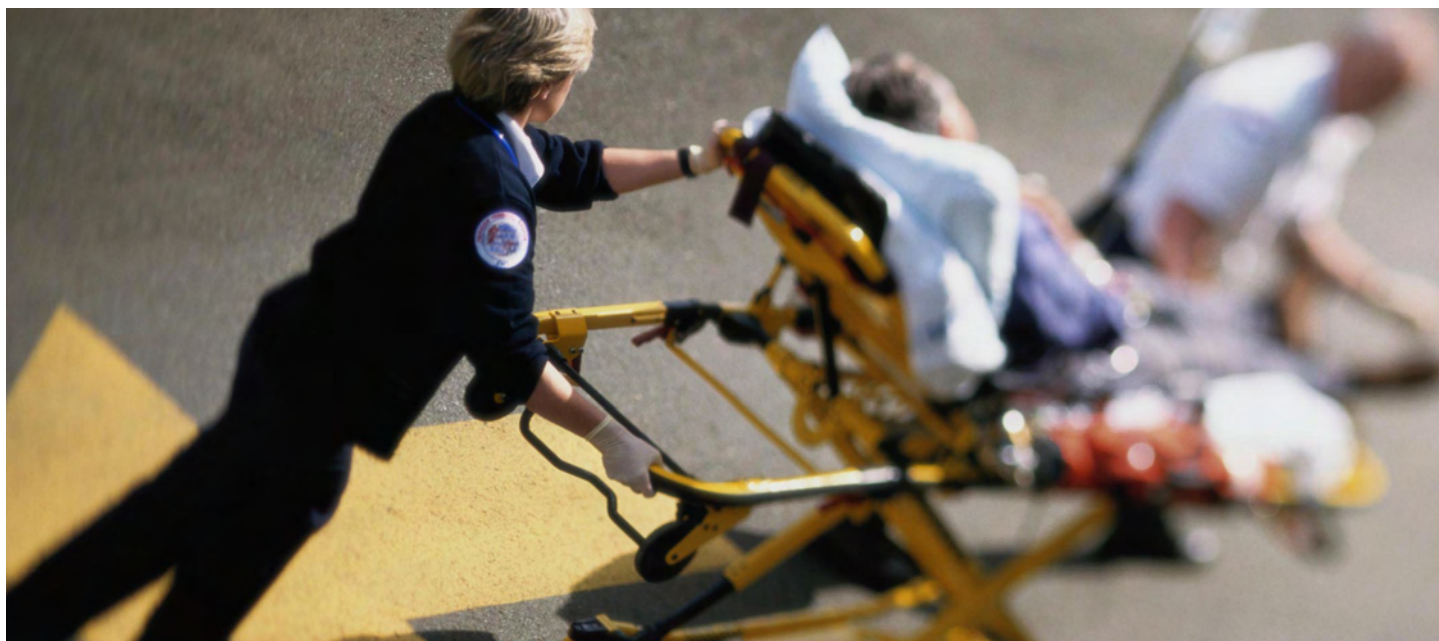


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## Hypothermic Treatment for Out-of-Hospital Cardiac Arrest

By Dr. Gregory A. Helmer



As an interventional cardiologist, one of the most frustrating parts of my job is having a patient rushed to my table after surviving an out-of-hospital cardiac arrest from a heart attack and subsequently never awoken. The cardiac team has gotten incredibly fast and efficient in getting the heart attack victim from the outside via an ambulance, resuscitated, and placed upon my table as the electrocardiograms are sent via blue tooth technology to the emergency room and the heart catheterization lab staff may be in and set up before the patient even arrives to the hospital. The percutaneous route of opening up the artery with equipment of advanced catheters, atherectomy devices, stents, and filters allows for very efficient and effective restoration of coronary flow and most of the time near full recovery of heart function. We all look at each other proud and thump on our chest at how well we've all done, however too often the patient has permanent neurological damage and may never awaken. ▶

## HYPOTHERMIC TREATMENT

(Continued from page 1)

