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**U.S. Cosmetic Policy Reform: A Growing Need to
Protect Communities of Color from Exposure to Toxic Chemicals**

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MPH 683: Integrated Learning Experience

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August 1, 2021

Abstract

Women of color are at a higher risk of exposure to toxic chemicals because of their use of more personal care products when compared to white women. A literature review was conducted focusing on mercury, a highly toxic heavy metal, found in some skin lightening creams used in Latinx, Black, and Southeast Asian communities to evaluate the impact of toxic chemicals used in communities of color. The use of skin lightening products is associated with the perception of beauty and social advantage. Further, women of color regardless of educational attainment experience the same social pressures to lighten their skin. This paper analyzes existing and pending federal and state of California legislation to propose policy alternatives using Bardach's Eightfold Path for policy analysis. The goal of using a policy approach is to provide a path forward for U.S. cosmetic policy reform and ultimately to protect consumers from the harmful effects of contaminants, like mercury in skin creams. Policy alternatives were evaluated using the following criteria: consumer safety, political feasibility, and implementability. The paper recommends a policy approach that expands the U.S. Food and Drug Administration's authority to include enforcement against counterfeit cosmetic products and adds a U.S. cosmetic facility registration process to complement existing community health education efforts. This policy recommendation would further help ensure an industry-wide standard for cosmetic products offered for sale in the United States and help create healthy environments across diverse communities.

Keywords: U.S. cosmetic policy, policy reform, skin lightening, cosmetics, toxic chemicals, mercury, policy analysis

U.S. Cosmetic Policy Reform: A Growing Need to Protect Communities of Color from Exposure to Toxic Chemicals

Women of color are at a higher risk of exposure to toxic chemicals in cosmetic products. Dodson et al (2021) surveyed 357 women between the ages of 18-34 in California about product use through a community-academic partnership and found that Hispanic/Latinx (10 products) and Asian (9 products) women used more cosmetics compared to White (7 products) and Black (7 products) women. See Figure A1 for the median number of products used currently or within the past year in each product category by race/ethnicity.

Women and men around the world use cosmetics to obtain a lighter skin tone. Peltzer et al (2016) reported 30.0% of female students in a population of 19,624 undergraduate university students in 26 countries across Asia, Africa, and the Americas used skin lightening products in the previous 12-month period compared to 16.7% of male students. The use of skin lightening and blemish-removing products among women of color is a practice deep-rooted in colorism and the belief that having fair skin is the standard of beauty. These unrealistic standards of beauty reinforce the use of these skin creams and remains a global health issue regardless of socioeconomic status or educational attainment (Peltzer et al., 2016; Dixon & Telles 2017; Rao 2020; Washam 2011; Zota & Shamasunder 2017).

Some skin lightening creams contain mercury, a highly toxic heavy metal. Mercury is naturally occurring in the earth's crust and is mined as cinnabar ore (mercuric sulfide). Cinnabar ore is then vaporized, captured, and cooled to form liquid mercury, also known as elemental mercury (ATSDR, 1999). Mercury in skin creams exist in two forms: inorganic and organic (e.g., methyl mercury) (World Health

Organization 2019). These creams include commercial creams from other countries, the resale of well-known creams after the intentional addition of mercury to the cream, and homemade or artisanal creams. Mercury in skin lightening creams affect both the cream users and their families requiring extensive decontamination of homes including disposal of household items to reduce exposure (Copan et al., 2015; Davidson et al., 2004).

The negative health effects of mercury depend on the form of mercury at the time of exposure, the length of exposure, and how the individual was exposed. Symptoms associated with exposure are not unique to mercury and without interviewing potentially exposed individuals or laboratory testing, it may be difficult to know that an individual has been exposed to mercury. Mercury exposure primarily affects the brain and kidneys, with symptoms ranging from skin rashes and skin discoloration to coma depending on how much and how often the cream was used (World Health Organization 2019). Pregnant women are particularly vulnerable to the negative health effects of mercury because mercury can cross the placenta and accumulate in the fetus (Chen et al., 2014). Further, Dickenson et al (2013) found that women who use mercury-containing skin creams gave birth to babies with high levels of mercury.

