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Cover art by Dietrich Varez, Volcano, Hawaii. All rights reserved by the artist.

Pele Dispersing the Hala

The volcano goddess Pele is said to have dispersed the hala plant in an angry fit.



Implementation of Hawaii's Prepaid Health Care Act

Root Cause of a Health Care Monopoly

Norman Goldstein MD
Editor, Hawaii Medical Journal

Over the past 62 years of publication, HMJ has published papers by physicians with law degrees or legal interests and some by attorneys with medical interests. But this month's lead manuscript is truly unique: "Implementation of Hawaii's Prepaid Healthcare Act: Root Cause of a Health Care Monopoly." The manuscript by Patricia L. Chinn, MD, JD, is presented to our readers in a format not too familiar. It is reprinted just as it appeared in the Hawaii Bar Journal. The reader will find references (in very small type) on the same page - not at the back of the article. This was the usual format of medical journals many years ago. With the massive amount of references Pat Chinn refers to, it's a blessing not to have to go to the last page to see the references.

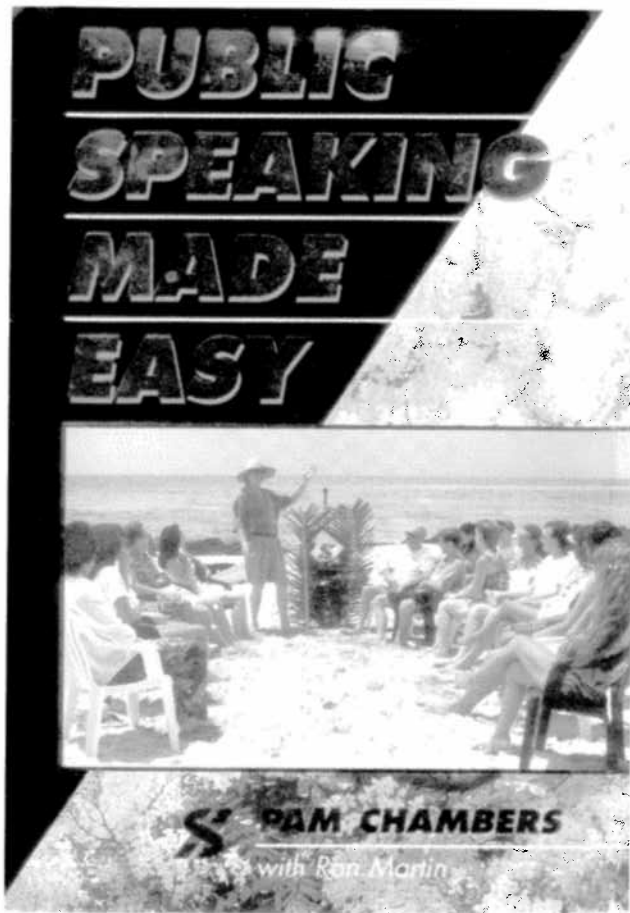
We knew Pat Chinn as a student and resident at John A. Burns School of Medicine (1972-1979) and as a very active officer of the Hawaii Federation of Physicians and Dentists (1990-1999), and the Hawaii Medical Association when she served as our President in 1999.

Pat went further and because of her legal interests subsequently entered the University of Hawaii W. S. Richardson School of Law, getting her JD degree in 2002. Today's paper was started as a member of the Law Review. In addition to her numerous medical organizations, Pat is a member of the American Bar Association; a Fellow of the American College of Legal Medicine; the American Health Lawyers Association; the Association of Trial Lawyers of America; and the Hawaii State Bar Association.

This lengthy, historic article will help our readers understand how and why our present healthcare market has developed. Dr. Pat Chinn is in private medical practice in Honolulu with special interests in Breast Disease, Laparoscopic Surgery, and Long Term Care.

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Public Speaking Made Easy

by Pam Chambers with Ron Martin,
Pp. 123. Worksheets. \$24.00 plus shipping.
Library of Congress Catalog Card
Number 97-092374.
Haleiwa, Hawaii: Success Dynamics, 1997.

reviewed by:

William W. Goodhue Jr. MD
Associate Editor
Hawaii Medical Journal

“It’s easy!” is the message Honolulu corporate and personal coaching consultant *Pam Chambers* (www.pamchambers.com) has taken to thousands of clients in her company training sessions, public speaking courses, and private presentation coaching workshops throughout Hawaii, and also on the US Mainland and in Australia. Her corporate clients have included Verizon Hawaii where she has already conducted seminars well over 50 times, and also health care facilities including Shriners’ Hospital, Straub Hospital & Clinics, The GN Wilcox Memorial Hospital, and the Hawaii State Department of Health. Her gem of a book, crafted with well-known author, motivational speaker, and entrepreneur *Ron Martin*, culls tips honed from nearly 20 years of experience focused on achieving her mission: “to empower people in the art of masterful communication”. The book, used in her Level I and Level II presentation classes, shows you how to be an effective public speaker. **It’s easy!**

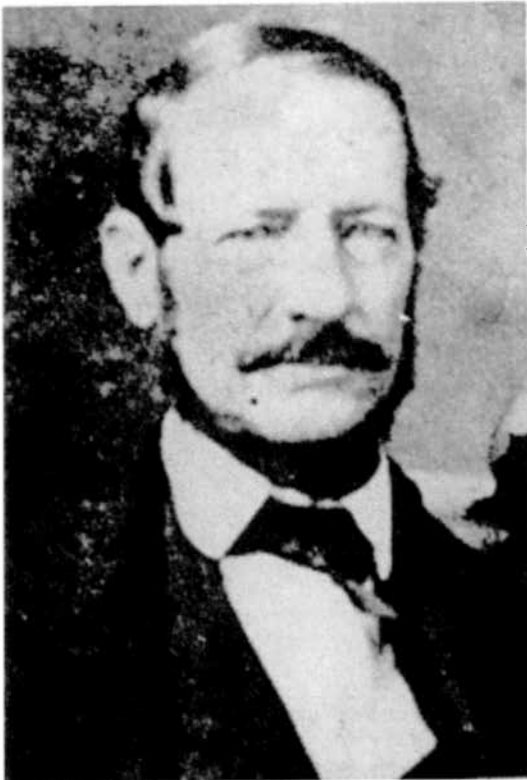
Reader’s Digest has reported that most people fear public speaking more than anything else—even death and taxes. This book will enable you to turn fear into strength! The first chapter tells us that *Life is a Presentation*: the skills that make us successful communicators during a normal day are the same skills we use for effective public speaking. We already know how to do it! Subsequent chapters discuss:

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- *Giving Your Audiences What They Want.*
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- *Your Tone of Voice.*
- *Your Presentation Content.*
- *Your Image.*
- *Welcoming Questions.*
- *Sticky Situations.*
- *Making Money in Public Speaking.*
- *Getting Invited Back.*

You’ll have to read the book to learn the 10-step “recipe” which, when followed, results in a well-organized presentation that guarantees results. **It’s easy!**

Tips on body language (hands out of pockets!), image (don’t use a lectern!), asking questions to give you control (begin with rhetorical questions!), and dealing with sticky situations (late arrivers, early leavers, hecklers) round out this guide to masterful communication and show how public speaking can be fun. And, if you want to get paid for public speaking, *Pam* shows you how to get started! **It’s easy!**

Public Speaking Made Easy should be required reading for everyone who works with people: that includes you and me! Remember, *Life is a Presentation!* This book will teach you attitudes and tools to build your confidence, allow you to be resourceful, and keep you in the driver’s seat. *Go for it!* **It’s easy!**



Thomas Charles Hyde Rooke

Thomas Charles Hyde Rooke MD 1806 - 1858

**by Hawaii Medical Association
Auxiliary**

When the Hawaiian Guards, a volunteer company, was organized in November, 1852, Dr. Rooke was elected surgeon. The doctor served twice as a member of the House of Representatives (1851-1855), representing the Honolulu district. For a time he was Chamberlain to the Royal Household during the reign of King Kamehameha III, and in May, 1858, he was named as a member of the Privy Council by King Kamehameha IV.

Dr. Rooke was one of the ten signers of the charter of incorporation of the Hawaiian Medical society in 1856. His interest and care of the Hawaiians impressed the future Queen Emma with the need for a hospital to treat her people. Although he did not live to see the opening of the Queen's Hospital in 1860, it was he who kindled the spark which brought it into being.

Henry M. Lyman in his "Hawaiian Yesterdays" tells of his first meeting with the doctor as follows: "One day Mr. Dole sent me with a note of introduction to Dr. Rooke...Presently he appeared, elegantly dressed, rebicund, affable, and redolent of delicious odors that I afterwards learned to recognize as indicative of acquaintance with the choicest brands of rare old wine". He was also known as a "middle of the road" man who never quarreled with anyone.

Dr. Rooke was deeply devoted to his adopted daughter, Emma, and anxious that she should have every cultural advantage. It was he who had her enrolled at Mr. and Mrs. Amos Cooke's School for the Chief's Children and, when her formal education was ended with the closing of the Royal School, he engaged a tutor and had her taught at home. To further broaden her horizons he sent to England for books and assembled a library which was the finest in Honolulu.

After living in the Islands for nearly 30 years, Dr. Rooke died in November 28, 1858, at Kailua, Hawaii, at the age of 52.

In 1838 he was listed as being a member of the Board of Trustees of the Oahu Charity School. He was one of the pioneers in the cultivation of coffee and was a charter member of the Royal Hawaiian Agricultural Society when it was organized in 1850, serving on the coffee committee. Another of his interests was meteorology and he kept a table of meteorological observations from January 1, 1844, to December 31, 1844. He held the highest degrees in the Odd Fellows and Masons, and was one of the oldest members of the Mechanic Benevolent Union.

Thomas Charles Hyde Rooke was born May 18, 1806, in Bengoe, Hertford, England. His family were professional people who had served in the Royal Navy. He was educated at a branch of Christ's College Hospital in Hertford and had studied in London where he graduated from the Royal College of Surgeons in 1826.

Clarice B. Taylor in her "Tales About Hawaii" (Star-Bulletin, December 16, 1955) says that Dr. Rooke fell in love with a woman beneath his station, and, quarreling with his father, gave up his career in the Navy and became a surgeon on a whaling ship bound for the South Seas. He first landed at Lahaina in 1829 where he met some high chiefs and some "foreigners". After another season's cruise his ship put in at Honolulu. Here Dr. Rooke was asked to remain and practice medicine, and, with the consent of his Captain, he agreed.

In 1830 Dr. Rooke married Grace Kamaikui, the second daughter of Mr. John Young, friend and counselor of Kamehameha I. Dr. and Mrs. Rooke had no children, but, according to ancient custom, in 1836 they adopted the infant daughter of Mrs. Rooke's sister. It was this much beloved daughter of the Rooke's who became Queen Emma in 1866 when she married Kamehameha IV.

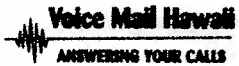
Dr. Rooke had his office and dispensary in his home and soon had a large practice. He was also physician to the Court, friend and adviser to the royal family, and became a naturalized citizen. In 1844 he is listed as Port Physician, and in December, 1850, he was appointed to the first Board of Health and served as its chairman.



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Implementation of Hawaii's Prepaid Health Care Act: Root Cause of a Health Care Monopoly

Patricia L. Chinn MD, JD



Patricia L. Chinn MD, JD

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The author wishes to thank her family for their support during her legal education.

The author would also like to thank attorneys Richard Clifton and Paul O'Donnell for their reviews of earlier drafts of this paper.

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I. Introduction

Hawaii's Prepaid Health Care Act ("PPHCA")¹ of 1974 was lauded as the "first employer-mandated health care legislation in the country."² Created to improve health care access for the uninsured, it provides that all employees in Hawaii who work twenty hours or more per week have access to health care. Some three decades later, this Hawaii experiment has produced unexpected results. The overall insurance coverage rate is estimated to be the same today as it was prior to the enactment of the PPHCA.³ More importantly, the implementation of the PPHCA has instead become the root cause of a health care monopoly in Hawaii. The manner in which the Act has been administered via the Prepaid Health Care Advisory Council ("Council") raises questions concerning antitrust behavior. This article discusses the underlying reasons for these concerns. The scope of this article, however, does not attempt to develop a detailed antitrust analysis. A brief overview here may be helpful to understanding the organization of this article.

In 1974, Hawaii enacted what was truly an innovative plan – the PPHCA – not knowing that Congress

would, within months, preempt the PPHCA by passing the federal Employees Retirement Income Security Act ("ERISA").⁴ ERISA was designed to assure Americans that their pension and other retirement benefits would be solvent and well managed. As such, ERISA's effectiveness depended on universal applicability which it achieved with a broad preemption clause. Unfortunately, with this preemption clause, ERISA immediately precluded Hawaii's brand-new PPHCA as well as other states' initiatives.⁵ Congress later amended ERISA, giving Hawaii a unique exemption. This exemption from ERISA preemption was granted partly because the PPHCA was a new concept in health care delivery, essentially a state-wide experiment in comprehensive employer mandated benefits.⁶ Congress "allowed Hawaii to experiment with [what was then] innovative health care legislation."⁷ However, the language of the exemption amendment and the manner in which the Act has been implemented have led to the development of a health care monopoly in Hawaii.

References

1. Haw. Rev. Stat. §393-7 (1993). The Prepaid Health Care Act states that:
(a) A prepaid health care plan shall qualify as a plan providing the mandatory health care benefits required under this chapter if it provides for health care benefits equal to, or medically reasonably substitutable for, the benefits provided by prepaid health plans of the same type, as specified in 393-12 (a) (1) or (2), which have the largest numbers of subscribers in the State. This applies to the types and quantity of benefits as well as to limitations on reimbursability, including deductibles, and to required amounts of co-insurance.
The director, after advice by the prepaid health care advisory council, shall determine whether benefits provided in a plan, other than the plan of the respective type having the largest numbers of subscribers in the State, comply with the standards specified in this subsection.
(b) A prepaid group health care plan shall also qualify for the mandatory health care benefits required under this chapter if it is demonstrated by the health care plan contractor offering such coverage to the satisfaction of the director after advice by the prepaid health care advisory council that the plan provides for sound basic hospital, surgical, medical, and other health care benefits at a premium commensurate with the benefits included taking proper account of the limitations, co-insurance features, and deductibles specified in such plan....
Id.
2. Angelo A. Stio, *State Government: The Laboratory for National Health Care Reform*, 19 SETON HALL LEGIS. J. 322, 340 (1994).
3. Norman K. Thurston, *Labor Market Effects of Hawaii's Mandatory Employer-Provided Health Insurance*, 51 INDUS. & LAB. REL. REV. 117, 118 (1997). "Using enrollment data, Dick (1994) found that since the mandate was enacted, coverage had not significantly increased in Hawaii in absolute terms. He also correctly noted that according to the Current Population Surveys, several states without mandates have smaller uninsured populations than Hawaii." *Id.*
4. 29 U.S.C.A. §1144 (1975).
5. Jolee Ann Hancock, *Diseased Federalism: State Health Care Laws Fall Prey to ERISA Preemption*, 25 CUMB. L. REV. 383, 403-04 (1995).
6. *Id.* at 404.
7. *Id.*

Two health plans dominate Hawaii's market, the Hawaii Medical Service Association ("HMSA"), a licensee of Blue Cross/Blue Shield, and the Kaiser Foundation Health Plan ("Kaiser"). HMSA currently claims 72% of the State's insureds and Kaiser, 17%.⁸ Because of its dominant market share, HMSA presumably exerts monopoly market power in Hawaii.⁹

Every health plan intending to do business in the state must first win approval of the Council, as provided for by the PPHCA.¹⁰ However, employees of HMSA and Kaiser (collectively representing 89% of the State's insureds) have served continuously as voting members of the Council since 1975.¹¹ HMSA and Kaiser employees only recently resigned from the Council in February 2003.¹² This article will discuss how the Council's former composition may have facilitated anticompetitive activity, effectively keeping competition out of the Hawaii market.

Part II of this article provides background on the PPHCA, the Council, ERISA, and the PPHCA's exemption from ERISA preemption. Part II also examines Hawaii's current healthcare market and the role of the Council in determining that market. Part III raises issues of potential monopoly behavior relating to the PPHCA and the Council. Part IV discusses possible remedies, then concludes that active state supervision of the Council is the most logical immediate solution, and finally suggests that an amendment to the PPHCA or its actual repeal should be considered as a long-term remedy.

II. Background

A. The PPHCA, The Council, ERISA And Its Preemption Clause, And The PPHCA's Exemption

1. The PPHCA

The purpose of the PPHCA was to provide health care coverage to the greatest number of Hawaii residents.¹³ Prior to passage of the PPHCA, a gap group¹⁴ existed which was not covered by any health insurance. By mandating coverage for employees who worked twenty hours or more per week, Hawaii had a great opportunity to narrow this gap group. However, "according to the best available aggregate data, the fraction of Hawaiians with hospital benefits in 1969 (88.3%)¹⁵ is essentially unchanged three decades later when compared to the percent of insured, 88.9%, in 1999¹⁶.

The PPHCA essentially set a standard for mandated health care coverage by specifying that a qualified health plan must provide "benefits equal to, or medically reasonably substitutable for, the benefits provided by prepaid health plans of the same type . . . which have the largest numbers of the subscribers in the State."¹⁷ The Council allows two types of plans to currently prevail, a comprehensive Type A (modeled after HMSA or Kaiser Health Maintenance Organization ("HMO") plans) and the less comprehensive Type B.¹⁸ The PPHCA mandates the specific benefits which Type

8. Health Trends in Hawaii: A Profile of the Health Care System, 5th Edition, Hawaii Health Information Corporation, available at http://www.healthtrends.org/research/HealthMarket_files/sheet001.htm (last visited Nov. 13, 2002).

9. See *United States v. United Shoe Machinery Corp.*, 110 F.Supp. 295 (D. Mass. 1953), 347 U.S. 521 (1954). In this case, a supplier of shoe machinery had garnered 75% of the market. The court held that this percentage was a factor in determining market control and the overall strength of the company, however, the court did not consider whether this percentage itself would warrant an inference of monopoly power. *Id.* See also Phillip Areeda & Louis Kaplow, *ANTITRUST ANALYSIS* 565 (5th ed. 1997) in which the authors state that "[a]s a practical matter, the courts will generally regard shares of 90 percent as sufficient for unilateral monopolistic exploitation and shares of 5 or even 50 percent as insufficient. But even such rules of thumb leave an enormous range of uncertainty." See *accord id.* at 571.

It cannot be emphasized too strongly that market definition and the defendant's market share give, at best, only a suggestion of defendant's market power. . . . The courts have not stated how much power they believe to be associated with given market shares. Nor have they indicated how much power must be established as a prerequisite to a finding of liability. Market definition is customary and may provide a helpful first approximation but one should have no illusions about its meaning.