Cardiac arrest outside the hospital is a major cause of unexpected death in the United States with survival rates estimated between 5-35 percent.<sup>1,2</sup> Permanent brain injury is a major cause of morbidity and mortality following cardiac arrest. The majority of patients who are resuscitated following a cardiac arrest do not awaken. Too often the current mode of treatment for neurological recovery following an out-of-hospital cardiac arrest is largely supportive. Anoxia and hypo-perfusion of brain tissue may persist for hours following resuscitation.<sup>3</sup> Therefore, the use of induced mild hypothermia has been proposed as a treatment option for cardiac arrest victims. Similar to cardioplegia during cardiac surgery – used to decrease metabolic requirements – hypothermia may decrease cerebral oxygen demand and thereby limit neurological damage. After a cardiac arrest with a lack of cerebral perfusion for more than five minutes, the generation of oxygen free radicals created after re-perfusion sets off reactions that result in more extensive brain injury.<sup>4</sup>

Several animal studies have shown that moderate-mild hypothermia (32-34 degrees Celsius or 89-93 degrees Fahrenheit) decreases brain damage after cardiac arrest.<sup>5</sup> All of the exact mechanisms are unclear but many theories have been postulated including retardation of destructive enzymatic pathways, suppression of oxygen free radicals, protection of lipoprotein membranes, reduction of oxygen demand and a decrease in intracellular acidosis. These reactions can lead to mitochondrial damage and programmed cell death or apoptosis. Hypothermia reduces the cerebral metabolic rate for oxygen by six percent for every one percent reduction in brain temperature.<sup>6</sup> It also appears that hypothermia decreases intracranial pressure which is often raised in patients after survival of cardiac arrest. Regardless of the mechanisms involved, multiple studies in humans have now demonstrated

improved neurological recovery when survivors of out-of-hospital cardiac arrest are treated with mild hypothermia.<sup>7,8</sup>

Multiple different techniques for inducing mild hypothermia have been shown to be effective. Ideally, cooling begins in the field as paramedics apply ice packs in the ambulance. Patients receive sedation, mechanical ventilation, and paralysis to prevent shivering. Patients are then cooled typically by an external cooling blanket, iced saline, or more recently endovascular catheter assisted devices. The external cooling

blanket consists of a mattress with a cover that delivers cold air over the entire body.

Alternatively, hypothermia has been achieved with two liters of cold (four degree Celsius), normal saline during 20-30 minutes into a peripheral vein with a high pressure bag. Core temperature is monitored with a bladder thermometer or pulmonary intra vascular catheter.

Hypothermia is then maintained for 12 to 24 hours. The patient may then be actively re-warmed over the next six hours by external warming with a heated blanket. Mild electrolyte changes have been observed such as fluctuations in potassium and glucose. Although systemic vascular resistance is increased and pulse rate is decreased, no significant arrhythmias were associated

with hypothermia. Also, interestingly, myocardial infarct size was not affected. There has been a consistent benefit noted allowing for a discharge to home at a significantly higher rate when treated with hypothermia (49 percent vs. 20 percent).<sup>9</sup> It is also interesting to note that for each additional 1.5 minutes in the time from collapse to return to spontaneous circulation, there was a 14 percent decrease in likelihood of a good outcome. Patients excluded in these findings include those with persistent hypotension, systemic infection, unstable rhythm, bleeding diathesis and recent major surgery. However, a recent trial suggested that even hemodynamically unstable patients may benefit from ▶

### Several animal studies have shown that moderate-mild hypothermia (32-34 degrees Celsius) decreases brain damage after cardiac arrest.



## HYPOTHERMIC TREATMENT

(Continued from page 2)

hypothermia. Evidence from the current trials suggest that treatment with hypothermia for cardiac arrest patients presenting with coma may save one life for every seven patients treated. Recently the American Heart Association (AHA) made treatment of this group of patients a class 2A recommendation.