This paper analyzes existing and pending federal and state of California legislation to propose policy alternatives using Bardach's Eightfold Path for policy analysis. The paper recommends a policy approach that expands the U.S. Food and Drug Administration's authority to include enforcement against counterfeit cosmetic products and adds a U.S. cosmetic facility registration process to complement existing community health education efforts. This policy recommendation would further help

ensure an industry-wide standard for cosmetic products offered for sale in the United States and help create healthy environments across diverse communities.

Background

Community Health Education

Effective community health education complements public health policies. The use of mobile and web application technology can help consumers make informed decisions on the go and when shopping for cosmetic products online to choose safer cosmetic products. The Environmental Working Group (EWG), a non-profit organization, based out of Washington D.C. developed a mobile app which gives consumers access to the EWG's online Skin Deep and Food Scores database in an accessible format. The mobile app, Healthy Living, allows users to scan a barcode, search by product name or browse by product category to get cosmetic product safety ratings and identify safer cosmetic alternatives. See Figure B1 for a screenshot of EWG's Healthy Living application. Another example is the Clearya mobile app and browser extension that alerts consumers to potentially toxic chemicals in products while shopping at the following online retailers: Amazon, Sephora, iHerb, and Walmart. The Clearya application compares the product ingredient list against both state, federal, and international lists for toxic chemicals of concern and offers safer alternatives for consideration. See Figure B2 for a screenshot of the Clearya application.

The development of educational materials in different languages can help with outreach in linguistically isolated communities of color. The California Department of Public Health (CDPH)'s Environmental Health Investigations Branch (EHIB) has developed educational materials and resources in multiple languages beyond Spanish

to include Lao, Tagalog, Vietnamese, Pashto, Urdu, Hindi, and Arabic. This helps to make information accessible to all persons and remove the language barrier to access information. For example, EHIB developed fact sheets alerting community members that some face creams can poison children. See Figure B3 for an example of a CDPH fact sheet in Hindi.

Federal Cosmetic Policies

The Federal Food, Drug, and Cosmetic Act (1938) definition of cosmetic products includes skin moisturizers, perfumes, lipsticks, fingernail polishes, eye and facial makeup preparations, shampoos, permanent waves, hair colors, toothpastes, and deodorants. Existing federal legislation includes broad language to address the adulteration and misbranding of cosmetics (Food, Drug, and Cosmetic Act, 1938) and packaging and labeling standards (Fair Packaging and Labeling Act, 1967). The legislation does not include an approval process to ensure the safety of ingredients used and a reporting mechanism to ensure reporting of adverse effects. Adverse effects include both short-term and long-term negative health outcomes associated with cosmetic product use. These effects can range from a skin rash and blotching to cancer and reproductive harm and central nervous system impairment. Federal legislation places the responsibility for compliance with federal and state laws on the cosmetic company without direct regulatory oversight. The Food, Drug, and Cosmetic Act (1938) does not require registration of cosmetic facilities to ensure good manufacturing practices are followed the same way they are required for food processors in the United States. Instead, the United States Food and Drug Administration (FDA) encourages

voluntary registration through their Voluntary Cosmetic Registration Program to regulate cosmetics.

At the federal level, the FDA uses import alerts to communicate regulatory information to field staff and the public. The FDA's import alert (FDA, 2009) on skin lightening creams includes a list of products added between September 2009 and November 2019 organized by country of origin, cosmetic company name, and skin cream brand name. The import alert gives field staff the authority to reject shipments matching the alert without a positive laboratory test confirming the presence of mercury. According to the import alert, importers are required to provide evidence to the FDA to allow a shipment to enter the United States; however, this does not stop individuals from bringing skin lightening creams into the country that may be contaminated with mercury.

In 2019, federal legislation was introduced in the senate (Personal Care Products Safety Act, 2019) to create a process for the FDA to review the safety of ingredients in personal care products. During the same year, a bill in the house of representatives (Cosmetic Safety Enhancement Act of 2019, 2019) was introduced to expand FDA's authority and create a registration process for both cosmetic facilities and cosmetic ingredient statements. Both bills included language regarding reporting of adverse events associated with the use of cosmetic products. The bills also contained specific language addressing areas that are of specific interest to reducing the availability of skin lightening and blemish removing cosmetic products adulterated with mercury. Some of these areas included labeling and internet sales, counterfeit cosmetic products, and the creation of a cosmetic foreign supplier verification program. Both bills have not been

passed to date; however, the senate bill (Personal Care Products Safety Act, 2019) was recently reintroduced on June 17, 2021, by Senator Diane Feinstein, democrat, from California and is co-sponsored by Senator Susan Collins, republican, from Maine.

