

# HAWAI'I MEDICAL JOURNAL

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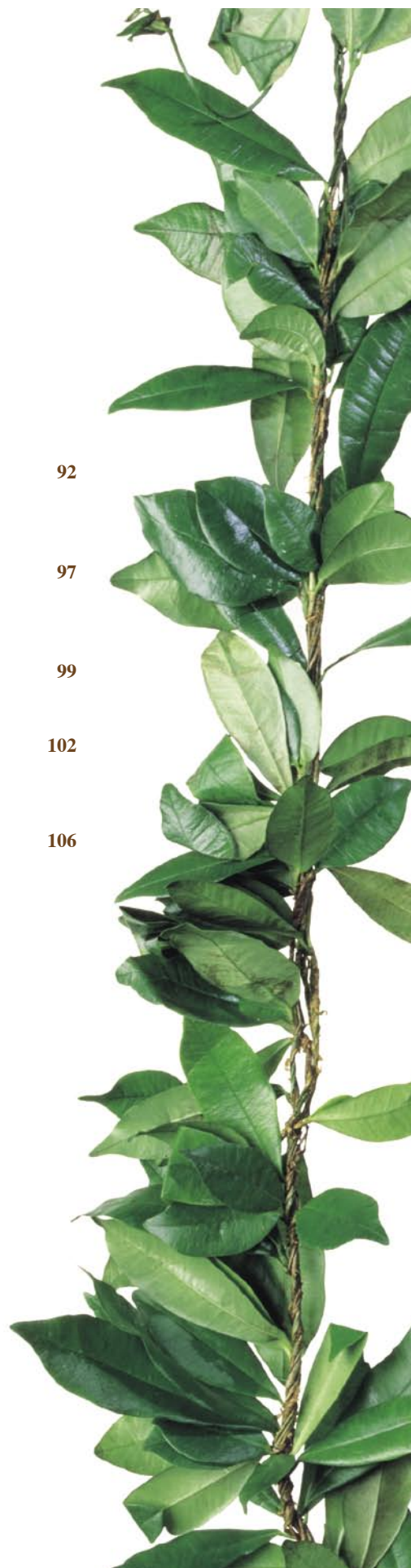
**PREVALENCE OF INTIMATE PARTNER VIOLENCE VICTIMIZATION  
AND PERPETRATION AMONG YOUTH IN HAWAI'I** 92  
Charlene K. Baker PhD and Susana Helm PhD

**THROMBOPHILIA AND OVARIAN HYPERSTIMULATION SYNDROME:  
A CASE REPORT** 97  
Gary Levy MD and Richard S. Lucidi MD

**IDIOPATHIC GRANULOMATOUS MASTITIS ASSOCIATED WITH  
CORYNEBACTERIUM SP. INFECTION** 99  
Creed Michael Stary MD, PhD; Yun Sun Lee MD; and John Balfour MD

**MEDICAL SCHOOL HOTLINE** 102  
**For Our Children: The National Children's Study**  
Lynnae Millar Sauvage MD

**WEATHERVANE** 106  
Russell T. Stodd MD



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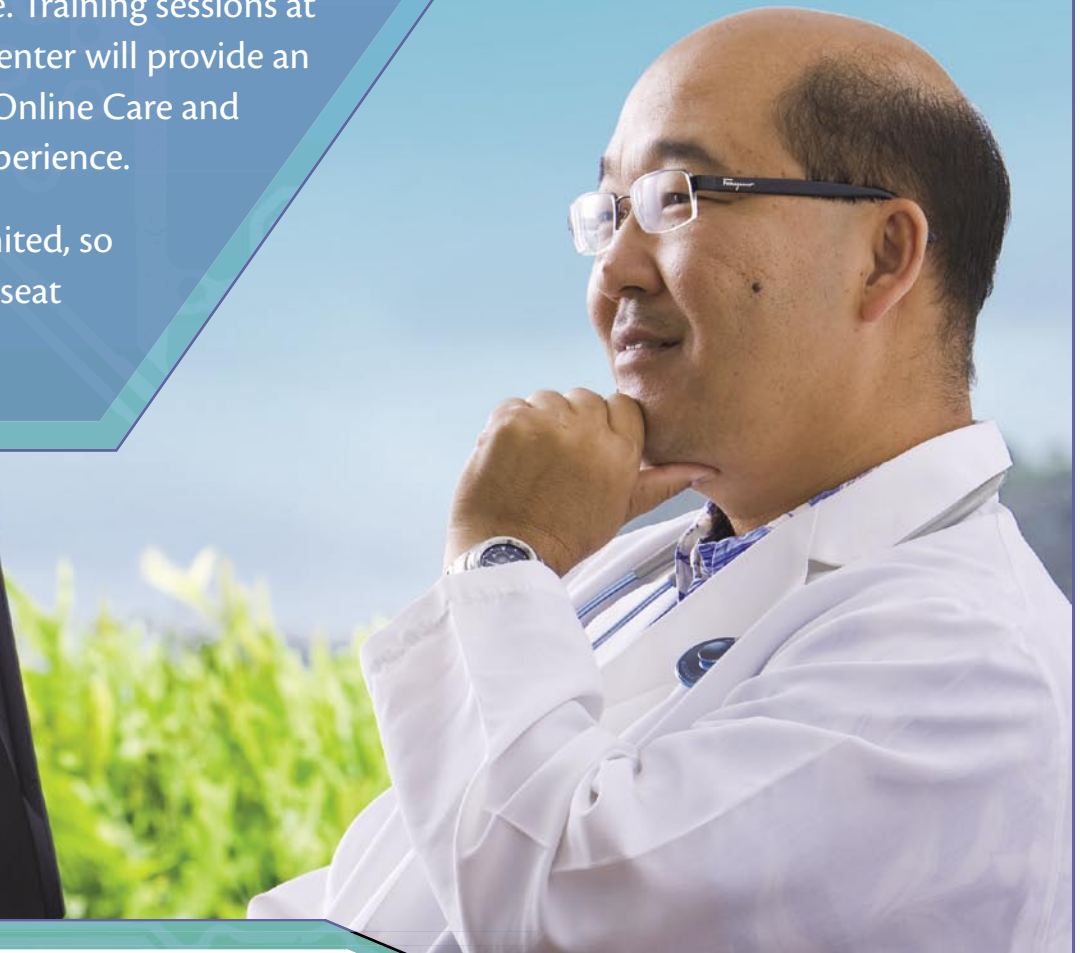
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# HAWAI'I MEDICAL JOURNAL

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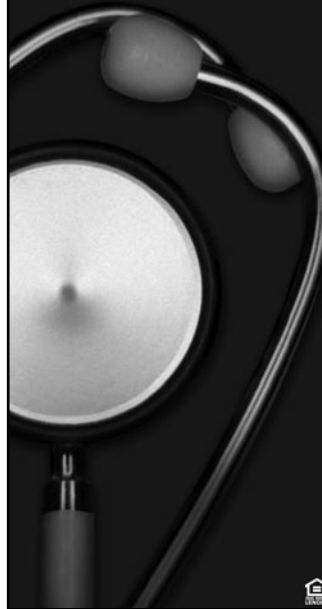
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# Prevalence of Intimate Partner Violence Victimization and Perpetration Among Youth in Hawai'i

Charlene K. Baker PhD and Susana Helm PhD

## Abstract

**Objective:** The purpose of the current study was to examine the prevalence of intimate partner violence (IPV) among teens in Hawai'i.

**Methods:** Youth from two O'ahu high schools (N = 623) were asked to complete a quantitative survey about their experiences, as victims and perpetrators, of IPV.

**Results:** The most frequently reported type of violence was monitoring/controlling behaviors. Girls reported higher rates of victimization and perpetration than boys for most violence types.

**Conclusions:** Future research should examine the contexts in which teen IPV occurs. It will also be important to engage community-based organizations in prevention efforts. Therefore, a train-the-trainer curriculum for IPV prevention and intervention is proposed.

