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Changes in Work Habits of Lifeguards in Relation to Florida Red Tide

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Abstract

The marine dinoflagellate, Karenia brevis, is responsible for Florida red tides. Brevetoxins, the neurotoxins produced by K. brevis blooms, can cause fish kills, contaminate shellfish, and lead to respiratory illness in humans. Although several studies have assessed different economic impacts from Florida red tide blooms, no studies to date have considered the impact on beach lifeguard work performance. Sarasota County experiences frequent Florida red tides and staffs lifeguards at its beaches 365 days a year. This study examined lifeguard attendance records during the time periods of March 1 to September 30 in 2004 (no bloom) and March 1 to September 30 in 2005 (bloom). The lifeguard attendance data demonstrated statistically significant absenteeism during a Florida red tide bloom. The potential economic costs resulting from red tide blooms were comprised of both lifeguard absenteeism and presenteeism. Our estimate of the costs of absenteeism due to the 2005 red tide in Sarasota County is about $3,000. On average, the capitalized costs of lifeguard absenteeism in Sarasota County may be on the order of $100,000 at Sarasota County beaches alone. When surveyed, lifeguards reported not only that they experienced adverse health effects of exposure to Florida red tide but also that their attentiveness and abilities to take preventative actions decrease when they worked during a bloom, implying presenteeism effects. The costs of presenteeism, which imply increased risks to beachgoers, arguably could exceed those of absenteeism by an order of magnitude. Due to the lack of data, however, we are unable to provide credible estimates of the costs of presenteeism or the potential increased risks to bathers.

Keywords

Florida Red Tide; K. brevis; Presenteeism; Absenteeism; Lifeguard work habits

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1. Introduction

The marine dinoflagellate, Karenia brevis, is responsible for Florida red tides that form in the Gulf of Mexico and come onshore on the west coast of Florida. Blooms of K. brevis produce neurotoxins, called brevetoxins, that cause fish kills and contaminate shellfish. Offshore winds and surf can also release these toxins into the water by breaking up the cells of the algae, which create onshore toxic aerosols. Humans are then exposed to these aerosolized neurotoxins, resulting in respiratory irritation in healthy individuals, manifesting as a burning sensation of the eyes and nose, and/or a dry, choking cough (Kirkpatrick et al., 2004). Exposure in asthmatics may result in exacerbations with possible prolongation and possible subchronic effects (asthma, pneumonia, bronchitis) based on emergency room visits (Fleming et al., 2005; Fleming et al., 2007; Fleming et al., 2009; Kirkpatrick et al., 2006). For the healthy population, these symptoms are non-threatening and reportedly disappear quickly after leaving the beach (Backer et al., 2003; Backer et al., 2005). For asthmatics, symptoms may continue to occur for several days after exposure (Kirkpatrick et al., 2009).

Other studies have focused on the economic impact of harmful algal blooms (HABs), and specifically, of Florida red tide (Hoagland et al., 2009; Morgan et al., 2009). The varied ways in which HABs can adversely impact an economy include: the closure of shellfish beds to harvesting; wild and farmed fish mortalities; constrained development of investment in coastal aquaculture; lost marine recreational opportunities; costs of removal of dead fish from beaches; lost tourist expenditures; and public health effects (Anderson et al., 2000; Adams et al., 2002). Adams et al. (2000) looked at the impacts of Florida red tide on local business, but encountered several challenges. First, many businesses that were severely impacted were too small for their decreased activities to show up in the broad state tax classifications. Morgan et al. (2009), however, found a 13.7% to 15.3% reduction in daily sales for beachfront restaurants during a red tide bloom. Second, the overall impact on the region could be minimal if people simply redirected their spending; for example, during an active Florida red tide bloom, visitors or residents might have patronized a local museum instead of renting personal water craft or beach cabanas. In spite of these challenges, these authors asserted that it is important to determine the magnitude of the economic losses of Florida red tide in order to calculate the potential net benefits associated with red tide prevention, mitigation, monitoring, and clean-up strategies.