State of California Cosmetic Policies

In California, cosmetic companies are required to provide a list of cosmetic products sold in the state to the Department of Public Health (CDPH) containing any ingredient identified as causing cancer or reproductive toxicity (California Safe Cosmetics Act, 2005). This requirement includes chemicals identified as fragrances or flavorings and does not exempt ingredients determined to be a trade secret according to federal law. The law exempts cosmetic manufacturers with less than one million dollars (\$1,000,000) of annual aggregate sales from the reporting requirements. It is unclear how and why the threshold for annual aggregate sales was set and the law does not address other toxic chemicals that affect the central nervous system, for example, mercury.

The Safe Cosmetics Act of 2005 also has provisions to investigate ingredients that are potentially toxic. The provisions include referral to the Division of Occupational Safety and Health in the Department of Industrial Relations and the Office of Environmental Health Hazard Assessment; however, the language here appears to focus primarily on occupational exposures with only a nod to investigations that may include “epidemiological studies to determine the health effects of exposures to chemicals in various subpopulations”.

The Safe Cosmetics Program in CDPH’s Occupational Health Branch is responsible for the collection of information on hazardous and potentially hazardous

ingredients in cosmetics sold in California and to make this information available to the public. The program maintains the Safe Cosmetics Database, which is a searchable online database for personal care products and ingredients reported by cosmetic companies making more than one million dollars (\$1,000,000) in aggregate sales in California. Despite mandated reporting, it is unclear who is responsible for ensuring compliance with reporting requirements and what are the consequences, if any, for not reporting potentially hazardous ingredients in cosmetic products sold in the state. Left unchecked, this increases the likelihood of women of color being exposed to toxic chemicals in cosmetic products.

On the other hand, the Cosmetic Safety Program in CDPH's Food and Drug Branch has regulatory authority to embargo and stop the sale of contaminated cosmetic products (Sherman Food, Drug, and Cosmetic Act, 1996). Embargo authority allows the program to hold in place adulterated or misbranded products. The Sherman Food, Drug, and Cosmetic Law (1996) is intended to be consistent with the federal Food, Drug, and Cosmetic Act and provide the state of California with authority to regulate the manufacture, sale, labeling, and advertising of activities related to food, drugs, devices, and cosmetics in the state. Registration of cosmetic facilities is voluntary, and with limited resources (e.g., staffing and funding) the state has focused on food processing and medical device manufacturing. It is unclear why registration is voluntary and not mandated.

In 2020, the California legislature passed two bills, SB 312 (Cosmetic Fragrance and Flavor Ingredient Right to Know Act, 2020) and AB 2762 (Toxic-Free Cosmetics Act, 2020), which added language to the Health and Safety code regarding consumer

product safety; however, both bills did not contain language regarding promulgating regulations or including legislative budget change proposals to fund the changes required by the bills. The Cosmetic Fragrance and Flavor Ingredient Right to Know Act (2020) does not define what criteria will be used to increase reporting of cosmetic products to CDPH's Safe Cosmetics Program.

As previously noted, CDPH does not currently have a mechanism to enforce reporting of toxic chemicals. This bill expanded the Safe Cosmetics Act (2005) to include disclosure of flavor and fragrance ingredients beyond carcinogens and developmental toxicants to any of the chemicals listed in the bill. The Toxic-Free Cosmetics Act (2020) prohibits the manufacturing, sale, delivery, holding, or offering of sale, in commerce cosmetics that contain any of the listed ingredients, which includes mercury, starting January 1, 2025.

