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Welcome to the third issue of the IAAHS Online Journal.

The International Actuarial Association Health Section (IAAHS) was created by the IAA on May 17, 2003, following two years of preparations and the success of the 1st International Health Seminar in Cancun in March 2002. The IAAHS promotes and facilitates international exchange of views, advice, research and practical information among actuaries involved with public and private health issues such as policy and program design, research and planning, adequacy and services delivery, sustainability, insurance, pre-funding and other financing methods. The IAAHS is managed by the IAAHS Committee, according to the IAAHS Rules. Since then we had a very successful 2nd International Health Colloquium in Dresden in April 2004, and our nearly 350 members are now organizing the Third International Health Colloquium in Paris in 2006.

The Online Journal supports the objectives of the IAAHS, is a non-refereed forum for communications and knowledge-sharing for IAAHS members, health actuaries, professionals, academics, and others who are interested in private and public health issues.

The former issues of the Journal (2003/1 and 2004/1) provided a wealth of information and news about the IAAHS and international health related issues, and permanent reference to key health-related organizations, publications, statistics, database, articles, and the like. In this issue we follow the same approach; however, we need your input – comments, suggestions, references and resources, articles and workpapers. The Journal will only be as successful as you, and other readers, make it. We wait your input – please refer all communications to the editor, Yair Babad.

Howard Bolnick Yair Babad Ibrahim Muhanna
IAAHS Chairman Online Journal Editor IAAHS Vice Chairman
IAAHS activities

For a summary of the IAAHS current activities, see the IAA Health Section Update of 14 December 2004. Of particular interest to you are the upcoming meetings of the IAAHS, and the formation of Topic Teams, designed to bring our HS members together to work on problems and areas of interest to a broad cross-section of the members. You are encouraged to submit papers for each of these or volunteer for panels or help in other ways, and in particular the Paris 2006 Colloquium; you are encouraged to volunteer for our topic teams; and of course you are welcome to submit papers, reports, and working papers to the Online Journal.

Upcoming IAAHS Meetings

These include the health track during EAAC in Bali this September (for details contact Brent Walker), the Third International Health Colloquium in Paris in 2006 in conjunction with the ICA2006 meeting (for details contact Claude Ferguson), and the Cape Town IAAHS Colloquium in 2007 (for details contact Emile Stipp).

Third International Health Colloquium in Paris in 2006

We are now in the process of organizing the organizing the Third International Health Colloquium in Paris in 2006, in conjunction with the ICA2006 meeting. More than 30 sessions are planned, on subjects such as health risk adjusting, trends in disability and frailty, international health trends, public-private partnership, private supplementary health, public healthcare reform, world (and specific areas) markets for health, first dollar medical expenses, non-traditional medicine, disease management, health reinsurance, group employee benefits, developing countries, genetic information, individual health underwriting, income protection, critical illnesses, and more. If you are interested in participating in the Colloquium, please e-mail Howard Bolnick or Claude Ferguson.

Fourth International Health Colloquium in Cape Town in 2007

14 – 18 May 2007 are the dates for the 2007 IAAHS Colloquium, to be held at the International Convention Centre in Cape Town, South Africa.

Starting on the Monday, the programme allows attendees to travel during the weekend. We shall probably not use all four days, which allows those who wish to squeeze in a short holiday to do so later in the week, but still be back at the office in time for the next week’s business.

The scientific programme, which will be finalised in conjunction with leading academics and experienced healthcare practitioners, will contain perspectives from both developed and developing countries, and will provide a mixture of theory and practice. The programme will specifically include opportunity for the newly formed topic teams to give feedback, and will also include presentations by role players in the South African market, where we are currently doing considerable work on, for instance, a risk equalisation model and risk based...
capital. However, the majority of the programme content would be drawn from presentations by members of the IAAHS, and we therefore invite you to discuss topics for papers and presentations with the IAAHS Committee.

State of the art technology and amenities are central to what the Cape Town International Convention Centre offers. The Centre is extremely adaptable and versatile. Furthermore, a number of hotels, offering a variety of degrees of luxury, are within easy walking distance from the Centre. (And all this versatility and accommodation may well be needed, as there are suggestions that IACA and the PBSSS join the IAAHS during that period for a bumper event!)