Reducing violence within intimate relationships has been a research focus for many years, though most studies have been on preventing violence in adult relationships. Attention has shifted to the need to address violence in adolescent dating relationships as these experiences likely are precursors to later relationship violence and have been associated with poor school and health outcomes for teens.<sup>1-5</sup> In particular, adolescent intimate partner violence (IPV) has been linked with drug and alcohol abuse, eating disorders, and attempting suicide.<sup>2</sup>

Recent studies have shown that adolescent IPV is prevalent in the United States, with rates ranging from 10-65% depending on the definitions of violence and the research methods used.<sup>5-8</sup> Using a conservative definition where only severe forms of physical and sexual aggression were included, results from one probability sample showed that one in five adolescent high school girls have experienced dating violence.<sup>9</sup> By contrast, using a broader definition that includes acts of verbal and psychological abuse, studies showed that almost half of adolescents reported experiences as a victim, perpetrator, or both.<sup>10-12</sup>

Data are limited regarding the prevalence of IPV among Native Hawaiian, Pacific Islander, and Asian American youth, with the exception of a few studies that have shed light on these populations. According to Hawai'i-based research conducted in 2003, 58% of the sample, which included Filipino American, Japanese American, Native Hawaiian, and Samoan adolescents, reported experiencing emotional dating violence, including verbal abuse and controlling behaviors.<sup>13</sup> Ramisetty-Mikler, Goebert, Nishimura, and Caetano found in a sample of Asian American, Native Hawaiian, Pacific Islander, and European American adolescents that almost 8% reported physical dating violence, with no sex differences in the rates.<sup>14</sup> Furthermore, according to the Hawai'i Youth Risk Behavioral Survey (YRBS), which is completed by youth in grades 9-12, 14% of girls and 17% of boys reported experiencing physical violence by their partners in the previous 12 months.<sup>15</sup> An important caveat with the last two studies on physical dating violence is that they are based on data from the YRBS, which includes a single question on IPV victimization; participants are asked: "During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?"

Therefore, to fill the gap in our understanding of IPV victimization and perpetration of emotional, physical, and sexual violence among Hawai'i adolescents, this study presents data collected in 2007 from a high school-based sample. Also, given the increased attention on teens' use of social electronic media (e.g., MySpace, Facebook, YouTube), as well as one national online survey showing that dating abuse via technology is a problem,<sup>16-18</sup> the current study will present data on the rates of adolescent IPV victimization and perpetration involving the use of social electronic media.

## Methods

The authors sought to collect information that would be useful to prevention educators in Hawai'i. Therefore, first, a qualitative study was conducted using focus group interviews to gather youth perceptions of IPV among teens. Then, a quantitative survey was developed to measure baseline prevalence rates of adolescent IPV, with the goal of building an empirical model to inform prevention activities. The survey was administered at two schools, and occurred about six months after the focus groups (which were also conducted at these schools) during the same academic school year. This paper presents youth self-reported prevalence rates of IPV victimization and perpetration on the quantitative survey. (For methodological details and results published from the focus groups, refer to Baker & Helm, 2010).<sup>19</sup>

## Participant Demographics

A total of 881 youths participated in the survey. To examine the prevalence of IPV, it was necessary to determine whether teens had been in a dating relationship in the past year. Therefore, participants were asked whether they had a boyfriend, girlfriend, ever "gone out" (defined as on a date or hung out romantically) or had a romantic relationship with someone in the past year. If yes, participants were asked to complete questions relating to IPV. A little over 70% of the total sample (n=623; 76% for girls and 66% for boys) answered "yes" to this question. Sample demographics and subsequent prevalence rates are based only on youth who had "dated" in the past year. Participants' ethnocultural groups included Native Hawaiian (n=160, 26.8%), Samoan or other Pacific Islander (n=41, 6.9%), Filipino (n=266, 44.6%), Asian (not Filipino, n=59, 9.9%), and other (n=71, 11.4%). [Ethnicity was operationally defined by asking students how they would describe their ethnic background. Participants were categorized as follows: Hawaiians = some Hawaiian ancestry because the large majority of Hawaiians are of mixed ancestry (US Bureau of Census, 2000). Therefore Native Hawaiian is typically defined as someone with any Hawaiian heritage. In this study, Hawaiian youth could be mixed with other ancestries such as Filipino, Samoan, Japanese, and White, for example. Samoan has at least some Samoan ancestry but no Hawaiian and Filipino heritage. Filipino has at least some Filipino ancestry but no Hawaiian and Samoan heritage.] Of those reporting a dating relationship, n=393 (63.8%) were girls, and n=223 (36.2%) were boys. [This discrepancy between male and female respondents was

the same for the sample as a whole; approximately two-thirds of the total sample was female.] Just over 25.5% of the sample were 9th graders, 31.5% were 10th graders, 27% were 11th graders, and 16% were 12th graders.

### **Survey Protocol**

The survey was administered to students as a paper-pencil, self-report questionnaire. Student responses were anonymous; no identifying information could be linked to the student's responses. The methods for the quantitative study were reviewed and approved by the University of Hawai'i Committee on Human Studies.

The IPV data reported here were collected as part of a larger epidemiological study on youth violence and risk and protective factors. The survey was based on a prior survey developed by the Asian and Pacific Islander Youth Violence Prevention Center, and was updated using data from focus group interviews with teens, community partners, work groups, and recent empirical evidence gathered from national experts. The survey topics were divided into 12 sections, including demographics, ethnic identity, violence/fighting, dating violence, substance use, suicidality, depression, and school attitudes, to name a few. In particular, IPV victimization and perpetration were measured by items representing four types of violence: (1) emotional, 2) physical, 3) sexual, and 4) monitoring and controlling behaviors, including using social electronic media. Items representing the first three types were taken from a previous study on adolescent IPV.<sup>20</sup> Items related to monitoring and controlling behaviors were developed from teen responses during prior focus group interviews.<sup>19</sup> Respondents were asked whether they had experienced or perpetrated these behaviors "never," "once," "2-3 times," or "4 or more times" in the past year. Reliability for the IPV scale was assessed using Cronbach's alpha, with results indicating excellent reliability at 0.89.

Emotional IPV consisted of 6 items, including: "my partner turned some of my friends against me;" and "my partner insulted me with put-downs." Physical IPV consisted of 3 items: "my partner slapped me or pulled my hair;" "my partner threw something at me;" and "my partner pushed, shoved, or shook me." Sexual violence was comprised of two questions: "my partner touched me sexually when I didn't want to be touched" and "my partner forced me to have sex when I didn't want to." Monitoring and controlling consisted of 3 items, including: "my partner went through my cell phone to check my calls or text messages;" "my partner kept track of whom I was with and where I was" and "my partner went through a personal website (like MySpace or Friendster page) to check up on who I was communicating with." Participants were asked to answer questions twice: once to assess victimization and secondly to assess perpetration.

### **Data Analysis**

Violence items were recoded as dichotomous variables, into either 0 (no victimization or perpetration) or 1 (any victimization or perpetration). Any answer of 1, 2-3, or 4+ times was coded as 1, indicating exposure to IPV. Recoding allowed for analyses on sex differences, as several items were positively skewed in that few students reported some types of violence more than once (e.g., sexual violence). Chi-square analyses were conducted to determine significant sex differences on the individual victimization and perpetration items as well as on the subscales representing the four types of violence.

## **Results**

Data on prevalence rates and sex differences related to the IPV victimization and perpetration questions, and the subscales representing the four types of IPV, are presented in Tables 1 and 2.

### **Emotional Violence**

With respect to girls' and boys' victimization, the most prevalent forms of emotional violence were the same, and involved dating partners who did something to make them jealous or insulted them with put-downs. These two forms also were perpetrated most often by girls and boys against their dating partners. Analyses indicated that girls self-reported significantly higher rates of victimization and perpetration compared to boys.

### **Physical Violence**

Girls and boys in dating relationships reported various forms of physical violence, though to a lesser degree than emotional violence. The most prevalent forms of victimization experienced by both girls and boys were partners who threw something at them, or slapped or pulled their hair. These same acts were identified as most commonly perpetrated by girls and boys. Sex differences were significant and showed that boys reported higher rates of victimization, while girls reported higher rates of perpetration.

### **Sexual Violence**

Though not as prevalent as emotional and physical violence, girls and boys in dating relationships reported sexual violence. For both victimization and perpetration, the most prevalent form reported by girls and boys was having a partner who touched them sexually when they did not want to be touched. There were significant sex differences, with girls more often victims and boys more often perpetrators of sexual violence.

### **Monitoring and Controlling Behaviors**

Girls and boys in dating relationships reported high rates of monitoring and controlling behaviors. For victimization, the most prevalent forms reported by girls and boys were partners who went through a personal website to check up on what they were doing and partners who kept track of who they were with and where they were. These same behaviors were the most often perpetrated as well. Significant sex differences were evident in monitoring and controlling behaviors. For both victimization and perpetration, girls self-reported significantly higher rates.

## **Discussion**

Results show that IPV among Hawai'i teens is prevalent. The most frequently reported type of violence was monitoring and controlling behaviors. Next, almost 60% of teens reported experiencing emotional violence. Although physical and sexual violence were reported less often; these rates were not inconsequential at 29% and 21%, respectively. Rates of perpetration were similar to victimization for each type of violence, with the exception of sexual violence where teens reported lower rates of perpetration compared to victimization.

