

# Tears of Hippocrates/Go Gently

John M Briley Jr MD\*

Kim Bode\*\*

*I encouraged Kim Bode to allow me to include the piece she wrote for Hospice. It follows immediately after this article. Any of you who have lost a child would understand, once you've read her story, why it should be shared.*

## Tears of Hippocrates\*

As little Khris' pediatrician I considered it a privilege to work with him and his family, but it was equally heart-rending to lose him and watch his parents work slowly through their loss. It hasn't been easy for them. But then, you readers already know that or you wouldn't be reading this publication.

I remember Khristopher Bode as never complaining about all the procedures I had to perform. Of course, he would look at me apprehensively, but never with dislike. And every now and again he would look at me with the merest hint of distrust, but never with distaste. While grateful for this gentle reception and forgiveness, my task was made all the harder.

I remember Kim, his mother, facing her problems alone while her husband frantically begged the Army for a transfer from Boston. I remember trying to be supportive, but as Khris' pediatrician I was more often than not the relayer of bad news. But like her son Khris, Kim never complained. I remember my own sense of frustration. I could do nothing more for little Khris, of course, but guilt can gnaw at a doctor's ego like a demon. Emotion—even unreasoning emotion—given half a chance, will always overcome logic.

Which brings me to the subject of guilt. Specifically, parental guilt.

As Oliver Goldsmith observed: "What art can wash guilt away?" Indeed, once guilt has been inflicted it cannot be taken away. Picture taking a feather pillow to a high mountain on a windy day. Imagine ripping the pillow open and scattering the feathers to the wind. Now, gather every single feather in the valley below and far beyond, and then stuff it with all its fellows back into the pillow. The ability to accomplish such a feat would be roughly equivalent to what it would require to remove a guilt which has been set in motion.

Unfortunately, Khris' parents had guilt laid on them, and, I am sorry to say, by my brethren in the medical profession. Hippocrates said, "At least do no harm." We doctors—and nurses—would do well to heed that sage piece of advice. If Hippocrates were alive today, he would shed tears.

What happened? Though we had decided to keep Khris comfortable in every sense, we had also decided, after much discussion, to allow Khris a peaceful and dignified death. If he fell asleep peacefully and didn't breathe, we would not resuscitate him. We agreed that our only caveat was that if he

was struggling for air we would suction him and give oxygen; if he was hungry we would feed him; and if he was thirsty we would give him fluids. And at all times, of course, he would be cuddled and loved. And he was. A lot.

Well, Khris did start to die peacefully in his sleep, but the nurse on duty pushed the "code blue" button. The emergency room crew crashed into the room and resuscitated Khris. Unfortunately, I was at the office at the time and couldn't stop them, and they didn't heed the pleas of Khris's parents. Khris, though weaker than ever, was now thoroughly frightened. And the parents were thoroughly upset. I was phoned and, along with the parents, told the emergency room crew to back off. I also delivered the message to the floor nurse.

Then, unbelievably, the head emergency room doctor told the parents: "You realize, of course, that your child will die?"

Although this was in no way true, the terrible words had been hurled, the underlying cruel and unfair accusation had been leveled, and the road to guilt had been paved. This is why Kim says, and says with great restraint: "Certain comments were made that only increased our feelings of guilt and horror." I marvel she can put it so mildly—but then, she is a lady.

To top it off, after Khris did die (peacefully) the nurses would not allow the mother to stay with her dead infant, even for a short while. She charitably refers to this as having "met with resistance from some of the hospital personnel," because she believes the nurses truly meant well. But for a long while after Khris's death Kim felt she had never had the chance to say goodbye to her son. More guilt due to our insensitivity. Fortunately, we now know that parents should have time with a dead child; just as we know that, like an adult, a child deserves a comfortable and dignified death. Any ridiculous and emotionally counterproductive medical-legal aspects to the contrary notwithstanding.

I can only hope all of us in the medical profession have also learned to "let go"—to remember that though we are expected to save lives, that how we handle death is as least as important as how we handle life.

## Go Gently\*\*

As though it were only yesterday, I can vividly recall the events surrounding the birth of our son Khristopher. After many long and hard hours, he was delivered safely it seemed.