Id.

10. HAW. REV. STAT. §393-7(a) (1993). "The director, after advice by the prepaid health care advisory council, shall determine whether benefits provided in a plan, other than the plan of the respective type having the largest numbers of subscribers in the State, comply with the standards specified in this subsection." *Id.*

11. Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee (Apr. 24, 2003). HMSA and Kaiser employees have been members of the Council continuously since 1975.

12. Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee (Apr. 22, 2003). HMSA's and Kaiser's resignations became effective February 25, 2003.

13. HAW. REV. STAT. §393-2 (1993).

14. Rolanda Moore Haycox, *Strategies to Meet the Needs of the Uninsured: Can the States Respond to the Challenge?*, 27 TULSA L.J. 111, 122 (1991). "Gap group individuals are persons who: (1) have too much income to qualify for Medicaid; (2) are not insured by an employer; (3) choose not to purchase health insurance; or (4) are dependents who are not included in their parents', guardian's, or spouse's health insurance plan." *Id.*

15. Thurston, *supra* note 3, at 118. Thurston, however, suggests that

these findings do not establish that the Hawaiian mandate had no impact on coverage. In particular, due to the lack of pre- and post-program measures of coverage, Dick was not able to estimate the change in Hawaiian coverage relative to the entire United States over the time frame of the mandate. Even if Hawaii's coverage rate had not increased at all since the mandate, if it prevented a rapid decline in coverage, one would conclude that it did affect coverage rates.

Id.

In further explanation of the uninsured group, Thurston discusses the loopholes in mandated coverage. He states:

The following categories of workers are not required to be covered under PPHCA-1974: new hires (workers who have been employed less than four consecutive weeks); part-time workers (those who are "employed" fewer than 20 hours per week); low-earnings workers (those whose monthly wages are less than 86.67 times the hourly minimum wage); government employees; self-employed individuals; seasonal workers; and commission-only workers.

Id. at 120.

16. Health Trends in Hawaii, *supra* note 8, available at http://www.healthtrends.org/research/HealthMarket_files/sheet001.htm.

Any earlier claims of Hawaii's success in covering its uninsured can be dispelled as:

In 1999, the proportion of Hawaii residents without health insurance coverage was 11 percent, as estimated by the Census Bureau, up 25 percent from 1995 levels and 52 percent from 1990. The increase in the proportion of uninsured results, in part, from QUEST enrollment reductions, the state's flat job count, and gaps in coverage for children created when employers cover employees but not family members.

Id. available at http://www.healthtrends.org/health_market/uninsured.html.

17. HAW. REV. STAT. §393-7(a) (1993).

18. Thurston, *supra* note 3, at 120.

A & Type B plans must provide.¹⁹ These include in-patient hospital care, outpatient hospital care, surgical benefits, medical benefits, diagnostic services, maternity benefits, substance abuse benefits, outpatient care, and detoxification.²⁰ However,

[t]ype B plans usually incorporate reduced coverage at lower costs, such as up-front deductibles or "existing condition" clauses. PPHCA-1974 also contains an incentive for employers to provide Type A plans: there is no requirement for employer contribution toward dependent coverage under Type A plans, while employers must pay for at least 50% of dependent premiums if they offer a Type B plan.²¹

Because there is an inherent incentive to avoid fronting half of the cost of dependents' insurance, and because there is little difference in premium cost between Type A and Type B plans, most employers opt for Type A plans.²²

Under the PPHCA, the Director of the Department of Labor and Industrial Relations ("DLIR") is charged with administering and enforcing the PPHCA.²³ The Director also ultimately determines whether any health plan complies with the mandated standards established by the PPHCA.²⁴

2. The Council

The Director of the DLIR is mandated to appoint a Council whose members represent medical and public health professions, consumers, and persons with experience in prepaid health care.²⁵ The Council may consist of up to seven members.²⁶ Until recently, the members included a benefit plans consultant, a hospital personnel officer, a human resources officer from the hotel industry, a physician in private practice medicine, an insurance agent, an HMSA employee, and a Kaiser employee.²⁷ A newspaper investigative report, in 2001,

noted that representatives of "Kaiser Foundation Health Plan, the largest health maintenance organization in the state, and HMSA, the largest fee-for-service provider" have been voting members of the Council.²⁸ At that time, Council members had served terms ranging from one to sixteen years.²⁹

On January 21, 2003, a newly elected Governor Linda Lingle, in her first State of the State Address, "propos[ed] that HMSA and Kaiser Permanente be prohibited in the future from sitting on the board that recommends which insurance companies can enter the market in Hawaii."³⁰ HMSA and Kaiser both voluntarily resigned from the Council shortly after the Governor's Address.³¹ Following this, the State of Hawaii Twenty-Second Legislature then passed, and the Governor signed, SB 665 SD1 HD2 CD1 which prohibits "a person representing a health maintenance organization under chapter 432D, a mutual benefit society issuing individual and group hospital or medical service plans under chapter 432, or any other health care organization" from membership on the Council.³²

At the beginning of each year, the Council chooses the plans that will be the benchmarks for the coming year - usually an HMSA plan and Kaiser HMO.³³ New companies applying for approval to sell insurance in the state must provide, at a minimum, similar coverage at similar cost to the plan enrollee.³⁴ These new companies submit their applications to the DLIR, at which time departmental staff review the paperwork along with a checklist and submit them to the Council for approval.³⁵ Among the required data are: proposed premium rates, deductible amounts, stop-loss provisions, detailed coverage information regarding hospital, surgical, medical, outpatient care, maternity, and other benefits.³⁶ The Council then may recommend approval of a plan with provisos.³⁷ The Council may also reject a plan for any number of reasons.³⁸

19. HAW. REV. STAT. §393-7(c)(1993).

20. *Id.*

21. Thurston, *supra* note 3, at 120.

22. *Id.*

23. HAW. REV. STAT. §393-31 (1993). "Except as otherwise provided in section 393-7 the director [of the DLIR] shall administer and enforce this chapter." (emphasis added) *Id.*

24. HAW. REV. STAT. §393-7(a)(1993). "The director [of the DLIR], after advice by the prepaid health care advisory council, shall determine whether benefits provided in a plan ... comply with the standards specified in this subsection." (emphasis added) *Id.*

25. HAW. REV. STAT. §393-7(d)(1993). "The prepaid health care advisory council shall be appointed by the director and shall include representatives of the medical and public health professions, representatives of consumer interests, and persons experienced in prepaid health care protection. The membership of the council shall not exceed seven individuals." *Id.*

26. *Id.*

27. Telephone Interview with John T. McDonnell, a member of the Council (Nov. 3, 2001). As of November 3, 2001, the Council members were: Paul Tom, Benefit Plans Consultants, the Council's Chair; Grace Abe, Personnel Officer of Queen's Medical Center, who serves as the Council's Vice-Chair; William Brown, Vice-President for Human Resources of Outrigger Hotels; John T. McDonnell, M.D., a physician; Michael Moss, HMSA; Claudia Schmidt, Kaiser; Shirley Wong, Principal Mutual Life Insurance Company.

28. Frank Cho, *New Health Plans Blocked*, HONOLULU ADVERTISER, Aug. 19, 2001, available at <http://the.honoluluadvertiser.com/article/2001/Aug/19/bz/bz01a.html> (last visited Aug. 19, 2001).

29. *Id.*

30. Governor Linda Lingle, An Outline of the Governor's Agenda, State of the State Address (Jan. 21, 2003), available at <http://www.hawaii.gov/gov/Members/steveb/speeches/stateofstate.html> (last visited Apr. 18, 2003).

31. Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee (Apr. 22, 2003), *supra* note 12. HMSA's and Kaiser's letters of resignation were both accepted, effective February 25, 2003. As of April 22, 2003, five members of the Council remain: Paul Tom, Chair; Grace Abe; William Brown; John McDonnell, M.D.; and Shirley Wong. *See also*, Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee, *supra* note 11.

32. S.B. 665, S.D.1, H.D.2, C.D.1, 2003 Leg., 22nd Sess. (Haw.2003).

33. Telephone Interview with John T. McDonnell, *supra* note 27.

34. HAW. REV. STAT. §393-7(1993) states that

[a] prepaid health care plan shall qualify ... if it provides for health care benefits equal to, or medically reasonably substitutable for, the benefits provided by prepaid health plans of the same type ... This applies to the types and quantity of benefits as well as to limitations on reimbursability, including deductibles, and to required amounts of co-insurance.

Id.

35. Telephone Interview with John T. McDonnell, *supra* note 27.

36. *See generally*, Minutes of the Council 2000-01.

37. *Id.* For example, the Council may require that: 1) a separate emergency room deductible is removed, 2) a copayment is lowered for PPO outpatient mental illness treatment (twenty-first to twenty-fourth visits), 3) a well-child (preventive) care to age six annual maximum benefit is removed, 4) a maximum lifetime benefit is at least \$1 million regardless of age, 5) at least 120 days of hospice care are covered, 6) a doctor's office visit copayment is lowered to \$10. *Id.*

38. *Id.* For example, plans may be rejected for: 1) high out-of-pocket limit, 2) high doctor office visit copayment, 3) eligibility requirement, 4) pre-existing condition limitation, 5) maternity not covered on the same basis for all dependents, 6) special waiting period and lifetime limit for organ transplant expenses, 7) exclusion of benefits for injuries related to semi-professional or professional athletics, including practice, 8) emergency room - clarifies that non-emergency care is covered at 80% after the deductible. *Id.*

3. ERISA

Congress enacted ERISA to solve a nationwide problem of inadequate and failed employee pension, health, and welfare plans.³⁹ Prior to ERISA, many Americans, who had relied on these plans for retirement, found these plans failing for numerous reasons, including mismanagement and under-funding.⁴⁰ To solve this problem, ERISA required plan administrators to comply with certain regulations and gave employees specific rights.⁴¹ Because the pension plan problem was nation-wide, Congress chose a global solution and placed almost all employee pension, health, and welfare plans under the ERISA umbrella.⁴² ERISA was signed into law on September 2, 1974.⁴³

4. ERISA's preemption clause

ERISA preempted⁴⁴ Hawaii's PPHCA.⁴⁵ Its preemption clause states that "[ERISA] shall supersede any and all State laws insofar as they may now or hereafter relate to any employee benefit plan . . ."⁴⁶ This preemption of state law is "express" - specifically preempting conflicting state law.⁴⁷ The ERISA preemption clause has been referred to as "[p]ossibly the farthest-reaching provision in the statute"⁴⁸ - the ERISA "statute's 'crowning achievement'."⁴⁹

ERISA's preemption clause significantly constrained many states' initiatives for health care reform.⁵⁰ It is remarkable that these far reaching effects of ERISA were not anticipated.⁵¹ The legislative

history of the statute reveals that the preemption clause in both the original House and Senate versions was narrow in scope and would have had only a partial preemptive effect.⁵² However, those who had a vested interest in health care reform were not involved in the discussions that led to ERISA's enactment.⁵³ "[T]he Department of Labor, which would administer ERISA, was apparently not consulted about the changes in the preemption clause. The Senate conferees were . . . responsible for health policy, but [did not discuss] the implications of preemption with their counterparts on the health subcommittee."⁵⁴ Special interest groups pushing the preemption clause were successful in having it introduced in the final days of conference committee deliberations.⁵⁵ Thus, the tremendous significance of the broad preemption clause passed unnoticed and unappreciated for its breadth.

Also remarkable about the preemption clause is that it prohibits the states from making any law regarding employee benefit plans even where federal law is silent, the so-called "regulatory vacuum."⁵⁶ It inhibits the states with regard to health insurance even though federal law does not regulate substantive benefits.⁵⁷

The State of Hawaii created its PPHCA prior to ERISA, not anticipating any federal health care legislation.⁵⁸ With the passage of ERISA three months later in September 1974,⁵⁹ Hawaii's new PPHCA became "obviously vulnerable"⁶⁰ to preemption.

39. Hancock, *supra* note 5, at 385.

40. *Id.*

41. James E. Holloway, *ERISA, Preemption and Comprehensive Federal Health Care: A Call for "Cooperative Federalism" to Preserve the States' Role in Formulating Health Care Policy*, 16 CAMPBELL L. REV. 405, 416 (1994).

ERISA mandates reporting and disclosure requirements, funding, participation, and vesting requirements, and fiduciary standards in the regulation of the administration of employee benefit plans. ERISA grants employees, retirees, and their dependents the right to bring claims against employers and plan administrators; thus protecting rights and enforcing obligations owed under employee welfare and pension benefit plans. By imposing requirements upon employers and relief for retirees and employees, ERISA establishes a uniform and consistent framework for the regulation of the administration of employee benefit plans.

Id.

42. Michael G. Pfefferkorn, *Federal Preemption of State Mandated Health Insurance Programs Under ERISA—the Hawaii Prepaid Health Care Act in Perspective*, 8 ST. LOUIS U. PUB. L. REV. 339, 341 (1989).

43. Hancock, *supra* note 5, at 385.

44. Susan J. Stabile, *Preemption of State Law by Federal Law: A Task for Congress or the Courts?*, 40 VILL. L. REV. 1, 4-5 (1995). "Preemption is the power of the federal government to supplant state law with respect to matters the federal government has the power to regulate under the Constitution. Preemption of state law by federal law may be . . . express or implied." *Id.*

45. Hancock, *supra* note 5, at 404.

46. 29 U.S.C. §1144(a) (1975).

47. Stabile, *supra* note 44, at 5. "Express preemption occurs where a statute contains an explicit statement that addresses the preemptive effect of the statute on state law claims, rather than leaving it to the courts to decide in any given dispute whether the federal statute preempts state law." *Id.*

48. Pfefferkorn, *supra* note 42, at 339.

49. *Id.*

This clause, which operates to "supersede any and all State laws insofar as they . . . relate to employee benefit plans," has been utilized to invalidate a number of comprehensive health care insurance statutes created by the states to fill the void created by the absence of a cohesive national health insurance scheme. *Id.*

50. Stabile, *supra* note 44, at 91. "[O]verall, Congress' express pronouncements have done more mischief than good." *Id.*

51. Daniel C. Schaffer and Daniel M. Fox, *Semi-Preemption in ERISA: Legislative Process and Health Policy*, 7 AM. J. TAX POL'Y 47, 51-52 (1989).

The health insurers appear not to have been aware of the significance of the preemption clause for their markets. A high official of the Blue Cross Association recalled that "very little was going on because nobody saw it; nobody in the health industry understood the implications of preemption." A lobbyist for the life insurance industry recalled that even though many of his largest companies wrote health insurance, they focused on other issues than preemption in the short period between the conference committee deliberations and final passage of the bill. Similarly, an eyewitness at the Health Insurance Association of America recalled that in 1974 his organization was still concerned mainly about national health insurance, cost-containment, Professional Standards Review Organizations and the new Health Planning and Resource Development Act. Moreover, the chief lobbyist was recovering from coronary bypass surgery during the period of the final negotiations of ERISA. In sum, he recalled, "I don't think anybody was thinking of the health implications of ERISA."

Id.

52. Pfefferkorn, *supra* note 42, at 346-347.

53. Schaffer, *supra* note 51, at 52.

54. *Id.*

55. *Id.* at 48. "The new language, preempting state laws relating to 'any employee benefit plan' including matters not regulated by the Act, was disclosed when the conference committee report was filed ten days before Congress took final action on ERISA." *Id.* at 49.

56. *Id.* at 48.

57. *Id.*

58. HAW. REV. STAT. §393-51 (1993).

This chapter [PPHCA] shall terminate upon the effective date of federal legislation that provides for voluntary prepaid health care for the people of Hawaii in a manner at least as favorable as the health care provided by this chapter, or upon the effective date of federal legislation that provides for mandatory prepaid health care for the people of Hawaii.

Id.

59. Leon E. Irish and Harrison J. Cohen, *Article: ERISA Preemption: Judicial Flexibility and Statutory Rigidity*, 19 U. MICH. J.L. REF. 109, 149 (1985).

60. Sylvia A. Law, *The Changing Face of Law and Medicine in the New Millennium: Article Health Care in Hawaii: An Agenda for Research and Reform*, 26 AM. J. L. AND MED. 205, 214 (2000).

5. The PPHCA's exemption from ERISA

Although the federal enactment of ERISA in 1974 was immediately applicable to Hawaii, the state's challenge to ERISA preemption did not actually start until 1976.⁶¹ This challenge became a long campaign to save the Hawaii PPHCA that did not end until 1983 when Congress finally granted an exemption.⁶² It remains Congress's only exemption for statewide employer mandated health care.⁶³ This challenge began with a 1976 amendment to the PPHCA.⁶⁴

In 1976, Hawaii amended the PPHCA to include the diagnosis and treatment of substance abuse as a mandated benefit.⁶⁵ "Employers who fail[ed] to comply with the requirements of the Hawaii Act [PPHCA] [were] enjoined from carrying on their businesses in any place in the State, and [were] liable to fines and other remedies."⁶⁶ Standard Oil Company, which did not cover certain mandated benefits and which had not complied with mandated reporting,⁶⁷ filed suit in federal court seeking an injunction,⁶⁸ arguing that ERISA had preempted the PPHCA.⁶⁹ Both the United States District Court for the Northern District of California and the Ninth Circuit Court of Appeals held that *ERISA did preempt the PPHCA*.⁷⁰ The U.S. Supreme Court later affirmed the lower courts' rulings.⁷¹

However, while the Standard Oil litigation was proceeding, supporters of the PPHCA continued to promote the Act both locally and nationally despite the uncertainty of whether or not it was preempted by ERISA.⁷² On a local level, Hawaii continued to comply with the PPHCA and, in time, it "became part of the work culture of Hawaii."⁷³ On a national level, the Hawaii Congressional delegation continued in its efforts to obtain either a Congressional amendment or exemption to ERISA preemption.⁷⁴

After the State lost its case in federal district court in 1977, the Hawaii senators introduced legislation to Congress, attempting to exempt the PPHCA from ERISA preemption.⁷⁵ They lobbied while

the State's appeal in the Ninth Circuit was proceeding.⁷⁶ The senators, however, encountered either ambivalence or opposition from numerous fronts including key senators, the AFL-CIO, the Business Roundtable, the ERISA Industry Committee, life and health insurance associations, the American Council on Life Insurance, and the Carter Administration and Undersecretary of Labor, Robert J. Brown.⁷⁷

It has been suggested that "[t]he first Senate hearings on the exemption of Hawaii were also the first public occasion on which the history of ERISA preemption was rewritten."⁷⁸ Though evidence exists that Congress enacted ERISA "without specific discussion,"⁷⁹ the new claim was that "Congress, it seemed, had inadvertently preempted state-mandated health benefits."⁸⁰ Whether this was influential in persuading Congress to reconsider the PPHCA's preemption is not clear.