Sarasota County does not close its beaches during onshore Florida red tides, requiring lifeguards to continue their normal work activities on the beach, thereby potentially exposing them to aerosolized neurotoxins. When exposed to brevetoxins occupationally, lifeguards report significantly increased upper airway irritation, including eye irritation, nasal congestion, and cough (Backer et al., 2005). These findings do not consider whether the symptoms of this exposure affected lifeguard productivity. Local businesses believe strongly that there is a significant negative effect on worker productivity during Florida red tide; however, the extent of this effect is unknown.

Impacts on labor productivity resulting from work absences are known as absenteeism. Absenteeism represents hours missed from work attributable to an illness or a medical condition (Prasad et al., 2004). Presenteeism is defined as any reduction in labor productivity related to illness when a person comes to work sick (Prasad et al., 2004). The purpose of this study was to compare lifeguard work and beach visitor attendance to develop quantitative estimates of the possible occurrence and extent of absenteeism. Presenteeism in Sarasota County lifeguards during a period of red tide was estimated using surveys related to performance information.

2. Materials and Methods

2.1. Study population

Study participants were full-time lifeguards with Sarasota County, Florida, who worked guarding beaches during the time periods of March 1 through September 30 for both 2004 and 2005. The months were selected to maximize the length of the study period between the 2 years during which there was an active Florida red tide (i.e. 2005) as well as available lifeguard data.

2.2. Lifeguard interviews

To investigate possible presenteeism impacts, a survey with the eligible study participants about their work and attendance practices was conducted with 16 individual lifeguards. The interviews were conducted in March 2008. This study was approved by the Human Subjects Committee of the University of Miami (Miami, Florida).

2.3. Environmental conditions

The Florida Red Tide Cell Count database maintained by the Phytoplankton Ecology Program at Mote Marine Laboratory was used to determine bloom and non-bloom periods. This program has numerous research cruises, transects, and experiments requiring cell enumeration and identification by microscopy. For this study, only Karenia brevis cell counts from the New Pass and the Mote Marine Laboratory Bay Dock location were used. These sites were sampled daily during onshore blooms, and every other day during non bloom time periods, and were representative of bloom conditions in Sarasota County. The longest span of months where one year clearly had an active onshore bloom (2005) and the other year did not (2004) were selected for the analysis (Figure 1). To represent sampling effort where values of ‘zero’ were obtained, a value of 120 was arbitrarily added to all cell count values. It should be noted that cell counts of less than 1,000 cells per liter a re considered background levels and not bloom levels.

2.4. Beach visitors

Every day the lifeguards estimate the number of visitors at each beach. This information is part of the county public records.

2.5. Lifeguard attendance

The records of lifeguard reported days absent were available through the county public records. The lifeguards’ identities were not available for use in the statistical comparison of attendance between years, eliminating the possibility of using a matched-sample t-test. An ANOVA was used instead of an independent samples t-test. Age, stratified into intervals of 18–21, 22–31, 32–41, 42–51, and 52–61 was used as a covariate in order to compensate for the loss of ability to match subjects between the two years. The data were statistically analyzed as described and compared to cell count data that identified the time periods of onshore K. brevis blooms.

2.6. Statistical analysis

Analysis of variance methods were used to compare lifeguard attendance data; paired t-tests were used to compare lifeguard responses to scaled survey items; and McNemar’s test was used to compare lifeguard yes/no responses. The SAS System, version 9.1.3, was used for all statistical analyses (SAS Institute Inc., Cary, NC).

2.7. Economic Impact Analysis

The economic impacts of absenteeism and presenteeism in lifeguarding can be separated broadly into two components: the costs-of-illness to individual lifeguards (and therefore, when summed, to Sarasota County) and the increased risks to beachgoers of reductions in lifeguard

effectiveness. Costs-of-illness involve the costs of any medical treatments and individual lost labor productivity (work hours) during periods of sickness and recuperation. Costs-of-illness also may involve economic damages as a consequence of personal pain and suffering. Because the latter costs are a type of non-market economic loss, they are difficult to measure and therefore only rarely estimated in most cost-of-illness studies. We focused in this study on the costs of medical treatments and lost productivity.