I remember the absolute joy in knowing I had a son, but he was whisked away rather quickly because of the complications of birth. All I knew while lying in the recovery room was that I had to go down the hallway and count fingers and toes. The nurses would not allow me up—or so they instructed me. Hugging my i.v. pole for support, I took the long walk to see my son. Nothing was going to stop me.

Khristopher, a handsome, smiley little baby with deep blue eyes, had the temperament of an angel. So for months I

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\*\* The bereaved mother

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# A Smoking Cessation Pilot Program

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*National health-care costs are continuing to climb and employers in Hawaii and across the nation are forced to increase their share of the burden. To limit these costs, worksite health promotion programs are increasing in number and in scope. Smoking control programs in particular now rank as the most prevalent type of worksite program; as the disability, absenteeism, and early death on the part of smokers have been well-documented as contributing to the cost of health care. Our research describes a year-long, pilot smoking-cessation program implemented at Hawaiian Telephone Company. Our program used a combination of behavioral-modification, social support and incentives technique to assist people to stop smoking or to maintain their nonsmoking behavior. The 12 volunteer participants provided a multiethnic, long-term, heavy smoker employee sample. Survey results at 1 year demonstrated that 4 of them quit smoking (quit rate=50%), 2 reduced their tobacco intake, 2 dropped out of the program and continued to smoke. The 4 who had entered the program for maintenance purposes remained smoke-free. Cost-benefit analysis yielded conservative estimates indicating that the program had paid for itself and saved an additional \$350 a year per participant who remained a nonsmoker.*

## Introduction

Reducing the rising cost of health care has been a national priority. Despite this increasing concern, health care expenditures have risen at nearly twice the rate of the gross national product<sup>1</sup>. One response to higher health care costs has been to shift payment from the public to the private sector. Business, in particular, has become a major payer of health care costs since most health insurance is organized and financed through the workplace<sup>2</sup>. In 1987, business contributed \$135 billion in health care spending, of which \$97 billion was spent on health insurance. In addition, business spent another \$11 billion on workers' compensation

and temporary disability insurance medical benefits<sup>1</sup>. As a result of these large expenditures, more than 81% of employers responding to a national survey indicated a major concern was health-care cost management<sup>3</sup>.

In Hawaii, the financing of health care by business is well established. Because of the enactment of the Prepaid Health Care Act in 1974, most employers have been required to offer health insurance to their employees working at least 20 hours a week. Presently, plans are underway to expand the employer's role in financing health insurance in Hawaii by mandating coverage of employee's dependents as well<sup>4</sup>.

As payment for health care continues to shift toward business, employers in Hawaii and across the nation are placing new emphasis on a number of health-care cost management strategies to contain expenditures. These strategies include company self-insurance, health insurance plan refinement, disability guidelines management, and health program development such as injury prevention, employee assistance and health promotion.

The most common type of worksite health promotion activity is to control smoking<sup>5</sup>. Nationally, 35.6% of businesses reported having smoking control programs<sup>3</sup>. The prevalence of smoking control programs is probably due to research that has demonstrated it costs more to employ smokers than nonsmokers. Although there is no single agreed-upon estimate of the cost of employing smokers, one estimate of annual cost to the employer per smoker is between \$336 and \$600<sup>6</sup>.

The negative health and behavioral cost of smoking has been clearly documented in terms of increased risk for chronic obstructive lung disease and cancer<sup>7</sup>. Studies have shown that smokers use health-care facilities 50% more than nonsmokers and tend to die or retire sooner than nonsmokers<sup>8</sup>. According to a Surgeon General's report, smokers are also estimated to be absent from work 33% to 45% more than nonsmokers. These increased rates of absenteeism are estimated to represent a loss of 81 million working days in the United States<sup>9</sup>.

In Hawaii, the cost reflects national figures. It was estimated that smokers in Hawaii cost \$173.6 million in direct medical expenses and lost productivity during 1985. This cost amounted to \$174 dollars per Hawaii state resident<sup>10</sup>.

