. Milford Whitinsville Regional Hospital, 14 Prospect St., Milford, MA 01757, 508-634-9962. Dr. Krauth has been Mrs. Rhodes' primary care physician for many years, and continues to treat her for all medical issues, including complications from her spinal cord injury, and will testify in accordance with her previously-produced medical records.

9. Adele Pollard, R.N., M.S., L.R.C., C.C.M, Life Care Planner. Adele Pollard is the Vice President and Director of Case Management Services at Case Management Associates, Inc. 44 Mechanic Street, Suite 111, Newton Upper Falls, MA 02464. (617) 332-7607. Ms. Pollard provides catastrophic medical case management and health care consulting services, life care planning and medical legal nurse consulting.

Ms. Pollard was educated at University of Massachusetts (Master of Science Degree in Human Services Health Policy & Planning, 1998; Bachelor of Arts in Psychology, 1984), and the Jackson Memorial Hospital School of Nursing, Miami, FL (Nursing Diploma, 1975). Ms. Pollard received her R.N. (Registered Nurse license, #140803) in 1975; her C.H.H.E. (Certified Holistic Health Educator) in 1983; her L.R.C. (Licensed Rehabilitation Counselor) in 1992; and her C.C.M. (Certified Case Manager, certification #11269) in 1993. Additionally, from 1985 to 1995, Ms. Pollard was a Certified Insurance Rehabilitation Specialist.

Previously, Ms. Pollard was a Rehabilitation Consultant for the New England CORE (Catastrophic Outreach and Rehabilitation Efforts) Program where she coordinated national catastrophic case management referrals for group health policyholders, providing rehabilitation claims consulting to long term disability and underwriting departments. From 1978 to 1984, Ms. Pollard was a rehabilitation nurse in the spinal cord unit of the University Hospital, Boston, MA, in the Traumatic SCI and ABI unit. From 1975 to 1978, Ms. Pollard was a rehabilitation nurse at the Jackson Memorial Hospital, Miami, Florida, providing patient care for SCI, orthopedic and neuro-trauma on the Rehabilitation Unit, as well as developing self-care criteria and participating in therapeutic pass and community re-entry patient programs.

Ms. Pollard will testify about the life care plan she prepared, which includes her nursing diagnoses. Ms. Pollard has reserved her right to supplement or alter her nursing diagnoses and expert opinion based on new or additional information. If she does so, these answers will be supplemented in a timely fashion.

A. Medical Record Review: The following medical records were reviewed by Ms. Pollard in preparation for developing a life care plan:

1. Fire, EMS and Police Reports
   09 January 2002, 13 January 2002

2. Milford Whitinsville Regional Hospital, Milford, MA
   Hospital Records: 09 January 2002 through 16 March 2003

3. UMass Memorial Medical Center/University Campus, Worcester, MA
   Hospital Records and Billing Statements: 09 January 2002 through 21 February 2002

4. Fairlawn Rehabilitation Hospital, Worcester, MA
Hospital Records: 05 February 2002 through 14 April 2002

5. VNA of Greater Milford, Milford, MA
Home Care Notes and Billing Statements: 17 April 2002 through 24 March 2003

6. Whittier Rehabilitation Hospital, Westboro, MA
Hospital Records: 22 May 2002 through 22 August 2002

7. Healthcare Recoveries Billing Statements
09 January 2002 through 20 September 2002

8. Marcia Rhodes' Out of Pocket Medical Expenses and Insurance Statements
28 January 2002 through 31 March 2003

B. Home Evaluation: On 24 September 2003, Ms. Pollard met with the Rhodes family, and Margaret Anyanda (Marcia's PCA) at their home in Milford, MA, and completed a community integration questionnaire.