In addition to examining overall prevalence rates, sex differences were analyzed. Results showed that girls were more often victims of emotional, sexual, and monitoring and controlling IPV by their

Table 1. Percentages of IPV Victimization and Perpetration			
Violence Items	Total N = 623	Sex	
		Boys N = 223	Girls N = 393
<b>Victimization (My partner...)</b>			
<b>Emotional</b>			
Did something just to make me jealous.	47.0	41.4	50.1 *
Insulted me with put-downs.	26.9	25.0	28.0
Has threatened to commit suicide to get me to stay with him/her.	17.1	7.9	22.1 ***
Turned some of my friends against me.	16.7	15.2	17.5
Destroyed or threatened to destroy something I valued.	12.9	12.4	13.1
Threatened me or deliberately tried to frighten me.	11.4	6.0	14.4 **
<b>Physical</b>			
Threw something at me.	18.0	23.4 **	14.9
Pushed, shoved, or shook me.	16.1	18.1	14.9
Slapped me or pulled my hair.	15.3	21.4**	11.9
<b>Sexual</b>			
Touched me sexually when I didn't want to be touched.	17.6	9.6	22.1 ***
Forced me to have sex when I didn't want to.	9.1	3.7	12.1 ***
<b>Monitoring</b>			
Kept track of whom I was with and where I was.	49.6	41.9	53.9 **
Went through my cell phone to check calls or text messages.	47.5	40.7	51.3 *
Went through a personal website (like a MySpace or Friendster page) to check up on who I was communicating with.	39.5	35.7	41.6
<b>Perpetration (I...)</b>			
<b>Emotional</b>			
Did something just to make my partner jealous.	41.9	25.1	51.3***
Insulted my partner with put-downs.	25.1	17.8	29.1**
Turned friends against my partner.	10.6	6.0	13.2**
Threatened or deliberately tried to frighten my partner.	8.1	5.7	9.4
Destroyed or threatened to destroy something my partner valued.	6.8	3.3	8.8**
<b>Physical</b>			
Threw something at my partner.	16.9	7.9	21.9***
Slapped my partner or pulled his/her hair.	16.6	5.6	22.7***
Pushed, shoved, or shook my partner.	16.0	10.3	19.2**
<b>Sexual</b>			
Touched my partner sexually when she/he didn't want to be touched.	5.1	7.9*	3.6
Forced my partner to have sex when he/she didn't want to.†	1.0	1.4	0.8
<b>Monitoring</b>			
Went through a personal website (like a MySpace or Friendster page) to check up on who my partner was communicating with.	44.8	34.4	50.5***
Kept track of who my partner was with and where he/she was.	44.2	31.6	51.2***
Went through my partner's cell phone to check calls or text messages.	41.8	30.7	47.9***

\* Significantly higher than its sex counterpart,  $p < 0.05$ , using chi-square analyses. \*\* Significantly higher than its sex counterpart,  $p < 0.01$ , using chi-square analyses. \*\*\* Significantly higher than its sex counterpart,  $p < .001$ , using chi-square analyses. † Chi-square analyses not conducted because of low expected cell counts.

dating partners. By contrast, boys reported being victims of physical violence more often than girls. Regarding perpetration, with the exception of sexual violence (where rates for boys were higher) girls had higher rates than boys. These findings are consistent with previous research where girls report higher rates of perpetration.<sup>21,22</sup>

There are many reasons for the discrepancy in rates between boys

and girls. Underreporting is likely, especially with some types of violence (e.g., sexual violence). It may be that boys who are victims of sexual violence do not report; similarly, boys who perpetrate sexual violence may also underreport this behavior. Also, adolescent IPV does not simply occur in heterosexual relationships. It may be that some of the teens in this sample were in same-sex relationships, thus

Table 2. IPV Victimization and Perpetration by Sex						
	Total (N = 623)		Sex			
			Boys (N = 223)		Girls (N = 393)	
	N	%	N	%	N	%
<b>Victimization</b>						
Emotional	368	59.7	117	52.5	251	63.9**
Physical	177	28.7	79	35.4 **	98	24.9
Sexual	124	20.6	25	11.6	99	25.7***
Monitoring	400	66.3	129	60.3	271	69.7 *
<b>Perpetration</b>						
Emotional	322	53.6	78	36.6	244	62.9 ***
Physical	169	28.0	36	16.7	133	34.3 ***
Sexual	33	5.5	18	8.4 *	15	3.9
Monitoring	370	61.4	102	47.4	268	69.1 ***

\* Significantly higher than its sex counterpart,  $p < 0.05$ , using chi-square analyses.

\*\* Significantly higher than its sex counterpart,  $p < 0.01$ , using chi-square analyses.

\*\*\* Significantly higher than its sex counterpart,  $p < .001$ , using chi-square analyses.

affecting the prevalence rates for boys and girls. Clearly, additional research is needed to better understand these discrepancies.

Another caveat is that the measure used in the current study did not assess the context of these behaviors. This issue has become one of the most prominent in teen IPV research.<sup>23</sup> Although etiological research that seeks to explain why teen IPV occurs is just getting started, it is clear that explanations posited for understanding adult female IPV perpetration are insufficient. Previous research suggests that self-defense is one reason for adult female perpetration; however, this explanation may not be as salient for teen IPV. Recent studies have shown that girls report anger as the primary factor for using violence.<sup>23,24</sup> Research also suggests that females use violence to respond to violence that males perpetrate against them, not in self-defense but rather as a reaction, or in some limited cases as retaliation.<sup>25</sup> Additional work is needed to understand the complexity of teen relationships, and that moves beyond measuring acts of violence. In particular, quantitative measures that assess context, including teens' reasons for perpetrating IPV, are needed. Qualitative research also will be important and possibly a precursor to surveillance research, to examine more thoroughly the many facets of girls' social ecology. The context in which teen IPV occurs is laced with other risk factors such as substance abuse, peer/family/school pressures, and societal gender role expectations of girls (e.g., to be in a relationship, even if it is unhealthy), all of which may help explain girls' higher rates of perpetration.

### Limitations

Data are based on responses from students at two public high schools on O'ahu. The extent to which prevalence rates are reflective of adolescents across the state (including those in private schools or not in school) is not known. Additional research is needed with adolescents in multiple settings on all islands in order to capture a more representative picture of adolescent IPV in Hawai'i. In addition, the data are self-reported. Therefore, it is possible that these prevalence rates are an underestimate, especially for the perpetration of physical and sexual violence. For example, students may not have wanted to admit to perpetrating acts of violence against their

partners, even on an anonymous survey. That said, the prevalence of IPV endorsed by teens was quite high, with rates for some types higher than in samples from the continental US.

### Implications for Practice/Intervention

Given high rates of adolescent IPV, as shown in the current study, it will be important for schools, community-based organizations (CBOs), and health clinics, among others, to address this problem through prevention education curricula or specific intervention programming. In particular, highlighting the prevalence of IPV as well as teen's use of social electronic media to perpetrate IPV will be important to include. Recently, several studies have shown how often teens use social media and for what purpose.<sup>17-19</sup> The current study's findings support this literature, and suggest that our conception of IPV may need to be expanded to consider monitoring and controlling behaviors as a new "type" of IPV, perhaps as a subgroup of emotional IPV or as its own group. Therefore, raising awareness about the dangers that come with social media use is a necessary next step, not only for teens but for parents, many of whom may not be as technologically savvy as their teenage sons and daughters. However, challenges exist as many organizations are overloaded in terms of limited staffing, staff inexperience in addressing this issue, and the limited time allotted to IPV prevention in the face of other competing demands.

To address these challenges, an increased number of staff trained to implement IPV prevention in their current day-to-day activities is required. Furthermore, there is evidence that IPV is correlated with other types of issues for teens, such as substance abuse.<sup>15</sup> As such, organizations that are implementing substance abuse interventions also can include information on the relationship between IPV and drug use. In this way, teens are exposed to information that is more fitting with their overall experiences. It also may help to ensure that organizations with limited time to address multiple teen issues can do so more efficiently. Integrating IPV prevention with existing education/services could potentially improve the effects of drug prevention programs. For example, it is difficult to tell teens to stop using drugs or alcohol when their dating partners may be pressuring them into it. In this case, the decision for teens may not be clear; if they stop drinking or using drugs it may cost them their relationship. With the integration of these two issues (IPV and substance abuse) health clinics and CBOs may appeal more effectively to adolescents' reality and context.