On the social side, a wide variety of options are available for partners (NB: including children!) and for those who wish to stay a little longer or arrive a little earlier. There are pristine beaches, beautiful mountains, wine farms with excellent wine and opportunities to see local wildlife, all within reasonable distance of Cape Town.

**Team reports and activities**

The Topic Teams

The topic teams are designed to bring our HS members together to work on problems and areas of interest to a broad cross-section of the members:

**Product Teams**
- Long Term Care Insurance (Avi Bar Or, Israel, avibo@actuary.co.il)
- Income Protection Insurance (Dan Skwire, U.S.A., dan.skwire@milliman.com)
- Critical Illness Insurance (Sue Elliot, U.K., sue.elliott@eu.watsonwyatt.com)
- Private Medical Expense Insurance (Alex Kogan, U.S.A., Alex.Kogan@AIG.com)
- Voluntary Health Insurance (to supplement Social Insurance benefits), combined with Public-Private Health System Partnership Team

**Process Teams**
- Health Risk Adjustment (Lori Weyuker, U.S.A., LWeyuk@aol.com)

**Policy Teams**
- Health Systems in Developing Nations (Alvaro Castro, Switzerland, alvaro@gmail.com)
- Public-Private Health System Partnerships (Howard Bolnick, U.S.A., hbolnick@kellogg.northwestern.edu)
- Traditional Medicine (Heather McLeod, Republic of South Africa, mcleod@iafrica.com)

You are encouraged to join the team of your interest. You do not have to be a member of the IAA to join the IAAHS or the teams; we recognize “observer” members, including non-actuaries and actuaries that are not members of the IAA, who are interested in following and participating in the IAAHS activities. To join the IAAHS please complete the online registration form and the new member survey to become a member. If you are interested in joining a Topic Team send an e-mail to Howard Bolnick.
The Traditional, Complementary and Alternative Medicine (TM/CAM) Team

Heather McLeod, Chair of the Traditional, Complementary and Alternative Medicine (TM/CAM) Team, wrote a terminology memorandum to the IAAHS Committee explaining the terminology Team, since “American terminology might prove confusing to the rest of the world”. The memo contains some material in this regard, and serves to set out terminology and an introduction to the topic.
Conferences, colloquia, seminars, and similar activities

Coming future activities

**Applied Actuarial Research 2005 Conference**
The meeting will be held March 14-16, 2005, at the University of Central Florida, at Orlando, Florida. The Conference will include a one-day seminar on research methods for health actuaries, including an introduction to Epidemiology. For more information, contact Ian Duncan, the U.S. SOA Health Section Liaison to IAAHS, at duncan@soluciaconsulting.com.

**3rd Annual World Critical Illness Insurance Conference**
The Third Annual World Critical Illness Insurance Conference will place in Toronto, Ontario. Three days of workshops, networking and exhibits begin April 7, 2005 at the downtown Sheraton Centre. “We will pull out all the stops to provide you with a world-class international educational event! This premier conference is a "must-attend" event for professionals and industry leaders in the critical illness insurance industry. Explore this web site at [www.criticalinsurance.ca](http://www.criticalinsurance.ca) and you will see why you owe this to your business and your clients.”

**4th International Conference on the Management of Healthcare & Medical Technology**
The conference, to be held in Aalborg, Denmark, on 25-27 August, 2005, has the goal of studying how can technology be used to improve healthcare performance, considering clinical, administrative, economic and social aspects. For more information see [http://www.hctm.net/events/2005/conference_2005.html](http://www.hctm.net/events/2005/conference_2005.html).
Health related resources

Back Issues of the Actuary
You can access back issues (for the years 2001-2004) of the Actuary (the official publication of the actuarial profession in the United Kingdom, published in London by the Staple Inn Actuarial Society) at http://www.the-actuary.org.uk/cgi-bin/index.pl?mode=backissues.