C. Daily Routine: A typical day for Marcia Rhodes is described as follows:

TIME	ACTIVITY
8:00 a.m. to 12:00 noon	Marcia wakes up and PCA or husband makes and brings breakfast and medications to her in her hospital bed. Her decubitus ulcers are checked and dressing re-dressed. She is transferred into her wheelchair with 2 people, a gate belt around her chest, and using a transfer board. She is pushed in her wheelchair into the bathroom, urine bag is emptied, and she is then again transferred onto the toilet. Does her own rectal digital stimulation and bowel program (takes up to 2 hours to complete). She is either transferred back to her wheelchair and then transferred into bed, or if taking a shower is transferred onto the shower seat. If she doesn't take a shower, she is assisted with a bed bath. Marcia is assisted with range of motion (ROM) exercises to her arms and legs.
12 noon to 1:00 p.m.	Marcia is assisted with dressing and eats lunch in bed, is given her medications. Dressings are changed.
1:00 p.m. to 3:30 p.m.	Is dressed and transferred into wheelchair. Will either be driven to a medical appointment in their van or: does needlepoint, painting, reads, works on computer, or watches TV from her wheelchair. Sometimes friends come to visit.
3:30 p.m. to 10:00 p.m.	PCA leaves at 4:00 p.m. urine bag is emptied for her and transferred back into bed. Does needlepoint, watches TV, uses laptop computer, talks on telephone, and chats with husband and daughter the remainder of afternoon. Continues with hobbies. Dinner is prepared and is eaten in bed. Usually 2 times a week they eat

	together as a family. Reports usually feeling most depressed nightly after dinner time. Medications are given, assisted with undressing. She is assisted with skin care. Urine bag is emptied, medications given to her. Starts to go to sleep around 10:00 p.m. Reports falling asleep between 11:00 p.m. and midnight. Wakes up by 8:00 a.m.

D. Current Medical & Functional Status: Mrs. Rhodes has home health aide/homemaker and skilled nursing services in the home. She is treating with a social worker and psychiatrist for mental health and psychotropic medication management issues. Her medical treatment is managed by an orthopedic surgeon, primary care physician, physiatrist, urologist, and a wound care center. Mrs. Rhodes is prescribed the following medications: Zyprexa, Wellbutrin, Cylert, Prozac, Valium, Percocet, Fosomax, Calcium, and multivitamin. Her medical supplies and durable medical equipment (DME) that are routinely used include: urinary and bladder supplies, would care supplies, transfer board, foot boots, reachers, Thermabands, a manual wheelchair and cushion, hospital bed, rental air mattress, emergency call system, and a handicapped conversion van. Mrs. Rhodes remains limited in her wheelchair safety and mobility due to resolving decubitus, resolving leg fractures, and her bipolar disorder and ADHD.

Her Functional Independence and Assessment Measure (FIM/FAM) was assessed during the onsite assessment. This standardized ordinal scale is the most widely accepted functional assessment measure used in rehabilitation. The FIM addresses dysfunction in activities that commonly occur with progressive, reversible or fixed neurological, musculoskeletal, and other disorders to assess the level of disability. The FAM emphasizes cognitive and psycho-social aspects of the disability. These items are applied in conjunction with the items of the FIM. The total combination 30 item scale is referred to as the FIM/FAM. Mrs. Rhodes currently presents with an overall FIM/FAM score of 4 = Minimal Assistance (subject performs 75% of tasks). When comparing this to her previous overall FIM/FAM score of 5 = Supervision and/or Set-up, at discharge from Whittier Rehabilitation Hospital (August 2002), a decrease in her overall functional independence level has occurred.

E. Systems Review: Marcia Rhodes is 5 feet 4 inches tall and weighs approximately 185 pounds.

1. Activity/Mobility: Mrs. Rhodes's wheelchair sitting time is only several hours a day due to medical complications. She has not yet been able to reach and maintain a 12 to 16 hour a day seating endurance time normally achieved at the T-12 SCI level. She does not drive and her community mobility is also limited. Most of her activities are in the home, from her hospital bed, and with the assistance of her PCA and family. Mrs. Rhodes is independent in using her manual wheelchair. Her physiatrist ordered a power wheelchair, which was delivered in late 2003. She requires assistance in all transfers.