To address this practice/intervention gap, the University of Hawai'i (UH) is developing a "train-the-trainer" teen IPV curriculum that can be implemented in a variety of settings. The curriculum includes modules on raising awareness of adolescent IPV, risk and protective factors associated with adolescent IPV, ideas for integrating IPV prevention into existing programs, and an introduction to evaluating IPV prevention activities. To disseminate this curriculum, UH is partnering with the Hawai'i Youth Services Network and will begin offering trainings beginning Spring 2011.

### Conclusion

Data from Hawai'i show that IPV among teens is prevalent, with monitoring and controlling behaviors the most insidious. To inform prevention and intervention activities, it is necessary to gather additional qualitative information related to the context in which IPV



occurs, and how this context may be different for boys and girls. Health and other service providers can be helpful in this endeavor. Finally, given the recent budget cuts in Hawai'i, it will be important to devise strategies that address adolescent IPV efficiently. Therefore, equipping program staff with information on IPV and how to integrate this information into existing activities may increase the likelihood that IPV is addressed, and thus reduced among teens in Hawai'i.

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# Thrombophilia and Ovarian Hyperstimulation Syndrome: A Case Report

Gary Levy MD and Richard S. Lucidi MD

## Abstract

**Background:** Ovarian Hyperstimulation syndrome (OHSS) is one of the most serious complications of controlled ovarian hyperstimulation. Recent prospective data revealed possible increased prevalence of thrombophilia markers in women who develop severe ovarian hyperstimulation syndrome (OHSS).

**Case:** A 26-year-old nulliparous woman underwent ovarian stimulation for in vitro fertilization with recombinant follicle stimulating hormone and developed severe OHSS. She was screened for hereditary and inherited thrombophilia markers and was found to be homozygous for MTHFR mutation and had decreased antithrombin levels.

**Conclusion:** This case adds to the limited information that there may be an association between women who develop severe ovarian hyperstimulation syndrome and an increased prevalence of underlying thrombophilia markers. If further research demonstrates a cost effective strategy, screening for those markers may identify women who are at a higher risk for development of severe ovarian hyperstimulation syndrome.

## Introduction

Ovarian hyperstimulation syndrome (OHSS) is one of the most serious complications of controlled ovarian hyperstimulation. It is classified on a scale of severity based on clinical and laboratory parameters. Mild OHSS is characterized by enlarged ovaries, abdominal distension and possibly nausea and emesis. This can progress to severe or critical OHSS, which is characterized by clinical evidence of ascites, hemoconcentration, potential renal insufficiency and thromboembolic phenomenon.<sup>1</sup> The incidence of this syndrome is variable. Schenker et al. reported that mild OHSS is thought to occur in up to 10% of ovulation induction cycles and severe OHSS can complicate up to 1% of patients.<sup>2</sup> There are numerous factors that predispose a patient to the development of OHSS. Age <35, polycystic ovarian syndrome and an initial high antral follicle count are all risk factors for development of OHSS.<sup>3</sup> The pathophysiology of OHSS is not clearly understood. The majority of clinical findings are related to intravascular volume depletion. Vascular endothelial growth factor (VEGF) is responsible for the increased capillary permeability seen in OHSS and this permeability leads to transudation of fluid from the hypervascular ovary, causing ascites. Consequently, hemoconcentration develops and there are numerous reports in the literature documenting thromboembolic events. Numerous authors have examined what additional factors may predispose a patient undergoing ovulation induction and hyperstimulation to develop OHSS.

Dolitzky et al. is the only study in the literature that we are aware of that evaluates the incidence of thrombophilia in patients with severe OHSS. They demonstrated an increased incidence of thrombophilia markers (85%) in patients who developed severe OHSS versus controls (26.8%).<sup>4</sup> We present another case which may guide future investigation in the direction of whether or not thrombophilia carriers are at a higher risk for developing OHSS with ovarian hyperstimulation and whether underlying thrombophilia markers are associated with development of severe OHSS.

## Case Presentation

A 24-year-old gravida zero and her partner presented with infertility secondary to severe oligoasthenospermia. Her past medical history was otherwise unremarkable. Her gynecologic review of systems documented normal monthly cycles with menses. Ovarian reserve testing documented normal day 3 follicle stimulating hormone levels of 5.7 mIU/ml. Her ovarian stimulation was initiated with recombinant follicle stimulating hormone 300 units daily. She had a total of 10 days of stimulation and GnRH antagonist was used to prevent premature ovulation. She developed forty-three follicles and her peak estradiol level on the day of hCG administration was 1469 pg/ml after receiving a total dose of 17 international units of recombinant follicle stimulating hormone. Intramuscular hCG was administered when her lead follicles measured eighteen millimeters. She underwent uncomplicated transvaginal oocyte retrieval. Thirty four oocytes were retrieved and intracytoplasmic sperm injection (ICSI) performed on 32 oocytes resulting in 16 embryos. Seven embryos reached the blastocyst stage of development and were cryopreserved.

Three days after oocyte retrieval the patient presented to the clinic with nausea, vomiting abdominal pain and distention. Physical examination revealed sinus tachycardia in the 120s beats per minute and her abdominal exam revealed moderate distension and clinical ascites. A transvaginal sonogram was performed which documented enlarged ovaries measuring eight centimeters each and four centimeters of free fluid in the pelvis. Laboratory evaluation at that time demonstrated hemoconcentration with a hematocrit of 45%. She was consequently admitted for inpatient management of severe OHSS. Embryo transfer was not performed and all suitable embryos were cryopreserved.

Her management consisted of intravenous fluid administration with normal saline, deep venous thrombosis prophylaxis with low molecular weight heparin and pain management. By hospital day six, her clinical status improved and she did not require paracentesis secondary to her improvement with conservative management. Laboratory parameters normalized and she was discharged home in stable condition.

Based on Dolitzky's et al. findings a decision was made to screen this patient for hereditary and acquired thrombophilia markers. We obtained laboratory analysis for evaluation of protein C and protein S deficiencies, Factor V Leiden mutation, antithrombin III deficiency, prothrombin gene (20210G>A) mutation, methyltetrahydrofolate reductase (MTHFR) gene mutations, anticardiolipin antibodies and the lupus anticoagulant.

Her results demonstrated that she was homozygous for the common MTHFR polymorphism (677C>T), a genotype where hyperhomocysteinemia is common. In addition she demonstrated laboratory evidence of antithrombin III deficiency with 76% activity.

## Discussion

Currently the prevalence of thrombophilia markers in women with severe hyperstimulation syndrome has only been examined once. Additionally, two case reports of women who presented with acute thromboembolic events in context of OHSS and were found to be carriers of thrombophilia have been described.<sup>5,6</sup> However, measuring thrombophilia marker activity levels during acute disease states is usually unreliable and may provide a false positive results as those levels may fluctuate. Consequently, future studies may consider screening women undergoing controlled ovarian hyperstimulation for thrombophilia and prospectively following them to monitor development of OHSS to evaluate if there is further association between thrombophilia markers and development of severe OHSS.

This case report supports Dolitzky's et al. findings that the prevalence of thrombophilia markers may be increased in patients who develop severe OHSS after controlled ovarian hyperstimulation with gonadotropins. Specifically, similar to their findings, our patient demonstrated decreased antithrombin levels and homozygosity for MTHFR 677T. In their study, patients who developed severe OHSS were found to have significantly lower antithrombin levels compared to controls. Similarly, they found that homozygosity for MTHFR 677T was found to be associated with a fivefold increased risk for severe OHSS, a mutation of which our patient was a carrier. Although several thrombophilia markers are not reliable in preg-

nancy and during acute disease states such as the pathophysiologic changes that occur with OHSS, such as AT III levels, the homozygous MTHFR genotype may be associated with development of OHSS. It is unclear why patients with underlying thrombophilia markers may be at higher risk of OHSS. Kodama et al. reported on decreased Antithrombin III levels in ART cycles that developed OHSS and numerous other papers demonstrated changes in hematologic parameters with ovarian stimulation. Thus it is plausible that patients with underlying hematologic pathology may be at risk for OHSS.

Further prospective studies evaluating underlying thrombophilia markers and severe OHSS are needed. This case report adds to the current limited data regarding underlying thrombophilia markers and a possible association with development of severe OHSS with controlled ovarian hyperstimulation with gonadotropins. The authors acknowledge the fact that undertaking future prospective trials to evaluate for this association may not be cost effective, but may shed light on the underlying etiology of OHSS.

In addition, based on our and Dolitzky's et al. findings homozygosity for MTHFR 677T may potentially be used as a screening tool for patients who may be at high risk for severe OHSS syndrome based on other risk factors.