With persistence, the Hawaii delegation finally succeeded in its efforts and Congress voted to exempt the PPHCA from the ERISA preemption clause in 1983.⁸¹ But this was not without a cost. Congress granted the exemption but expressly mandated that the PPHCA should stand as it was written in 1974, some nine years earlier, without the 1976 increase in mandated benefits to which Standard Oil had earlier objected.⁸² Expressly preempted was "any amendment of the Prepaid Health Care Act enacted after September 2, 1974, to the extent it provides for more than the effective administration of such Act as in effect on such date."⁸³ Thus, Congress made exceedingly clear its reluctance to consider any future exemptions for Hawaii. Congress also explicitly stated that "the amendment made by this section shall not be considered a precedent with respect to extending such amendment to any other State law."⁸⁴ Again, Congress's intent was clear - it had agreed to grandfather the Hawaii PPHCA, but it was unwilling to extend any further exemptions to any of the other states.⁸⁵

61. Schaffer, *supra* note 51, at 54. See also Irish, *supra* note 59, at 150.

62. For a report of the Hawaii Congressional delegation's activities and the responses to their efforts to win an ERISA preemption exemption, see, e.g., Schaffer, *supra* note 51, at 53-60. See also, *ERISA: Exemption from Preemption for Hawaii Prepaid Health Care Act*: Hearing on H.R. 4046 Before the Subcomm. on Labor-Management Relations of the Comm. on Education and Labor, 97th Cong. 2d Sess. 3 (1982).

63. Schaffer, *supra* note 51, at 54.

64. *Id.*

65. Standard Oil Company of California v. Agsalud, 442 F. Supp. 695, 696 (N.D. Cal. 1977), *aff'd*, 633 F.2d 760 (9th Cir. 1980), *aff'd mem.*, 454 U.S. 801 (1981). See also Schaffer, *supra* note 51, at 54.

66. Standard Oil Company of California, 442 F. Supp. at 696.

67. *Id.*

68. *Id.* at 697. See also Schaffer, *supra* note 51, at 54.

69. Standard Oil Co. of California, 442 F. Supp. at 697.

70. Standard Oil Co. of California, 663 F.2d at 766.

71. Agsalud v. Standard Oil Company of California, 454 U.S. 801 (1981).

72. Law, *supra* note 60, at 214.

73. *Id.* Even after Congress overturned the PPHCA, most employers voluntarily continued to provide coverage for employees. *Id.*

74. Schaffer, *supra* note 51, at 54-59.

75. *Id.* at 54-55.

76. *Id.*

77. *Id.* at 55-57.

78. *Id.* at 57-58.

79. *Id.* at 58 (quoting Renfrew, J. in Standard Oil Co. of California v. Agsalud, 442 F. Supp. 695, 711 (N.D. Cal. 1977)).

80. Schaffer, *supra* note 51, at 58. Apparently Senator Daniel Inouye had misquoted Judge Renfrew, and in doing so, he suggested that the preemption of Hawaii's PPHCA was simply inadvertent. *Id.*

81. *Id.* at 59.

82. *Id.*

83. 29 U.S.C. §1144(b)(5)(B)(ii)(1983)(emphasis added).

84. Schaffer, *supra* note 51, at 59 (quoting Pub. L. No. 97-473, sec. 301(b), 96 Stat. 2605, 2612 (1983)(not codified)).

85. Schaffer, *supra* note 51, at 59.

B. The Current Health Care Market

As noted earlier, HMSA and Kaiser dominate the market. HMSA, a non-profit tax-exempt mutual benefit society,⁸⁶ “wields monopoly power as a seller of health insurance, and monopsony⁸⁷ power as a purchaser of the services of health care providers.”⁸⁸ In 1977, HMSA provided coverage for 44.3% of people in the private sector and served as the third party administrator for Medicare and several other health plans.⁸⁹ Kaiser, HMSA’s closest competitor, provided coverage for only 14.7% of the private sector.⁹⁰ In 1999, more than 60% of consumers were covered by HMSA,⁹¹ and estimates for 2000, are closer to 72%.⁹² As these figures indicate, “HMSA has enormous capacity to exercise control.”⁹³ Undoubtedly, HMSA is a dominant market player and has enormous marketing power which makes Hawaii, for all practical purposes, “a single payor health insurance system”⁹⁴ and a monopoly health care market.

According to Professor Richard S. Miller, Professor of Law, Emeritus, William S. Richardson School of Law,⁹⁵ HMSA “virtually monopolizes the Preferred Provider Organizations (PPOs) and is almost the only buyer of physicians’ PPO services in this State . . .”⁹⁶ Indeed, the participating provider agreement, which physicians must sign in order to contract with HMSA, was characterized as a contract of adhesion in 1999, by Arleen Meyers, M.D., J.D., founder and President of the Hawaii Coalition for Health (“Coalition”), a non-profit health care consumer advocacy organization.⁹⁷

In 1999, the Coalition filed a complaint with Hawaii’s Insurance Commissioner against HMSA. The following discussion of the Coalition’s complaint is not offered in this article as legal authority, but to describe an aspect of the current health care market that has recently raised some antitrust concern. The Coalition’s complaint alleged “unfair contracting practices and creating a business environment of adhesion, coercion, and intimidation and for exercising its monopsony power to unreasonably restrain physicians’ ability to provide quality care for their patients or to advocate on behalf of their patients . . .”⁹⁸ As regards HMSA and its provider contract,

Dr. Meyers stated that

HMSA occupies more than sixty percent (60%) of the consumer market for health insurance and is the major payor of reimbursements for medical care for virtually all Hawaii physicians who are not fully employed by a single health maintenance organization. If physicians practicing outside the Kaiser Permanent system don’t sell their services to HMSA, they are forced to go out of business. As a result, physicians are under enormous economic pressure to enter into any contract proffered by HMSA regardless of whether the terms are anti-competitive or against their or their patients’ individual self-interest. *HMSA therefore holds both monopoly and monopsony power of dangerous proportions*, precluding any single physician’s ability to negotiate with HMSA for either herself or her patients.⁹⁹

In response, HMSA argued that health care contracts between HMSA and its providers were private contracts and not under the regulation of the Insurance Commissioner.¹⁰⁰

The Coalition’s complaint was settled in 2000.¹⁰¹ HMSA agreed to “significant changes in the appeals processes it provides to physicians, while the Commissioner accepted HMSA’s assertion that federal law prohibits state regulation of contracts between insurers and providers.”¹⁰²

III. Antitrust Issues

This section will discuss potential antitrust issues and monopoly behavior, however, it must again be noted that the scope of this article does not permit a detailed antitrust analysis. The discussion in this section deals with the Council’s implementation of the PPHCA and the Act’s regulatory limitations.

Of note, HMSA and Kaiser representatives were first appointed to the Council in 1975, when the PPHCA was initially implemented, and served continuously on the Council until February 25, 2003, when they voluntarily resigned.¹⁰³ HMSA’s membership on the Council for the past three decades created an extraordinary conflict of interest and facilitated potential anticompetitive activity on the

86. About HMSA, at <http://www.hmsa.com/company/about.html> (last visited Oct. 24, 2001).

87. BLACK’S LAW DICTIONARY 1023 (17th ed. 1999). Monopsony is “[a] market situation in which one buyer controls the market.” *Id.*

88. Law, *supra* note 60, at 210.

89. *Id.*

90. *Id.* “HMSA’s only serious competitor is Kaiser, which served 14.7% of people with private health insurance in 1997. In 1997, all other commercial insurers combined provided coverage to only 2.6% of the population.” *Id.*

91. Hawaii Coalition for Health v. Hawaii Medical Service Assoc., Complaint to the Ins. Div., Dep’t of Commerce and Consumer Affairs, State of Hawaii, October 27, 1999, at 1.

92. Health Trends in Hawaii, *supra* note 8.

93. Law, *supra* note 60, at 210.

94. *Id.*

95. Richard S. Miller, J.D., is also Legal Consultant for the Hawaii Coalition for Health.

96. Richard S. Miller, *Why We Need Laws to Protect Patients from Their Health Plan*, HAWAII MEDICAL JOURNAL, February 2000, at 70.

97. Hawaii Coalition for Health v. Hawaii Medical Service Assoc., Complaint to the Ins. Div., Dep’t of Commerce and Consumer Affairs, State of Hawaii, Oct. 27, 1999, at 2. This complaint was written by Arleen Meyers, M.D., J.D., a previous student of Professor Richard S. Miller.

98. *Id.* at 1.

99. Hawaii Coalition for Health, *supra* note 91, at 1 (emphasis added).

100. Law, *supra* note 60, at 212.

101. *Id.*

102. *Id.*

103. Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee, *supra* note 11. See also, Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee, *supra* note 12.

part of HMSA. New companies applying to do business in the state were obligated to submit applications and divulge proprietary and confidential information to the Council.¹⁰⁴ While most new plans would have guarded this information from prospective competitors, the information instead went directly to HMSA and Kaiser employees by virtue of their membership on the Council.¹⁰⁵ On occasion, this information also went to more than one HMSA or Kaiser employee in attendance at meetings of the Council.¹⁰⁶ Data summary sheets, usually generated at each Council meeting, assisted a comparison of benefits between plans.¹⁰⁷ Even a member of the Council itself "acknowledge[d] that by being on the council the two companies [HMSA and Kaiser] may be getting 'a leg up' on their competitors by seeing their plans . . ."¹⁰⁸ It is likely that this loss of confidentiality was a strong deterrent to new market entrants - possibly serving to maintain Hawaii's contracted health care market.

Remarkably, previous directors of the DLIR and previous Council chairs allowed and even required the sharing of this proprietary information among market competitors. HMSA and Kaiser may have had an unfair advantage if their employees who were Council members directly relayed proprietary information belonging to new health plan applicants. There was certainly potential for violating a basic goal of antitrust law - fairness and elimination of unfair business practices.¹⁰⁹

The primary statute that is the basis for federal antitrust law is the Sherman Act.¹¹⁰ Section 1 of the Sherman Act declares that activity in restraint of trade is illegal and those who participate in such activity will be found guilty of a felony punishable by fine and/or imprisonment or may be subject to damage claims.¹¹¹ Section 2 relates to independent conduct and states that "[e]very person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony" punishable by fine and/or imprisonment, or may be subject to damage claims.¹¹²

Areeda defines monopoly power "as the power to control price or to exclude competition. It can be understood as a significant degree of market power."¹¹³ Market power, in turn, is "the capacity to act other than as would a perfectly competitive firm. In particular, most discussions of market power will concern the extent to which a firm's most profitable price exceeds competitive price levels."¹¹⁴ However, market power may also "be inferred from structure, conduct, performance, or some combination of the three."¹¹⁵ Areeda notes that "[d]ebate over §2 often contrasts power with conduct, structure with behavior."¹¹⁶

In *United States v. Aluminum Co. of America* ("ALCOA"),¹¹⁷ ALCOA was alleged to have monopolized the interstate commerce of aluminum. The case came before Judge Learned Hand of the United States Circuit Court of Appeals, Second Circuit, via a certificate of the Supreme Court.¹¹⁸ The court held that a monopoly itself is not evidence of monopolizing and that ALCOA "may not have achieved monopoly; monopoly may have been thrust upon it."¹¹⁹ The court then drew a distinction between "power and conduct, structure and behavior"¹²⁰ by stating "that size does not determine guilt; that there must be some 'exclusion' of competitors; that the growth must be something else than 'natural' or 'normal'; that there must be a 'wrongful intent,' or some other specific intent; or that some 'unduly' coercive means must be used"¹²¹ in order to constitute an antitrust offense.

Similarly, in *United States v. Grinnell Corp.*,¹²² the defendant had high market power consisting of "over 87% of the business."¹²³ "The percentage is so high as to justify the finding of monopoly. And, as the facts already related indicate, this monopoly was achieved in large part by [sic] unlawful and exclusionary practices."¹²⁴ Justice Douglas stated that "[t]he offense of monopoly . . . has two elements: (1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historical accident . . ."¹²⁵

104. Telephone Interview with Edward T. Coda, President of Med*Save Hawaii Marketing, Inc. ("Med*Save"), a representative of a health plan rejected by the Council (Nov. 20, 2001). Med*Save had hoped to market medical savings accounts, also known as medical IRAs (individual retirement accounts). It submitted a "complete copy" of its plan to the PPHCC. It had paid "significant dollars to actuaries to develop a rate structure used in coming up with information with submitting our plans." *Id.* When the submitted plan was rejected, there was concern that this information could be used by others to create a similar plan in Hawaii or elsewhere on the mainland. *Id.*

105. *Id.* The information that Med*Save provided to the Council included, but is not limited to, the following: estimated costs of providing customer service, employer group contracts, provider contracts, anticipated market share, commission rates, third party administrator information, and therefore, indirectly, provider fee schedules. *Id.*

106. Telephone Interview with John T. McDonnell, *supra* note 27.

107. See Minutes, *supra* note 36. This data includes such information as: eligibility requirements, waiting periods, premium amounts, deductible amounts, out-of-pocket limits, stop-loss provisions, limits on pre-existing conditions, hospital coverage, surgical benefits, medical benefits (including number of home and office visits), out-patient care benefits, maternity benefits, diagnostic and other benefits. *Id.*

108. Cho, *supra* note 28 (quoting William S. Brown, Vice-President for Human Resources, Outrigger Hotels).

109. Areeda, *supra* note 9, at 26. Additionally, even with proposed changes relating to their own plans, HMSA and Kaiser representatives remained at the table and actively participated in discussion - they did not vote but remained present at the vote. (Telephone Interview with John T. McDonnell, *supra* note 27).

110. Areeda, *supra* note 9, at 4. "The basic statute, the Sherman Act, simply condemns (1) contracts, combinations, and conspiracies in restraint of trade and (2) monopolization, combinations and conspiracies to monopolize, and attempts to monopolize." *Id.*

111. 15 U.S.C.S. §1 (LEXIS Law Publishing 2001).

112. 15 U.S.C.S. §2 (LEXIS Law Publishing 2001).

113. Areeda, *supra* note 9, at 448.

114. *Id.*

115. *Id.*

116. *Id.* at 447.

117. 148 F.2d 416 (2d Cir. 1945).

118. *Id.* at 421.

119. *Id.* at 429.

120. See *supra* note 114.

121. Aluminum Co. of America, 148 F.2d at 429.

122. 384 U.S. 563, 570-71 (1966).

123. *Id.* at 567.

124. *Id.* at 576.

125. *Id.* at 570-71 (emphasis added).

HMSA, covering 72% of insureds in a market analysis, would likely be found to have monopoly power, but monopoly power itself does not violate antitrust law if it has been legally obtained.¹²⁶ However, if the HMSA and Kaiser employees who served on the Council voted to reject competitor plans for reasons other than furthering the lawful purposes of the Council, or if HMSA and Kaiser benefited from knowledge of proprietary information gained through the Council, then this conduct could constitute behavior consistent with illegal maintenance of a monopoly.

According to an investigative report of a major local newspaper published in 2001, the previous Council rejected ninety-six out of an approximate one hundred mainland plans that applied to do business in Hawaii.¹²⁷ Fifty-nine out of sixty-four plans were rejected in the first seven or eight months of 2001.¹²⁸ In the same article, Professor Thomas Saving, Professor of Economics, Texas A & M University,¹²⁹ stated, "I don't think there is much doubt that they (HMSA and the council) are deterring entry into the market."¹³⁰ It is essential that recent Council denials be scrutinized and an assessment made of procedures to safeguard the confidentiality and disclosure of proprietary information.

Although it is imperative that the State of Hawaii provide adequate supervision of the Council, as Professor Richard S. Miller recognized, there was "only the most minimal of scrutiny and supervision"¹³¹ by the state's DLIR. By permitting HMSA and Kaiser seats on the Council, previous DLIR directors created a convenient mechanism for market competitors to control new entry into the Hawaii market and thus may have facilitated potential monopoly antitrust activity. Furthermore, other individuals who were present at Council meetings, including HMSA and Kaiser employees who were not members of the Council, had the opportunity to use proprietary information discussed at these meetings. New applicants may have been deterred from even applying to do business in the state when

they realized that they were required to share their information with major market competitors, and without any guarantee that a license to sell insurance would even be granted. The bottom line is that HMSA and Kaiser employees should not have served as Council members because of their inherent conflicts and the appearance of impropriety. Informational firewalls should be enacted immediately if they do not yet exist. The newly constituted Council in 2003 must consider potential conflicts of interest at the same time it reconciles itself with Hawaii's sunshine laws.

In response to criticism that the State has *not* provided adequate oversight, the previous Administration and HMSA may both raise an argument of state action immunity.¹³² However, in order to claim the protection that state action immunity carries, there must be, on the part of the State, "adequate supervision and [a] clearly articulated purpose to displace competition"¹³³ which appear to be lacking here. Instead, here, there appears to have been a general abdication of the State under successive previous administrations to provide oversight.¹³⁴

There may also have been an unusually close working relationship between the DLIR and HMSA, raising a question of propriety. A previous DLIR director resigned her position as DLIR director in October, 2000,¹³⁵ was elected Chair of the Hawaii Democratic Party in April, 2001, and was then elected to the Board of Directors of HMSA in May, 2001.¹³⁶ Scrutiny must be applied to the Council's activities, its voting members, and the State's supervisory role via the DLIR to insure that all business is conducted with the acknowledgment of conflicts of interest and with the assurance of propriety and fair dealing.

The potential monopoly problem is further compounded by a general requirement of the PPHCA which specifies that any plan operating in the state shall provide "health care benefits equal to, or medically reasonably substitutable for, the benefits provided by

126. Aluminum Co. of America, 148 F.2d at 430. "The successful competitor, having been urged to compete, must not be turned upon when he wins." *Id.*

127. Cho, *supra* note 28.

128. Cho, *supra* note 28.

129. Thomas Saving, Ph.D., is Director of Private Enterprise Research Center at Texas A&M. "In 2000, President Clinton appointed Dr. Saving to the Board of Trustees of the Social Security and Medicare Trust Funds. In May 2001, he was appointed by President Bush to the President's Commission to Strengthen Social Security." Private Enterprise Research Center (Nov. 30, 2002) at <http://www.tamu.edu/perc/staff.html>.

130. Cho, *supra* note 28.

131. Miller, *supra* note 96, at 70. See also Areeda, *supra* note 9, at 129. For state action immunity, there must be, on the part of the State, "adequate supervision and [a] clearly articulated purpose to displace competition" which appear to be lacking here. *Id.*

132. See Phillip A. Proger, *Antitrust Primer*, presented at a meeting of the American Health Lawyers Association: Antitrust in the Healthcare Field held February 17-18, 2000, Arlington, VA, at 83-84.