SOA Top 10 Articles Every Health Actuary Should Read
Article list compiled by the Society of Actuaries’ Health Practice Area Communications Committee and selected from articles included in the Literature Review research project recently sponsored by the Society of Actuaries’ Health Benefit Systems Practice Area and the Health Section.) Note, though, that “this list is not intended to represent the best or only approach to any particular issue; neither the Society of Actuaries nor the individuals or companies participating in the Communications Committee make any guarantee with regard to the accuracy, completeness or suitability of the information contained herein; they assume no responsibility or liability in connection with the use or misuse of any such information; and the information presented herein does not necessarily represent the opinions of the Society of Actuaries or its officers, directors, staff or representatives.”

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<td>5 Managed Care</td>
<td>Schield Jill, James J. Murphy, and Howard J. Bolnick, “Evaluating managed care effectiveness: a societal perspective,” North American Actuarial Journal. 2001; Volume 5, Number 4: pages 95-110.</td>
<td>This paper provides an overall stakeholder analysis of the managed care market, models their objectives and relationships, and makes conclusions based on the model.</td>
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<td>6 System Reform</td>
<td>Bolnick, Howard J., “Designing a World-Class Health Care Financing System,” Presentation at the International Congress of Actuaries, Cancun, Mexico, 2002.</td>
<td>This article examines the potential for and performance of health systems around the world, and, the advantages and disadvantages of public and private health financing.</td>
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<td>7 System Reform</td>
<td>Hall, Mark A., Elliot K. Wicks, and Janet S. Lawlor, “HealthMarts, HIPCs, MEWAs, and AHPs: A Guide for the Perplexed. Health Affairs. 2001; Volume 20, Number 1: pages 142-153.</td>
<td>authorize new forms of group purchasing arrangements for health insurance would fit and function within the existing, highly complex market and regulatory landscape.</td>
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<td>8 Demographic Change</td>
<td>Bodenheimer, Thomas, Edward H. Wagner, and Kevin Grumbach, (2002). &quot;Improving Primary Care for Patients With Chronic Illness, Parts I and II&quot; Journal of the American Medical Association, Volume 288, Number 14: pages 1775-9 and Volume 288, Number 15: pages 1909-14.</td>
<td>The authors describe their Chronic Care Model, designed to increase focus on chronic care by emphasizing community resource coordination, provider incentives and goals, patient/family education, a provider team approach, following guidelines, and an elaborate information system.</td>
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<td>9 Demographic Change</td>
<td>Lee, R. and J. Skinner (1999). &quot;Will Aging Baby Boomers Bust the Federal Budget?&quot; Journal of Economic Perspectives, Volume 13, Number 1: pages 117-140.</td>
<td>The authors conjecture what will happen to the federal budget as the baby boom generation ages. The declining mortality rate and its economic implications are discussed, along with predictions for elderly health status in the coming decades and likewise their implications for the economy.</td>
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<td>Quality of Care</td>
<td>Sprague, L., &quot;Quality in the Making,&quot; <em>The American Journal of Medicine</em> (2000), Volume 111, Number 5: pages 422-431.</td>
<td>This article provides an overview of quality assurance and improvement in US healthcare. It looks at the roles of patients, providers, and regulators in requiring quality and provides one of the simpler guides to most of the alphabet soup of players in healthcare quality.</td>
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Books, reviews, articles and reports

By IAAHS members and from IAAHS activities

A Shock to the System
By Howard Bolnick, appeared in Contingencies (magazine of the American Academy of Actuaries) 5 January 2005 issue. The paper is concerned with the continuing rise of the cost of health care and health insurance. A traditional system of health insurance risk classification that discourages healthy lifestyles and preventative treatment doesn’t help.

Technical Review Panel on the U.S. Medicare Trustees Report
The website URL for the Technical Advisory Panel's report to the Medicare Trustees, which was contributed by John Bertko, is http://aspe.hhs.gov/health/medpanel/. The Technical Review Panel on the U.S. Medicare Trustees report was established by the U.S. Dept. of Health and Human Services in 2004 to review the assumptions and methods underlying the Medicare Trust Funds (Hospital Insurance and Supplemental Medical Insurance) annual reports to the U.S. Congress, including those involved with implementation of the new Medicare prescription drug (Part D) benefit. The Panel, which has seven members, reviewed the Medicare assumptions, projection methodology, long-range growth assumptions and stochastic forecasting techniques used to develop the annual reports.