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# Idiopathic Granulomatous Mastitis Associated with *Corynebacterium* Sp. Infection

Creed Michael Stary MD, PhD; Yun Sun Lee MD; and John Balfour MD

## Abstract

*Idiopathic granulomatous mastitis (IGM) is a rare inflammatory condition of the breast. The etiology and treatments options of IGM remain controversial. Previous case reports have suggested that Corynebacterium sp., a gram-positive bacillus endogenous to the skin, may be associated with IGM. In the present report, we describe the first case of IGM with a positive culture for Corynebacterium sp. reported in the United States.*

## Introduction

Idiopathic granulomatous mastitis (IGM) is a rare inflammatory condition of the breast with unclear etiology and variable treatment options.<sup>1-5</sup> The usual presenting symptoms of breast mass, pain, and erythema suggest an inflammatory or neoplastic process.<sup>6-8</sup> However, mammography and ultrasound findings are nonspecific and histopathologic features, which include noncaseating granulomatous changes centered on lobules, are notable for a distinct absence of neoplastic changes.<sup>1,3,5,6</sup>

While the etiology of this disease remains obscure, the majority of cases of IGM are aseptic, and an autoimmune pathogenesis of the disease has therefore been endorsed.<sup>9-12</sup> However, reports of coexistent organisms suggest that an initial pathogenic insult may be responsible for generating a subsequent autoimmune response.<sup>13-15</sup> In particular, it has been suggested that *Corynebacterium* species, a gram-positive bacillus endogenous to the skin, may be associated with IGM.<sup>13,15-19</sup> In the present report, we describe a case of IGM associated with a positive culture for *Corynebacterium* sp.

## Case Report

A 33-year-old non-puerperal, gravida 6 para 4 woman initially presented to clinic with a 2-week history of erythema, edema, and tenderness in her left breast accompanied by subjective fevers and chills for 4 days. Her history was notable for uneventful breastfeeding of all her children, with no history of mastitis. On physical examination, the patient was afebrile, however she was noted to have 2 fluctuant lesions on the left breast, one lateral and the other periareolar. There was diffuse erythema and induration of the areola, with marked tenderness to palpation, however no fluid was expressed from the nipple. Ultrasound revealed ill-defined heterogeneous and hypoechoic areas with no obvious abscess, consistent with mastitis. However, scant purulent fluid was obtained with fine needle aspirate and sent for culture, and a presumptive diagnosis of spontaneous infectious mastitis was made. A prophylactic course of Bactrim was prescribed and the patient was sent home in stable condition. Wound cultures subsequently revealed pan-sensitive 4+ *Corynebacterium* sp.

Unfortunately, the patient returned 2 days later, having discontinued Bactrim due to intolerable nausea and vomiting, and again complained of persistent erythema and induration, and worsening tenderness in the left breast. Admission CBC was significant for a leukocytosis with bandemia. Repeat ultrasound indicated diffuse heterogeneity with increased echogenicity, and a small periareolar fluid collection

was identified. The patient was admitted for failed outpatient therapy and was initiated on intravenous antibiotic therapy (penicillin G and vancomycin). An incision and drainage was performed at the bedside where a copious amount of non-foul smelling purulent material was expressed and sent for further analysis. Subsequent bacterial, KOH preparation, AFB, fungal, and yeast cultures and smears were negative. Over subsequent days, the patient's left breast continued to be tender, erythematous, and warm, and an OR incision and drainage with core needle biopsy was performed. Loculations and purulent material were drained from the periareolar and lateral aspect of the breast. Biopsy results demonstrated granulation and giant cell formation with liquefactive necrosis, compatible with granulomatoid inflammation and abscess, with no evidence of malignancy (Figures 1-4). The patient was continued on empiric intravenous antibiotic therapy, and the patient was discharged in improved condition the following week with a course of oral doxycycline.

## Discussion

The pathogenesis of granulomatous mastitis is unknown, although a progression from subclinical mastitis to mastitis, and finally to breast abscess with granuloma formation has been suggested.<sup>19</sup> Competing theories regarding the etiology of granulomatous mastitis include autoimmune and hypersensitivity processes,<sup>5,20-22</sup> versus an infectious pathogenesis.<sup>14,15,23,24</sup> Although the majority of cases of IGM appear aseptic, case reports of documented coinfection with *Corynebacterium* sp. have been reported in the United Kingdom,<sup>16</sup> France,<sup>13,17-19</sup> and Italy.<sup>17</sup> However, the present case is the only published report of IGM associated with *Corynebacterium* sp. documented in the United States.

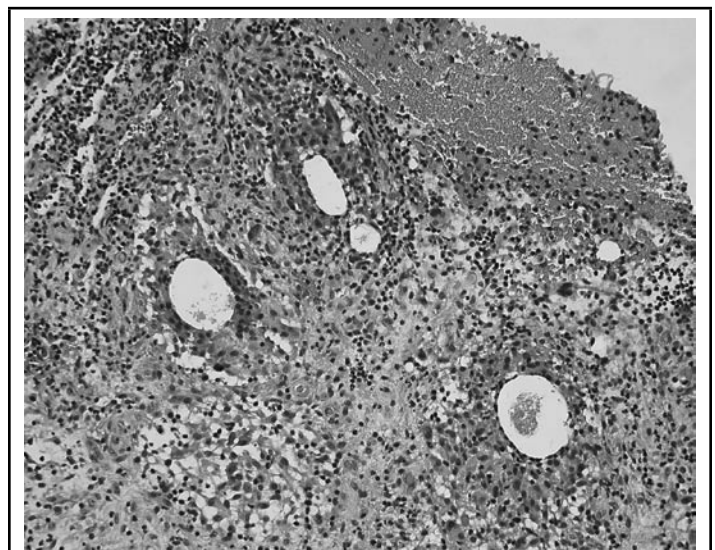


Figure 1. Low power histopathology of breast tissue fat lobules with evidence of chronic inflammation.

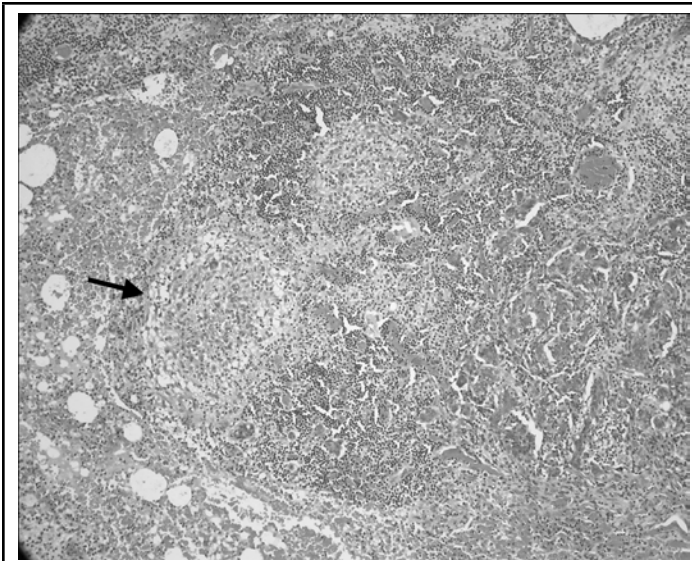


Figure 2. Low power histopathology image of breast tissue lobules with evidence of chronic inflammation and formation of granuloma (→).

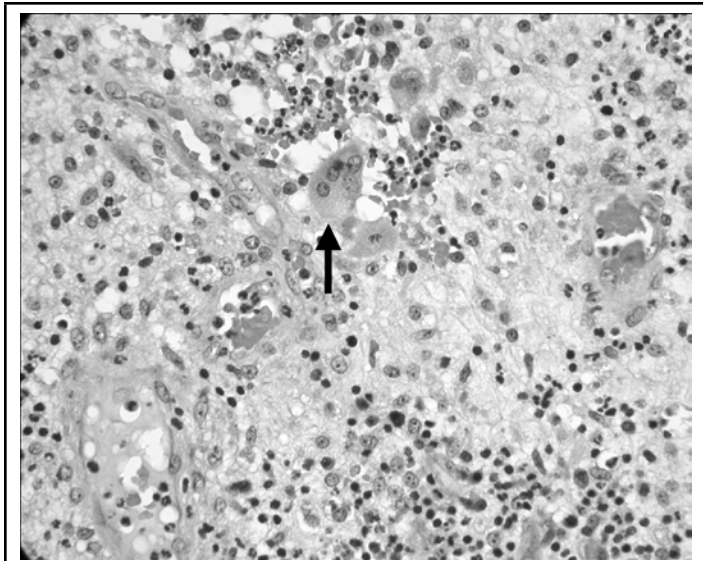


Figure 4. High power histopathology of breast lobule with evidence of giant cells (↑).