The state must reasonably have foreseen that anticompetitive effects logically would result from its announced policy." Furthermore, anticompetitive activity of even a private party may be immune if the party can prove that "not only was it acting pursuant to clearly articulated and affirmatively expressed state policy but also that the state was actively supervising its anticompetitive conduct.

Id. (emphasis added).

State action immunity has four broad categories: 1) federal immunity; 2) state immunity; 3) state action immunity of local governments, including municipalities; and 4) state action immunity for private parties.

In the health care sector, as well as in other others [sic], the federal government is immune from liability under the Sherman Act. This immunity extends to intermediaries and agents acting on behalf of the government. . . . Actions of the sovereign branches of a state – the legislature, the highest state court and presumably the executive – are immune as well. . . . Under our dual federal system of a sovereign federal government and sovereign states, local subdivisions of the state and other state agencies and municipalities are not automatically immune from antitrust liability unless their allegedly anticompetitive acts are authorized by the state. When they act pursuant to a 'clearly articulated and affirmatively expressed' state policy to displace competition with regulation in a particular industry, their actions are immune. *City of Lafayette v. Louisiana Power & Light Co.*, 435 U.S. 389 (1978)(municipal activities in operating city-owned electric utilities not immune from antitrust attack because of the absence of any state policy displacing competition with regulation or monopoly public service or authorizing anticompetitive conduct. . . . The state must reasonably have foreseen that anticompetitive effects logically would result from its announced policy.

Id. at 83-84.

133. Areeda, *supra* note 110, at 129.

134. Proger, *supra* note 132, at 84.

Under appropriate circumstances, private parties, as well as government agencies, may be immune from antitrust liability. If the allegedly anticompetitive conduct is the action of a private party, rather than a government entity, the private party must prove not only that it was acting pursuant to clearly articulated and affirmatively expressed state policy but also that the state was actively supervising its anticompetitive conduct.

Id. (emphasis added).

135. Telephone Questionnaire with State of Hawaii Department of Labor and Industrial Relations employee (June 30, 2003), *supra* note 12.

136. This previous DLIR director, appointed by Governor Benjamin Cayetano, remained in that position for five years until she left the DLIR and joined a private Honolulu law firm. She was elected Chair of the Hawaii Democratic Party shortly thereafter on April 16, 2001. Lynda Arakawa, *Democrats Elect Leader*, HONOLULU ADVERTISER, April 17, 2001, available at <http://the.honoluluadvertiser.com/article/2001/Apr/17/ln/in08a.html> (last visited Oct. 24, 2001).

A month later, in May 2001, she was elected to the Board of Directors of HMSA. *Trade Winds*, HONOLULU ADVERTISER, May 21, 2001, available at <http://the.honoluluadvertiser.com/article/2001/May/21/bz/bz10atradewinds.html> (last visited Oct. 24, 2001).

prepaid health plans of the same type . . . which have the largest numbers of subscribers in the State.”¹³⁷ Because HMSA is the plan with the largest number of insureds, any new market player is mandated to provide the same package of benefits that HMSA provides. However, in order to compete successfully with HMSA, the new plan must provide these benefits at similar or lower cost or must offer some other value added benefit. Since HMSA has monopoly (dominant market share for selling its plans) and monopsony (monopoly buying) power¹³⁸, it is highly unlikely that any new player can compete successfully with HMSA.¹³⁹

Any value added benefit or innovation that a new applicant might have hoped to use to compete with HMSA would have been divulged to the previous Council, and from there, potentially directly to HMSA and Kaiser. Even with HMSA and Kaiser no longer seated as Council members, their presence in the public audience at Council meetings may continue to serve as a deterrent to new applicants.

The Council wields significant power. Even if a new applicant offers a promising, new, and strikingly innovative plan (for example, medical savings accounts or medical IRAs), the Council can still reject it, and opt to maintain the status quo. In the past, the rationale used to justify denial of medical savings account plans was that, although the new plans would provide comprehensive coverage with similar employee out-of-pocket expenses, the coverage would not be the same as the Council’s benchmark plans (HMSA and Kaiser).¹⁴⁰

In the past few years, several health plans have closed their doors,¹⁴¹ unable to sustain business in Hawaii’s market. These plans were unable to successfully compete with HMSA. In some cases, the plans set low premium rates in order to compete, however these premium levels were probably too low to cover the costs of doing business. Few start-ups have assets, reserves, or investment income that are sufficient enough to offset initial operating losses.¹⁴² Additionally, few plans can compete in Hawaii because of the generally higher costs associated with mandated benefits.¹⁴³

It is vitally important to understand that, despite operating losses of its health plans, HMSA has, until recently, been able to report yearly net gains because its losses have been offset by relatively huge returns on investments. HMSA had \$37 million in operating losses in 1998, \$18 million in 1999, and \$49 million in 2000.¹⁴⁴ However, these losses were offset by investment income of \$54 million in

1998, \$57 million in 1999, and \$66 million in 2000.¹⁴⁵ Thus, HMSA has had tremendous financial ability to offset operating losses with investment income. This record shows that HMSA likely offered premiums below the cost of doing business, and health plans that did not have the financial depth of HMSA went out of business.

However, HMSA is not immune to general economic conditions, especially as relates to investment income. For 2002, HMSA has now reported losses of “\$34.9 million, compared with a \$3.4 million gain in 2001 Those losses were worsened by a \$21.3 million one-time charge [for technology upgrades] Excluding the one-time charges, HMSA’s net loss for 2002 was \$13.6 million.”¹⁴⁶ During that same period, HMSA reported investment income of \$2.6 million. Now, for the first quarter of 2003, HMSA has already reported a net income of \$3.7 million.¹⁴⁷ Few companies have HMSA’s ability to weather economic downturns.

Through continuing monopoly power, large assets, and knowledge of other plans’ proprietary information, HMSA has had the requisite ability to offer below cost pricing. This has resulted in few competitors and little choice for consumers who now face a very contracted market. The situation is ripe for a Section 2 Sherman Act violation for illegal maintenance of a monopoly, and immediate intervention is important to determine whether any such conduct has already occurred.

In 2000 and 2001, soon after other health plans that were unable to sustain business left the market, HMSA increased its premiums 8.5% and 9% respectively. In 2002, HMSA announced yet another rate increase of 5% for small employer groups and 7% for HMSA Health Plan Hawaii, its HMO (health maintenance organization) plan. In 2003, HMSA announced it would seek approval for an 11.5% rate increase for small businesses for its Preferred Provider Plan and a 7.8% rate increase for its Health Plan Hawaii Plus.¹⁴⁸ Scrutiny can be applied now, to ascertain whether HMSA became financially stronger simply through good business management or whether predatory pricing¹⁴⁹ has occurred.

In sum, there is no substantial competitor to HMSA in Hawaii. The regulatory limitations of the PPHCA and the previous decisions of the Council, influenced by HMSA and Kaiser serving as members, may have played important roles in preserving HMSA’s dominant position.

137. HAW. REV. STAT. §393-7(a) (1993).

138. Law, *supra* note 60, at 210.

139. Cho, *supra* note 28 (quoting Professor Thomas Saving).

140. Telephone Interview with Edward T. Coda, *supra* note 104.

141. Telephone Questionnaire with State of Hawaii Department of Commerce and Consumer Affairs employee (November 2002). During 1998 and 1999, three plans (Queen’s Premier Plan, Pacific Health Care, and Kapiolani Health Hawaii) either dissolved or changed in corporate structure. Insureds covered under Queen’s Premier Plan were transferred to HMSA’s Health Plan Hawaii (“HPH”) in October 1998. Pacific Health Care closed its doors and transferred its patients to HMSA HPH in August 1999. Kapiolani Health Hawaii’s three HMO [health maintenance organization] plans were bought out by HMSA HPH in November 1999. A fourth health plan, University Health Alliance, was in receivership with the State’s Insurance Commissioner.

142. As a practicing physician and surgeon, this author has found physicians naturally reluctant to participate with new plans because new plans may require medical providers to share risk when there is concern that the plans themselves may be undercapitalized.

143. Cho, *supra* note 28 (quoting Thomas Saving, see *supra* note 128, and accompanying text).

144. Helen Altonn, *HMSA Rates Set to Rise*, HONOLULU STAR-BULLETIN, May 3, 2001, available at <http://starbulletin.com/2001/05/03/news/index.html> (last visited Aug. 26, 2001).

145. *Id.*

146. John Duchemin, *HMSA’s Losses Worst Ever*, HONOLULU ADVERTISER, Feb. 28, 2003, available at <http://the.honoluluadvertiser.com/article/2003/Feb/28/bz/bz01a.html> (last visited Apr. 10, 2003).

147. John Duchemin, *HMSA Reverses Its Loss Trend*, HONOLULU ADVERTISER, May 13, 2003, available at <http://the.honoluluadvertiser.com/article/2003/May/13/br/br09p.html> (last visited June 29, 2003).

148. For community-rated groups, HMSA raised rates an average of 8.5% in 2000, and 9% in 2001. On May 7, 2002, HMSA announced a rate increase of 5% for small employer groups, and 7% for basic medical plans for HMSA Health Plan Hawaii. Lyn Danning, *Small Businesses To See HMSA Hike*, HONOLULU STAR-BULLETIN, May 8, 2002, available at <http://starbulletin.com/2002/05/08/news/story2.html> (last visited Aug. 8, 2001).

Just one year later, in 2003, HMSA announced that it would seek approval for an 11.5% rate increase applicable to small businesses for its Preferred Provider Plan, and a 7.8% rate increase for Health Plan Hawaii Plus (its largest HMO plan). John Duchemin, *HMSA Seeking 11.5% Increase For Businesses*, HONOLULU ADVERTISER, April 8, 2003, available at <http://the.honoluluadvertiser.com/article/2003/Apr/08/bz/bz02a.html> (last visited Apr. 10, 2003).

149. Areeda, *supra* note 9, at 914 (citing *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993)). Predatory pricing under Section 2 of the Sherman Act has two prerequisites to recovery First, a plaintiff seeking to establish competitive injury resulting from a rival’s low prices must prove that the prices complained of are below an appropriate measure of its rival’s costs The second prerequisite to holding a competitor liable under the antitrust laws for charging low prices is a demonstration that the competitor had a reasonable prospect, or, under §2 of the Sherman Act, a dangerous probability, of recouping its investment in below-cost prices

Id.

IV. Remedies

A. State Government

The most expeditious remedy to correct an environment so conducive to antitrust activity has already occurred under the new state administration. In her first State of the State address in January, 2003, Governor Linda Lingle expressly made known her desire for a Council excluding HMSA and Kaiser, and HMSA and Kaiser quickly resigned as members of the Council.¹⁵⁰ This immediately conveyed a new sense of fairness to the application and approval process and portends greater supervision of the Council's activities. With these assurances, new competitors can now be encouraged to enter the Hawaii market. Similarly, the public can be assured that the Council will deliberate fairly, and the public will benefit from new competition in the health care market.

The bigger question, however, remains - does the ERISA preemption allow the PPHCA to evolve and address the new demands of Hawaii's current health care market? Several authorities¹⁵¹ suggest "ERISA now severely limits Hawaii's ability to improve its health care system, since Hawaii cannot amend its 1974 legislation to implement more comprehensive and effective reforms."¹⁵² The PPHCA is frozen in time, permanently set in a 1974 mindset with little possibility of amendment. "[T]he Congressional action that saved the Hawaii Act from preemption also effectively removed the ability of the Hawaii legislature to modify it."¹⁵³ The PPHCA is virtually impossible to change as expressly stated in the preemption waiver.¹⁵⁴ Thus, the Hawaii State Legislature is significantly precluded from addressing current health care needs.¹⁵⁵

This bar to innovation prevents creative responses to Hawaii's changing health care demographics. This is a significant problem. The Hawaii Health Information Corporation, reporting health related

data since 1994, cites several areas of concern. These include a rapidly increasing elderly population, exponentially growing costs of chronic care, the shifting of health care coverage to managed care plans, and a higher rate of inflation for medical care.¹⁵⁶ Costs for chronic care alone are expected to double over the next two decades and, in the year 2020, are expected to account for 80% of total direct expenditures.¹⁵⁷

Entities with vested interests in access to health care are aware of these evolving needs and the inadequacy of Hawaii's current system to address them. Even a Council member recently said, "[t]he market has so changed over the years that the Prepaid Health Care Act is antiquated beyond its usefulness."¹⁵⁸ Despite earlier attempts of the State to win Congressional approval to change the PPHCA, those efforts have been consistently rebuffed.¹⁵⁹

Indeed, "[i]n the 1990s, Congress considered a number of proposals for expansive ERISA waivers. Hawaii, among other states, sought additional waivers that would allow the state to modify its health care laws Congress has repeatedly demonstrated its unwillingness to extend ERISA waivers for Hawaii."¹⁶⁰ This is regrettable, especially in light of evidence that the PPHCA was conceived with the understanding that it would need to be extended to other patient groups if it proved to be successful.¹⁶¹ The State had realized, at inception, that gap groups would initially exist, and had provided a scheme to be implemented later, which would allow the subsequent inclusion of these gap groups (the self-employed and others).¹⁶² Although the ERISA preemption and exemption clauses preclude changes to the PPHCA, on close scrutiny, a solution may be found buried within the language of ERISA itself.

Despite the general statutory limitation of ERISA's section 514(a), states caught by ERISA preemption may possibly have two options to develop their own health care initiatives.¹⁶³

150. See *supra* notes 30-31.

151. See, e.g., Byron Done, *Health Care Reform and ERISA Preemption: Can the States Adopt Aspects of Germany's Health Care System to Achieve Universal Access and Cost Containment?*, 18 HASTINGS INT'L & COMP. L. REV. 745, 757 (1995).

152. *Id.*

153. Pfeifferkorn, *supra* note 42, at 364.

154. See *supra* note 83.

155. Hancock, *supra* note 5, at 404.

156. The Hawaii Health Information Corporation ("HHIC") has been reporting health data since 1994 via both publication and website with the sponsorship of HMSA. Regarding demographic changes, it reports that Hawaii's population is aging rapidly The numbers of the "older old" are also increasing dramatically The increasing proportion . . . signals the need to monitor the ability of health care resources to meet the elderly's greater need for services The portion of the population deemed of "work age" (19-65) is decreasing relative to the elderly, raising questions about the social burdens this decreasing cohort must bear posing important questions for health care and public policy.

Health Trends in Hawaii, *supra* note 8, available at <http://www.healthtrends.org/demographics/index.html> (last visited Nov. 13, 2002).

Regarding chronic diseases, HHIC reports:

Chronic diseases include conditions that are prolonged, do not resolve spontaneously and are rarely cured completely approximately 45 percent of the U.S. population suffers from some type of chronic condition. The direct cost for chronic care in 2000 was \$510 billion. This is expected to double by 2020 and account for 80 percent of direct medical expenditures.

Id. available at http://www.healthtrends.org/health_status/chronic.html (last visited Nov. 13, 2002).

Regarding an overview of the health care market, HHIC states:

Managed care has replaced traditional fee-for-service or indemnity reimbursement to providers as the principal system of managing and financing health care delivery. In 2000, 85 percent of insured Hawaii's [sic] residents were covered under some form of managed care program, an increase of 49.1 percent from 1992. As coverage shifts away from traditional fee-for-service coverage and indemnity insurance, which declined by 62.5 percent from 1992, mainland commercial insurers play a diminishing role in Hawaii's market.

Id. available at http://www.healthtrends.org/health_market/index.html (last visited Nov. 13, 2002).

"Since the advent of QUEST [Hawaii Medicaid HMO] in 1994, total HMO enrollment increased by 48.5 percent. When QUEST plans are excluded, enrollment in HMOs increased by 68 percent over the same period." *Id.* available at http://www.healthtrends.org/health_market/managed_care.html (last visited Nov. 13, 2002).

"Over the 1990s, the average inflation rate for medical care was 72 percent higher than the overall inflation rate." *Id.* available at http://www.healthtrends.org/health_market/cpi.html (last visited Nov. 13, 2002).

157. *Id.*

158. Cho, *supra* note 28 (quoting William Brown, Vice-President of Human Resources for Outrigger Hotels Hawaii).

159. Fernando R. Laguarda, *Federalism Myth: States as Laboratories of Health Care Reform*, 82 GEO. L.J. 159, 183 (Nov. 1993).

160. Devon P. Groves, *ERISA Waivers and State Health Care Reform*, 28 COLUMB. J.L. & SOC. PROBS. 609, 634-35 (1995).

161. Pfeifferkorn, *supra* note 42, at 364-65.

162. *Id.* at 365.

163. Groves, *supra* note 160, at 620-24.

Specifically the Act in

[s]ection 514(a) . . . declares that ERISA “supersedes any and all State laws insofar as they may now or hereafter relate to any employee benefit plan” (including ERISA-covered health plans). However, Section 514(b) qualifies this by explicitly preserving state regulation of 1) “insurance, banking, or securities” 2) “generally applicable criminal laws[s] of a State” and 3) the Hawaii Prepaid Health Care Act as amended through September 2, 1974.¹⁶⁴

States, using a narrow interpretation of section 514(a)’s “relates to” clause, may enact generally applicable legislation that escapes the “relates to” clause or, alternatively, they may use the “savings clause” of section 514(b) that preserves the states’ ability to regulate insurance.¹⁶⁵

The “relates to” clause, if narrowly interpreted, may exempt statutes of general applicability. In *United Wire, Metal and Machine Health and Welfare Fund v. Morristown Memorial Hospital*,¹⁶⁶ employee benefit plan participants sued to upset New Jersey’s method for determining hospital rates.¹⁶⁷ The Third Circuit held that the hospital’s rate setting scheme was not preempted by ERISA because it related to a “statute of general applicability.”¹⁶⁸ The Supreme Court upheld this ruling.¹⁶⁹

The “savings clause” of ERISA stems from Congress’s original intent that the states continue to regulate insurance even after ERISA’s enactment.¹⁷⁰ Congress specifically “‘saved’ state laws that regulate insurance, banking, and securities.”¹⁷¹ The ERISA savings clause exempts state laws “‘to the extent they are applied to insurance companies or insurance policies, even if they might impact on employee benefit plans.’”¹⁷² This, in effect, leaves open a window for state insurance regulation. Examples include workers’ and unemployment compensation and disability insurance.¹⁷³ Thus, the Hawaii State Legislature may be able to use the ERISA savings clause to uphold the state’s prerogative to regulate certain aspects of insurance. The courts may provide additional support.