2. Gastrointestinal: Mrs. Rhodes has a neurogenic bowel and is not taking routine stool softeners, laxatives or suppositories. She is not on a high fiber diet. It can take her up to two hours every day to have a bowel movement on the toilet with digital stimulation and manually removing stool from her rectum.

3. Genitourinary: Mrs. Rhodes has a neurogenic bladder and has recurring urinary tract infections (UTI) since her injury. She attempted self-intermittent catheterizations in the past but has gone back to an indwelling Foley catheter. Given her excessive weight and body type, recurring UTI's, and emotional profile, long term independent intermittent caths may not be feasible. Urology may recommend a suprapubic tube procedure to best manage her bladder program, long term.

4. Integumentary: Her skin integrity remains poor and she has had skin breakdowns to her ischium, knee, calf, sacrum, buttocks regions and foot since her injury. She uses a Pegasus mattress, had daily dressing changes, and is followed by a wound care center as part of her current skin care program. She is able to perform skin pressure reliefs while in and out of bed independently. The current process of performing all transfers with a sliding board will continue to have a shearing effect on her already compromised skin. She would benefit from alternative transfer technique training and durable medical equipment.

5. Mental Health: Mrs. Rhodes is on numerous medications for her Bipolar disorder and ADHD. She takes Valium and Percocet. Her impaired coping abilities and disability related adjustment issues warrant long term interventions to reduce negative effects on her overall health maintenance and to keep her family unit (support system) intact.

6. Musculo-Skeletal: She is assisted with daily ROM exercise at home and attends swimming with her PCA, when her skin is intact. Mrs. Rhodes did not go through the SCI Models System Rehab program at Boston Medical Center for her acute inpatient rehab program. She has not been able to consistently attend and maximize her strength, endurance and functional independence levels through outpatient therapies due to recurring medical complications and fluctuations in her mental health status.

7. Neurological: Mrs. Rhodes severed her spinal cord at the T-12 level. The American Spinal Cord Injury Association (ASIA) provides standards for neurological and functional classification of spinal cord injury. This impairment scale using alpha A-E is used to categorize injury types into specific categories and it also has five classifications of Clinical Syndromes for injuries that do not meet ASIA A-E criteria. Her ASIA Impairment Scale is ASIA A = Complete. No motor or sensory function is preserved in the sacral segments S4-S5.

F. Nursing Diagnoses: The North American Nursing Diagnosis Association's definition of a nursing diagnosis encompasses a clinical judgment about an individual, family, or community response to actual or potential problems/life processes which provides the basis for definitive therapy toward achievement of outcomes. Nursing diagnoses are integrated into nursing process and includes the etiology of the condition when known. This provides the basis for prescriptions for definitive therapy that is derived through a deliberate, systematic process of data collection and analysis. The following nursing diagnostic categories describe actual medical problems, potential risks and complications specific to Marcia Rhodes and are referenced in the Cost Tables attached hereto as Exhibits A-C.