Funding is necessary for program implementation. The Toxic-Free Cosmetics Act of 2020 did not include additional funding for CDPH to conduct enforcement or require the development of regulations for implementation. A review of the Department of Finance (DOF) bill analysis from May 2020 revealed that funding was not included because program implementation costs would not be incurred until fiscal year 2024-25. The expectation from DOF would be that CDPH will request necessary funding through the budget process in future years. While this makes sense from the state's financial arm, it does not support program implementation. The Senate Committee on Appropriations acknowledged that CDPH will need \$742,000 in the first year and \$709,000 ongoing as well as 3.0 positions to investigate complaints, enforce and

impose penalties as well as conduct laboratory analysis; however, the final bill text stated that the bill would result in “unknown costs to CDPH”.

Process for Policy Adoption

The end goal of a policy approach to close the gap in U.S. cosmetic safety is to protect consumers from the harmful effects of contaminants in cosmetics. In this paper, preventing exposure in communities of color from exposure to mercury in skin creams is used as an example to evaluate the policy options. The policy options were evaluated using three criteria: consumer safety, implementability, and politically feasible. The policy criteria were selected based on the goal of improving consumer safety and the need for policy to be both implementable and politically feasible for success. The criteria were applied to each policy using “high”, “medium”, and “low” metrics in the decision rubric shown in Figure 1.

Policy Criteria

Consumer safety was defined as how well a consumer is protected from adverse health effects, which includes both long-term and short-term negative health outcomes associated with the use of a cosmetic product. These effects can range from a skin rash and blotching to cancer and reproductive harm and central nervous system impairment. A score of “high” indicated that consumers did not experience any adverse health effects with the use of cosmetic products. A score of “medium” meant that allergic reactions including skin rash were possible in skin cream users with existing allergies and a score of “low” meant there were adverse health effects associated with the use of cosmetic products.

Implementability was defined as the extent of program resources and infrastructure that would be required to implement the policy. A score of “high” meant that implementing the policy would not require any additional program resources or infrastructure. A score of “high” also implies that the program has a sustainable funding source and does not require additional funding. A score of “medium” meant that the policy would require some additional programmatic changes or funding to implement and a score of “low” meant that the policy required more extensive programmatic changes and funding to implement.

Politically feasible was defined as the political barriers to implementing the policy. A score of “high” meant that there were no political barriers to implementing the program. A score of “medium” meant there were external barriers (e.g., partisan politics); however, no internal barriers (e.g., regulatory vs. non-regulatory programs) were likely to exist for program implementation and a score of “low” meant that the program was infeasible because of political pressures.

Figure 1. Decision Rubric

Criteria	Consumer Safety	Implementability	Politically Feasible
Scoring Definitions	<p>High - No adverse health effects associated with the use of cosmetic products.</p> <p>Medium - Allergic reactions are possible in skin cream users as a result of existing allergies.</p> <p>Low - Adverse health effects associated with the use of cosmetic products</p>	<p>High - No additional program resources or infrastructure needed to implement.</p> <p>Medium - Requires some additional programmatic changes or funding to implement.</p> <p>Low - Requires more extensive programmatic changes and funding to implement.</p>	<p>High - No political barriers to implementing the program.</p> <p>Medium - External barriers; however, no internal barriers to implementing the program.</p> <p>Low - Program is infeasible because of political pressure.</p>
<p>Policy Option 1: No policy change, State of California continues education and outreach efforts with communities of color</p>	Low	High	High
<p>Policy Option 2: Require online platforms to screen and remove skin creams known to the State of California to contain heavy metals including mercury.</p>	Medium	Low	Low
<p>Policy Option 3: Registration of cosmetic facilities and enforcement against counterfeit cosmetic products</p>	Medium	Medium	Medium

Methods

This literature review focused on mercury, a highly toxic heavy metal, in some skin lightening creams as an example of the impact of toxic chemicals found in creams used predominantly in communities of color. Specifically, the literature review looked at peer-reviewed literature obtained from PubMed and Fusion published between 2000 to 2021 on mercury exposure and cosmetics legislation in the United States. The search was conducted using the following keywords: skin lightening OR skin whitening OR skin bleaching AND mercury AND intervention OR prevention OR reduction OR strategies AND cultur*, mercury poisoning AND the United States AND culture, mercury vapor exposure AND culture OR culture OR ethnicity OR identity OR values AND united states OR america OR USA or U.S. OR United States of America, and United States AND legislation AND cosmetics.