B. Judicial Review

For many years, the specific language of the express preemption left little room for judicial maneuvering.¹⁷⁴ ERISA’s broad preemption explicitly states that it preempts “‘any and all state laws insofar as they . . . relate to any employee benefit plan.’”¹⁷⁵ Despite Congress’s intent that the “relates to” clause be applied broadly, some courts

have not been so deferential.¹⁷⁶

One commentator has suggested that judicial review “through a flexible and adaptive judicial doctrine of preemption” might have been a better method to resolve conflicts between state and federal interests.¹⁷⁷ In *Standard Oil Company of California v. Aghsalud*,¹⁷⁸ in which Standard Oil first challenged the PPHCA alleging it had been preempted by ERISA, Judge Renfrew of the United States District Court, Northern District of California, held that ERISA did in fact preempt the PPHCA. However, he very importantly noted that:

[b]y enacting ERISA, Congress created a moratorium of indefinite length of the passage of health insurance laws. Congress could rationally have decided to take a different course. It troubles the Court, as it troubles defendants, that Congress preempted state health insurance laws apparently without specific discussion of the need for such a step. The workers whom ERISA was primarily intended to protect may be better off with state health insurance laws than without them, and the efforts of states like Hawaii to ensure that their citizens have low-cost comprehensive health insurance may be significantly impaired by ERISA’s preemption of health insurance laws.¹⁷⁹

Judge Renfrew urged Congress to consider the advice of Justice Brandeis:

Federal legislators should heed the admonition that Justice Brandeis addressed to the federal courts: “To stay experimentation in things social and economic is a grave responsibility. Denial of the right to experiment may be fraught with serious consequences to the Nation. It is one of the happy incidents of the federal system that a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”¹⁸⁰

One commentator has opined that the savings clause is unambiguous and should be accepted for its plain meaning. “ERISA expressly states that it does not preempt state laws that regulate insurance: ‘[N]othing in this subchapter shall be construed to exempt or relieve any person from any law of any state which regulates insurance. . . .’”¹⁸¹

In 2003, the U.S. Supreme Court acknowledged that healthcare and insurance regulation have historically been state domain and “that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.”¹⁸² ERISA’s preemption clause was intended to protect

164. Joseph M. Silvestri, *Employer Plan Design Requirements: Federal and State Regulation of Employer-Provided Health Benefits*, 393 PLI/COMM 315, 334 (1996)(emphasis added).

165. Groves, *supra* note 160, at 620-24.

166. 793 F.Supp. 524 (D.N.J. 1992).

167. *Id.* at 526.

168. *United Wire, Metal and Machine Health and Welfare Fund v. Morristown Memorial Hospital*, 995 F.2d 1179, 1189 (3rd Cir. 1993).

169. 510 U.S. 944 (1993)(*Reh’g Den.*).

170. Groves, *supra* note 160, at 620-21.

171. *Id.*

172. *Id.* at 621 (quoting Richard A. Hopp et al., *Report to Washington Health Care Commission on Preemption of State Laws Regulating Health Benefits* 9 (June 30, 1992)(unpublished report on file with the Columbia Journal of Law and Social Problems)).

173. Groves, *supra* note 160, at 621.

174. Stabile, *supra* note 44, at 37.

175. 29 U.S.C. §1144 (1998).

176. Groves, *supra* note 160, at 618-19. *See, e.g.*, text and *supra* notes 162-65 (discussing *United Wire, Metal and Machine Health and Welfare Fund v. Morristown Memorial Hospital*).

177. Irish, *supra* note 59, at 153.

178. 442 F.Supp. 695 (1977).

179. *Standard Oil Co. of California v. Aghsalud*, 442 F.Supp. 695, 711 (9th Cir. 1977) (Renfrew, J.).

180. *Id.* (citations omitted).

181. Donald T. Bogan, *Saving State Law Bad-Faith Claims From Preemption*, 39 TRIAL 52, 56 (Apr. 2003)(citing 29 U.S.C. §1144 (b)(2)(A)).

182. *Rush Prudential HMO, Inc. v. Moran*, 536 U.S. 355 (2002).

pension plans and retirement benefits, not to preempt state sovereignty in health and insurance, and to apply a broader interpretation to the preemption clause would require clear Congressional intent. The Court today appears to be contracting ERISA's broad preemption clause.

Further guidance in this area of ERISA preemption of state laws is found in *Kentucky Assn. Of Health Plans, Inc. v. Miller*. In this 2003 case, the Court held

Today we make a clean break from the McCarran-Ferguson factors and hold that for a state law to be deemed a 'law' . . . which regulates insurance under §1144(b)(2)(A), it must satisfy two requirements. First, the state law must be specifically directed toward entities engaged in insurance. Second, as explained above, the state law must substantially affect the risk pooling arrangement between the insurer and the insured.¹⁸³

Perhaps the Court's new direction relating to the savings clause will provide an alternative to an otherwise inflexible PPHCA.

C. Federal Intervention

One federal approach would be a Department of Justice ("DOJ") investigation.¹⁸⁴ The advantages of a DOJ analysis include expertise in antitrust evaluations, the resources needed to perform econometric studies, and the general belief that an outside agency will look objectively at a situation in which the State itself may have been negligent by not providing adequate oversight and supervision of the PPHCC.¹⁸⁵ Several procedures are available for enforcing antitrust law: criminal punishment,¹⁸⁶ equitable relief including proceedings in equity,¹⁸⁷ private suits in equity,¹⁸⁸ consent decrees,¹⁸⁹ and also private actions.¹⁹⁰

However, a Congressional amendment which would allow Hawaii to change its PPHCA would most directly remove the restrictions

under which Hawaii's current health care system must operate. The 1983 exemption that holds the PPHCA to its 1974 language¹⁹¹ prevents any contemporary response to meeting increasing health care costs and changing demographics. Many feel that ERISA in general "has had a disastrous effect on state efforts to improve access to health care."¹⁹² They hold little hope that any state's attempt to obtain corrective action from Congress can be successful, especially in view of Hawaii's protracted attempt from 1974 to 1983 to obtain its exemption.¹⁹³ Congress's original intent with ERISA was to establish a uniform nation-wide standard for employee rights and employer responsibilities in order to stabilize pension plans and protect retirees.¹⁹⁴ Because of this original aim toward national uniformity, ERISA stifles state innovation and modern response to current health care needs.

Consideration should also be given to actually repealing the PPHCA. This is probably the best way to open the doors to competition. Although proponents will argue that Hawaii employees will lose health care benefits, this author believes it more likely that employers would continue to provide insurance to employees just as they did from 1974-1983,¹⁹⁵ while the PPHCA was actually preempted by ERISA. Even in the absence of a mandate, it is highly likely that providing medical benefits will remain an important way in which small business employers can compete for more qualified employees.¹⁹⁶

V. Conclusion

In 1974, two laudable events occurred: Hawaii passed the PPHCA, designed to ensure that more of its citizens have access to reasonable health care coverage at a reasonable price;¹⁹⁷ and Congress passed ERISA, designed to assure American citizens that pension and other employee benefit plans would be well-managed and kept solvent.¹⁹⁸ Congress attached a very broad preemption clause to

183. 123 S.Ct. 1471 (Apr. 2, 2003)(internal citations omitted).

184. Cho, *supra* note 28.

185. See *supra* notes 132-133 and accompanying text for a discussion of state action immunity.

186. Areeda, *supra* note 9, at 54. "Violations of §1 and §2 of the Sherman Act, however, are criminal and are punishable by imprisonment up to three years and fines up to \$350,000 for an individual and up to \$10 million for a corporation." *Id.*

187. *Id.* at 60.

Sherman Act §4 and Clayton Act §15 confer jurisdiction on the federal courts "to prevent and restrain violations of this act" and direct the government "to institute proceedings in equity to prevent and restrain [antitrust] violations." The Supreme Court has understood the power under this statute to embrace "such orders and decrees as are necessary or appropriate" to enforce the statute.

Id. (citing *Northern Sec. Co. v. United States*, 193 U.S. 197, 344 (1904)).

188. Areeda, *supra* note 9, at 62.

Since 1914, Clayton Act §16 has permitted private persons to obtain injunctive relief against actual or threatened antitrust injuries. To have standing, the private litigant must demonstrate a significant threat of injury to itself. But where the anticompetitive effect or potential of the defendant's behavior would warrant an injunction in a government suit, the court may well proscribe the defendant's activity without close scrutiny of the harm claimed by the private plaintiff.

Id.

189. *Id.* at 63.

190. *Id.* at 73.

The treble damage remedy gives private persons a powerful financial incentive to enforce the antitrust laws. Under both the Sherman Act and the Clayton Act, any private person "injured in his business or property by reason of anything forbidden in the antitrust laws . . . shall recover threefold the damages by him sustained, and the cost of suit, including a reasonable attorney's fee."

Id.

191. See *supra* notes 82-83 and accompanying text.

192. *Id.* at 405.

193. Groves, *supra* note 160, at 635.

194. Holloway, *supra* note 41, at 416.

195. Law, *supra* note 73.

196. Telephone discussion with Senator Sam Slom, President of Small Business Hawaii, an economist, and Senator, Hawaii State Legislature (October 2002).

197. See *supra* note 13 (citing HAW. REV. STAT. §393-2 (1993)).

198. See *supra* notes 39-41, and accompanying text.

ERISA in order to insure that all Americans would be covered and that ERISA plans would be portable.¹⁹⁹ This clause, however, had the unfortunate effect of preempting the Hawaii PPHCA.²⁰⁰

Later, Congress granted Hawaii a unique exemption from ERISA preemption and provided an opportunity for Hawaii's statewide experiment in employer mandated health care coverage.²⁰¹ However, Congress's grant of this ERISA exemption also tied Hawaii to the law (PPHCA) as it was enacted in 1974.²⁰² Now, almost three decades later, Hawaii's PPHCA has become outmoded and untenable. Further, the PPHCA likely failed its original purpose of increasing health care access. The number of insureds in 1969, 88.1%, is not appreciably different from that in 1999, three decades later, at 88.9%.²⁰³ Although Hawaii's marketplace and demographics have changed dramatically²⁰⁴, Hawaii remains tied to the 1974 PPHCA language and therefore is unable to address modern demands.

The constraints of Hawaii's express exemption deny Hawaii any flexibility in meeting the new demands of a changed market.²⁰⁵ These demands are exemplified by the conflict between balancing increased patient expectations and higher longevity with decreased resources and higher costs of providing that care. Additionally, the language of the Act itself calls for new plans to meet a standard of benefits set by the largest plans in the state. This type of regulation has set an artificially achieved benchmark and is not a benchmark achieved as a result of a freely competitive market.

Further, the PPHCA was implemented in such a way that it raised questions of conflict of interest and monopoly maintenance. The DLIR Director's responsibility is to administer the Act²⁰⁶ after receiving recommendations and advice from the Council.²⁰⁷ The Director determines whether any applicant plan meets mandated

requirements.²⁰⁸ However, in the past, health plans applying to do business in the state found a formidable hurdle in both the application process and in meeting the benchmark as set by the PPHCA and as implemented by the Council.²⁰⁹ Formerly, applicant plans were at a distinct disadvantage, having to share proprietary information with marketplace competitors²¹⁰ who were members of the committee.²¹¹ This created a glaring conflict of interest, at worst, illegal monopoly maintenance, and at best, an appearance of impropriety.

As HMSA and Kaiser have recently resigned their memberships on the Council, the Governor's newly appointed DLIR Director has a fresh opportunity to review the composition and functions of the Council and to provide safeguards to protect proprietary information. The State must insure active supervision of the Council's activities in order to encourage the entry of new competitors to the Hawaii market.

The State may also consider implementing initiatives, on a local level, of 1) laws of general applicability, and 2) laws that relate to insurance regulation. Both of these approaches may give Hawaii options to deal with rising health care costs, and would not be at odds with ERISA. Indeed, the language that authorizes these approaches is found within ERISA itself.²¹²

Additionally, the State may ask its Congressional delegation to pursue a broader ERISA exemption, one that will allow Hawaii to change its PPHCA, encouraging competition and promoting innovation in its health care delivery system. Undoubtedly, it will take courage, tenacity, and resources to honestly evaluate the effects of the PPHCA, to pursue the modifications necessary to make it relevant for today's world, and, alternatively, to work for its repeal if other solutions prove untenable.

199. See *supra* notes 42, 46-48, and accompanying text.

200. See *supra* notes 44-45, and accompanying text.

201. See *supra* notes 6-7, 81, and accompanying text.

202. See *supra* notes 82-83, and accompanying text.

203. See *supra* notes 15-16, and accompanying text.

204. See *supra* note 156, and accompanying text.

205. See *supra* notes 151-155, and accompanying text.

206. See *supra* notes 23-24, and accompanying text.

207. See *supra* note 25, and accompanying text.

208. See *supra* notes 33-38, and accompanying text.

209. See *supra* notes 104-105, 127-130, and accompanying text.

210. See *supra* notes 104-108, and accompanying text.

211. See *supra* notes 11-12, 105, and accompanying text.

212. See *supra* notes 163-173, and accompanying text.

A Community-Based Asthma Management Program: Effects on Resource Utilization and Quality of Life

Sheila Beckham RD, MPH, Darlene Kaahaaina CHW, Kelli-Ann Voloch MD, and Anuenue Washburn RN, BSN

Abstract

Objective: *The Waianae Coast Comprehensive Health Center (WCCHC) developed an integrated community-based asthma management program in an effort to reduce inappropriate medical utilization and improve quality of life in their pediatric asthma population.*

Methods: *Over a period of three years, eighty-eight children with asthma participated in the community-based asthma management program. During this time, an automated asthma tracking system was developed, the WCCHC established a standard system of care based on the National Asthma Education and Prevention Program Expert Panel Report Guidelines for the Diagnosis and Management of Asthma (NAEPP Asthma Guidelines) adapted for cultural sensitivity, and a coordinated team care approach was implemented in the asthma management program.*

Results: *During the pilot study, forty children participated in the program. Among these forty individuals, there was a significant decrease in both per capita expenditures and asthma related visits after community health worker (CHW) intervention. Average per capita charges decreased from \$735 to \$181, Emergency Department (ED) visits decreased from 60 to 10, and*

the overall asthma related visits decreased from 1.5 to 0.25 per person after the initial CHW encounter. These results were replicated during the 2000-2001 intervention period where average per capita charges decreased from \$310 to \$129 and ED encounters dropped from 32 to 10 after the first CHW encounter. In addition, the number of high utilizers- defined as those presenting to the ED two or more times for asthma-related diagnoses- sharply decreased from 176 in 1998 to only 16 in 2001. Quality of life improved, with 72% fewer nighttime and 96% fewer daytime symptoms reported after CHW intervention during the pilot study. During the year 2000, symptoms during exercise and asthma related doctor visits decreased 59% and 67% respectively after CHW intervention.

Conclusion: *The community-based asthma management program demonstrated success in improving utilization patterns and reducing asthma-related expense among program participants. Improvement was also noted in quality of life as expressed through frequency and time of asthma symptoms. Other health care institutions may also be positively impacted by developing multidisciplinary team implemented, culturally-adapted, and scientifically-based disease management programs.*

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Introduction

Asthma prevalence, morbidity, and severity rates in the pediatric population have been steadily rising. An increase of more than 40% over the past decade has elevated the asthma prevalence rate to greater than 5% of the United States' pediatric population.¹ This translates into an estimated 5 million children nationwide suffering from asthma, making it the most common chronic childhood disease.² In 2000, 5.8% of those 5 to 17 years old reported having an asthma episode in the past year.³

The State of Hawaii leads the nation in asthma prevalence, with 87.7 cases per 1000 persons as opposed to the national average of 55 cases per 1000 persons. The ethnic distribution shows Hawaiians as having the highest asthma prevalence in the State (Hawaiians/143.2 per 1000, Filipinos/75.7 per 1000, Chinese/72.6 per 1000, Others/82.7 per 1000, and Caucasians/71.8 per 1000).⁴ According to the 2001 Hawaii Health Survey, the age group with the highest asthma prevalence in Hawaii is birth to fourteen. In the same category, 15,245 of the 32,812 children are of Native Hawaiian ancestry.⁵ This data points to the Native Hawaiian childhood and youth population as having the highest asthma prevalence in the State of Hawaii.

Asthma care presents a substantial financial burden. The projected cost of asthma in the United States for the year 2000 was \$14.5 billion.⁶ Annual direct and indirect costs for asthma in Hawaii are estimated at 127 to 296 million dollars.⁷ Emergency Department (ED) visits and inpatient care are responsible for more than 40% of the total national medical costs for asthma.⁸ Between 1992 and 1999, ED visits increased 29% nationwide, with the pediatric population making up the majority of the visits. The rate of outpatient and ED visits continued to climb after 1995, while the hospitalization rate decreased.⁹ Children with asthma visited the ED 2.2 more times and paid 2.8 times more in total annual medical costs than those without asthma.¹⁰

With these factors in mind, the Waianae Coast Comprehensive Health Center developed an integrated community-based asthma management project to improve quality of life and decrease inappropriate medical utilization in their pediatric population. Located within a medically underserved area, the WCCHC services the most Native Hawaiians in the State of Hawaii. Waianae has the youngest population as well as the highest percentage of Hawaiian/Part Hawaiians (41%) in the State.¹¹ During 1999, 3,460 visits were made by 1,468 individuals to the WCCHC Emergency Department for asthma related diagnoses. Children under 14 years old comprised 43% of the 1,468 individuals. Fifty-nine percent (59%) were Hawaiian/Part Hawaiian. The total cost for asthma (all ages) at the WCCHC during 1999 was \$720,360.48, with 51% of

this attributed to ED visits. During 2000, 806 children under the age of 14 presented to WCCHC for asthma related care. Seventy-four percent of these children were Medicaid/Medicaid Managed Care (QUEST) or uninsured. A review of utilization patterns among those managed care patients who incurred the majority of encounters and charges over a one-year period revealed that 5% of total patients were responsible for 25% of the charges. Children with asthma represented a high percentage of these utilizers.⁷

Measurable outcomes included utilization patterns and patient quality-of-life questionnaires. It was anticipated that the asthma management project would result in fewer asthma-related visits to WCCHC and improve quality of life among participants.

Methods

Study Population: The target population was asthmatic children between the ages of 3 and 10 years old for the pilot study and 3 and 14 years old for the 2000-2001 intervention period. During the 1999 pilot study, 78 potential participants were identified, and 40 (51%) consented to participate. Eligibility requirements for this study included an asthma-related hospitalization and/or more than one asthma-related ED or same day office visit in the past 45 days. Two hundred thirty-one children were referred during the 2000-2001 intervention period, with 48 (21%) of these agreeing to be program participants. Program participants for both phases ranged from mild to severe asthma classifications.