Even with today's technological advances, out-of-hospital cardiac arrest has a dismal outcome. Post resuscitative mild hypothermia for cardiac arrest patients lowers mortality, reduces neurological impairment, and is recommended by the international Liason Committee on Resuscitation. It is ideal for those patients found within six hours of a ventricular fibrillation cardiac arrest in a state of neurological coma. Further research still must be conducted to determine if other types of comatose patients may also benefit. A recent trial of 109 comatose patients found that those in shock also benefited, while those patients in whom cardiac arrest was not due to ventricular fibrillation had no benefit.<sup>10</sup> Still further work needs to be done to determine if there is an optimal temperature, duration, and methodology to cooling. Most importantly, data also indicates that physician utilization of this technique remains low despite its impressive clinical benefit

**Evidence from the current trials suggest that treatment with hypothermia for cardiac arrest patients presenting with coma may save one life for every seven patients treated.**



and low cost of implementation.<sup>11</sup> A recent survey found 74 percent of physicians caring for resuscitated cardiac arrest patients had never used therapeutic hypothermia.<sup>11</sup> Reasons cited for not using this technology included “not enough data,” “not part of advanced cardiac life support guidelines,” and “too technically difficult to use.” All of these reasons appear inappropriate and seem to be based on lack of physician knowledge, given what is currently known. Health care systems and emergency medical services need to be fully trained and aware of this therapy. It behooves all of us, medical providers as well as health care systems to come up with a more systematic approach to the care of this most critically ill patient. 🩺



**Dr. Gregory A. Helmer** is Chief of Cardiovascular Services at Fairview Southdale Hospital and Executive Committee Member for the Minnesota Heart Clinic, both in Edina, Minnesota. He is board certified in both internal medicine and cardiovascular diseases. Dr. Helmer has received specialized training in non-invasive and invasive cardiology and is actively involved in cardiovascular research. He advises on the care and treatment of cardiovascular disease for ROSE Program clients.

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## REINSURANCE



# A New Case Management Benchmark Survey By Kathy Thiesen

**THANK YOU FOR YOUR RESPONSE!** As a follow up to the 2005 and 2007 ING Reinsurance (ING) Medical Case Management Benchmark surveys, ING asked for feedback from past benchmark participants and survey invitees to gather information on the perceived value and impact of the benchmark survey. Thanks to your feedback and continued interest in our efforts, we made changes.

The survey remains a comprehensive measure of medical case management operations. Although our objectives and format for this survey have remained the same, we added new metrics for the 2008 benchmark survey with the goal of adding simplicity and value for respondents.

## Objectives:

- Develop measurement standards for the managed care industry regarding medical case management operations.
- Determine baseline information on practices for calculating financial returns as a result of case management involvement.
- Present summary data in a way that allows health plans to compare themselves against the participant group as a whole, and to similar companies in the industry to determine their performance with case management operations among peer organizations.

## Enhancements for 2008:

Participant feedback provided a strong basis for our directive to continue to go forward with this resource. Annual participation was seen by our participants as a good way to stay on top of market trends, and progression of case management benchmark data.

Through the assistance and feedback of our Steering Committee members, enhancements and improvements have been made to the data collection tool from previous versions. The following will be collected for this year's benchmark survey.

## Benchmark Measures:

- Relationship between case management, disease management and utilization review
- Case Management staffing and responsibilities
- Accreditation and certification
- Collaboration and responsibilities of Medical Director

- Case Manager compensation and reimbursement for professional fees
- Caseloads and stratification
- Measures of cost effectiveness – outcome measures, ROI

In addition to the individual benchmark items, the summary of the survey data will be analyzed to show the impact of case management practices to overall outcomes – for example, what practices were evident in health plans with higher ROIs? How did caseload size affect other areas of operation and outcomes? How much did location, size, or membership of the health plan affect the practice of case management?

## Why should your organization participate?

- Participation in this industry survey is *free of charge*. Comprehensive assessment of the case management market is available to you – and the only requirement is your participation.
- The survey requests *operational data*. You will be asked to provide data that relates directly to your case management operations. The survey summary will include aggregated data – and segmented by company size, location, and primary membership group.
- *Confidentiality* of your submission is our priority! ING has retained the services of an independent survey consulting firm to receive and aggregate the data. No participating company will be connected to their individual responses in the final summary.
- Annual survey participation will allow health plans to track benchmarks along a *continuum*, and use the information toward performance improvement measures that communicate priorities, support decisions, and guide quality care.