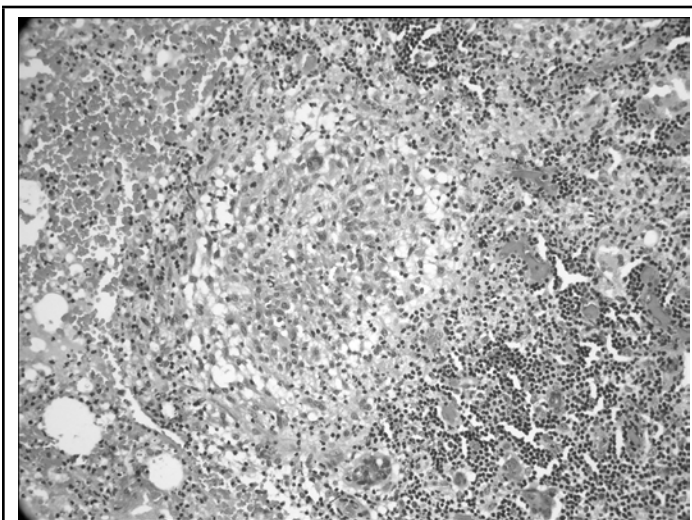


Figure 3. High power histopathology image of granuloma within breast tissue lobules.

The limited number of case reports demonstrating an association between infection with *Corynebacterium* sp. and IGM may be due to underdetection in an already rare disease. *Corynebacterium* sp. are typically non-pathogenic in immunocompetent individuals and therefore may not always be routinely screened for in cases of IGM. Furthermore, culture of lipophilic *Corynebacterium* sp. requires a 72 hr incubation period on special media, further contributing to the possibility of false negative reports of infection.<sup>15</sup> However, *Corynebacterium* sp. are routinely implicated in the development of mastitis in livestock,<sup>25</sup> and may be associated with infection at higher rates in humans than previously considered. While the role of *Corynebacterium* sp. in the pathogenesis of IGM has not been definitively established, the strongest supporting evidence has been documented by Taylor *et al.*<sup>15</sup> who demonstrated granulomatous disease in 27 of 34 patients with inflammatory mastitis and concomitant *Corynebacterium* infection.<sup>15</sup>

In the context of a possible infectious etiology, the present case in which *Corynebacterium* sp. were identified in the progression of IGM illustrates the controversial nature of an optimal treatment paradigm. Initially, alternative causes of mammary granulomas, such as tuberculosis and sarcoidosis, must be excluded. However, the results of this case report and the previous studies above support a recommendation of additionally screening for *Corynebacterium* sp. prior to accepting a diagnosis of aseptic IGM. While adequate response to immunosuppression has been described with aseptic IGM (9-12), in the present case we relied on systemic antibiotics and surgical incision and drainage with positive results, thus avoiding a definitive mastectomy.

#### Authors' Disclosures

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## For Our Children: The National Children's Study

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"The fetal origins hypothesis states that fetal undernutrition in middle to late gestation, which leads to disproportionate fetal growth, programmes later coronary artery disease."<sup>1</sup> The Developmental Origins of Adult Disease Hypothesis, proposed by DJ Barker, describes the development of adult disease in terms of fetal exposures and growth. Multiple large epidemiologic studies have confirmed events prior to birth are significant in child development and subsequent adult health.<sup>2-4</sup> Adult morbidities that potentially occur secondary to small size at birth can be split into two groups: metabolic and non-metabolic. Metabolic morbidities include hypertension, dyslipidemia, coronary artery disease and insulin resistance; non-metabolic morbidities include attention deficit hyperactivity disorder, neurodevelopmental delay and Schizophrenia.<sup>5</sup>

It is theorized that fetal adaptations to intrauterine conditions affects the shape and development of fetal structure and organs. Certain exposures could cause abnormalities to the process of fetal organ development. The alterations in fetal organ development and subsequent organ function are thought to be responsible for the development of adult disease. Though the intrauterine environment plays a role in the development of adult disease, postnatal exposures are also important. For example, the highest risk of adult coronary artery disease occurs in individuals who were small at birth but who became heavy in childhood.<sup>6</sup> Individuals who are small at birth and remain lean have a much lower rate of coronary artery disease. The causal association between low birth weight and overweight in childhood with subsequent development of coronary artery disease holds across diverse populations and sexes; thus this observation is robust and is of importance.<sup>6</sup> To study the complex interrelationships between genetics, psychosocial, and pre- and postnatal environmental exposures and adult disease, a large, representative cohort of maternal-child pairs needed to be established.

The National Children's Study (NCS) is underway. In excess of 100,000 maternal-child pairs will be recruited into the sample from 105 different areas across the United States. Broad environmental and cultural exposures and health status will be assessed longitudinally throughout the life of the child, during various developmental stages (pregnancy, at birth, infancy, childhood, adolescence and adulthood). Genetic and epigenetic studies will be performed upon biologic samples that will be collected and stored. Interactions between genetic predisposition and the environment will be studied in a cohort of adequate size. The NCS will provide a superb opportunity to study maternal genetics and pre- and postnatal environmental exposures on fetal and subsequent child health.

The NCS is a dynamic, evolving research project. Many of the specific measures that will be obtained throughout the life of the child have yet to be determined. The potential information that it will yield regarding genetics, psychosocial and environment exposures and child health is amazing. It is anticipated that this information will

help to improve the care provided for children, and their children's children.

The University of Hawai'i National Children's Study center will be enrolling over 1000 children into the national cohort. For the pilot study, factors affecting recruitment of participants and operational activities are being studied. In the main study, the study design will become increasingly complex. Some of the childhood conditions that will be evaluated include childhood accidents, obesity, autism and attention deficit hyperactivity disorder. An environmental concern of particular interest for Hawai'i will be the effect of environmental air exposures like volcanic emissions and smoking on pregnancy outcomes, particularly small for gestational age at birth.

The causative factors for small gestational age at birth are diverse, and include intrauterine infection, fetal chromosomal abnormality, multiple gestation, maternal medical diseases like diabetes, substance abuse, hypertension, malnutrition, and abnormal placental development resulting in increased placental resistance. The most significant modifiable risk factor for small for gestational age at birth is smoking. When compared to non-smokers, smokers are 3.5 times more likely to have an infant that is small at birth.<sup>7</sup>

In 2004 and 2006 the US Surgeon General summarized the evidence regarding the adverse effects associated with maternal smoking. Outcomes attributed to smoking during pregnancy include premature birth, delivery of a small for gestational age infant and childhood obesity and behavioral disorders like attention deficit hyperactivity disorder.<sup>8-9</sup> These documents included a firm recommendation to stop smoking during pregnancy. However, though public health efforts in this area have been quite successful,<sup>10</sup> and overall rates of smoking during pregnancy have decreased, up to 10% of all pregnant women will continue to smoke throughout gestation.<sup>7</sup>

Large epidemiologic studies of smoking exposure and pregnancy outcomes support a causal relationship between smoking and small for gestational age infants.<sup>11</sup> There is a correlation between maternal smoking and both small for gestational age infants and childhood obesity,<sup>6</sup> a phenotype that can result in increased risk of coronary artery disease as an adult. Proposed mechanisms underlying impaired fetal growth secondary to smoking include decreased uterine blood flow and abnormal placental development with increased resistance resulting in chronic hypoxia. Smoking also affects maternal appetite and food consumption. This may also play a role in maternal and fetal nutrition. There is also substantial epidemiologic data suggesting a causal relationship between maternal smoking and childhood obesity. A recent meta-analysis of 14 studies, comprised of 84,563 children, confirmed children whose mothers smoked during pregnancy are at increased risk to be overweight (odds ratio 1.5).<sup>12</sup> The mechanism underlying this observation is unclear.

The study will be particularly interested in looking at the efficacy of public health and local community and provider based programs and process to encourage smoking cessation. The sample size of the study will be large enough so that subgroups of participants will be identified with similar lifestyles, as the effect of societal burden on health is clear, and this factor must be considered. The study could also provide the opportunity to identify factors that optimize pregnancy outcomes in women who continue to smoke. Much of the epidemiologic work regarding the effects of smoking in pregnancy is dependent on patient recall of smoking exposure. In the NCS, information regarding smoking during pregnancy can be collected prospectively, eliminating recall bias. Additionally, biologic samples that are being collected could be assayed for cotinine levels, as a biologic marker for smoking exposure, allowing for more accurate correlations between smoke exposure and pregnancy outcome. Genetic variations in enzymes metabolizing the products in tobacco smoke cause variations in serum levels of cotinine thus measuring the biomarker not only quantifies exposure but allows for an assessment of the effect of genetic variation on pregnancy outcomes.<sup>12</sup>

The potential benefit of the NCS for the children of Hawai'i is clear. In addition to the data that will be obtained, University infrastructure has been expanded to support the contract particularly in the area of information technology and data storage. Finally, because the University received this contract, several additional projects have been awarded in biotechnology development, dietary assessment, health literacy, and in evaluating factors affecting recruitment and retention in the study.