A review of government websites including the California Department of Public Health, U.S. Food and Drug Administration, Agency for Toxic Substances and Disease Registry were used to analyze relevant legislation and programmatic information on implementation of cosmetic policy. For the policy analysis, Bardach's Eightfold path was used as a framework to construct policy alternatives, select the criteria, project the outcomes, and confront the trade-offs to reach the recommended policy approach.

This approach helped to identify the gaps in U.S. cosmetic policy and decide on a policy approach to improve cosmetic safety and help create healthy environments across diverse communities without driving the practice of adding mercury in skin creams further into the illegal marketplace.

Policy Recommendations

Strategy for Policy Adoption

There are three main stakeholders: consumers, cosmetic manufacturers, and public health agency staff. For consumers, there will be individuals who will stop the use of skin-lightening and blemish-removing creams that may contain mercury; however, for some, they may not be convinced that there is any harm involved in the use because of the delayed effect for some of the more serious side effects. A policy approach would help protect consumers by helping to ensure skin creams available for sale in California do not contain harmful ingredients. Cosmetic manufacturers find that self-regulation is costly for the industry and believe the practice does not allow for fair competition. The list of cosmetic manufacturers who support U.S. cosmetic legislation and expanding FDA's authority suggests that the industry is interested in a more uniform policy approach.

Based on the review and analysis of existing and pending legislation, the following three policy options were considered as policy alternatives to close the gap in exposure to toxic chemicals from cosmetic product use.

Policy Option 1

If there was no policy change, the Environmental Health Investigations Branch (EHIB) in the state of California's Department of Public Health (CDPH) would continue education and outreach efforts in communities of color. This policy option received a score of "low" for consumer safety because some women of color may become aware of the dangers of skin lightening and blemish-removing creams that may contain mercury while others may not. This policy option alone would not have a significant

effect on reducing the likelihood of adverse health effects associated with the use of a skin cream potentially containing mercury. No additional program resources or infrastructure would be needed to implement because this is the no policy option alternative. Consequently, this policy alternative would receive a score of “high” for implementability. Further, political feasibility for this alternative would be scored “high” because EHIB has been conducting program activities since 2010 and political barriers are less likely with an established program.

Policy Option 2

Requiring online platforms to remove skin creams known to the State of California to contain heavy metals including mercury would require the establishment of a state program that does not currently exist to establish the standard and provide regulatory oversight for implementation of the policy. Establishment of a state program is costly and would require significant program infrastructure and funding for implementation. Consequently, this policy option would receive a score of “low” for implementability. Further, without existing authority and program structure, there is a need to first engage online platforms and conduct education and outreach with online platform companies to reduce push back for the new regulatory requirements. This would mean that this alternative would receive a score of “low” for political feasibility. Together with existing education and outreach efforts, there is potential to reduce consumer access to skin creams containing mercury and improve consumer safety, which would give this alternative a score of “medium” for consumer safety.

Policy Option 3

Enforcement is needed to complement existing education and outreach efforts to remove skin creams containing mercury from distribution or sale in ethnic stores, swap meets, by individuals, and on the internet (Minnesota Department of Health 2011, Texas Health and Human Services 2020). Together with existing education and outreach efforts, there is potential to reduce consumer access to skin creams containing mercury; however, there is always going to be a risk of an adverse reaction from existing allergies. Registration of cosmetic facilities and enforcement against counterfeit products would help create a mechanism for the removal of counterfeit products from the marketplace. Consequently, this policy alternative would receive a score of “medium” for consumer safety.

CDPH has existing enforcement authority to embargo and stop the distribution or sale of contaminated cosmetic products. Currently, registration of cosmetic facilities is voluntary, and with limited resources (e.g., staffing and funding) the state has focused on food processing and medical device manufacturing. Some additional funding and program infrastructure would be needed to expand the existing program, which would give this policy alternative a score of “medium” for implementability; however, the collection of cosmetic facility registration fees scaled based on annual aggregate sales can help create a sustainable funding source for program implementation and ongoing operations.