DIAGNOSES	DEFINING CHARACTERISTICS & OR ETIOLOGY
1. Risk for Infection	Presence of increased risk for invasion of pathogenic organisms (e.g. respiratory, urinary tract, skin).
2. Risk of Injury	Presence of risk factors for bodily injury due to paralysis from SCI.
3. Altered Protection	Decreased ability to guard self from internal or external threats such as illness. Impaired healing, neurosensory alterations, immobility.
4. Reactive Depression	Expressions of hopelessness, perceived powerlessness, significant personal loss.
5. Impaired Skin Integrity	Altered circulation, metabolic state, alterations in skin turgor (elasticity), altered nutritional state (obesity).
6. Health-Management Deficit	Report and observation of inability to manage treatment due to: SCI knowledge deficit, depression, impaired mobility, activity intolerance.
7. Bowel Incontinence	Change in bowel habits characterized by involuntary passage of stool. Inability to recognize the urge to defecate.
8. Urinary Retention	Incomplete emptying of the bladder. Bladder distention, residual urine (100 ml or more) when catheterized. Inhibition of reflex arc.
9. Impaired Physical Mobility	Decreased muscle control, strength or mass. Requires help from another person and equipment or device.
10. Impaired Transfer Ability	Limitation of independent body movement between two nearby surfaces. Requires help from another person and equipment or device.
11. Risk for Joint Contracture	Presence of risk factors for shortening of tendons at moveable joints. Loss of voluntary postural muscle control.
12. Ineffective Management of Therapeutic Regimen	Reports and observations that specific rehabilitation goals are not met. Actions not taken to include rehabilitation treatment regimens in daily routines.
13. Self-Bathing Hygiene Deficit	Impaired ability to complete bathing and hygiene activities. Requires help from another person and equipment or device.
14. Self-Dressing Grooming Deficit	Impaired ability to complete dressing and grooming activities. Inability to put on and take off lower body clothing. Requires help from another person and equipment or device.
15. Self-Toileting Deficit	Impaired ability to perform or complete toileting activities. Unable to carry out proper toilet hygiene, rise from toilet. Transfer deficit, decreased activity tolerance, strength, and/or endurance, uncompensated neuromuscular and musculoskeletal impairments, environmental barriers. Requires help from another person and equipment or device.
16. Impaired	Impaired ability to operate a manual wheelchair on uneven surfaces, on

DIAGNOSES	DEFINING CHARACTERISTICS & OR ETIOLOGY
Wheelchair Mobility	an incline/decline, and on curbs.
17. Impaired Home Maintenance Management	Inability to independently maintain a safe, growth-promoting immediate environment. Lack of necessary equipment, aids, insufficient finances, unfamiliarity of resources, SCI knowledge deficit, and lack of SCI role models.
18. Sleep-Pattern Disturbance	Disruption of sleep time and quality; causing discomfort or interference with desired life activities. Verbal complaints of not feeling well rested and difficulty falling asleep. Physical discomfort, daytime boredom, inactivity, anxiety.
19. Fatigue	Insufficient energy to maintain usual routine (physical activity, required tasks, decreased work performance). Increase in rest requirements, poor physical conditioning.
20. Impaired Social Interaction	Insufficient or excessive quality of social exchange. Self-concept disturbance, limited physical mobility, environmental barriers.
21. Altered Nutrition: More Than Body Requirements	Weight 10% to 20% over ideal for height and frame (overweight). Eating in response to external cues (institutional setting meal pattern), eating in response to internal cues other than hunger (anxiety, depression), sedentary activity level (relative to caloric intake).
22. Knowledge Deficit	Reports inadequate knowledge, unfamiliarity with information resources.

G. Future Care & Cost Tables: Mrs. Rhodes' future care needs and costs will vary at different time intervals during her remaining life expectancy. This report's table appendices represent Future Annual Costs (Exhibit A), Episodic Costs (Exhibit B), and Potential Complications and Associated Risks (Exhibit C), as they relate to Mrs. Rhodes' diagnosis and disability. These anticipated future costs do not reflect growth trends which will need to be determined by an Economist. The National Center for Health Statistics Report publishes current life tables for white females in the United States, which is attached hereto as Exhibit D. The plaintiffs consulted with Dr. Michael DeVivo at the National Spinal Cord Injury Statistical Center at University of Alabama at Birmingham to develop an estimate of Mrs. Rhodes' life expectancy, and his analysis is attached hereto as Exhibit E. The Spinal Cord Injury Models Systems life expectancy table encompasses published data on ASIA A-D categories of neurological impairment.