## Open Invitation:

Participation in the Medical Case Management Benchmark survey is open to all interested Managed Care and Excess Medical Health Plan organizations. Invitations for this survey will be sent May 1, 2008. For more information on the benchmark survey – please contact your ROSE Health Services Consultant, at 1-800-767-3509 – or [kathleen.thiesen@us.ing.com](mailto:kathleen.thiesen@us.ing.com) 📧



**Kathy Thiesen, RN,** Senior Market Research Analyst, has been with ING Reinsurance since 2000 and has more than 10 years of insurance industry experience.

# Supplemental Security Income as a Benefit for Individuals and Medicaid Managed Care Organizations

By Allison Born

**Your Medicaid members with disabling conditions, whether physical or psychological, are prone to be greater consumers of healthcare. Although many of your members may be eligible for Supplemental Security Income (SSI), the difficulty of navigating the application process and the likelihood of denial prevent those eligible for disability from pursuing the benefits they need. By providing your members with expert, empathetic advocates that help the member secure SSI benefits, you are offsetting the financial impact of supporting disabled members, while offering an important social service that fosters positive relationships between the member and plan. While your plan is capitated at a significantly higher rate, you also increase plan loyalty by providing your members a free service that grants them access to monthly income to meet their basic needs.**



SSI is a federal program administered by the Social Security Administration (SSA) that provides monthly cash benefits to disabled individuals who have limited income and resources. The applicant must meet both economic and medical criteria in order to qualify for the program. The SSA considers a member to be disabled if he or she has “marked and severe functional limitations” that are expected to last a year or longer, or result in death. Social Security provides SSI benefits to people who have conditions serious enough to significantly impede their ability to function, and in the case of adults, work.

There are many conditions that Social Security considers disabling. The SSA separates criteria for adults and children, and defines “functional limitation” differently based on the age of the member. An adult’s disability must prevent him or her from performing any “substantial” work, while a child’s disability must significantly impede his or her ability to function as other children of the same age. All of the disability listings are outlined in the Blue Book, and are separated into adult and childhood listings: (<http://www.ssa.gov/disability/professionals/bluebook/general-info.htm>). In addition to a member’s condition meeting the Blue Book listings, the member must have explored various treatment options, as Disability Determination Services (DDS) will not medically approve a claim unless it can be demonstrated that a condition persists even when it is being treated, and that it will continue for twelve months or longer.

The Kaiser Family Foundation has estimated that 12 percent of the total Medicaid managed care enrollment is disabled; there are most likely many of your members that could qualify medically and economically for SSI ▶

**SUPPLEMENTAL SECURITY INCOME**

(Continued from page 5)

but have not done so. There are many factors that prevent SSI-eligible members from accessing the disability benefits for which they qualify. The SSI application process is complicated, and more than two-thirds of initial claims are denied. Facing medical problems is difficult enough; a member does not always have the energy, time, or willingness to complete the necessary paperwork, meet deadlines, follow up with doctors, or communicate with DDS. It is in these situations that having an advocate can mean the difference between an approval and a denial. An advocate has experience navigating the application process, is knowledgeable about its requirements, and has a network of contacts from the SSA and DDS.

Approved disability claims help ensure that the costs associated with supporting disabled members do not cause financial hardship to Medicaid MCOs. For example, in Washington state, newborns who become SSI eligible within a 60-day time frame are automatically shifted to fee-for-service coverage, and the Medicaid plans recoup all expenditures back to date of birth. Consequently, the cost-savings implications of SSI advocacy is extraordinary. Although the Washington fee-for-service model is unique, significant cost-savings are available to plans in every state. Remarkable increases in capitation occur when a member becomes SSI eligible. Capitation is the