Politics and Potential Policy Opposition

Pending federal legislation on cosmetic safety has bipartisan support as well as support by both cosmetics manufacturers representing over 90 brands and several non-profit organizations. There will always be some external political barriers; however, the political environment appears favorable for the addition of cosmetic facility registration and enforcement against counterfeit products. This policy option would also build on the Toxic-Free Cosmetics Act, Assembly Bill 2762, passed in 2020. This bill specifically prohibits the manufacture, sale, delivery, holding or offering for sale of any cosmetic product containing any of the ingredients listed in the bill, which includes mercury. Given the existing support for legislation and a favorable political environment, this policy alternative would receive a score of “medium” for political feasibility. Further, state public health officials would have the resources including staff to conduct market surveillance and issue fines to businesses for the sale of skin creams contaminated with mercury regardless of the country of origin.

Potential opposing arguments include that the cost of implementation outweighs the benefit, and state public health officials should focus on education only; however, education alone is not enough. Education on how to choose a safer cosmetic is important to help reduce the use of products that may contain toxic chemicals, especially in vulnerable populations; however, enforcement tools are also needed to ensure consumer safety. Another possible argument is that seizing contaminated products will put small businesses out of business. The reality is that these products containing mercury are already prohibited from sale under existing state law. The state currently conducts education and outreach efforts for businesses including ethnic

markets regarding mercury in skin creams. There needs to be consequences for selling consumer products contaminated with harmful substances. The recommended policy approach expands the U.S. Food and Drug Administration's authority to include enforcement against counterfeit cosmetic products and adds a U.S. cosmetic facility registration process to complement existing community health education efforts. This policy recommendation would further help ensure an industry-wide standard for cosmetic products offered for sale in the United States and help create healthy environments across diverse communities.

Public Health Impact and Implications

Cosmetic products predominantly used by persons of color, like skin lightening creams contaminated with mercury, continue to be available for sale in ethnic stores, swap meets, by individuals, and on the internet. In July 2019, a 47-year-old Mexican American woman went to her doctor with numbness in her hands and face, slurred speech, and trouble walking (Mudan et al., 2019). Doctors measured the mercury level in her blood and found it was 500 times the acceptable amount. State public health officials interviewed her family and learned that she was a long-term user of skin lightening creams purchased from Mexico to remove spots and wrinkles. She remains in a semi-comatose state as of the writing of this paper. See Table 1 below for select mercury poisoning cases in the U.S.

Table 1.*Select U.S. Mercury Poisoning Case Studies*

Citation	State	Description of Incident	Symptoms
Tewell et al., 2017	Florida	a 3-year-old boy exposed to elemental mercury from a broken blood pressure monitor placed as a toy in a home day care center.	Weight loss, lethargy, painful pink discoloration of the hands and feet, weakness, sweating, excessive salivation, hypertension, and tachycardia
Langley et al., 2014	North Carolina	Elemental mercury spilled on a School Bus and at a residence exposing two students and three family members.	Same day of the exposure, students and family members reported headache, cough, numbness or tingling in hands, and difficulty breathing
Dickenson et al., 2013	California	A pregnant woman participating in a research study had elevated mercury blood levels. Following a patient interview, study authors learned she had been using a skin cream purchased from Mexico.	Unknown as the participant did not return to participate in the study.
Ori et al., 2018	Arizona	Toddler of a mother who purchased and used skin creams from Mexico.	Irritability, weakness, painful pink discoloration of the hands and feet, weight loss

Current literature has focused on young women and especially women who may become pregnant. The use of mobile and web application technology may help young women find safer cosmetic product alternatives. Additional research on how to conduct education and outreach in older community members is still needed. Older community members may or may not be tech savvy or interested in using mobile and web application technology.

Globally, there is an increased prevalence of skin lightening product use among university female students (Ahmed et al., 2017). The study authors discovered that even educated women were subject to the same social pressures to lighten their skin. Further, Alrayyes et al (2019) found that the use of skin lightening products is associated with the perception of beauty and social advantage. The study authors concluded that there is a need for public awareness, in which existing community health educational efforts in the form of apps and educational materials can begin to address the information gaps; however, enforcement is also needed to implement an industry standard and ensure consumer safety.