The costs of increased risks to beachgoers results from reductions in actual lifeguard coverage due to absenteeism or reductions in lifeguard attentiveness or reductions in the number of preventative actions taken due to presenteeism. Both types of losses are non-market in nature, and estimating the costs of increased risks would involve conducting surveys of variations in beachgoer willingness to pay (WTP) for visits to beaches that offer lifeguard services. For Sarasota County, the risks to beachgoers of absenteeism are minimized due to a policy that requires complete lifeguard coverage. Notably, the costs of risks to beachgoers may exist even in the absence of changes in patterns of beachgoer visitation, as beachgoers may continue to visit beaches even if individual WTP has been diminished due to the increased risks.

In this study, we present preliminary calculations only of the market-related costs-of-illness associated with absenteeism. We discuss a theoretical approach to the calculation of the non-market risks of changes in lifeguard effectiveness (i.e., presenteeism), but we are unable to develop credible estimates of the costs of these risks at present. Our estimates of the costs of red tide blooms to lifeguarding in Sarasota County must therefore be considered conservative.

3. Theory and Calculations

3.1 Estimating the Extent of Absenteeism and Presenteeism

The first goal of this study was to estimate the frequency of absenteeism in Sarasota County lifeguards using hypothesized relationships between beach visitation or lifeguard days-absent and the occurrence of red tide. The available data did not reveal significant changes in beach visitation. Data on lifeguard days-absent show significant increases during a red tide for both sick and vacation days, however.

In addition to the analysis of recorded data, a survey of Sarasota County lifeguards was used to estimate the extent of presenteeism. Finding statistically significant evidence of both absenteeism and presenteeism, the survey results were used to begin to develop estimates of the range of economic impacts of brevetoxin-induced respiratory illnesses in lifeguards.

3.2 Calculating the Economic Impacts of Absenteeism

The second goal of this study was to estimate the economic impacts of Florida red tide by considering lifeguard attendance practices with and without a bloom. Sarasota County requires that its beaches be staffed at all times by lifeguards, regardless of the occurrence of a red tide bloom. The County must always maintain the same ostensible level of lifeguarding inputs (hours worked) employed in guarding the beaches. These data show that lifeguards took significantly more time off from work for both sicknesses and vacations during a K. brevis bloom, however. As a result, the county must incur added costs to hire additional lifeguards to substitute for those that take time off. These added costs are our measure of the economic impacts of absenteeism.

The economics literature typically focuses on lost productivity due to illnesses but not due to vacation time. Strictly speaking, vacation time lost to illness represents a cost to the individual lifeguards, but it is not a cost to the County, because lifeguards presumably would have taken vacation anyway. In Sarasota County, 56.25% percent of lifeguards report taking vacation time to minimize exposure to brevetoxin inhalation. Moreover, the mean number of vacation days

taken increased during the red tide period, suggesting that, first, lifeguards did not utilize all vacation days in the non-bloom period (a benefit to the County) and, second, the additional vacation time was likely used because the lifeguards experienced brevetoxin-induced respiratory illnesses. Because both the proportion of lifeguards substituting sick for leisure time during their vacations is so large and the vacation time increased during the bloom period, we consider sick leave as well as a portion of vacation time as the appropriate measure of absenteeism.

Adopting estimates of the costs-of-illness or avoidance of exposure due to aerosolized brevetoxins from a recent study (Hoagland et al., 2009), we develop a range of estimates of lost labor productivity due to lifeguard absenteeism at Sarasota County beaches. We subtract the difference between years in mean (and plus or minus one standard deviation) sick days and vacation days. We assume that all of the additional sick days and 56.25% of the additional vacation days in 2005 are due to brevetoxin-induced respiratory illness.

3.3 Calculating the Economic Impacts of Presenteeism

The third goal of this study was to estimate the economic impacts of reductions in on-the-job lifeguard productivity or effectiveness due to red tide, called presenteeism. Often individuals suffer from mild illnesses that prevent them from functioning at their normal ability but which do not impair them enough to justify staying at home (Brouwer et al., 1999). Workers with high-physical-load jobs can exhibit an estimated productivity loss due to presenteeism of 13% per worker (Meerding et al., 2005). Computer users who report health complaints affecting their work have an estimated 17 hours per month (about 10%) of lost productivity (Koopmanschap et al., 2005). Backer et al. (2005) found that lifeguards who had occupational exposure to Florida red tide report a variety of symptoms including throat and eye irritation, nasal congestion, coughs, and headache. All lifeguards reported noticing some effect of red tide exposure. These symptoms were very similar to the symptoms of an upper respiratory cold, resulting in decreased productivity (Brouwer et al., 2005).