From other sources

Analysis of 2002 Long-Term Care Insurance Loss Ratios
An analysis publication by Claude Thau, which for $219, provides:
1) The exposures, claims and loss ratios by duration (0, 1, 2, 3, 4, 5-9, 10+, total) of all insurers with $100,000,000 or more premium exposed, plus all companies in the top 20 of sales-- a total of 56 companies. These 56 companies account for 95% of the premiums and 95% of the claims, and their aggregate loss ratio is within 0.1% of premium to the aggregate of all the companies reporting. This data comes from the NAIC report, but I've put it into a spreadsheet for you. I've also added data for some entities with multiple companies so you can look either at individual company data or family of companies' data.
2) Adjusted loss ratios to make results more comparable between companies. The adjustment applies industry exposures by duration to adjust for the fact that insurers vary greatly in their distribution of business by duration. It also shows the ratio of each company's adjusted LR to the industry's LR; in other words, a company experience/industry experience ratio.
3) Loss ratios further adjusted to assume that 10+ experience will be at an ultimate level, hence the same for all carriers. The report also shows the ratio of each company's LR ratio to the industry's LR ratio on this basis.
4) Company rankings are shown for the NAIC-reported LRs, the LRs after each of my two adjustments and the reported A/E ratios. It is interesting to look at the differences in these rankings and may be interesting to see my brief comments. Range of results (minimum and maximum) are shown for several of the above, but the range is not very meaningful, at least as regards minima.
5) State data and a ranking of the states from #1 to #51 (DC is included), with #1 having the lowest LR. U.S. possessions with few citizens had very low LR. They are all listed as #0 to avoid distorting the rankings.

6) Loss ratios for each company weighted, in a very rough fashion, to represent a single year's worth of sales, based on Society of Actuaries data. Of course, underwriting has changed over time, but this effort is intended to give an idea of the overall loss ratio for a block of sales which experiences the company's durational loss ratios. I don't think this proved to have much value, but you can alter the durational weights and discount rates used, particularly because the SOA data runs only for 14 years. Maybe you can find some value in this.

Note that while the data is interesting to peruse and thought-provoking, it is hard to draw definitive conclusions. Even with the adjustments I was able to make to the data, many other adjustments would be necessary to make the comparisons more meaningful. Therefore, I wrote a ten-page report which discusses the difficulties in detail, citing some examples.

Benefits of Interoperability: A Closer Look at the Estimates
By Laurence C. Baker, Health Affairs (the policy journal of the health sphere) 10, 1377, 19 January 2005, http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.22.

The paper by Jan Walker and colleagues provides an estimate of savings to be gained by increased health care information exchange and interoperability (HIEI). However, the assumptions on which their analysis was based seem very optimistic and could produce estimates that are not achievable. This commentary outlines some questions about their assumptions and suggests that less-aggressive assumptions could lead to more realistic expectations about the financial implications of achieving interoperability.

Healthcare Papers
This is an e-journal with interesting papers. The URL is http://www.longwoods.com/hp/.

E-Health: Steps on the Road to Interoperability
By Brent James, Health Affairs (the policy journal of the health sphere) 10, 1377, 19 January 2005, http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.26.

Interoperable electronic medical records (EMRs) have the potential to produce better health outcomes while improving the efficiency of care delivery and reducing its costs. Implementation will require massive changes at all levels. In many instances, the costs of implementation could fall on one group, while savings will accrue to some other group. A successful transition strategy identifies a series of steps, where each step pays its own way, at the level of the local groups directly affected, and lays the foundation for the next step. Such a strategy implies an era in which large groups will likely play a critical role.

Health Care Financial Review Issue on Health Risk Adjustment
Appeared in Spring 2000, Vol. 21, #3, at http://www.cms.hhs.gov/review/00spring/default.asp. The entire issue is devoted to this subject.

The 1990-99 Individual Disability Experience SOA Committee Report
Is available at http://www.soa.org/ccm/content/areas-of-practice/health/experience-studies/1990-99-ind-di-exp-comm-report/. In November of 1999, the NAIC Life and Health Actuarial Task Force (LHATF) formally requested that the Society of Actuaries (SOA)
undertake a study of individual disability income (IDI) experience in the U.S. and the construction of new morbidity tables based on that experience. The responsibility for conducting the study and constructing new tables was assigned to the Individual Disability Experience Committee (IDEC) of the SOA. This report discusses the results of the experience study conducted by the IDEC, which will subsequently turn its attention to the construction of new morbidity tables.