To identify participants for the pilot study, various methods were employed. An electronic tracking system was developed which sent daily printouts of all asthma-diagnosed ED encounters to the asthma educators for review. From October to December 1999, the search was broadened to include all patients who received updrafts in either the ED or at an office visit. In an effort to enhance potential participation, referrals from primary care providers and case management were also accepted.

Project Design: In order to develop a standard system of care for asthma management, WCCHC selected the NAEPP Asthma Guidelines as an infrastructure. A multidisciplinary team representing pediatrics, family practice, internal medicine, chronic disease, behavioral health, pharmacy, and preventive health convened to review these guidelines with respect to the cultural needs of the community and the current practices of the WCCHC's providers. The NAEPP Asthma Guidelines were adapted to Waianae practice and adopted by the providers in July 1999. During the implementation phase of the pilot study, two community health workers (CHWs) were trained for 11 months in the following areas: anatomy and physiology of asthma; symptoms

and triggers; severity classifications; asthma medications; peak flow meter, inhaler and spacer use and care; and relaxation and strengthening exercises. Potentially high-risk asthma participants were referred to the asthma management program through the electronic system or by the primary care provider (PCP). After reviewing the patient's history and asthma intervention plan documented in the medical chart, initial appointments were made by the CHWs as home visits. The first visit focused on building rapport, evaluating family and social supports, and assessing the home environment for triggers. Barriers to regular medical follow-up care, treatment, compliance, and quality of life were also assessed. The CHW then collaborated with the asthma treatment team (PCP, CHWs, project coordinator, MD consultant, and patient) to develop an asthma intervention plan, with particular emphasis placed on medication management. Visit results were recorded in progress notes and encounter forms were printed for each subsequent visit to facilitate tracking of utilization.

For the 2000-2001 grant period, the home outreach model was expanded on. Greater efforts were focused on integrating the asthma management/education services into existing clinics and programs through in-office education. The management curriculum remained similar to the pilot year with greater emphasis on medication management. Additional educational tools to augment asthma education included a set of diseased lungs, a year's supply of cigarette tar in a bottle, medical complication flip charts, and an interactive asthma education CD.

An Asthma Management Education and Assessment Summary Report was developed for use by the CHWs when communicating information in the medical chart. This form helped the asthma management team track patient self-management goals such as medication management, environmental triggers, exercise, relaxation, and prevention. Chronic disease self-management was added as an electronically track-able procedure

on both the enabling and medical encounter forms in April 2001. In addition, the brief quality of life tool developed during the pilot year was continued for both pre and post assessments.

Results

Patient Encounters: Forty of the 78 potential participants consented to be part of the pilot program. The home evaluation form was completed for 20 (50%) of these patients.

Two hundred thirty-one children were referred to the 2000-2001 asthma management project. Forty-eight (21%) of these actively participated in the program. CHWs conducted a total of 158 visits among these 48 participants.

Utilization Patterns: The 40 pilot study participants visited WCCHC with asthma related complaints 103 times from March 1, 1999 to April 30, 2000. Of this total, 83 visits occurred before the participants' first encounter with the CHW. Twenty visits occurred after the first encounter. The latter number represents 19% of the total number of visits. Before CHW intervention, the program participants averaged 1.5 visits per person. After the first CHW visit, this decreased to 0.25 visits per person. The charges incurred for all visits was \$36,613 (excluding the salary for 1 FTE CHW at approximately \$28,000/year). Of this total, \$29,384 was charged before the participants' first encounter with the CHW and \$7,229 was charged after the first encounter. The latter number represents 20% of total charges. Per capita, this means a decrease from \$735 to \$181 for asthma related visits. In addition, 28 of the 40 (70%) participants did not have another asthma related visit to WCCHC after their first encounter with the CHW.

It is interesting to note that two non-compliant participants incurred bills for \$3,302 after their first CHW encounter. If this amount were subtracted from

Table 1.— Pilot Study Home Evaluation Summary

Homes not evaluated	% of homes	Homes evaluated	% of homes
No consent for home visit - seen in clinic	38%	One or more asthma triggers noted	100%
Unsafe to enter	7%	Smoking noted	75%
Could not locate	5%		

Table 2.— Pilot Study Period

Measurable Outcome	Before CHW Intervention	After CHW Intervention
Total costs to WCCHC among program participants	\$29,384 (\$735 per capita)	\$7,229* (\$181 per capita)
ED encounters among program participants	60	10
ED costs among program participants	\$948 per capita	\$469 per capita
Total number high utilizers	176	

* includes two non-compliant individuals who incurred \$3302; charges do not include CHW salary

the total charges and charges incurred after the first CHW visit, only 9% of total costs would have been charged after the initial asthma education visit.

The number of asthma related complaints seen in the ED among the program participants decreased from 60 to 10 after the initial CHW encounter. This translates to an average of \$948 per capita before CHW visit and \$469 after initial CHW encounter. Additionally, 61% of all participants had no further asthma related ED visits.

Total asthma related expenses for the 2000-2001 study period decreased by more than half among the 48 participants after the first CHW encounter. During the period of October 1, 2000 through September 30, 2001, program participants visited the WCCHC for asthma related complaints a total of 134 times and incurred a total of \$14,866 before CHW intervention. After the first CHW visit, a total of \$6,185 was spent. Per capita, this shows an average decrease from \$310 to \$129. Total ED visits decreased from 32 prior to initiation of CHW intervention to 10 following the initial educational session. Average asthma related ED charges dropped from \$1119 per person to \$188 per person after CHW intervention. The number of high utilizers, defined as those presenting to the ED for asthma related symptoms three or more times a year, decreased 91% from 176 in 1998 to 16 in 2001.

In an effort to assess seasonal variation, total asthma related expense was also examined among 17 patients referred to the project that failed to show up for asthma education with the CHW. No significant change was noted prior and following referral. The total amount spent on these individuals before referral was \$14,493, and after referral it was \$13,002. Average per capita charges among referred children that did not participate

in the study decreased from \$853 prior to initial CHW referral to \$765 at the end of the grant year.

Quality of Life: For the pilot program, 25 (63%) of the 40 participants returned the quality of life evaluation forms. Thirty-six individuals (75%) completed the quality of life forms during the year 2000. An overall improvement was sustained over both years.

Discussion

Program Participants: Several factors contributed to the fact that only 40 out of the 78 patients recruited actually participated in the program. The pilot study began in the spring, a time of year when there is a decrease in the number of asthma related complaints. Therefore, the number of potential participants to evaluate for the asthma program was limited until the winter months, when the number of asthma related complaints increased. It was difficult to make initial phone contact with several patients due to wrong numbers, numbers no longer in service, and relatives not relaying messages. Some parents were uncomfortable with a "stranger" calling their house. Due to the lag time in between receiving a potential participant's name and actual contact, some parents were not interested in the program since they were no longer alarmed by their child's recent bout with asthma.

Of the 40 patients who consented to an initial visit with the CHW, difficulties were encountered in establishing follow-up appointments. Although future appointments were scheduled at the time of the first visit, many of those appointments resulted in cancellations or no-shows. An unforeseen condition was that living situations changed. Contacting the participant

Measurable Outcome	Before CHW Intervention	After CHW Intervention
Total costs to WCCHC among program participants	\$14,866 (\$310 per capita)	\$6,185 (\$129 per capita)
ED encounters among program participants	32	10
ED costs among program participants	\$1119 per capita	\$188 per capita
Total number high utilizers	16	4

Control Group	Before CHW Referral	After CHW Referral
17 patients who were referred to program but did not participate	\$14,493 (\$853 per capita)	\$13,002 (\$765 per capita)

Indicator	Pilot Program Response	Year 2000 Response
Fewer daytime symptoms	96%	79%
Fewer nighttime symptoms	72%	42%
Fewer symptoms during exercise	84%	59%
Decreased number of asthma related doctor visits	92%	67%

by phone often required several attempts. If possible, the CHW offered asthma education in conjunction with another scheduled appointment at the WCCHC in order to increase the chances of the patient keeping the appointment.

Over time, it became apparent that it was propitious for the CHW to provide as much asthma education as possible at the first appointment. At the second appointment, the CHW reviewed the most important aspect of asthma education for that participant as well as a modified asthma care plan if provided by the PCP.

The major limiting factor for the program was the patient. An attitude of indifference prevailed, making it difficult to set an appointment when the child was not experiencing symptoms. Therefore, it was proposed for the ensuing study phase that asthma education be combined with scheduled PCP appointments. The CHW would be on-call and would aim to establish rapport and begin asthma education at these short encounters.

The initial intent of the 2000-2001 intervention period was to specifically focus on children with excessive ED utilization or with frequent same-day out-patient clinic visits. However, due to the low number of referrals during the first quarter of the grant year, any direct provider referrals were followed by the asthma management team. It may appear that with only a 21% participation rate drawing conclusions based on this model may be preliminary. Yet the dramatic decrease in ED utilization illustrates the importance and relevance of this community-based asthma management program.

Sorting through the ED printouts was tedious, cumbersome, and yielded only one active participant. Direct involvement by providers, who referred patients at the time of the clinic visit, provided the most positive assurance that the patient would successfully participate in the program and fostered a sense that the asthma management project was a vital component of clinical asthma care at the WCCHC.

A key to successful integration of asthma management education appears to be the support of the medical provider as well as the timing of the intervention. Education integrated into either a symptomatic or preventive clinic visit reinforces the importance of the prevention and disease management component. Likewise, when the patient presents to the ED at the time of crisis and greatest need, educational intervention would likely be most effective. Most patients did not verbalize or demonstrate interest in asthma education after the crisis was resolved.

Utilization Patterns: Previous studies have shown that coordinated asthma education/management programs have the propensity to decrease ED utilization, hospitalizations, and other asthma-related expenditures. One military hospital saved an estimated \$4845 per

asthma patient annually after asthma education was provided,¹² while another military hospital decreased hospital admissions from 147 to 87 over the two years that their asthma management program was in place.¹³ A third hospital experienced a decreased length of hospital stay of 12 hours per admission and saved an average of \$300,000 per year after an asthma education program was implemented.¹⁴ Positive outcomes were demonstrated in the WCCHC asthma management program even after seasonal variations were assessed. Over the three years that the asthma management program was in place, asthma related ED visits and expenditures continued to decrease. The success of the program can be seen most clearly in the drastic decrease of high utilizers.

In a study comparing a randomized control group receiving a one-time asthma education session with a group receiving the education plus asthma case management, a decrease of 57% to 75% in resource utilization was noted in the experimental group.¹⁵ The WCCHC used an integrated, patient-centered, multidisciplinary team approach in the asthma management program. Case management inevitably became a part of the program as CHWs conducted home assessments and met with the participants 2 to 3 times over the course of the intervention. This asthma case management component, as opposed to a one-time education session, may have contributed to the success of the program.

Another strength of the asthma management program may have been the repeated emphasis on proper medication management. A recent study found that, due to inadequate asthma education at the doctor's office, most parents develop a "trial and error" methodology in caring for their asthmatic children. Nearly half of those parents interviewed reported receiving little or no education at the time of first asthma diagnosis. Additionally, over half of those parents of children with an established history of asthma did not understand the way their children's medication worked.¹⁶ The implications of misunderstanding the mechanism of medication action have a direct impact on asthma-related ED visits. Farber et al. correlated a misunderstanding of inhaled corticosteroid action with an 82% decrease in daily use of the medication.¹⁷ Daily use of inhaled corticosteroids has been shown to contribute to a significant decrease in ED visits.¹⁸

Conclusion

The asthma management program has demonstrated success in improving utilization patterns and in reducing asthma related expense among program participants. Improvement has also been noted in quality of life as expressed through frequency and time of asthma symptoms. The WCCHC's community-based asthma prevention/education program has been refined through cultural adaptation of scientifically based

disease management guidelines and development of the infrastructure that incorporates tracking and identification of asthma patients.

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Occurrence of Neural Tube Defects and Down Syndrome Among Siblings

Mathias B. Forrester BS and Ruth D. Merz MS



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Ruth D. Merz MS

Abstract

A recent study had reported increased risk of Down syndrome among siblings of infants with neural tube defects (NTDs) and vice versa. However, Hawaii Birth Defects Registry data indicate no elevated risk of Down syndrome among older siblings of infants with NTDs and vice versa, contradicting the findings of the previous study. Further investigation of the potential relationship is warranted.

Introduction

A number of studies have found reduced risk of neural tube defects (NTDs) with maternal periconceptional use of folic acid.¹ This association has been linked to polymorphisms in genes for folate metabolism such as 5,10-methylenetetrahydrofolate reductase (MTHFR) and methionine synthase reductase (MTRR).²⁻⁵ Several investigations have likewise noted a relationship between mutations in MTHFR and MTRR genes and Down syndrome,⁶⁻⁹ although other investigations reported no such association.^{10,11} Folic acid is a component of DNA synthesis. If DNA synthesis is impaired, then there may be problems in the segregation of chromosomes during cell division, leading to aneuploidies such as Down syndrome. Impairment of DNA synthesis also could interfere with rapid cell division during the early development of the fetus, resulting in structural defects such as NTDs.

The observation that both NTDs and Down syndrome may be influenced by polymorphisms in the same folate metabolism genes suggests a similar etiology for at least a portion of these two birth defects. One recent study demonstrated an elevated risk of Down syndrome among siblings of infants with NTDs and vice versa.¹² However, an accompanying editorial mentioned several limitations to this study.¹³ The study was hospital-based, and risk for conditions in hospital-based studies may be exaggerated when compared to population-based studies. Moreover, the reference rates for NTDs and Down syndrome that were used were from other populations. The results of a subsequent hospital-based investigation did not support the findings of the original study.¹⁴ The intent of the present investigation was to determine the risk of Down syndrome among older siblings of infants and fetuses with NTDs and vice versa using data from

a population-based birth defect registry and reference rates from the population being studied.

Methods

Data for this analysis was obtained from the Hawaii Birth Defect Program (HBDP), a population-based birth defects registry for the state of Hawaii. HBDP staff identify eligible infants and fetuses (any pregnancy outcome with one or more reportable birth defect identified between conception and one year after delivery where the pregnancy ended in Hawaii) and collect information through review of logs and medical records at all delivery and tertiary care pediatric hospitals, facilities that perform elective terminations secondary to fetal anomalies, genetic counseling centers, cytogenetic laboratories, and all but one major prenatal ultrasound facility in the state. Through its multiple source ascertainment system, the ascertainment of eligible infants and fetuses by the HBDP is believed to be as complete as possible.

Among the information the HBDP collects is the total number of older siblings. This information generally is available in the medical records the HBDP staff review as a mention of the total parity or gravidity or a list of all previous pregnancies. The HBDP also collects the history of birth defects among older siblings. The manner in which this is done is described elsewhere.¹⁵ Briefly, birth defects among older siblings are identified through review of the medical records of the probands as well as review of the medical records of any older siblings mentioned to have birth defects where possible. The HBDP database is also examined to identify multiple infants or fetuses with the same mother and/or father.

Cases were all infants and fetuses with Down syndrome confirmed by cytogenetic analysis or NTDs delivered during 1986-2000. Reference rates for the two birth defects were calculated based on the 281,866 live births delivered in Hawaii during 1986-2000. The total number of older siblings of any pregnancy outcome were determined for each birth defect. The number of older siblings with an NTD was determined for Down syndrome cases and the number of older siblings with Down syndrome was determined for NTD cases. The observed number of older siblings with the birth de-

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fect in question was then compared with the expected number based on the reference rate. P-values and 95% confidence intervals (CIs) were calculated using Poisson probability. P-values less than or equal to 0.05 or 95% CIs that did not include 1.0 were considered to indicate that the observed number of older siblings with a particular birth defect was significantly different than expected.

Results

During 1986-2000, there were 286 infants and fetuses with NTDs and 441 with Down syndrome, resulting in reference rates of 10.1 per 10,000 live births for NTDs and 15.6 per 10,000 live births for Down syndrome.

The number of older siblings was known for 284 NTD cases, of which 205 had one or more older siblings. A total of 496 older siblings was identified. None of the older siblings were reported to have Down syndrome, which is not significantly different from the 0.77603 siblings that were expected based on the reference rate ($P=0.460$; 95% CI 0.00-4.75).

The number of older siblings was identified for 432 cases of Down syndrome, and 362 of these cases had one or more older siblings. There was a total of 981 older siblings. One older sibling had an NTD (encephalocele). This is not significantly different from the 0.99539 older siblings with NTDs that were expected based on the reference rate ($P=0.630$, 95% CI 0.03-5.60).

Discussion

Using population-based data and reference rates from the study population, we failed to find increased risk of Down syndrome among older siblings of infants and fetuses with NTDs and vice versa. This is contrary to the findings of a previous study,¹² although consistent with a subsequent investigation.¹⁴

Our investigation also has limitations. Since the maternal age at the previous pregnancies was not known, a maternal age-adjusted expected number of Down syndrome births could not be calculated. In addition, the medical records of all older siblings were not reviewed, only those where there had been report of a birth defect in the records of the proband and the siblings' medical records could be found, and those that were in the HBDP database. Thus some birth defects among siblings might be missed. It is unknown to what degree this will impact the investigation. However, the data in other population-based birth defects registries will likely suffer from the same limitation. Finally, the relatively small number of cases and older siblings limits the statistical significance of the analysis; thus, this investigation has limited power. This study may be considered a pilot. Since some birth defects registries in other states also may collect information on birth defects among family members,¹⁶ other birth defects registries with larger populations may repeat

this analysis. Furthermore, the data presented here may be combined with data from other population-based birth defects registries in meta-analyses that allow for greater statistical significance.

Considering that the results of our investigation differ from that of the original study,¹² further investigation into the potential link between NTDs and Down syndrome is warranted.

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Surgical Notes from Ancient Tonga

Paul W. Dale MD



Paul W. Dale MD

Introduction

In November of 1806, an English ship, the PORT AU PRINCE, a privateer which was also fitted out for whaling, began taking on water from a large leak. The captain decided to put into Tonga for repair. Captain James Cook had charted these islands some thirty years earlier and had met with a friendly reception, so much so that he called them the Friendly Islands. But soon after the PORT AU PRINCE anchored off the island of Haapai in Tonga, the ship was captured by native warriors. Most of the crew were massacred. By the express wishes of Finau, the local chief, a young lad by the name of William Mariner, fifteen years of age, the captain's clerk, was spared and taken into the chief's ohana. Tonga in those times had not been significantly influenced by the rare appearance of English or French ships in these islands. The society, culture, and arts were as they had always been. Surgical instruments and dressing were prepared from native materials. There were no metals, no woven articles, and nothing written nor illustrated.

