



**Nail Technicians and Social Determinants of Health**  
**A case study of Portland Vietnamese Nail Technicians**

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## **Background**

**~50% of the Nail Technicians in the Portland metropolitan area are Vietnamese.**

Though concerns associated with high chemical exposures in nail salons have been recognized across the country\*, we have very limited information about chemical exposures in the workplace and the health needs of this community in the Portland metropolitan area.

Oregon Collaborative for Healthy Nail Salons (OCHNS) formed in August 2007. Current members – Multnomah County Health Department- Environmental Health, Oregon Department of Environmental Quality, Oregon Health Licensing Agency (OHLA), Oregon Health & Science University- CROET and the School of Nursing, Oregon OSHA, and the Zero Waste Alliance (ZWA).

**\*A Preliminary Survey of Vietnamese Nail Salon Workers in Alameda County, California, J Community Health (2008) 33:336–343; Results from a Community-based Occupational Health Survey of Vietnamese-American Nail Salon Workers, J Immigrant Minority Health (2008) 10:353–361.**



## **Background (contd.)**

*(from the April 2010 OCHNS Strategic Planning Retreat)*

**Vision Statement: OCHNS is a partner/resource with the nail salon community/organizations and empowers the community to take leadership.**

**Community based leadership requires... community driven agendas.**

Involvement from nail salon community (i.e., Nail Techs, their children and families, cosmetology schools and students, and salon owners) is critical.

2010: ZWA proposal to survey Vietnamese Nail Techs

❖ **Identify health concerns at home and at work**

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## **About Social Determinants of Health**

### **What are Social Determinants of Health (SDH)?**

SDH are societal factors that can affect health. Factors like low education level, poverty, smoking, stress at home and work, lack of access to healthy food, lack of access to clean and safe environments.

Societal factors are recognized as a cause for increased mortality and healthcare costs. They can affect families and lead to poor health especially as we get older or if we have children.

### **Relevance of SDH in managing public health**

- Focus is on prevention of health impacts
- Controls healthcare costs by reducing downstream impacts
- Increases community awareness and participation in programs
- Unifies government/regulatory agencies and stakeholders, increases goodwill



## **Project Objectives**

Reach out to Nail Technicians (Nail Techs) in Portland area to learn about health concerns at work and at home.

Partner with a community organization to provide outreach to Portland area Vietnamese community. i.e., Nail Techs, salon owners.

Develop a survey and informed consent form for use by Vietnamese speakers in or survey population. Questions covered 3 areas- about the participant, home/neighborhood , work. A few about follow-up/meetings.

Survey ~70 Nail Techs in the Portland area.

### **NOTES**

Immigrant and Refugee Community Organization (IRCO) selected as our community outreach partner for this project. IRCO staff helped with survey development and conducted the surveys.



## What we learned, in general

Portland area stakeholders in the nail salon community are concerned about the economic impacts of openly discussing health concerns associated with their workplace.

Many workers acknowledge health issues associated with exposure to organic compounds but continue to work because they need the income.

Many salons have implemented practices to reduce these exposures.

There is significant uncertainty among stakeholders about the long-term health impacts of chronic low-level exposure to organic compounds in the workplace.

Feedback from the community— at the 2011 Tet (New Year) festival and from our community outreach partner (IRCO)— suggests that key **stakeholders (i.e., salon owners) need regulatory guidance/drivers to change current practices.**



## Preliminary findings from our survey cohort

Predominant clusters (by age): 36-40, 41-45 (~75% > 30 y.o.)

Education: completed High School (~ 50%)

Health Insurance: No (~70%)

Young Children in Household (<10 y.o.): Yes (~50%)

Years as Nail Tech: 1-12 years (~90%)

Primarily Employed as : Employee (vs. Independent Contractor)

Hours at work per week: 20-50

Concerns at work: Bad smells, too much exposure to chemicals, not enough ventilation.

Health concerns working as Nail Tech (Top 3): Breathing difficulties, skin conditions, allergies. Other concerns: asthma, arthritis. **~ 50% reported no problems.**



## Cause for Concern

### Poor ventilation >> increased exposure to volatile chemicals (e.g., acetone)

*“While measured levels of chemical exposure may be considered low by regulatory agencies, such as the Occupational Safety and Health Administration, Dr. Roelofs made the point that existing regulatory limits are likely outdated and not protective enough for workers. Additionally, salon workers and owners may be experiencing health problems because they are exposed to a mix of chemicals (at various levels) over long workdays and workweeks and synergistic effects need to be considered when examining potential health effects.”*

excerpted from **Framing a Proactive Research Agenda to Advance Worker Health and Safety in the Nail Salon and Cosmetology Communities**, California Healthy Nail Salon Collaborative (2010).

### Occupational Solvent Exposure and Brain Function: an fMRI study

Cheuk Ying Tang, David M. Carpenter, Emily L. Eaves, Johnny Ng, Nimalya Ganeshalingam, Clifford Weisel, Hua Qian, Gudrun Lange, and Nancy L. Fiedler

ENVIRONMENTAL HEALTH PERSPECTIVES (2011) doi: 10.1289/ehp.1002529

Conclusion: Painters, dry-wall tapers, and carpenters show altered brain pathology caused by prolonged exposure to solvent mixtures during construction work.





## **Roles for Government and regulations?**

### **San Francisco guidance on volatile and toxic organics**

**– formaldehyde, toluene, dibutyl phthalate (DBP), methyl ethyl ketone (MEK)**

Regulation to adopt standards and process for nail salons to qualify for San Francisco's Healthy Nail Salon Recognition Program

Ordinance No. 269-10, Adopted November 5, 2010

Regulation Effective Date: February 7, 2012

[http://www.sfenvironment.org/downloads/library/sfe\\_env\\_reg\\_12-01-HNSRO.pdf](http://www.sfenvironment.org/downloads/library/sfe_env_reg_12-01-HNSRO.pdf)

### **Green Nail Salon Checklist Analysis (2011)**

California is the first state in the US to have a formalized Green Business Program (GBP). The California Green Business Program, based in counties and cities around California, verify that businesses meet higher standards of environmental performance than those required by law.

[http://www.efc9.org/projects2011/HairCareProject/GreenNailSalonChecklistAnalysis\\_FIN1\\_.pdf](http://www.efc9.org/projects2011/HairCareProject/GreenNailSalonChecklistAnalysis_FIN1_.pdf)



## **Regulatory guidance to promote change e.g., a Portland area Safe Nail Salon Program**

Initiates conversation about issue(s) of relevance

Identifies causes for concern among stakeholders and the public

Assesses damage to health and environment (i.e., the commons)

Compares *status quo* vs proposed / lower risk outcomes

Defines options to mitigate health & economic impacts

Coordinates stakeholder efforts to implement change

Provides opportunities for continuing education (Nail Techs) and economic development.



## **Tell us about your nail salon experience (Informal Survey)**

**How often do you go to a nail salon?**

Never

Once a month

More often

**How was the air quality in your nail salon?**

No smells

Mild Smells

Strong Smells

**Is cost a primary issue in selecting the salon you visit?**

Yes

No

**Would you pay more for safer salon products?**

Yes

No

**How much more would you pay per visit for less toxic products?**

\$5

\$10

\$15

\$20

**Thank you for participating in our project.**



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### **Community Outreach Partner**

#### **Immigrant & Refugee Community Organization (IRCO)**

**Project Outreach Manager: Pei-ru Wang**

**Community Outreach Staff: Chi Bui, Robert Wong**

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*Zero Waste Alliance*

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## **Questions/Comments**

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