H. Future Annual Costs: Exhibit A tables represent goods and services that are anticipated to be required on a routine basis, every year, throughout Marcia Rhodes' life expectancy.

I. Episodic Costs: Exhibit B tables represent goods and services that are anticipated to be required on a periodic basis throughout Marcia Rhodes' life expectancy.

J. Potential Complications & Associated Risks: Exhibit C tables refer to itemized potential complications and associated risks that Marcia Rhodes is anticipated to experience in the future. Published long term medical complications from the regional model systems that relate to Mrs. Rhodes' level of SCI include: pneumonia/atelectasis, DVT, pressure ulcers, fractures, and renal calculi. Other complications may include: osteoporosis, heterotopic ossification, cardiovascular disease, kidney reflux, and depression. Mrs. Rhodes is 24 months post-injury and has already been diagnosed and treated for DVT's, osteoporosis, fractures, pressure ulcers, and depression.

K. Summary: Marcia Rhodes sustained a spinal cord injury two years ago that resulted in Paraplegia. Her lack of further rehabilitation improvement and disability related depression is in part contributed by her limited spinal cord injury rehabilitation involvement, absence of community resources/supports, the bipolar disorder and ADHD. Marcia Rhodes presents with problem solving and SCI knowledge deficits. She would benefit from participating in a short term rehab admission at the Boston Medical Center SCI Model Systems Program, and by having her SCI medical follow-up and evaluations done there. She, her family and PCA would all benefit from going through the SCI education and training series, and be connected with services and resources that include: a peer mentor program, her community Independent Living Center, the Boston SCI Chapter, leisure/recreational activities and events, and vocational rehabilitation.

Her low community integration (9) demonstrates she remains socially isolated from the community and remains at high risk for increased depression and dependence on others. Mrs. Rhodes continues to experience medical complications related to her SCI that further impact her functioning and coping skills. Her functional independence levels have decreased (4) instead of increased since last year's rehab discharge (5) to home. Published data from the 18 SCI Model Systems National database indicate: by inpatient rehabilitation discharge, 80% to 90% of the cases average 6 to 7 (independent or modified independence) and at year one 89% to 97% of cases were rated independent. Mrs. Rhodes may be receptive to initially working on these issues with a disabled peer and/or mentor program. She would also benefit from having a nurse case management experienced in spinal cord injury to coordinate needed services, implement her life care plan, and make revisions as needed. The recommended multi-disciplinary approach outlined in this LCP identifies the lifetime needs and resources for Marcia Rhodes to become productive, maintain an optimal level of health, social well being, and community reintegration.

In addition to the previously-mentioned exhibits, the community integration questionnaire for Mrs. Rhodes is attached hereto as Exhibit F, and other resources relied upon by Ms. Pollard are listed in Exhibit G.

8. Dana Hewins, PhD. Dr. Hewins is an economist with thirty years of academic and consulting experience. He specializes in the areas of labor economics, health care economics, and forensic economics. He received his education at Tufts University (Bachelor of Arts, 1968), the University of Chicago (CIC Traveling Scholar), 1970-1971, the University of Illinois (Master of Arts, 1970; Doctor of Philosophy in Economics, 1975), and Harvard University (postdoctoral study, 1982-1984). From 1973-1982, Dr. Hewins taught at Ohio University, and was a Visiting Professor at Tufts University in 1983, and a member of the Economics Department at Regis College from 1982-2002, serving as Chair of the department for many years.

Dr. Hewins has also served as an economic consultant to many organizations and institutions, including the Ohio Supreme Court, the Appalachian Regional Commission, and the Area Six Health Systems Agency. His research on a variety of topics has been published in periodicals such as the *American Bar Association Journal, Economic Inquiry, the Review of Social Economy, the I.C.C. Practitioner's Journal,* the *Quarterly Review of Economics and Business,* and the *Massachusetts Lawyer's Weekly.*

Dr. Hewins evaluated two components of the economic loss sustained by Marcia Rhodes as a result of injuries she incurred in an accident on January 9, 2002. These components were (1) the economic value of lost household services and (2) the future costs of medical and personal care. Dr. Hewins calculated the present values of economic losses based on data from both public and private sources, including the life care plan prepared by Adele Pollard of Case Management Associates, Inc.