To study the potential affects of diet on child growth and development in Hawai'i, and in particular childhood obesity, dietary instruments utilized in the NCS must reflect the local diet. Dietary instruments that have been developed to study dietary intake across populations are awkward and time consuming to use, and do not include many of the food items commonly consumed in Hawai'i. Terminology utilized in the surveys is also inconsistent. For example, *malassadas* and *lau lau* are not listed, and *Ahi* and *Aku* are just listed as tuna. Dr. Rachel Novotny\* has been awarded a project to look at utilizing the internet to improve the quality of data collected and the ease of use of dietary instruments.

A major barrier to success of the project in Hawai'i is recruitment and retention of participants. Thus far, the people of Hawai'i have been welcoming and most have been interested in participating in this landmark study. However, study participation is a significant long-term commitment, as the children will be followed for 21 years. If 3% of participants drop out of the study each year, and this drop out rate is commonly seen in prospective observational studies, by the end of the 21st year only 37% of the original cohort will remain in the study for the final assessment of health as a young adult. Clearly, the more participants that can be retained in the study for the entire 21 years, the better the data and study conclusions. Dr.

Rosanne Harrigan\*\* and Dr. Beatriz Rodriguez\*\*\* will be studying the factors that affect recruitment and retention in the local populations, focusing on the Pacific Islander and Filipino cultures. It is hoped that this research will retain the majority of the participants in the study for the entire 21 years, ensuring the results are representative of the population of Hawai'i.

Conducting a study of this magnitude and with this longitudinal study design is a challenge. In addition to concerns about dietary assessment and participant retention in Hawai'i, it will be a challenge to track the participants as they move. The significant population of military personnel will result in participants moving all around the world. However, understanding how the movement of military families and deployment of parents overseas affects child health and development is crucial to optimizing the health of these families. We are working with Dr. Parnell Mattison\*\*\*\* at Triple Army Medical Center to ensure we capture and appropriately follow our military population. The goal is to provide the best for all children, regardless of race, ethnicity, socioeconomic status, parental employment, or location of residence. It is anticipated that the people of Hawai'i will support and participate in the National Children's Study.

\* Dr. Rachel Novotny PhD. Professor of Human Nutrition Food and Animal Sciences at the University of Hawai'i at Manoa.

\*\* Dr. Rosanne Harrigan APRN, EdD. Professor in Complementary and Alternative Medicine at the John A. Burns School of Medicine.

\*\*\* Dr. Beatriz Rodriguez MD. Professor in Geriatric Medicine at the John A. Burns School of Medicine.

\*\*\*\* Dr. Parnell Mattison DO, Chief Pediatrics Nephrology, Tripler Army Medical Center.

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# Instructions to Authors

## Manuscripts

Submit manuscripts to *Hawai'i Medical Journal*, c/o Drake Chinen, 95-1027 Ainamakua Dr. #114, Mililani, Hawai'i 96789. Contact: drakechinen@gmail.com.

Manuscripts are reviewed by the editor, the peer review panel, and other experts in the particular specialties. Please be aware that your article will be edited to comply with the AMA style, corrected for grammar, and recommendations could be made by the peer reviewers. Submit only articles that have not been submitted elsewhere.

- Please submit one copy on 8-1/2" x 11" paper, and submit digital Word doc to drakechinen@gmail.com
- Use Microsoft Word.
- Use Times font in 10 point size.
- Do not underline and do not use full caps.
- Use double spaces between lines. Do not use 1-1/2 spacing.
- Use a single space between sentences. Do not use two spaces.
- Number pages consecutively beginning with the title page.
- Tables, figures, graphs, and illustrations can be up to 7-1/2 inches in width. They must be black and white (grayscale). They cannot be in color. They must be prepared in Microsoft Word or Excel. Numerical data should accompany graphs. Do not embed tables, figures, and graphs within the text, their placement must be at the end of the manuscript.
- Photos must be black and white (grayscale). Photos must be submitted as JPEG.

**Note: Keep manuscript to 3,000 words maximum.**

## Cover

A cover should contain the name of the author with whom HMJ will correspond, include an address, phone number, fax number and email address. Also, list authors' names: first name, middle initial and last name of each author with highest academic degrees; name of department and institution to which the work should be attributed. Title: Keep the title short, specific, and catchy if possible.

## Abstract

The second page of the manuscript should include an abstract that highlights for the reader the essence of the authors' work. It should focus on facts rather than descriptions and should emphasize the importance of the findings and briefly list the approach used for gathering data and the conclusions drawn.

The abstract summarizes the main points of an article: (1) the purpose of the study, (2) the basic procedures followed, (3) the main findings, and (4) the *principal* conclusions. Expressions such as "X is described," "Y is discussed," "Z is also reviewed" should be avoided in favor of a *concise* statement. A few specific guidelines to consider in preparing a synopsis-abstract follow:

- Do not begin the abstract with repetition of the title.
- Cite no references.
- Avoid abbreviations.
- Use the salt or ester of a drug at first mention.
- If an isotope is mentioned, when first used spell out the name of the element and then, on line, give the isotope number.
- Avoid the use of trademarks or manufacturers' names unless they are essential to the study.
- Include major terms in the abstract, since the abstract can be text searched in many data retrieval systems.

## Style

Use JAMA style or consult the AMA Manual of Style

- Use the objective case, such as "the team determined" or "the study involved," not I or we, and avoid medical jargon.
- Use generic drug names unless citing a brand name relevant to your findings. Do not use abbreviations in the title and limit their use in the text.
- Use human terms, i.e. "men" and "women" instead of "males" and "females."
- Also place a comma before "and" in a series.

## Text

We recommend that articles be divided into sections with headings:

**Introduction.**—The purpose of the article and rationale for the study. Do not review the subject extensively.

**Methods.**—Describe the patients or experimental animals clearly. Identify the methods, apparatus, and procedures in sufficient detail to allow other physicians to reproduce the results.

*Ethical Approval of Studies and Informed Consent.* For human or animal experimental investigations, formal review and approval, or review and waiver, by an appropriate institutional review board or ethics committee is required and should be described in the Methods section. For those investigators who do not have formal ethics review committees, the principles outlined in the Declaration of Helsinki should be followed (<http://www.wma.net/e/policy/pdf/17c.pdf>). For investigations of human subjects, state in the Methods section the manner in which informed consent was obtained from the study participants (ie, oral or written).

**Results.**—Present the results in logical sequence in the tables, illustrations, and tables. Do not repeat all of the data in the text, summarize important observations.

**Discussion.**—Emphasize the new and important aspects of the study and conclusions taken from them. Do not repeat data in Results

section. State new hypotheses when warranted, but clearly label them as such. Recommendations may be included.

## References

All references must be cited in the text and should be arranged in the order in which they are cited—not alphabetically. Please use the JAMA style for the references:

1. Jones J. Necrotizing Candida esophagitis. *JAMA*. 1982;244:2190-2191.
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## Footnotes

Place footnotes outside of punctuation marks. (e.g., These include diabetes,<sup>5</sup> hypertension, orthopedic complications,<sup>6</sup> asthma, sleep apnea,<sup>7</sup> eating disorders,<sup>8</sup> and psychosocial problems.<sup>9</sup>)

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a potential conflict of interest would be sufficient. This includes a financial disclosure statement pertaining to: grants, honoraria, royalties, payments for manuscript preparation or other activities, patents, stock options, travel expenses, gifts, and so on.

A disclosure can be a team statement such as: “None of the authors identify any conflict of interest.” Or “Dr. XXX reports serving on the scientific advisory boards of XYZ Company. Dr. YYY reports serving on...Associated honoraria for Drs XXX and YYY are paid to...No other authors reported any financial disclosures.” Or “This work was supported by grant ABC from ...Treatment and placebo capsules were donated by XYZ Company...” Please refer to JAMA or NEJM for model statements.

## Conflicts of Interest

Authors must disclose all relationships that could be viewed as presenting a potential conflict of interest.

## Institutional Review Board (IRB) Approval

Please see “Methods” section of the instructions to authors.

## Acknowledgments

Acknowledge only persons who have made substantial contributions to the study. Authors are responsible for obtaining written permission from everyone acknowledged by name; readers might believe those acknowledged are endorsing the study and conclusions.