Lifeguard attentiveness during red tide is determined by a combination of two factors: (1) how attentive lifeguards feel they should be, which they gauge based on beach attendance; and (2) how attentive lifeguards can actually be, which they base on how they feel when experiencing the effects of exposure to red tide. We conclude that there is a productivity loss due to presenteeism from Florida red tide blooms in Sarasota County, but we are unable to develop credible estimates of the economic losses here because reliable data exist only on inputs (hours worked) and not on outputs (lives saved or preventative measures taken).

One option for estimating the economic impacts of presenteeism is to compile data on any standardized changes in lifeguarding outputs, such as drownings or rescues per visitor. The US Lifesaving Association (USLA) compiles annual data from Sarasota County lifeguards on the numbers of drowning deaths and rescues (USLA 2009). There is no apparent change in the number of drowning deaths during 1991 through 2007, as the number of deaths is very close to or equal to zero in every year. In other words, there is no observable change in lifeguarding outputs that could be attributable to presenteeism. A task for future research is to examine the possible correlation between red tide and some other non-zero standardized measure of output, such as the number of rescues per beach visitor, at much finer time scales.

Another method for estimating the economic impacts of presenteeism is to analyze a possible relationship between the non-market value (beachgoer willingness-to-pay or WTP) for beach visits and lifeguard presenteeism. Unfortunately, the literature is ambiguous with respect to the imputed value of lifeguards. For example, Yeh et al. (2006) find a negative WTP for lifeguard hours per week in a model of multiple-day beach visits at beaches along the Lake

Erie shoreline. In contrast, Lew and Larson (2005) find a positive WTP for on-beach lifeguards at beaches in Southern California.

Blackwell and Tunny (2000) present WTP estimates for an additional lifeguard at beaches in Florida, Hawaii, and Australia. Assuming that the effects of presenteeism are such that each beach loses one lifeguard during each week of a significant red tide bloom during 2005, then the lost value of lifeguarding due to HAB-induced presenteeism is roughly $82,000, which is an order of magnitude larger than the costs-of-illness due to absenteeism.[1] Note that this estimate is based on a survey of beachgoer WTP; we have not established that there is any loss in actual labor productivity (i.e., increased drownings or reduced preventative actions) associated with presenteeism.

4. Results and Discussion

4.1. Attendance data

The number of lifeguards employed in 2004 was 37 and in 2005 was 39. Table 1 shows the demographic breakdowns across the two years of interest. Lifeguards took significantly more time off for vacation (an average of 39.6 days) in 2005 (period of red tide) compared to 16.8 days in 2004 (period of no red tide). Similarly, they took an average of 22.2 days of sick leave in 2005 (period of red tide) and only 8.0 days in 2004 (period without red tide). Both mean sick days and vacation days of absence were significantly greater in 2005 compared to 2004 (Table 2).

We anticipated fewer beach visitors during a red tide bloom, but our data, admittedly incomplete, did not reveal a statistically significant drop in visitation during a bloom. Table 3 shows the mean number of beach visitors in 2004 and 2005 across the publicly lifeguarded beaches in Sarasota County for the months March through September. There was no significant difference in the number of beach visitors between 2004 and 2005 at any beach, nor overall. Note that county records were unavailable for any beach in May 2004 and unavailable for Nokomis Beach in July 2004, suggesting that somewhat higher levels of beach visitation may have occurred in 2004. Further, the number of visitors in these two years is consistent with records for beach attendance since 1999. Even major catastrophic events, such as hurricanes, do not appear to affect beach visitation significantly. For example, Sarasota County was impacted by three hurricanes in 2004 (Charley, Frances, Jeanne) and one hurricane in 2005 (Dennis); however, the occurrence of hurricanes did not alter the number of beach visitors based on lifeguard beach attendance estimates.

Both the geographic area of the beach and beach attendance were used to determine the number of lifeguards necessary to protect a beach safely. If the number of beach visitors remained constant, for consistent beach safety it is important that the number of lifeguards also remained constant on the beach. Our data demonstrated that lifeguards took significantly more time off from work during a K. brevis bloom. This implied that some lifeguards must have worked more hours to fill the place of the absent lifeguards.