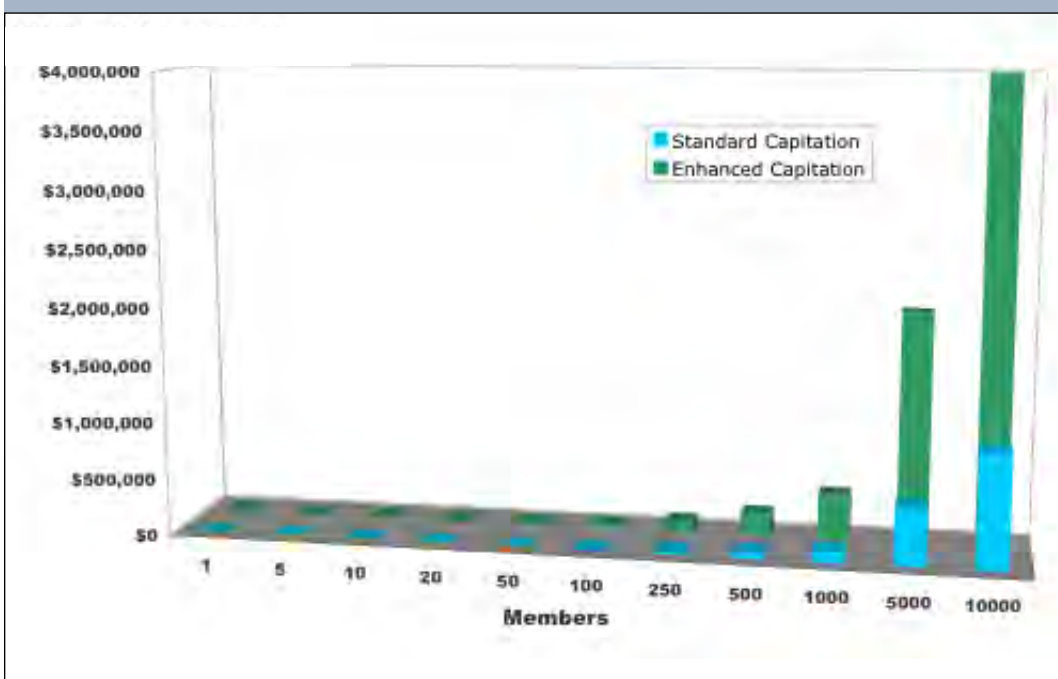
fixed payment a Medicaid MCO is paid to provide coverage for an enrolled member. Chart A illustrates capitation and the striking revenue enhancements that occur when members are shifted to SSI-capitation. For illustrative purposes, \$100 represents a standard capitation rate, and \$400 as the Aged/Blind/Disabled rate.

**CHART A:**

MEMBERS	STD. RATE	ABD RATE	STD. RATE	ABD RATE
1	\$100	\$100	\$400	\$400
5	\$100	\$500	\$400	\$2,000
10	\$100	\$1,000	\$400	\$4,000
20	\$100	\$2,000	\$400	\$8,000
50	\$100	\$5,000	\$400	\$20,000
100	\$100	\$10,000	\$400	\$40,000
250	\$100	\$25,000	\$400	\$100,000
500	\$100	\$50,000	\$400	\$200,000
1000	\$100	\$100,000	\$400	\$400,000
5000	\$100	\$500,000	\$400	\$2,000,000
10000	\$100	\$1,000,000	\$400	\$4,000,000

Members with disabling conditions will likely be greater consumers of healthcare, which is the primer for entitlement programs like fee-for-service Medicaid and Medicare. It can be a great opportunity for health plans to shift risk appropriately, while at the same time offering members and their families benefits beyond healthcare coverage (disability income). 🧡

**CAPITATION ENHANCEMENT**



*Allison Born is Project Manager in charge of health plan implementation at Disability Outreach, a company that works with Medicaid MCOs to transition members to the SSI category of eligibility.*