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# UPCOMING CME EVENT

Date	Specialty	Sponsor	Location	Meeting Topic	Contact
<b>October 2011</b>					
10/7-10/8	Multi	Department of Surgery, University of Hawai'i (Jointly Sponsored with the Hawai'i Consortium for Continuing Medical Education)	Hyatt Regency Waikiki	2nd Cross-Cultural Health Care Conference: Collaborative and Multidisciplinary Interventions	Web: <a href="http://www.cchc-conference.com">www.cchc-conference.com</a>



# THE WEATHERVANE

RUSSELL T. STODD MD, CONTRIBUTING EDITOR

## ❖ TONY MANOUKIAN MD WAS A ONE IN A MILLION GUY!

Anthony Manoukian, MD came to Maui in the early 1990s as the county medical examiner with a strong background in forensic pathology. His kind, intelligent, humble, warm and thoughtful personality made him a strong and very well-liked member of the Hawai'i medical community. He performed about 200 post mortem exams each year on Maui and other islands, often to assist police investigations. When necessary he provided valuable testimony at trials and hearings to explain cause and/or mechanism of a questionable death. His skill as a medical expert was recognized by all and his lucid presentations at trial left little room for challenge. Jury members often remarked about his skill in simple direct testimony which made things clearer and easier to understand. Tony was admired and respected by all who knew him. When he became fatally ill about four months ago, diagnostic studies revealed spongiform encephalopathy, the hallmark of Jacob Creutzfeldt disease (CJD), an incurable and rapidly fatal illness. The frequency of CJD is one in one million. His departure is a great loss to our medical family, as well as the entire island ohana.

## ❖ IT IS A SIN TO BELIEVE EVIL OF OTHERS, BUT IT IS SELDOM A MISTAKE.

Forty-two Republicans have signed a request for the White House to withdraw the appointment of Donald Berwick as head of Centers for Medicare and Medicaid Services (CMS). President Obama delivered the job to Dr. Berwick during a Congressional recess when there was no opportunity for committee questions. Democratic chairman Max Baucus complained at the time because CMS commands massive power over medical care and government spending, and Senate evaluation is important. The 42 GOP senators object to the appointment claiming that Dr. Berwick is a Harvard trained think-tank wonk without broad experience and moreover he has authored radical proposals about medical care. Others have pointed out that his past record in quality assurance in hospitals and clinics has resulted in reduced accidents and malpractice claims. He is an advocate of the National Health Service in Great Britain. While it is true that the GOP can block the confirmation if they maintain unity, the White House is not giving in at this time.

## ❖ ADAM ASKED HIMSELF, "SHOULD I TEACH HER TO TALK?"

No matter how you dice it, slice it or perfume it, the income gap between male and female doctors just isn't fair. Although women now make up nearly half of all medical school graduates, they are paid measurably lower salaries than their male counterparts. The data measured and reported in Health Affairs found that males are annually paid \$17,000 more. The difference was 12.5% in 1999, but has increased to 17% in 2008. Lead researcher Professor Anthony Lo Sasso at the University of Illinois School of Public Health in Chicago postulated that the pay differential may be because women doctors are planning greater flexibility like family benefits and avoiding being on call. Still, it certainly looks like gender bias.

## ❖ PLEASE REMOVE YOUR CLOTHES AND PLUG THIS IN.

At Northwestern University, tenured psychology Professor John Michael Bailey invited his class of 567 students to stay for an extracurricular demonstration of a sexual act involving a woman, a man and an electric-powered device. 100 students remained for the event and the campus newspaper published an article about the class. Defending his action, Professor Bailey issued a lengthy statement including, "thoughtful discussion of controversial topics is a cornerstone of learning." Initially, Northwestern University supported the professor, but an outcry from alumni and other university people caused Northwestern to change their stance. Northwestern President Morton Schapiro said, "Many members of the Northwestern community are disturbed by what took place on our campus, and so am I." He launched an investigation of this shocking episode.

## ❖ THE DEVIL MADE ME DO IT.

Toyota has recalled nearly eight million automobiles, paid a record \$48.8 million in fines, defended hundreds of lawsuits and endured humiliating grilling before Congress. After ten months of studying complaints, the National Highway Traffic Safety Administration (NHTSA) investigation aided by NASA reached the conclusion that the problem was driver error. Like unexplainable aircraft crashes, the National Transportation Safety Administration likes to state simply "pilot error." Department of Transportation Secretary Roy LaHood didn't want to use that language so the DOT

came up with "pedal misapplications." This Orwellian bit of newspeak is an apparent attempt to avoid saying the driver was too stupid to tell the difference between brake pedal and accelerator.

## ❖ PUFF ENOUGH POT TO BECOME SCHIZOPHRENIC AND GET A DOUBLE PORTION.

Although the relationship of cannabis use and psychosis is well established, the question has remained whether the cannabis triggered the psychosis or if people were taking pot for their symptoms. Researchers led by Professor Jim van Os of Maastricht University in Netherlands studied 1900 users, ages between 14 to 24, over a ten year period with evaluation at three, seven and ten years. Previous users of cannabis or those with a history of psychotic symptoms were excluded. Other research team members were from Germany, Switzerland and the U.K., with findings reported in the British Medical Journal (BMJ). The study found that cannabis "significantly" increased the risk of psychotic symptoms, such as schizophrenia, even when other factors such as socio-economic status, use of other drugs and history of other psychiatric symptoms were considered. Sir Robin Murray, Professor of Psychiatry at King's College, London, said the study added "a further brick in the wall of evidence that regular use of cannabis is a contributory cause of psychoses."

## ❖ SEND A VOLLEY CHEER ON HIGH. SHAKE DOWN THE THUNDER FROM THE SKIES.

Everyone knew the wind was blowing hard and gusts were reaching 60 mph. For some presumed to be very important reason, an unnamed athletic department supervisor directed a 20 year-old Notre Dame student to film football practice from on high. He went up in a scissor lift to 35 feet in howling winds, and sent Tweets to his friends expressing fear for his life. The lift blew over, and the student fell to his death. The Indiana Department of Labor spent four months investigating the incident, charged Notre Dame with six safety violations and levied fines up to \$77,500. President John Jenkins issued a statement, "We failed to keep the student safe and for that we remain profoundly sorry." He promised a thorough Notre Dame investigation and will issue a complete public report.

## ❖ EVERYONE SEEMS NORMAL UNTIL YOU GET TO KNOW THEM.

It may have seemed like a good idea at the time, but now many people want their tattoo gone. An article published in the Archives of Dermatology found that the main reasons are embarrassment, new job or career, and body-image issues. Others stated they were just tired of it and said they had grown up since getting labeled. Laser removal works but often takes from three to ten treatments and can run into thousands of dollars. At home removal using chemical skin-peeling kits, such as trichloroacetic acid and other exfoliation products, will slough off the layer of skin covering the tattoo but not remove it. Repeated use may cause the tattoo to fade. Dermatologists are skeptical of the home use products stating that they are less effective, may be risky and have caused serious skin injury, as in at least one known case which required a skin graft. Moreover, as skin ages with wrinkling and sagging, so does the tattoo. The black panther on my friend's shoulder gradually morphed into a gecko. The moral is: think before you ink, especially with peer pressure and after three shots of tequila.

## ❖ BE CAREFUL WHEN PLAYING WITH BEACH BALLS.

Reuters reported that a man had been swimming in the nude at Valalta Beach in Croatia. When he got out of the water and sat in a beach chair his chilled testicles slipped through slats in the chair. Upon attempting to rise later, his now body-temperature testicles were snared between the slats. Ultimately, a saw was required to free the man.

## ❖ GREAT BALLS OF FIRE!

In Denmark, a man was in the operating room to have a pigmented lesion removed from one of his butt cheeks. When his surgeon used an electrocautery to stop a bleeder, the patient passed intestinal gas. The spark ignited the expelled methane gas which caused the spirit-soaked operative field to burst into flame. The patient suffered first and second degree burns of his genitals and surrounding skin. Talk about a hot piece of ...!

## ADDENDA

❖ Weight an evangelist carries with God equals one Billigram.

❖ If you are ill and can't afford a doctor, go to the airport. You will get a free x-ray and breast exam, and if you mention al Qaeda, you will get a colonoscopy.

## ALOHA AND KEEP THE FAITH — rts■

*(Editorial comment is strictly that of the writer.)*

# Hawaii's Physicians **CHOOSE HAPI** as their Medical Malpractice Carrier

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<b>Pediatrics</b>	<b>\$1,662</b>

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**Leland Dao, D.O., Family Practitioner**