4.2. Lifeguard interviews

Only one lifeguard (6.25%) of the 16 lifeguards responded that the presence of red tide did not have any affect on his work as a lifeguard. All 16 respondents (100%) stated that they noticed the health effects of exposure to red tide when working during a bloom. Additionally, 12 individuals (75%) reported that they had taken time off due to red tide, and those same

[1]This lost value ($82,772) is calculated as the total beach visits in Sarasota County in 2005 (65,891 visits) times the proportion of weeks when red tide blooms occurred in 2005 (observations of cells/liter ≥ 1,000 in Figure 1 or 100%) times the estimated WTP for an additional lifeguard ($1.25 in 2009 dollars) from the Blackwell and Tunny (2000) study.

individuals stated that they had taken time off in order to reduce their exposure to red tide. For nine individuals (56.25%), a red tide influenced their decision of when to take their vacation time.

Measuring the productivity of lifeguards is difficult because they provide a service that is difficult to quantify. Lifesaving, which is a natural measure of output from lifeguarding, occurs only infrequently. It is far easier to measure an input, such as the number of hours worked, but it is unknown how hours worked correlates with lives saved or other lifeguard services, except in an absolute sense (i.e., lives almost certainly would be lost without any lifeguarding at all). Another output is the taking of preventative actions. Sarasota County lifeguards spend a large amount of their time performing preventative actions, such as asking parents to pay closer attention to their children or warning about rip tides, so that they have to make fewer actual lifesaving attempts.

Presenteeism of lifeguards working during Florida red tides may be important in that it could adversely affect both lifesaving and preventative action. To investigate how possible presenteeism could affect their productivity, we asked lifeguards about their attentiveness under varying conditions. Rating attentiveness on a scale of 1 to 10, where 1 was “not attentive” and 10 was “very attentive,” 12 lifeguards (75%) reported a decrease in attentiveness during a red tide. We also asked lifeguards to indicate changes in work practice under varying conditions. Work practices were measured on a scale of 1 to 10, which included an explicit midpoint value of 5.5, where 1 was “not productive/no change,” 5.5 was “same,” and 10 was “more productive/significantly changed.” Thirteen lifeguards (81.3%) reported that they were less productive during a red tide.

Table 4 compares the attentiveness of lifeguards during varying beach conditions and when there was average beach attendance. Table 4 also compares work practices during illness in the presence of red tide with work practices when the weather was inclement. There were statistically significant decreases in attentiveness when beach attendance was down, when lifeguards were sick with a headache or upper respiratory cold, and in the presence of red tide. Likewise, there were statistically significant decreases in work practices both when lifeguards were ill and in the presence of red tide. Additionally, when comparing lifeguard decision-making regarding time off, using rain as the standard (no lifeguards reported taking time off due to rain), there was no statistical difference for storms or hurricanes, but there was a statistical difference due to the presence of Florida red tide (Table 5). Further, there was a statistical difference when comparing taking time off to decrease exposure to red tide to taking time off to decrease sun exposure, as seen in Table 5.

4.3 Economic Impacts of Absenteeism

Table 6 presents the range of absenteeism costs due to the 2005 red tide, which range from zero to $6,000 and average $3,000 for the 2005 red tide at Sarasota County beaches. Using a discount rate of three percent and assuming 2005 bloom levels continue into the future, we find that the mean capitalized costs of lifeguard absenteeism in Sarasota County could be on the order of $100,000. (Three percent is the interest rate on low risk asset, such as a long-term government bond.) As noted above, data are lacking to allow an estimate of the potential productivity losses associated with the occurrence of presenteeism in lifeguards due to red tide. The development of estimates of the economic impacts of presenteeism is a task for future research.

4.4. Limitations

The limitations of this study relate primarily to the quality of data drawn from the county public record system. Lifeguards approximate the number of beach visitors after visually scanning

the beach throughout the day. In 2004 and 2005, this figure was hand-written in a ledger and later transferred to electronic form. One cannot be assured of the accuracy of these figures either in the collection of the data or in their transcription.