A. Lost Household Services.

Cornell University, in co-operation with the U.S. Department of Agriculture, produced a series of three studies of household services, which were published in 1973, 1980 1992, respectively. After reviewing the Cornell data, as well as a recent survey of other published studies (Martin and Vavoulis, 2002, ch. 5), Dr. Hewins determined that Ms. Rhodes would have probably devoted an average of *at least* 4 hours per day to household services, had she not been injured.

Dr. Hewins also reviewed wage data for occupations such as cooks, food preparation and service workers, laundry workers, maids and housekeeping cleaners, including data compiled by the Massachusetts Division of Employment and Training and published in its *Massachusetts Occupational Wage Statistics* series. After reviewing these wage data for the Southern Worcester Service Delivery Area (an area which includes Ms. Rhodes' hometown of Milford), Dr. Hewins determined, all things considered, that a 2002 wage rate of $8.00 per hour would be reasonable for evaluating the lost household services of Marcia Rhodes.

B. Economic Analysis.

The economic value of Marcia Rhodes' lost household services was projected from January 9, 2002, to age 75, or for a period of 28.45 years. Dr. Hewins assumed that she would have devoted an average of at least 4 hours per day to household services. Given a market wage rate of $8.00 per hour, this yields a base-year (2002) annual value of household services of $11,680. It was further assumed that the market value of these household services would increase in the future at the real long-term growth rate of 1 percent, a rate approximately equal to the average annual real rate of increase in the compensation of the average American worker over the past several decades according to data published in the most recent (2003) *Economic Report of the President* (Table B-50). Given these parameters, and using a real nontaxable discount rate of 1.9 percent, the present value of Marcia Rhodes' lost household services was determined to be $292,379 as of July 12, 2002, the date of filing of the complaint. The date of filing was used for all present value purposes in accordance with *Griffin v. General Motors*, 380 Mass. 362.

Using real discount rates in tandem with real growth rates eliminates the need to forecast future inflation rates and is the standard methodology employed by economists to determine the present

values of future economic losses. All projected lost household services and future medical and personal care expenses were reduced to present value by using a *nontaxable* discount rate of 1.9 percent, a rate approximately equal to the average annual "real" (i.e., inflation-adjusted) yield on high-grade municipal bonds for the past 30 years. The 1.9 percent real discount rate is well within the 1 to 30 percent range with the U.S. Supreme Court found to be reasonable in *Jones & Laughlin Steel Corporation v. Pfeiffer*, 103 S.Ct. 2541 (1983).

C. Future Medical and Personal Care Expenses.

The life care plan prepared by Adele Pollard indicates that Marcia Rhodes will require various products and services in the future as a result of her medical condition. These future costs of care have been sub-divided into "Annual Costs" (Exhibit A), "Episodic Costs" (Exhibit B), and "Potential Complications and Associated Risks" (Exhibit C). For each of the relevant expense components, Ms. Pollard provided information concerning the expected duration, frequency, and current costs of the various products and services. Whenever Ms. Pollard provided ranges for her frequency or current cost estimates, Dr. Hewins used the midpoints of her ranges.