## Please mark your calendars for the... 24th Annual ROSE® Seminar

September 10–12, 2008 • Marriott City Center • Minneapolis, Minnesota

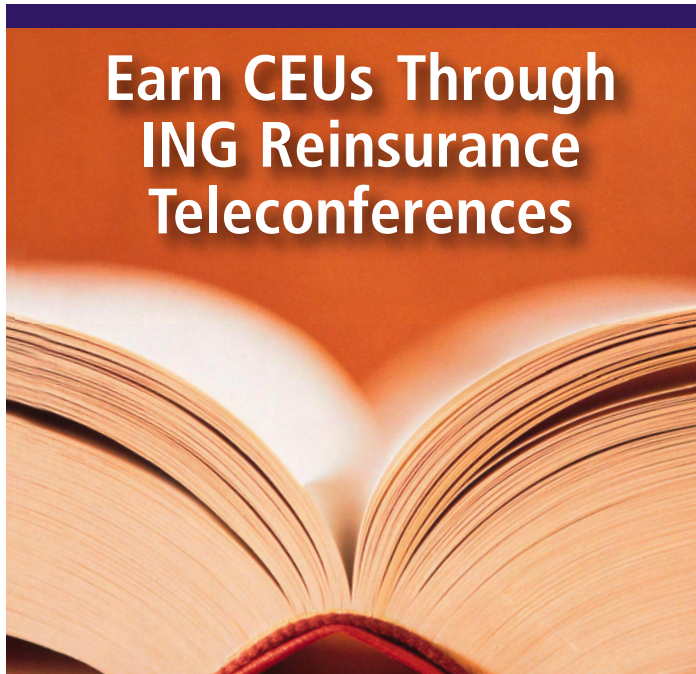
We are excited about the plans that are underway for this year's Seminar. The Seminar will feature a variety of topics for medical management and claims management professionals.

The ROSE Seminar is complimentary, by invitation only, for ING Reinsurance clients. Please share this reminder with your co-workers who may be interested in attending and bring them along to the Seminar.

Please watch for registration materials in the coming months.  
We look forward to seeing you in Minneapolis this Fall! 🌹

## Upcoming Conferences and Educational Programs of Interest

TPA/MGU/Excess Insurer Executive Forum (SIAA) <a href="http://www.siaa.org">www.siaa.org</a>	Hilton Head, SC	April 9–11, 2008
9th Annual: Management of Transplantation & Other Complex Medical Conditions Email: <a href="mailto:education@optumhealth.com">education@optumhealth.com</a> <a href="http://www.urnweb.com">www.urnweb.com</a>	Boston, MA	April 29–May 2, 2008
Spring Managed Care Forum <a href="http://www.aamcn.org">www.aamcn.org</a>	Atlanta, GA	May 1–2, 2008
The Disease Management Colloquium <a href="http://www.dmconferences.com">www.dmconferences.com</a>	Philadelphia, PA	May 19–21, 2008
America's Health Insurance Plans (AHIP) Annual Conference <a href="http://www.ahip.com">www.ahip.com</a>	San Francisco, CA	June 18–20, 2008
Case Management Society of America <a href="http://www.cmsa.org">www.cmsa.org</a>	Denver, CO	June 19–23, 2008
CCMI Associates ( <i>Multiple dates and location</i> ) Case Management Certification Preparation <a href="mailto:ccmi@lowery.mv.com">ccmi@lowery.mv.com</a>	Lansing, MI Orlando (CMSA) Boston	April 11–12, 2008 June 16–17, 2008 August 15–16, 2008
2008 AWHONN Convention <a href="http://www.awhonn.org">www.awhonn.org</a>	Los Angeles, CA	June 21–25, 2008



# Earn CEUs Through ING Reinsurance Teleconferences

ING Reinsurance ROSE® Program offers nursing and CCM continuing education credits at no charge to our clients. This program has been well received by ING clients. The ROSE program is listening to our clients and has planned for a variety of topics for the New Year.

Here is a listing of 2008 teleconference topics:

DATE	TOPIC	SPEAKER
April 24, 2008	Breast Cancer	Colleen Merrell, RN, BSN, OCN
June 2008	Claims Management	Stacy Borans, M.D.
August 2008	Infectious Disease	Dan Nafziger, M.D.
October 8, 2008	UR vs CM	Sherry Aliotta, RN
December 10, 2008	Healing and Humor	Candis Fancher, M.S. CCC

Watch for future email notifications for specific dates and registration information. For future topic suggestions please contact your Health Services Consultant via email or phone at 1.800.767.3509. 📧📞

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The purpose of the ROSE Resource newsletter is to provide clients of ING Reinsurance with information on a wide variety of topics related to catastrophic medical case management. Case histories, facility highlights and similar articles are intended to serve general information purpose and do not constitute endorsements of facilities, programs or persons by ING Reinsurance. The information contained in the articles represents the opinion of the authors and does not necessarily imply or represent the position of the editors or ING Reinsurance. Articles are not intended to provide legal, consulting or any other form of advice. Any legal or other questions you have regarding your business should be referred to your attorney or other appropriate advisor.  
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