The estimates of the economic costs of Florida red tide blooms on lifeguarding are likely to be conservative, except where we have added the private costs of lost vacation time due to respiratory illness. Our study has focused only on the beaches of Sarasota County, and we expect that these kinds of costs are incurred wherever K. brevis blooms occur along the Florida Gulf coast. We were unable to estimate the costs of presenteeism, although we concluded that such costs could be an order of magnitude larger than absenteeism costs. Future research efforts are needed to characterize potential changes in beach visitation associated with red tide blooms. In addition, work might usefully be directed at understanding the nature and strength of a production function for lifeguarding that relates labor inputs to lifesaving and preventative action outputs. Finally, economic research is needed to model not just the value of the presence of lifeguards on beaches but the relevant services of lifeguards.

5. Conclusions

We have documented behavioral changes in lifeguard absenteeism when there is an onshore K. brevis bloom. These changes resulted in economic losses for Sarasota County. An additional economic loss is also likely occurred due to lifeguard presenteeism. Further study is needed to quantitatively measure the economic effects of lifeguard presenteeism during a Florida red tide and to fully understand the costs of lifeguard absenteeism. In addition to potential adverse effects on the health and well-being of lifeguards, absenteeism and presenteeism could imply reductions in safety for beach visitors.

Importantly, Sarasota County lifeguard policies may work to ameliorate both absenteeism and presenteeism by requiring beaches to be fully staffed by multiple lifeguards. Such a policy may have been implemented mainly to enhance beach safety, but it likely reduces the economic impacts of the adverse effects of aerosolized brevetoxins on lifeguards.

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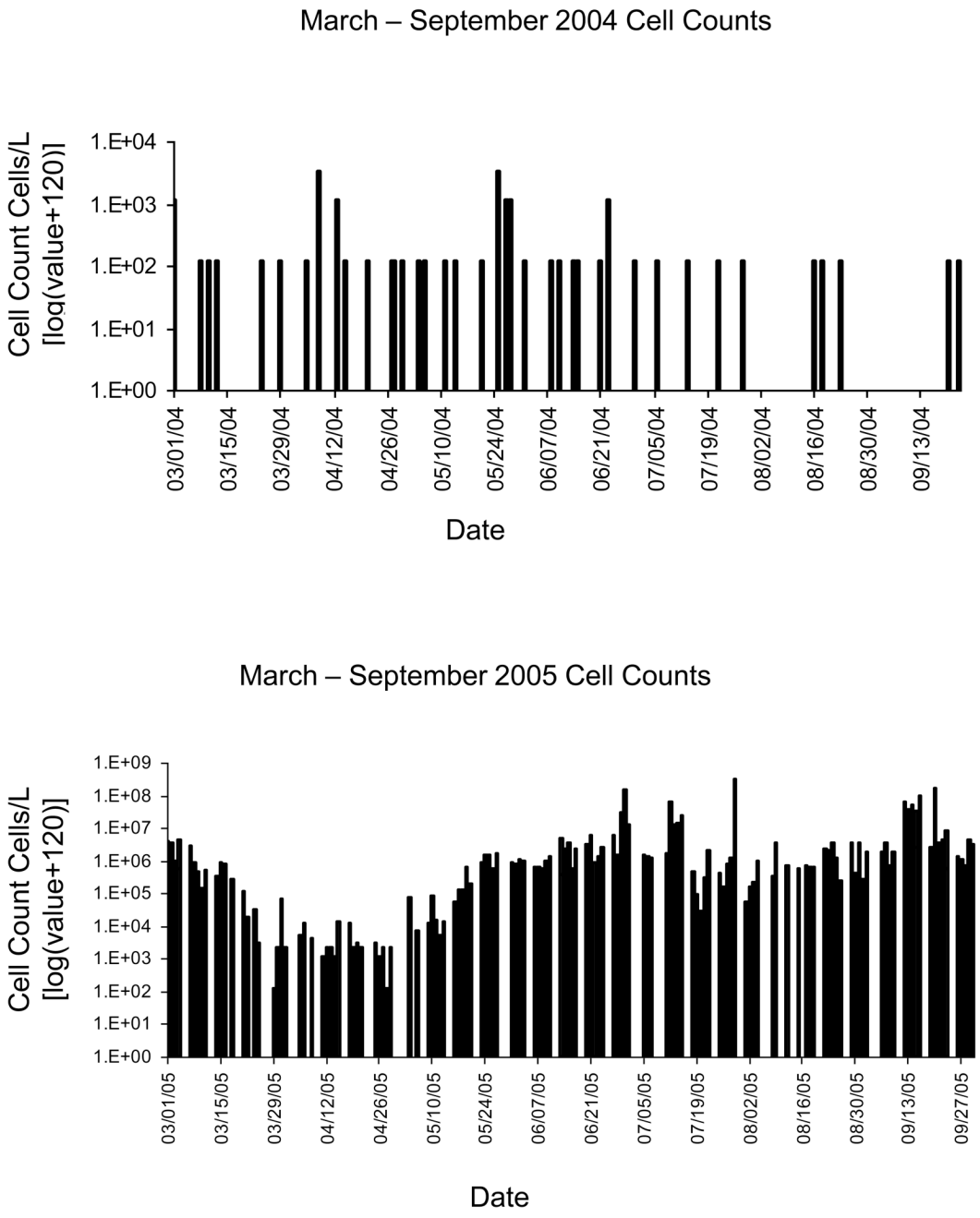