William Mariner resided for 5 years in Tonga, became fully conversant in the Tongan language, and lived solely among the native people. He was picked up by a passing English ship and thereby returned to the British Isles. In London he was befriended by a London physician, Dr. John Martin, who, in 1817, published a detailed account of Mariner's observations of the Tongan society and of his many experiences while living in Tonga.¹

With some editing and revision by the author, PWD,² * the surgical notes, as recalled by William Mariner, are taken from Dr. Martin's publication.

Let the reader judge for himself the skill and competence of the isolated surgeons of Tonga at the beginning of the nineteenth century.

The surgeons

"No native of Tonga undertakes to practise surgery, unless he has been at the Fiji Islands, where constant wars afford great opportunities of becoming skillful; and no native of Tonga would employ a surgeon who had not been thus schooled. Nor would anyone, as I believe, undertake an important surgical operation, unless he feels himself confident in what he is about to perform. It must be said of them, that they are not rash in their opinions. When a surgeon performs an operation, he never fails to obtain a present from the patient or his friends."

Management of Chest Wounds

"*Kauso* is an operation which is performed to allow of the escape of extravasated blood, which has lodged in the cavity of the thorax, in consequence of wounds, or for the extraction of a broken arrow. There are no other instances where they think of performing it. The instruments they use are a piece of bamboo and a splinter of shell; sometimes a probe made of the stem of the coconut leaf. I saw a number of persons on whom the operation had been performed, and who were in perfect health; and two instances of the fact itself I was an eyewitness to. The one I am about to describe was performed upon a Fiji islander, who had received a barbed arrow in the right side, between the fifth and sixth ribs; not in a line directly below the nipple, but about an inch backwards. The arrow had broken off about three inches from the point, under the third row of barbs; and from the rise and fall of the thorax in the act of respiration the whole piece was perfectly concealed from any external view. The barbs



Mr. Mariner in the costume of the Tonga islands.

(London Published May 8, 1816 by J. Murray, Albermarle Street.)

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and the point were of the same piece with the arrow. They are made thin under each barb, on purpose that they may break. The barbs of this arrow were about a quarter of an inch transverse diameter, and the stem of the arrow under each row of barbs about the eighth of an inch."

"A countryman of the wounded man wished to perform the operation, but the patient desired that a friend of his, a native of Vavau, should manage it. This proved that he placed at least equal confidence in his skill as in that of his countryman; for he had seen him perform the operation several times before at the Fiji Islands."

The patient was now lying on his back, but a little inclined to his left side; and this was considered a favourable posture for the operation. It was a fine clear day, and the weather warm.

"Had it been rainy or cloudy, or had the patient felt himself cold, fires would have been lighted in the house, and a burning torch held to his side, to relax the integuments, and to render by such means the wound more favourable. The wound had been received the day before; and on pressing the finger upon its orifice the broken end of the arrow could not now be felt, except by the pain which such pressure gave the patient. In the first place, the operator marked with a piece of charcoal the situation and length of the intended incision, which was about two inches; the small wound made by the arrow being in the centre of it. The integuments were now drawn upwards, so that the black line lay upon and parallel with the superior rib; an assistant pressing his hand above, and another below the situation of the intended incision, with a view to keep the integuments firm and steady. The operator having now chosen a fit piece of bamboo, began his incision, and carried it down to the bone, the whole length of the mark, which was done with five or six motions of the hand, aided by considerable pressure. In this part of the operation a shell could not be used, on account of its liability to break. The integuments being now allowed to return to their natural situation, the incision was cautiously continued with a splinter of shell, midway between the two ribs, dividing the intercostal muscles to nearly the same extent as the external wound, to allow of the introduction of a finger and thumb to lay hold of the arrow. During this part of the operation, however, the end of the arrow became perceptible, protruding between the ribs at every inspiration. The operator, as soon as possible, secured it with the finger and thumb of his left hand; while with his right he proceeded to widen the incision on either side, that he might take a deeper and firmer hold, and secure, if possible, the second row of barbs. To facilitate the operation, he now slipped the noose of a string over the barbs he held between his finger and thumb, and having secured which, his left hand was no longer in the way of his right; for by drawing

the string as far as prudence would allow, he kept it pressed upon the superior rib, and thereby preserved the arrow from receding at every expiration. The incision was now carried through the intercostal muscles and the pleura, sufficiently to allow of the introduction of the finger and thumb of the right hand, with which he endeavoured to disengage as much as possible what might obstruct the barbs; while with his left finger and thumb he laid hold of the end of the arrow, and kept gently twisting it, always one way, so as to break down those obstructions which could not be removed with the other hand, taking care, however, not to use so much force as might be supposed liable to break the barbs; and in this way, in the course of two or three minutes, he withdrew the arrow, bringing with it a small portion of the substance of the lungs, which could not be disengaged. During this part of the operation the patient was almost insensible; he was held by those about him, to prevent any mischief arising from his struggles, which at times were violent. The operator now carefully examined the arrow, and being satisfied that every barb (of which there were three rows) was entire, he ordered him to be gently turned on the right side, so that the wound was depending; and to make it more completely so, a quantity of ngatu [tapa] was placed under him in two situations, namely under the shoulder, and under the pelvis, in such a way that the orifice of the wound was evidently the most depending portion of the thorax. The patient being now perfectly sensible, the operator desired him to make a full inspiration, enquiring whether it gave him much pain; and being answered that he could bear it tolerably well, he desired him to make several full inspirations from time to time, but not so as to fatigue himself, and occasionally to move his body gently. By these means a considerable quantity of blood was discharged. A few hours afterwards the operator introduced between the ribs a portion of banana leaf, smoothly folded several times, and anointed with coconut oil, as a pledget to keep open the wound. He ordered his patient to be kept perfectly quiet, not to be spoken to, no noise to be made, nor his attention to be attracted in any way: to live chiefly upon vegetable diet, or if he had any kind of meat, fowl in preference to pork, or if pork, it was to be very small in quantity, and without the least fat, with coconut milk for drink, in any quantity that he felt disposed to take. The first night he had a great deal of pain, much thirst, and little sleep; the following day he was much easier, a great deal of blood was found to have been discharged, and a fresh pledget was introduced, which was renewed every morning as long as any discharge was apparent. When the discharge of sanguinous fluid ceased, which was in about nine or ten days, the operator introduced his probe, to be sure that the cessation of the discharge was not occasioned by any obstruction. He then contented himself with a more superficial pledget, that the external orifice

might not heal too soon; and the patient was allowed to change his posture occasionally, but not for a long time together. As he grew better a little more meat was allowed him; but the use of kava was interdicted until he got tolerably well. The wound healed in about six weeks, without any sort of dressing or washing; the patient was confined to his house about two months, and was not perfectly recovered till near a twelve-month, when he seemed as healthy and as strong as ever, with scarcely any cough having supervened in the meanwhile. This was considered a very dangerous wound, and a very well conducted cure. I do not know that they are acquainted either with the exact situation or existence of the intercostal arteries."

"It often happens that the arrow, not being a barbed one, is withdrawn without any difficulty; but still the surgeon thinks proper to perform the operation of *kauso*, not by enlarging the wound made by the arrow, but by making another at some little distance from it, in a part which, either from judgment or education, he deems more safe and proper. In all those persons whom I knew to have undergone the *kauso* it had been performed in nearly the same situation as the one above stated."

In all cases of considerable wounds produced by pointed instruments the patient is not allowed to wash himself till he is tolerably well recovered, nor to shave, cut his hair, nor his nails. All these things they say are liable to produce *kita* (tetanus), unless the wound be of such a nature, and in such a situation, that it may with safety be first laid completely open, then there is no danger. I never witnessed a case of tetanus produced by these means. They notice that wounds in the extremities, particularly in the feet and hands, are liable to produce tetanus."

Fractures and Dislocations

"As to fractures, and dislocations of the extremities, it may be said that there is scarcely any native but what understands how to manage at least those that are most likely to happen; for they are very well acquainted with the general forms of the bones, and articulations of the extremities. They use splints made of a certain part of the coconut tree. For broken arms they use slings of *tapa*. In fractures of the cranium they allow nature to take her course without interfering, and it is truly astonishing what injuries of this kind they will bear without fatal consequences. There was one man whose skull had been so beaten in, in two or three places, by the blows of a club, that his head had an odd misshapen appearance, and yet this man had very good health, except when he happened to take kava, which produced a temporary insanity. Fractures of the clavicle and ribs I never saw."

Circumcision

"*Tefe*, or the operation of circumcision, is thus per-

formed. A narrow slip of wood, of a convenient size, being wrapped round with *tapa*, is introduced under the prepuce, along the back of which a longitudinal incision is then made to the extent of about half an inch, either with bamboo or shell (the latter is preferred); this incision is carried through the outer fold, and the beginning of the inner fold, the remainder of the latter being afterwards torn open with the fingers. The end of the penis is then wrapped up in the leaf of a tree called, *ngatae*, and is secured with a bandage. The boy is not allowed to bathe for three days. The leaf is renewed once or twice a day. At the Fiji Islands this operation is performed by amputating a portion of the prepuce, similar to the Jewish rite."

Amputation of Testicles and/or scrotum

"The natives of these islands are very subject to enlarged testicles, and for this they sometimes perform the operation of *poka* (castration). My limited observation on this subject does not authorize me to speak with any degree of certainty in regard to the precise nature of these tumefactions. [Probably filarial infection leading to elephantiasis]"

"Their mode of performing this operation is summary enough; a bandage being tied with some degree of firmness round the upper part of the scrotum, so as to steady the diseased mass, at the same time that the scrotum is closely expanded over it, an incision is made with bamboo, just large enough to allow the testicle to pass, which being separated from its cellular connections, the cord is divided, and thus ends the operation. They neither tie the cord, nor take any pains to stop the bleeding; but, if the testicle be not very large, and the epididymis not apparently diseased, they perform the operation by dissecting it from that body with the same instrument. The external wound is kept from closing by a pledget of the banana leaf, which is renewed every day till the discharge has ceased, and the scrotum is supported by a bandage. A profuse hemorrhage is mostly the consequence of this operation. It was performed seven times within the sphere of my knowledge, during my stay; three of which I was a witness. Not one of the seven died."

"There was one rare instance of a man, both of whose testes were affected with species of sarcoma, to a degree almost beyond credit. When he stood up, his feet were necessarily separated to the distance of three quarters of a yard, and the loaded scrotum, or rather the morbid mass, reached to within six inches of the ground. There was no appearance of a penis, the urine being discharged from a small orifice about the middle of the tumor, that is to say, about a foot and a half below the *os pubis*. The man's general health was not bad; and he could even walk by the help of a stick, without having any sling or support for his burthen. It was specifically lighter than fresh water, and

considerably lighter than salt water, so as to produce much inconvenience to him when he bathed. He died at the island of Foa, about two or three months before I left Vavau.”

Gunshot wounds

“In cases of gunshot wounds, their main object is to lay the wound open, if it can be done with safety in respect to the larger blood-vessels and tendons, not only for the extraction of the ball, if it should still remain, but for the purpose of converting a fistulous into an open wound, that it may thereby heal sooner and better. If they have to cut down near larger vessels, they use bamboo in preference to the shell; the same near tendons, that there may be less chance of injuring them. They always make incisions nearly in the course of the muscles, or, at least, parallel with the limb.”

Sprains

“In cases of sprains, the affected part is rubbed with a mixture of oil and water, the friction being always continued in one direction, that is to say, from the smaller towards the larger branches of the vessels. Friction, with the dry hand, is also often used in similar and other cases, for the purpose of relieving pain.”

Tetanus

“*Kita* is a disease very common among the Tonga people; but still more common among the natives of the Fiji Islands, who, from their warlike habits, are more frequently in the way of it. They adopt, however, a remedy which the Tonga people have borrowed of them, and consists in the operation of *tokolosi*, or passing a reed first wetted with saliva into the urethra, so as to occasion a considerable irritation, and discharge of blood; and if the general spasm is very violent, they make a seton of this passage, by passing down a double thread, looped over the end of the reed, and when it is felt in the perineum they cut down upon it, seize hold of the thread, and withdraw the reed, so that the two ends of the thread hang from the orifice of the urethra, and the doubled part from the artificial opening in the perineum; the thread is occasionally drawn backwards and forwards, which excites very great pain, and abundant discharge of blood. The latter operation I saw performed several times; but only twice for tetanus, arising in both instances from wounds in the foot. In these cases the spasms, but particularly the convulsive paroxysms, were exceedingly violent, extending to the whole body, neck, face, trunk, and extremities. In neither case was the jaw permanently locked, though on every accession it was violently closed for a few seconds. A native of the Fiji Islands performed one operation, and Halaapiapi the other. They both happened at Vavau, at different times. In either case the disease came on suddenly, three or four days after the wound was received, which was from an

arrow not barbed. The moment the symptoms became evident *tokolosi* was performed. In the short space of two hours one of them was greatly relieved, and the other in about six or eight hours. The following day the one on whom Halaapiapi operated was quite well, and afterwards had no other attack; consequently the thread was withdrawn. The other on the second day was not quite free from spasmodic symptoms, and a paroxysm coming on, the seton was moved frequently, which in two or three hours gave him great relief, and he afterwards had no other attack. It was thought prudent, however, to keep in the seton till the fourth of fifth day, when it was withdrawn. The effect of this operation was a considerable pain and tumefaction of the penis, but which gradually subsided (in about five or six days). The artificial openings in both case healed spontaneously, without difficulty.”

“These are the only two cases of tetanus in which this operation was performed that I can speak of with certainty, having been an eyewitness of them. I heard of several others at the Haapai islands, and at the island of Tongatapu, some of which were equally fortunate. From what I have heard and seen of the success of this operation at the Tonga Islands, I am disposed to believe that about three or four in ten recover by the aid of it. The Fiji islanders, however, speak of the happy effects of this singular mode of cure with much more confidence than the natives of Tonga; but as they claim the merit of the discovery, they are probably rather too profuse in praise of it. Tetanus is not the only disease for the cure of which the operation of *tokolosi* is performed. It is adopted also in cases of wounds in the abdomen, upon the mistaken notion that any extravasated blood in the cavity of the abdomen is capable of passing off by the discharge from the urethra. I saw the operation performed once in this case, and, as the man was considered in a very bad state, and notwithstanding got well, the cure was attributed to this remedy. It is also performed for relief in cases of general languor and inactivity of the system; but, in such instances, they only endeavour to produce irritation by passing the reed without any thread or artificial opening. The present King had it thus performed on him for this purpose; and two days afterwards he said he felt himself quite light, and full of spirits.”

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* *Instead of the phonetic spelling of Tongan words devised by Mariner, the author has introduced contemporary Tongan spelling.*

Laboratory Professionals: The “Behind the Scene” Partner in Healthcare**Sheri M. Gon, Lecturer**

Clinical laboratories are typically located in basements or hard-to-find wings of hospitals. Most consumers never see the inside of hospital or reference laboratories. In-patients requiring lab tests usually have their specimens collected by a nurse or phlebotomist. Non-laboratory healthcare professionals providing direct patient care may collect specimens but delivery to the laboratories is dependent on couriers, pneumatic tube systems, or lab staff. So, “out of sight, out of mind” rings true when someone asks what happens in a clinical laboratory.

Because the clinical laboratory is not a visible part of healthcare, services provided by the laboratory healthcare professionals are misunderstood or taken for granted.

A typical clinical laboratory consists of laboratory professionals with levels of responsibilities. The educational requirements of these professionals range from high school diploma to post-graduate degrees.

Phlebotomists and laboratory assistants occupy entry-level positions but are essential to any laboratory. They are responsible for collecting, transporting, and processing specimens in the pre-analytical phase, under the supervision of associate or baccalaureate degreed laboratory personnel. Kapiolani Community College offers a certificate in phlebotomy. It is a 164-hour course that includes class instruction and clinical training at medical facilities in the community. Graduates of the KCC phlebotomy program are eligible to take the national certification exam provided by the National Certifying Agency (NCA) or the American Society of Clinical Pathologists (ASCP).

Medical Laboratory Technicians (MLTs), also known as Clinical Laboratory Technicians (CLTs) are associate degreed (2 years of college) laboratory personnel. They are trained to perform many of the commonly ordered laboratory tests such as basic chemistry and hematology tests. Kapiolani Community College has an accredited training program for MLT/CLTs. After earning their associate degree, MLT/CLTs are eligible to take a national certification examination from either ASCP or NCA. In addition, they must obtain a license to practice in the state of Hawaii.

MLT/CLTs are found all departments of the laboratory expect in some specialty departments, requiring higher-level cognitive and decision-making skills that Medical Technologists and Clinical Laboratory Scientists can provide.

Medical Technologists (MT), or Clinical Laboratory Scientists (CLS) are terms that are used interchangeably. The traditional designation “medical technologist” may be somewhat confusing since popular media often refer to advances in medicine as “medical technology.” The term “clinical laboratory scientist” is a recent designation that was adopted to describe more accurately the profession.

The University of Hawaii, John A. Burns School of Medicine, Division of Medical Technology is the only accredited program in the Pacific that trains MT/CLSs. After applications for admission are reviewed the applicant is interviewed. Students that meet admission requirements enter the Division of Medical Technology program as juniors. After two years of a laboratory science curriculum, Medical Technology students earn their bachelors of science degree. Clinical training of six months’ duration takes place at a variety of community medical centers including the state Department of Health and Blood Bank of Hawaii. Upon completion of the post-baccalaureate clinical training, graduates are eligible for national board certification examination by ASCP or NCA. According to Division records, a majority of UH Medical Technology graduates elect to take both board examinations. The titles of MT (ASCP) (Medical Technologist from the American Society for Clinical Pathology) or CLS (NCA) (Clinical Laboratory Scientist from the National Certification Agency) are bestowed after passing the exams. In addition, Hawaii requires MT/CLSs apply for licenses to practice in the state.

Cytotechnologists prepare and analyze cells. Their work is restricted to cellular analysis of exudates and transudates. In Hawaii there are no programs to train cytotechnologists. A small number of local MT/CLS graduates have entered this discipline and have returned to Hawaii after receiving their training on the Mainland.

The typical laboratory professionals are detail oriented, enjoys science, takes pride in their work, maintains high standards, and loves to problem solve. They realize their strengths in being analytical so are comfortable with providing healthcare in this manner versus being in a different discipline that is more directly involved with patient care.

Over 80% of information in medical charts consists of laboratory data. The majority of medical decisions (both diagnosis and treatment) depend on laboratory data. The most recent therapeutic drug value from the lab affects drug dosages.

Unfortunately, lab professionals are often overlooked as essential in providing and improving healthcare. This lack of recognition may be a contributing factor¹ to laboratory workforce shortages according to the Coordinating Council on the Clinical Laboratory Workforce (CCCLW).

