



History and Medical Recommendations for Former Residents of Naval Air Facility, Atsugi, Japan

CDR David McMillan

Occupational and Environmental Medicine

Navy Bureau of Medicine and Surgery

June 2009



Overview

- **Background**
- **Environmental Assessments**
- **Health Risk Assessment Findings**
- **Risk Communication Efforts**
- **Additional Health Studies**
- **Recent studies and recommendations**
- **DoD/VA further collaborations**



Background

- **Health concerns began in 1985 when the adjacent, off-base Shinkampo Incineration Complex (SIC) was licensed to burn industrial wastes.**
- **Navy repeatedly engaged the local Kanagawa Prefectural Government about concerns over SIC emissions.**
- **President Clinton, U.S. Ambassador Foley, SECDEF Cohen raised the issue repeatedly with the Japanese Prime Minister.**
- **Both the US and Japan agreed to joint monitoring of SIC's emissions.**
- **Navy formed a Shinkampo Action Team to help USDOJ.**
- **USDOJ files lawsuit in March 2000 vs. SIC.**
- **In April 2001 the SIC ceased operations.**



Environmental Assessments

- In 1995 and 1998 Navy conducted screening Health Risk Assessments (HRA) using environmental compliance data (air pathway only).
- Screening HRAs indicated a risk for potential excess cancer and non-cancer health effects and supported the need for a more comprehensive HRA.
- In 1998 a comprehensive HRA initiated.



Risk Assessment in Perspective

Does . . .

- Estimate cancer and non-cancer risks
- Identify contaminants that need to be addressed
- Identify the populations we are concerned about and how they are exposed.

Does not . . .

- Determine if health effects occurred in the past or will occur in the future.
- Determine if an observed condition in an individual or population is the result of exposure to the site's contaminants.

Uses many health protective assumptions ...
Used to set cleanup levels



HRA Findings

- **Cancer**

Cancer risk for children under the age of 6, living on base for 3 years is 1.1×10^{-4} .

Cancer risk for adults living on base for 3 years is 7.4×10^{-5}

- EPA's de minimus risk is equal or less than 1 in 1 million or 1×10^{-6} .

- A risk between 1×10^{-6} and 1×10^{-4} is a risk management range.

Decisions are based on a number of factors in addition to the HRA findings. Some of these factors are current and future exposures and land use.

- **Non-cancer**

Adverse health effects such as irritation of the eyes & upper respiratory system, headaches, and skin rash were short lived and could be directly related to exposure.

Repeated long-term exposure to chemicals potentially increased the risk for irreversible non-cancer effects.



Risk Communication and Health Consultation Plan

BUMED prepared a risk communication and health consultation plan in April 1998.
– Most comprehensive DoD plan ever at that time.

Phase One: Jun-Aug 98

Provided risk communication to all adults on base.

Provided one-on-one health consultations for:

- adults living more than six years on station.
- children under six years of age.
- those with chronic respiratory conditions.
- pregnant and nursing women.
- others upon request.

Phase Two: Aug 98 forward

Integrates risk communication into Orientation Week for new arrivals

Offers one-on-one health consultation for:

- others upon request
- those who did not receive at time of overseas screen



Additional Health Studies

Children's Respiratory Health Study, 2000

- No differences in the respiratory health of children living on or off base at NAF Atsugi versus those at Yokosuka.
- Most of the children in the study group had lung function better than that of the general population in the United States.

Pregnancy Loss in Women at NAF Atsugi Japan, 2000

- Risk of miscarriage at NAF Atsugi comparable to Yokosuka, Japan and were at the lower expected risk range described for the population of the United States.



ATSDR Review

- **Requested ATSDR conduct a review of the earlier Navy assessments to include the pregnancy outcome study.**
- **Agreed with Navy Medicine's methods and conclusions.**



Current Communication Efforts

- **Navy and Marine Corps Public Health Center website.**
 - Frequently Asked Questions.
 - Physician help line for providers with questions.
 - Documents, reports and studies.



Battelle Technical Report

- **Battelle Memorial Institute contracted Oct 2007:**
 - Review all health risk assessment data.
 - Provide additional medical screening recommendations for this population due to exposures.
- **Report in June 2008:**
 - No additional population-based screening.
 - Provided proposals for additional research.



Comment in Battelle Report

- “It is important to note that during the years 1985-2001, numerous studies were conducted and an outreach program was initiated to keep the affected residents informed. The evaluations conducted at NAF Atsugi far exceeded those which would normally have been conducted in the civilian sector. Furthermore, one cannot dismiss the very sensitive political and diplomatic challenges related to a situation in which U.S. military personnel were attempting to close a privately owned civilian facility in a host country over which they had no control.”



NMCPHC Epi Study

- **Navy and Marine Corps Public Health Center's Epidemiology Data Center performed analysis.**
- **Compared selected health outcomes between former residents at NAF Atsugi and NS Yokosuka.**
- **Included over 5600 active duty and over 11,000 family members in NAF Atsugi former-resident cohort.**
- **Current medical information available for 24% of active duty and 28% of dependents compared to 19% and 25% for comparison population.**
- **Outcomes studied for 11 cancer types and ocular, dermal and respiratory disorders.**



Findings

- **No difference in cancer rates.**
- **Increased number of visits for dermatological disorders among former NAF Atsugi residents.**
- **No ocular or respiratory differences.**



Next Steps

- **Further analyze the dermatological data to determine what, if any, clinical guidance is needed.**
- **Continue to answer questions and concerns as they arise.**
- **Population size makes it unlikely that the potential excess numbers of cancers can be identified in future studies.**



DoD and VA

- **Brief provided to DoD/VA Working Group, June 2009.**
- **Current cohorts identified for former active duty residents of NAF Atsugi and NS Yokosuka made available to VA.**
- **Coordination and communication between Navy's Epi Data Center and VA.**



Questions