According to the 1989 Behavioral Risk Factor Surveillance Survey of Hawaii residents, 23.9% of employed respondents were smokers. The survey also demonstrated that smoking was associated with other health risk behaviors such

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as alcoholism (i.e. binge drinking, chronic drinking, and drinking and driving), seatbelt non-use, and sedentary lifestyle<sup>11</sup>. Together, the number, cost, and associated health risk behavior of employed smokers provides a clear rationale for worksite smoking control intervention.

### Control at the Worksite

Smoking control programs at the worksite vary in scope and intensity ranging from smoking prohibition, incentive schemes, treatment approaches and a combination of strategies<sup>7</sup>. The most common intervention, namely a restriction or prohibition of smoking at the worksite, could also be one of the simplest and most economical methods<sup>12</sup>. According to the National Survey of Worksite Health Promotion Activities, 76.5% of worksites have a formal policy on smoking<sup>3</sup>. However, research has demonstrated that smokers who are not allowed to smoke at work tend to smoke more when outside of the workplace<sup>13</sup>. For example, Gottlieb and associates found that a restrictive worksite smoking policy can be effective in reducing environmental exposure to tobacco smoke at work but not at decreasing smoking prevalence<sup>14</sup>. Thus, smoking policies, such as a ban on worksite smoking, might not be effective in reducing the ill effects of smoking on employee health unless combined with other approaches.

Programs based on incentives include quit-smoking contests and reward systems for maintaining a smoke-free status. Nearly a quarter of the employers across the nation are estimated to have offered special events or contests<sup>3</sup>. In one incentive program, smokers were given lottery tickets for each week they maintained abstinence. Lottery prizes included weekly and quarterly winnings<sup>15</sup>. Other programs offered non-monetary rewards, such as praise and recognition. Regardless of the type, incentives appear most successful when they are offered in moderate amounts yet frequent intervals for good behavior which the individual can control. Incentive programs have also demonstrated effectiveness when they are consistent with organizational policies and tailored to target group characteristics<sup>16</sup>.

The approaches to treatment range from behavioral strategies, such as self-help to medically based programs which offer advice by physicians and nicotine substitutes. Behavioral programs that include both individual and group approaches are being implemented with increasing frequency<sup>17</sup>.

Nationally, 54.3% of employers offer information regarding smoking effects on health, 49.7% provide self-help materials, 20% utilize group classes or workshops and 15.1% offer individual counseling<sup>3</sup>. Quit rates at worksite-smoking-cessation programs seem to produce results comparable to clinic-based pro-

grams. For example, workplace smoking programs can be expected to offer sustained quit rates of 20% to 30%<sup>18,19</sup>. Programs that provide a combination of strategies have achieved the greatest success. This is especially true of programs that offer motivational strategies with training skills<sup>12,20</sup>. One employer who conducted a multicomponent smoking control program reported that 20% of the smoking workforce quit smoking<sup>12</sup>.

### Savings in Costs

Depending on the type and success of smoking cessation programs, conservative estimates indicate that employers can save \$175 to \$345 annually per smoker. These savings are associated with the reduced costs of employing a healthier, more productive work force<sup>6</sup>. The exact savings to employers the result of a smoking cessation program depend on the cost

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## A SMOKING CESSATION PILOT PROJECT

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of the program in relation to participation and quit rates<sup>21</sup>. Aside from savings for the employer, direct gains to the smoker are achieved in reduced disability, illness, and premature death<sup>12</sup>.

In general, monetary concern has not been shown to be the primary factor in instituting a smoking control policy. According to the National Survey of Worksite Health Promotion Activities, companies developed smoking policies for the following reasons: To protect nonsmokers (40.4%), to comply with regulations (39.5%), to protect equipment (12.7%), and to protect employees who were at high risk for health problems (7.4%)<sup>3</sup>.

### Local Experience

The Hawaiian Telephone Company (HTC) is one example of an organization active in health promotion. As a self-insured organization, HTC maintains extensive data on employee health. In 1984, benefits paid due to absenteeism (ie, missed hours of work due to illness or injury) totaled over \$2 million. Health-care expenditures consumed 13.9% of HTC's net income in 1980 and 17.7% in 1990. Aware of their climbing health-care costs, HTC made a commitment to employee health through corporate and site-specific programs and policies.