Throughout the country an imminent loss of professionals will occur due to retiring “baby boomers.” Currently, the average age of clinical laboratory scientists is approximately 45 years old.² The laboratory is a prime example of this trend. Over time, there has been a decline in enrollment. In 2003, only four students graduated with a degree in Medical Technology.

Decreased enrollment of students into health profession programs and the large numbers of the currently employed “baby boomer”

generation nearing retirement age suggest more will be leaving the health professions than there are qualified to replace them.³

Data from the US Bureau of Labor Statistics (BLS, Washington, DC) and the National Accrediting Agency of Clinical Laboratories (NAACLS) indicate that the demand for clinical laboratory technologists and technicians will far exceed the supply of new workers in the coming years. There are approximately 313,000 clinical laboratory technologists and technicians working in the US today, and 5,300 new positions will be created per year through 2008. Annual demand for an additional 4,000 positions will be needed to replace retiring laboratory workers. Thus through 2008 the nation's laboratories are expected to require a total of 9,300 new laboratorians each year.⁴

The University of Hawaii John A. Burns School of Medicine's Biomedical Park in Kakaako is designed to be a magnet for biomedical research. Although the tenants for Kakaako research labs will be high-profile principle investigators, their need for local laboratory professionals of all levels will be necessary to support their research. This potential movement of laboratory professionals from clinical laboratories to research laboratories may further exacerbate the attrition rates in medical centers.

Recruitment and retention of technicians will begin with improving visibility of laboratories. It begins with education. Laboratory personnel will need to be advocates of their profession by sharing what they do with other healthcare professionals and the public. An excellent communication tool for laboratory science is a consumer website, Lab Tests Online (www.labtestsonline.org). Both healthcare professionals and lay public can access this site for information on laboratory testing. Lab Tests Online is an award-winning site sponsored by more than 25 laboratories. The internet reaches out to healthcare consumers to educate the public about laboratory science.

April 18 through 24 is National Medical Laboratory Week. Laboratories throughout the nation will conduct open house tours or arrange activities to highlight the laboratory profession and the services they provide. Please check with your laboratories for any Lab Week activities.

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Due to error by author, correction to:

Hawaii Medical Journal, February 2004 Vol. 63, No. 2, p. 53, Medical School Hotline, "Addressing Native Hawaiian Health at the John A. Burns School of Medicine," by Shannon M. Hirose-Wong PhD

"Table 1.— NCHRP Student Projects" should have listed: Amy Brown PhD (College of Tropical Agriculture and Human Resources) as Research Mentor/Sponsor.

Table 1.— NCHRP Student Projects

Research Category:Authors	Title of Project	Research Mentor/Sponsor
Lapa'au L. C. R. Y.	Evaluating the Effectiveness of Kukui Nut Oil in the Treatment of Psoriasis	Amy Brown, Ph.D. (College of Tropical Agriculture and Human Resources)



Oncology Nurses... Who Are We?

Joanne Itano RN, PhD, OCN

Although nurses have cared for those with cancer since the establishment of nursing as a profession, the specialty of oncology nursing is relatively new. It began in the 1950's and developed because of scientific and technological developments, a national and international recognition of cancer as a major chronic health problem, changes in the professional and public perceptions of cancer, and changes in the nursing profession.¹

Prior to the 1900s the survival rates for cancer were very low. It was a poorly understood disease and feared by both the public and health professionals. Many believed that cancer was contagious. Surgery was the primary treatment and nursing care focused on the care of the surgical client.²

With the discovery of chemotherapy during World War II, single agent chemotherapy was introduced as a treatment modality in the 1950s and 1960s. Radiation therapy techniques were established with the development of the cobalt-60 unit. The stigma of cancer continued, and it was common not to inform the patient about his or her diagnosis, treatment or prognosis.¹

The passing of the National Cancer Act in 1971 by Congress which authorized a broad, intensive program to reduce the incidence, morbidity and mortality of cancer was a significant event. Cancer was now viewed as a national health problem.¹

At about the same time, comprehensive cancer centers were developing, hospitals established oncology units and combination chemotherapy and multimodal treatment approaches began to improve survival rates. The National Cancer Institute and the American Cancer Society developed a multimedia public education program to provide the public with a clearer understanding of cancer to remove much of the stigma and fear associated with cancer. With these events, a more optimistic attitude about cancer emerged.^{1,2}

During the 1970s the nursing profession also introduced the roles of independent practice, primary care practitioners, primary nursing and specialization. The First National Cancer Nursing Conference was held in 1973, sponsored by the American Nurses Association and the American Cancer Society. Twenty nurses met to discuss the idea of a national organization which resulted in the establishment of the Oncology Nursing Society (ONS) in 1975. The major goal of ONS is to use its resources to promote the highest professional standards for oncology nurses.^{1,3}

ONS published standards for professional nursing practice within the specialty of oncology in 1979. This document, *Outcome Standards for Cancer Nursing Practice* was the first standards developed in oncology nursing and provided the foundation for the development of oncology nursing as a specialty. Standards are important to a profession as they describe the responsibilities for which oncology nurses are accountable and a competency level of professional nursing practice. Over the next several years standards were developed

for the practice of advanced practice nursing in oncology and for oncology nursing education for the generalist and advanced practice levels.

Scope of Oncology Nursing Practice

The scope of oncology nursing practice is very broad. Nurses play a significant role in the continuum of cancer care. We are well aware of the significant **practice** role of the oncology nurse. Well known are the nurses who provide competent and compassionate care in hospital settings. In addition, there are the nurses who provide care in outpatient chemotherapy/biotherapy clinics, radiation therapy centers or in physicians' offices. All of these nurses have a major role in assisting patients to cope with the side effects of their disease and treatment and in providing psychosocial support to the patients and families.

Advanced practice nurses, those with masters degrees in nursing, function as clinical nurse specialists, nurse practitioners or administrators of oncology programs. They are clinical experts in oncology nursing and may provide direct services to patients, be involved in staff development, and plan and implement new programs to better serve those with cancer.

Nurses also are involved in the **prevention and early detection** of cancer, working with cancer risk assessment, in breast health clinics or targeting high risk groups or those groups that have low participation in screening activities such as mammography or pap smear. Education is a major focus in assisting clients to care for themselves by participating in prevention and screening activities.

Nurses play a significant role in **palliative and hospice care**. Their patients are those with cancer for which there is no cure and those who are in the terminal stages of their illness. These nurses provide symptom management, comfort and support to the patient and his/her family.

Oncology nurses are also **educators**. They teach clients and their families, plan educational programs to update staff about new developments in cancer care and work with those new to oncology nursing to assist them to gain the knowledge and skills necessary to provide comprehensive care to those with cancer. For example, here in Hawaii we have two nurses, Diane Nakagaki of Kaiser Permanente Medical Center and Carol McCann of Tripler Army Medical Center, who participated in the chemotherapy/biotherapy administration training program provided by national ONS in a train-the-trainer format. Between the two, they have trained almost 400 registered nurses in the state of Hawaii. Academic educators focus on preparing advanced practice nurses in oncology and assuring that graduates of basic nursing programs have sufficient knowledge about cancer to provide effective nursing care.

In **research** nurses are involved in managing clinical trials in the recruitment of subjects, patient education about the trials, data collection and follow up and are also principal investigators in oncology nursing research projects. ONS is very much involved in facilitating research in oncology nursing and in the utilization of research findings. They publish the results of research priority surveys on a regular basis. The 2000 survey identified nine common priorities between the ONS general membership and the ONS researcher group. They are pain, fatigue, depression, quality of life, early detection, prevention/risk reduction, palliative care, hospice/end of life and access to cancer care.⁴⁻⁵

The ONS Foundation strives to generate financial resources to achieve the ONS mission of promoting excellence in cancer nursing and quality cancer care. Since its inception in 1981, this foundation has funded over \$13 million in awards, grants and scholarships. Research funding is a significant component of this funding. Oncology nurse researchers have contributed significantly to new knowledge directly applicable to oncology care in the areas of fatigue, hope in adolescents with cancer, quality of life, self care interventions, and the impact of cancer on the family.

Oncology nurses are active in **health policy**. ONS has a lobbyist in Washington, DC and state health policy liaisons in most states to serve as the link between ONS and each state. Through action alerts ONS is able to mobilize nationwide support for legislative issues relevant to oncology. For example, bills on reimbursement of oncology services and the nurse reinvestment act were hot issues in the fall of 2003 and email alerts from ONS provided Hawaii nurses with opportunities to communicate with their legislators. Hawaii has a state health policy liaison and was selected to participate in a ONS/Association of Community Cancer Centers partnership focused on health policy. A representative from the local ONS and the Hawaii Society of Clinical Oncology attended a training session and are working to determine ways in which these two organizations can partner to impact important advocacy issues related to oncology.

Certification

The Oncology Nursing Certification Corporation (ONCC) administers a program to certify nurses at the basic and advanced level and in pediatric nursing. Certification is the process by which a non-governmental agency (ONCC) validates, based upon predetermined standards, an individual RN's qualifications and knowledge of practice in a defined clinical area of nursing. Its purpose is to assure the public that the nurse has completed all eligibility criteria to earn a specific credential and to promote the development of specialty areas of nursing by establishing minimum competency standards and recognizing those who have met the standard.⁶

The OCN credential is evidence of basic oncology nursing knowledge of the professional nurse. More than 20,000 nurses have earned this credential. The AOCN exam tests the knowledge of advanced practice nurses in oncology and 1350 oncology nurses nationwide have completed this certification. CPON focuses on the knowledge essential in pediatric oncology nursing and there are 850 CPONs in the United States. Currently in Hawaii, 72 RNs have the OCN certification, one is an AOCN and seven have the CPON credential.⁷

Oncology Nursing Society (ONS)

The Hawaii Chapter of ONS was founded in 1989 and currently has a membership of about 100 nurses. Our major activities, consistent with the mission of the national organization to promote excellence in patient care, teaching, research administration and education, includes an annual oncology nursing conference held each August which averages 125 participants and dinner lectures often sponsored by pharmaceutical companies. Each year, the Mana'olana (Nurse of Hope) award is presented by the local chapter to a nurse who exemplifies the highest ideals of oncology nursing. Educational awards are available to attend national oncology-related conferences. The local chapter has a collaborative relationship with the Hawaii Society of Clinical Oncology (HSCO). HSCO has provided an educational grant used to promote the specialty of oncology nursing to nursing students. Presentations funded by this award were held at each of the nursing schools on Oahu. In addition, ONS members are invited to become members of HSCO and attend educational programs sponsored by the organization. HSCO recently recognized an oncology nurse, Dorothy Coleman of the Cancer Research Center of Hawaii, with an award for meritorious service.

Hawaii is also well represented at the national level. ONS members have been elected to national offices (Karen Taoka of The Queens Medical Center); appointed to national committees (Joanne Itano of the University of Hawaii @ Manoa), and selected as a fellow for the Leadership Development Institute (Connie Gazmen of the University of Hawaii @ Manoa). Patricia Nishimoto of Tripler Army Medical Center was selected to provide the Schering Oncology/Biotech Clinical Scholarship Lectureship which recognizes and supports excellence in clinical nursing practice. Taoka and Itano are also editors of the *Core Curriculum for Oncology Nursing*, 3rd edition.

Summary

Oncology nursing has matured into a well-established specialty in nursing. The scope of practice for the oncology nurse is broad and spans the continuum of cancer care. Oncology nurses have important roles in all aspects of cancer care. The ONS is the largest organization of oncology professionals in the United States with a membership of about 30,000 and has contributed to the development of oncology nursing through its many educational programs, support of research, opportunities for networking, establishment of certification examinations, and development of an active foundation.

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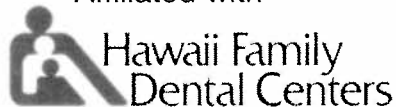
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We Have Only Ourselves, And One Another. That's All There is.

In 1996, 47 thousand students applied for entry to American medical schools. By the year 2002, that number had dropped substantially to 35 thousand, a decrease of almost 27% over a mere six years. Moreover, for the first time, more women than men applied, as 50.8% of applicants were female. Willarda Edwards, MD, Chair of the AMAs Women Physicians Congress, said one reason is that more women are interested in studying sciences as they progress through school. That may be so, but what accounts for the obvious decrease in total applicants, especially males? It seems logical to assume that many accomplished students no longer view medicine as a desirable profession. Also, without question, fewer young people are seeking a profession which has become so heavily regulated. While the increase in women candidates is encouraging, the big picture is not a pretty one.

There Are Three Certainties In Life — Death, Taxes, Another Diet Book.

Robert Atkins, M.D. has become more famous in death than he was in vivo. As an anti-carbo guru, the doctor wrote a book pushing for a diet long in fat and protein, which produced a measure of success in reducing waist lines. He traveled and gave speeches about his good health and eating habits. Controversy arose after his death when the New York medical examiner reported that Dr. Atkins weighed 258 pounds, and had a history of heart disease, congestive heart failure and hypertension. Physicians Committee for Responsible Medicine, a vigorous, vibrant, vegetarian's venue, and long time critic of the Atkins diet, were quick to jump on the report. They sent the ME's summary to the Wall Street Journal where it was published, and then the stuff hit the fan. Susan Trager, chairman of the Atkins Physicians Council, Dr. Patrick Fratellone, Atkin's cardiologist (also an Atkins diet proponent) and Atkin's widow, all rushed to repudiate the ME's data. With reason, they were upset about lack of confidentiality, and they claimed that his weight ballooned with fluid overload in ICU care. Also, his physician said that he had cardiomyopathy, not arterial disease. It's a pretty grim world when you can't even get laid away in peace.

Hospitals — Welcome To The 20th Century!

Bar code electronics have been in other industries for many years, and at last medicine is getting on board. In one great bold step into the world of medical technology, Mark McClellan, M.D., commissioner of the Food and Drug Administration, stated that patients will be given bar code bracelets within two years. The code will tie into a computer system which can be scanned to determine the right medicine, the right dose at the right time, and any conflicts with the patient's medical record. McClellan estimates that 500,000 adverse events and transfusion errors will be prevented over a 20 year period. It's about time!

Life Is Not Going In Circles — It Is A Downward Spiral.

The inspector at Hartsfield-Jackson airport in Atlanta was suspicious of a smoky odor emanating from a suitcase of a passenger arriving from Cameroon. He opened the bag and found an entire smoked monkey! The woman claimed the meat was intended for a traditional wedding reception of some African immigrants. An international treaty prohibits importation of non-human primates. From New York to Honolulu, inspectors are reporting similar findings as the market for "bushmeat;" mostly from Africa, is increasing. "We are probably seeing only the tip of the iceberg," according to the wildlife agent in charge in Atlanta. A report in JAMA last year, warned that monkeys in Cameroon are hosts to a number of viruses, including some that are close cousins to the AIDS virus. Too often, suspicious shipments slip by because the CDC, the Fish and Wildlife Service, the Department of Agriculture and the FDA, cannot agree on which agency has jurisdiction. Low land gorillas and chimpanzees are harvested by the thousands, and not rarely end up on the dinner tables in Europe. The bushmeat trade is devastating African wildlife where as much as 5 million tons of bushmeat are extracted each year, according to the London Zoological Society. Bon appetit!

All Solutions Breed New Problems.

Amidst the ongoing angst regarding jobs leaving the United States for overseas labor, one occupation should be considered inviolate -- medical

transcription. It isn't. This problem came to bear when a foreign transcriber threatened to place patient's medical data on the internet, if the transcriber was not paid for work already accomplished. With information such as names, social security numbers, addresses, and laboratory and imaging reports, a whole host of problems could ensue if these reports are not well protected. The threat of identity theft and other legal ramifications readily come to mind. In California, legislation has been introduced to prevent HMOs, hospitals and medical offices from sending confidential information abroad for transcription. Sometimes the world gets ugly in ways we never imagined.

A Pedestrian Is A Man With Two Vehicles — One Driven By His Wife, The Other By One Of His Children.

The first ATVs (all terrain vehicles) came along in the 1970s, and were used primarily by ranchers and foresters to navigate rough terrain. They were three-wheelers with small engines, and difficult to handle. In the 1980s they began to be used for recreation, but many injuries (and law suits) resulted. Manufacturers quickly moved to a four wheel model, beefed them up (some models will go 70 mph) and began to market them for "family recreational activity." In 2002, 825,000 ATVs were sold in the United States. Regulation is minimal, and serious injuries and deaths are now a serious public health problem. Only 10 states require a driver's license, 34 states ban their use on paved roads (frequently ignored), 18 states set a minimum age of 12, Utah allows 8 year olds to operate ATVs, and West Virginia which has the highest per capita ATV death rate, has debated rules for 7 years, but passed none. Since 1992, 1/3 of reported injuries were to children under age 16, while 14% of deaths were children under age 12. ATV injuries to children are 12 times more likely to be fatal as bicycle accidents, according to the National Save Kids Campaign which tracks childhood deaths. What family fun!

If You Can See No Disadvantages, Look Harder.

If you wonder where your teen-age child (or your spouse) might be in the family auto, you can find out with a gadget for your vehicle called Networkcar. Using a global positioning system (GPS) and a wireless network, the company can install a monitoring device, and establish a personalized website. Log on, and you can see where your car is, and even whether it is parked or in motion. Retail price is suggested at \$995, including service for the first year. Egad! Is there no privacy? Next, junior will have to worry about a telephone-video-camera in the back seat! And that technology is available already.

It Is Time For A Complete List Of Whatever Is Pending.

A man was sentenced to incarceration in the sex offender facility in Farmington, Missouri. He cut through the retaining fence and escaped. The local sheriff was "flabbergasted" when he found that no additional crime had been committed. Missouri law states that escape from a prison or mental health facility is a violation, but does not provide for penalty for escape from the sex offender facility. After two years, the criminal was apprehended, and admitted that he had investigated the law and knew that to escape from there was not a crime. "These people (lawmakers) are stupid." He is being charged with property damage. No statement was forthcoming about fulfilling his sentence; perhaps it should be done by the politician who wrote the law.

Stupidity Is An Elemental Force Which No Earthquake Can Match.

Parents of school children in Spokane, Washington, are resting comfortably knowing that the "zero tolerance" plan is working. Three third grade boys (ages 8 and 9) brought their G-I Joe two inch long plastic rifles to school, and used them in a "threatening manner" while at play. They received one day suspensions for the violation.

ADDENDA

- ❖ The human eyeball weighs about one ounce.
- ❖ A computer programmer is someone who solves a problem you didn't know you had in a way you do not understand.
- ❖ As Mrs. Bill Gates noted after the honeymoon, "So that's why you named it microsoft."

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