Interoperability: The Key to the Future Health Care System
By David J. Brailer, Health Affairs (the policy journal of the health sphere) 10, 1377, 19 January 2005, http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.19. The United States is building a point-of-care health information system to rival the worldwide network of electronic banking. Through health care information exchange and interoperability, clinicians will have access to a longitudinal medical record. This interoperability is a fundamental requirement for the health care system to derive the societal benefits promised by the adoption of electronic medical records (EMRs). The paper by Jan Walker and colleagues highlights some of these benefits. One critical question is whether the adoption of EMRs needs to wait for interoperability standards or whether it can proceed efficiently without them.

A Networked Patient Records Management System for Health Care Facilities
By James Francisco from the Eller College of Business and Public Administration of the University of Arizona, appeared as an Eller College Working Paper No, 1007-04 on 12/2003, http://ssrn.com/abstract=607447. This paper describes a notional networked patient records management system for healthcare facilities. The Information Systems and Medical Practice literature are surveyed as a part of the groundwork for the design. The selected design includes both wireless and traditional networking components. The described solution includes both hardware and software specifications and both high and low level design documents for the system. The issues that will be discussed in the paper will be hardware selection, current availability of COTS software, development issues, security, and scalability.

OECD reports on Private Health Insurance and Long-Term Care
The private health insurance reports are components of the OECD Health Project. The study assesses the role that private health insurance (PHI) plays in OECD member countries. They Developed a taxonomy of private health insurance schemes in Member countries, which sets a framework for data collection of various types of health insurance schemes, and two survey instruments: a) On statistics, to gather data on private health insurance markets, such as premiums, claims, population coverage and share of total health expenditure; b) On regulations, to gather detailed information on governmental interventions towards PHI. See http://www.oecd.org/department/0,2688,en_2649_33929_1_1_1_1_1,00.html. The OECD have also many reports on Long-Term Care.

SOA Prescription Drugs Monograph
This is a May 2004 monograph by Allen Cassels, available from the SOA at http://library.soa.org/library-pdf/m-hb04-1_all.pdf. For any illness or condition for which there are two or more equally effective and safe drugs, the most rational behavior when prescribing, paying for or taking a treatment would be to favor the least expensive drug first. Unfortunately, physicians, payers and patients do not always act in the most rational manner.
This is partly due to a poor understanding of the concept of therapeutic equivalence. Substitution of therapeutically equivalent drugs depends on having access to good evidence of the interchangeability of therapies available to treat the same condition. Independent evidence, particularly meta-analyses of randomized controlled trials, needs to be used in order to support these policies to ensure their clinical neutrality. The top 20 drugs studied here are not the most expensive individually, nor the most prescribed, but those where, through a combination of cost and volume, represent the largest financial impact on private drug plans.

The Value of Health Care Information Exchange and Interoperability
By Jan Walker, Eric Pan, Douglas Johnston, Julia Adler-Milstein, David W. Bates, and Blackford Middleton, Health Affairs (the policy journal of the health sphere) 10, 1377, 19 January 2005, http://content.healthaffairs.org/cgi/content/abstract/hlthaff.w5.10. In this paper we assess the value of electronic health care information exchange and interoperability (HIEI) between providers (hospitals and medical group practices) and independent laboratories, radiology centers, pharmacies, payers, public health departments, and other providers. We have created an HIEI taxonomy and combined published evidence with expert opinion in a cost-benefit model. Fully standardized HIEI could yield a net value of $77.8 billion per year once fully implemented. Nonstandardized HIEI offers smaller positive financial returns. The clinical impact of HIEI for which quantitative estimates cannot yet be made would likely add further value. A compelling business case exists for national implementation of fully standardized HIEI.
Research issues of interest to IAAHS members

Requests for information and calls for papers

Long Term Care Coverage
Yair Babad and colleagues request data on monthly mortality of long-term care patients, by age, gender, and ADLs (Activities of Daily Living), as well as morbidity by age, gender, and ADLs among LTC insureds, for academic research of LTC. Please send all material to Yair Babad.