Approximately 23% of HTC employees are smokers. HTC piloted a year-long smoking-cessation program in an effort to convince employees to stop smoking, and in that way to reduce health-care costs. In anticipation of adopting a total smoke-free workplace policy, the pilot program also gave

HTC an opportunity to test smoking-employee reaction to such a proffered policy change.

The pilot program began in May 1990 as a joint effort between the American Cancer Society (ACS), HTC Customer Services, and HTC Health Services Department/Fitness Center. The Cancer Research Center of Hawaii (CRCH) conducted the evaluation of the pilot study.

Our research describes the program which used a combination of behavioral-modification, social support and incentives techniques. The target population was a multiethnic, long-term, heavy-smoker employee population.

### Methods

Employees eligible to participate were smokers in the Customer Services Department of approximately a total of 500 employees. Smokers were personally invited to participate in the pilot program by the manager of customer services.

The sample included 12 volunteers. Their average age was 38 years. Eleven of the participants were women. The ethnicity of the respondents was varied and included Caucasian, Japanese, part Hawaiians, part Filipinos, and others. The majority of the participants had some college education and a stable employment history at HTC. The average educational level was 1 year of college. The number of years participants had been employed at HTC ranged from 1 to 27 years with an average length of employment of 14 years. Participants included salaried managers and hourly paid staff.

The history of smoking by participants indicated they were mostly long-term, heavy smokers. For example, 75%



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of the participants indicated they had spent 20 or more years as a smoker. The average number of cigarettes smoked per day was 30.

### Intervention

The program emphasized life-style changes the key factor in achieving smoke-free status. It included 3 components: Attending a stop-smoking clinic, skill-development classes and a social support group. The program was held after work in the company main building and sessions lasted from 1 to 2 hours. Membership fees in the company's fitness center were waived in order to encourage the participants to exercise during the program.

The stop-smoking clinic component closely resembled the traditional approaches to the problem. In the clinic sessions, participants were instructed on ways to quit. These sessions were offered twice weekly for the first 2 weeks of the program by an ACS facilitator.

Skill-development classes included sessions on weight control, nutritional management, exercise, hair/make-up, fashion styling, stress reduction and money management. These classes were intended to build participants' self-esteem by improving their appearance and personal confidence. Classes were offered twice a month throughout the program year and topics were rotated. All of the instructors were volunteers from the community.

The support group was organized under the guidance of an ACS facilitator. The support group meetings provided a forum for participants to share their feelings and discuss problems. It met once or twice monthly throughout the program.

In order to motivate individuals to participate actively in the program, a point system and a package of incentives were offered. For example, participants received points for maintaining ideal weight, achieving weight loss, exercising, and for attending skill-development classes and support group sessions. In addition, they also received points for time spent as a nonsmoker. The participant with the greatest number of points at the end of the program was awarded the grand prize of a trip to a Neighbor Island. Second and third place winners also received gifts. All participants who completed the program were awarded a certificate.

### Analysis

Survey questionnaires were issued 1 year after the program start, in order to obtain information on the background of the participants and to evaluate the program. All 12 participants responded to the survey; however, not all questions were answered.

Records were also kept on the cost of the program so as to conduct a cost-benefit analysis. Self-reported smoking status was confirmed by direct observation by the participants co-workers and supervisors.

### Results

Of the 12 participants who started the program, 8 entered the program as smokers attempting to quit and 4 entered as nonsmokers seeking maintenance. At the end of the program year, 4 had quit smoking, 2 had reduced their tobacco intake and 2 had dropped out of the program and continued to smoke. Of the 4 who entered the program for maintenance, all maintained a smoke-free status. The quit rate or the number of smokers who were able to quit smoking was 50%, although actually 8 of the 12 became or continued to be nonsmokers.

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**Action:** Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

**Indications:** Yocon<sup>®</sup> is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

**Contraindications:** Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

**Warning:** Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

**Adverse Reactions:** Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.<sup>1,2</sup> Also dizziness, headache, skin flushing reported when used orally.<sup>1,3</sup>

**Dosage and Administration:** Experimental dosage reported in treatment of erectile impotence.<sup>1,3,4</sup> 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.<sup>3</sup>

**How Supplied:** Oral tablets of Yocon<sup>®</sup> 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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For those who were able to quit or maintain a smoke-free status, participation in the program for a full year appeared to be an important factor in their success. Of the nonsmokers at the end of the program, six (75%) participated in the program for the full year. One individual of the 4 who continued to smoke completed the program and 2 quit without participating for the entire program year.