Figure 1.
Karenia brevis Cell Counts

Table 1

Lifeguard Demographics

Year	Gender	N	Mean Age ± SD	Minimum Age	Maximum Age
2004	Male	32	34.9 ± 12.0	18	57
	Female	5	24.2 ± 7.6	18	37
2005	Male	36	33.8 ± 12.4	19	58
	Female	3	26.3 ± 10.1	20	38

Table 2

Comparison of Lifeguard Sick and Vacation Days between 2004 and 2005

Year	Sick Days					Vacation Days				
	Mean	SD	Range	F	p	Mean	SD	Range	F	p
2004	8.0	10.0	0–45			16.8	21.0	0–75		
2005	22.2	30.2	0–136	9.54	<0.01	39.6	34.6	0–104	16.4	<0.01

*ANOVA

Table 3

Average Number of Beach Visitors in Sarasota County, March-September*

Beach	2004	2005
Lido	55,246	53,492
Siesta	194,749	203,114
Nokomis**	30,237	28,044
North Jetty	29,102	24,046
Venice	38,973	54,233
Manasota	37,271	32,414
All Beaches	67,980	65,891

* No data for May 2004 for all beaches

** No data for July 2004

Table 4

Lifeguard Survey: Attentiveness and Productivity

Attentiveness- (Scale 1–10) (Paired t-test)	**Mean**	**SE**	**Range**	**t**	**p**
When attendance is average	8.56	0.26	7–10	--	--
When attendance is up*	9.63	0.18	8–10	4.3	0.001
When attendance is down*	6.81	0.52	3–10	−4.2	0.001
When lifeguard has headache or upper respiratory cold*	6.93	0.46	4–10	−4.6	0.001
When there is inclement weather*	7.57	0.70	2–10	−1.5	0.150
When there is red tide*	5.79	0.45	2–8	−5.1	0.000
Productivity (Scale 1–10) (Paired t-test)	**Mean**	**SE**	**Range**	**t**	**p**
When there is inclement weather	5.77	0.24	4–8	--	--
When lifeguard has headache or upper respiratory cold**	3.70	0.34	1–5.5	−4.4	0.001
When there is red tide**	3.81	0.36	1–5.5	−3.6	0.003

* compared to attentiveness when beach attendance is average

** compared to productivity when weather is inclement

Table 5

Lifeguard Survey: Decision Making

Decision -making – (Yes/No) (McNemar's)	**S**	**p**
Taken time off due to rain	--	--
Taken time off due to a storm*	3.000	0.080
Taken time off due to a hurricane*	0.000	1.000
Taken time off due to red tide*	5.440	0.020
Taken time off to decrease sun exposure	--	--
Taken time off to decrease red tide exposure**	9.000	0.003

* compared to time off due to rain

** compared to time off to limit sun exposure

Table 6

Estimates of the Economic Impacts of Brevetoxin-Related Illness to Lifeguarding in Sarasota County, Florida in 2005

		Lost Lifesaving Days		
Costs-of-Illness		**Low**	**Mean**	**High**
Percentile	Daily Costs	0	27.03	54.88
25th	$170.00	$0	$4,594	$9,329
50th	$328.00	$0	$8,864	$17,999
75th	$352.00	$0	$9,513	$19,316