In calculating present values, each item of future medical and personal care expense was considered separately. The first step in evaluating each cost component was to select a reasonable future growth rate. These growth rates were determined on the basis of extensive research into the historical rates of increase in medical and personal care costs, as well as an examination of the best available forecasts of future cost increases. Among the sources consulted were:

U.S. Department of Commerce, *Statistical Abstract of the United States, 2002*, U.S. Government Printing Office, 2003

U.S. Department of Health and Human Services, *Health, United States: 2002*, U.S. Government Printing Office, 2002

U.S. Department of Labor, *Occupational Outlook* Handbook, 2002-03 edition, U.S. Government Printing Office, 2002

Assorted articles from various issues of the *Health Care Financing Review, Health Affairs, Medical Economics*, and *Medical Benefits*

The real (inflation-adjusted) growth rates ultimately selected were as follows:

Category	Real Growth Rate
Physician services	1.5
Skilled nursing care	2.0
PCA/homemaker services	1.0
Other professional services	1.0
Prescription medications	2.5
Medical tests	1.0

Equipment and supplies	0.0
Nonmedical goods	0.0
Nonmedical services	0.0

Having established appropriate growth rates, and given the cost tables (Exhibits A-C) furnished by Ms. Pollard, Dr. Hewins then projected each category of expense from December 1, 2003, to the appropriate endpoint. For many goods and services, the appropriate endpoint was the end of Ms. Rhodes' expected lifetime. According to the most recent (2000) life expectancy tables published by the U.S. Department of Health and Human Services, National Center for Health Statistics, a 48-year-old white female has 33.8 years of expected life remaining.

For comparison purposes, a second projection of future costs was also performed here, one that employed a remaining life expectancy of 23.8 years. This 23.8-year figure was derived from Dr. Michael J. DeVivo's report of April 30, 2003, which was completed as part of the life care plan and is attached hereto as Exhibit E. In his report, Dr. DeVivo, Professor and Director of the National Spinal Cord Injury Statistical Center in Birmingham, Alabama, estimated that Marcia Rhodes had a remaining life expectancy of 24.4 years as of the date of his report. To allow for the time that has elapsed since the date of Dr. DeVivo's report, the 24.4-year life expectancy figure was reduced to 23.8 years for purposes of this evaluation.

Exhibit C lists potential complications that Mrs. Rhodes will likely suffer. The frequencies are identified but the exact timing (year of expected occurrence) is not given due to uncertainty. For these particular items, Dr. Hewins used the so-called "offset method" for computing the present values. Using this method, the growth rate is simply assumed to equal the discount rate, so that the two rates offset or cancel each other. This means that the present value is simply equal to the current cost, regardless of when the services are needed. It is Dr. Hewins' opinion that the offset method will provide a reasonable estimate of present values if the growth rate is expected to be similar to the discount rate, as has historically been the case for hospital/physician expenses.

All other categories of expense were projected into the future, using the appropriate growth rate, and then discounted to present value. Given this methodology and these parameters, and employing a real nontaxable discount rate of 1.9 percent, the combined present value of Marcia Rhodes' future medical and personal care expenses was determined to be $1,814,704 when Ms. Rhodes' remaining life expectancy was assumed to equal 23.8 years, and $2,373,781 when a 33.8-year life expectancy was employed. Both of these present values were calculated as of July 12, 2002, the date of filing.

Dr. Hewins reserves the right to alter or refine his opinions should additional information

become available. If he does so, these answers will be supplemented in a timely fashion. He relied on the sources listed in Exhibit H in forming his opinions.

Respectfully submitted,

MARCIA RHODES, HAROLD RHODES and HAROLD RHODES ON BEHALF OF HIS MINOR CHILD AND NEXT FRIEND, REBECCA RHODES,

By their attorneys,

M. Frederick Pritzker, Esq. (BBO#406940)
Margaret M. Pinkham, Esq. (BBO#561920)
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CERTIFICATE OF SERVICE

I, Margaret M. Pinkham, counsel for plaintiffs, hereby certify that I have, this 5th day of February, 2004, served a copy of the foregoing Plaintiff Marcia Rhodes' Answers to Expert Interrogatories in the manner indicated below:

By First Class Mail
Michael Smith, Esq.
Morrison, Mahoney & Miller
250 Summer Street
Boston, MA

By First Class Mail
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