The results indicate that participants had been reluctant to quit smoking in the past. For a few participants, this was their first effort at quitting; whereas the majority of participants had tried previously to quit at least once, but no more than 4 times. The number of attempts at quitting seemed very small when the number of years participants had been smoking is considered. Past methods of quitting included cold-turkey approaches, and involvement in other organized smoking cessation programs.

Half of the respondents agreed they felt healthier since they had stopped smoking; 42% agreed that they felt more productive at home and at work. Comments about the benefits of being a nonsmoker included "clear breathing," "not as tired," "fewer colds," and "more confidence."

Comments on the point system yielded seemingly contradictory findings. Although most participants found the point-tracking system hard to follow and over 60% did not know their own score, over half of the group thought the point system helped to motivate participation in program activities. Suggestions for improving the point system included awarding an equal number of points to each participant at the start of the program, more precise guidelines, and having a scorekeeper to update and post scores.

The most helpful aspects of the program ranked in order of importance included: 1) Specific techniques on how to quit, 2) group support in suggesting ways to not start smoking again, and 3) more information about managing stress. If given the repeat opportunity to change their own involvement in the program, several people indicated they would monitor their diet more carefully and attend exercise classes. If given the opportunity to change the program itself, respondents suggested that more specific information should be provided, and group discussions facilitated on reasons for quitting and concerns related to expected withdrawal symptoms. Other suggestions included scheduling fewer meetings as group goals are met, and avoiding classes in December around the Christmas holiday.

### Discussion

The results of the pilot study appear to indicate that a combination of behavior modification, social support, and providing incentives makes for an effective program for individuals attempting to stop smoking, as well as individuals seeking to maintain their nonsmoking status. The \$1,400 cost of the pilot program paid for incentives, fitness memberships, awards, and food at the mid-year and year-end banquets. Most of the work involved in administering the program was volunteered by the ACS and CRCH, or by HTC employees.

HTC estimates that smokers cost between \$200 and \$1,500 a year more than nonsmokers in medical expense, short-term disability and decreased productivity. The estimate for increased health-care costs alone is over \$350 a year per smoker. The savings to the company, therefore, could be estimated conservatively at \$350 per smoker a year. Four employees who no longer smoke at a savings of \$350 each or

\$1400 total, result in the program paying for itself. There will, of course, be additional savings for every year each of the employees continues to be a nonsmoker while employed by HTC. Four other employees participated in the program as part of their maintenance program. If any of those participants go back to smoking, the company would lose the \$350 savings. Therefore, in addition to those who actually quit, the savings arising from at least one of the participants who maintained nonsmoking can be included in the cost savings of the program. Five employees also reported increased productivity at work and home, which is difficult to quantify, but should be considered as a further value of the program.

In summary, the most conservative assessment is that the program paid for itself and improved the health status and quality of life for half of the participants. A more likely assessment is that the program saved at least \$350 in year one and will save \$350 a year for each employee continuing to be smoke-free while working for HTC. In fact, the program saved \$1,400 in year one, will save \$350 a year for each employee continuing to be smoke-free, and additional benefits will be experienced through improved productivity and better employee moral.

The significance of this intervention is enhanced by the reason of the participants having been long-term, heavy smokers. The difference in life expectancy of a 38-year-old nonsmoking woman compared to a heavy smoker is almost 16 years<sup>22</sup>. The difference between a light smoker (<24 cigarettes a day) and a 38-year-old heavy smoker is almost 13 years<sup>22</sup>. The combined years of life extension due to the program for the 4 participants who quit is 64 years.

Evaluation of the program was a critical component of the design, implementation and success of this pilot project; previously, only 17% of worksites with anti-smoking activities reported they had conducted formal evaluations<sup>3</sup>. In our project, the program evaluation information was presented to the participants, the facilitators and HTC management. Data from the evaluation will serve as the basis for future health promotion policy in order to provide programs in a systematic fashion tailored to the specific needs of the population at hand.

### ACKNOWLEDGMENTS

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