Based on the policy analysis, the recommended policy approach includes the registration of cosmetic manufacturing facilities and an explicit law that the sale of counterfeit cosmetic products is prohibited. This approach complements existing education and outreach efforts by both government and non-profit organizations in communities of color. This policy would help protect consumers from the harmful effects of toxic chemicals in skin creams and other cosmetic products by creating a mechanism for the removal of counterfeit products from the marketplace. Further, state public health officials would have the resources including staffing to conduct market

surveillance and issue fines to businesses for the sale of cosmetic products contaminated with toxic chemicals regardless of the country of origin. The programs can be mostly funded through the collection of cosmetic facility registration fees that are scaled based on annual aggregate sales. The end goal is to protect consumers and especially the most vulnerable populations from the negative health effects associated with toxic chemical exposure.

Finally, public health agency staff will likely welcome the additional resources to fulfill their mandate that they have been unable to do until now. A policy approach implementing registration of cosmetic facilities and enforcement against counterfeit cosmetic products would help ensure an industry-wide standard for cosmetic products offered for sale in California that balances the needs of stakeholders with public health and safety.

Conclusion

Women of color are disproportionately impacted by exposure to toxic chemicals because of their increased personal care product use. Bardach's Eightfold Path for policy analysis was used as a framework to construct policy alternatives, select the criteria, project the outcomes, and confront the trade-offs to reach the recommended policy approach. The recommended policy approach balances the need to inform the consumer using community health education with the need for enforcement and implementing a standard across all cosmetic manufacturers to ensure consumer safety.

As for next steps, U.S. Congress needs to expand FDA's authority to include enforcement against counterfeit cosmetic products and require U.S. cosmetic facility registration process. This in turn impacts California's Sherman Food, Drug, and Cosmetic Law (1996), which follows the federal Food, Drug, and Cosmetic Act to implement federal law at the state level for food, drugs, devices, and cosmetics in California. This policy recommendation would further help ensure an industry-wide standard for cosmetic products offered for sale in the United States and help create healthy environments across diverse communities.

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Appendix A. Median Number of Personal Care Products Used by Race/Ethnicity

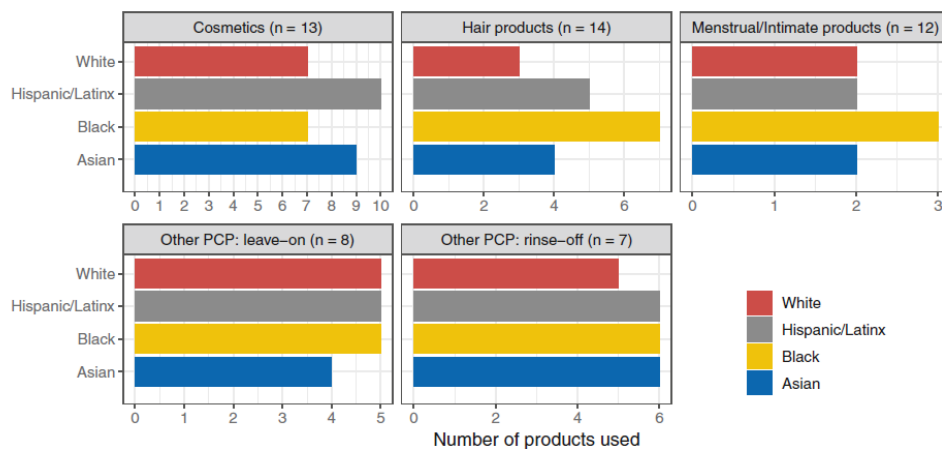


Fig. 1 Median number of products used currently or within the past year in each product category by race/ethnicity. Number (*n*) represents the total number of products that we asked about in that product category.

Figure A1. Median Number of Personal Care Products Used by Race/Ethnicity. Adapted from Dodson et al., (2021, P.491).

Appendix B. Examples of Current Community Health Education Efforts

Figure B1

Clearya mobile app and browser extension for safer cosmetic product identification

Clearya English ▾

KEEP TOXIC CHEMICALS OUT OF YOUR HOME

Shop online as usual.
We'll alert you of toxic ingredients,
and help you find safe products.

 Add Clearya to Chrome

Or get the mobile app:

 Download on the App Store

 GET IT ON Google Play

Figure B2

Environmental Working Group (EWG) app, Healthy Living to get cosmetic product safety ratings and identify safer cosmetic alternatives

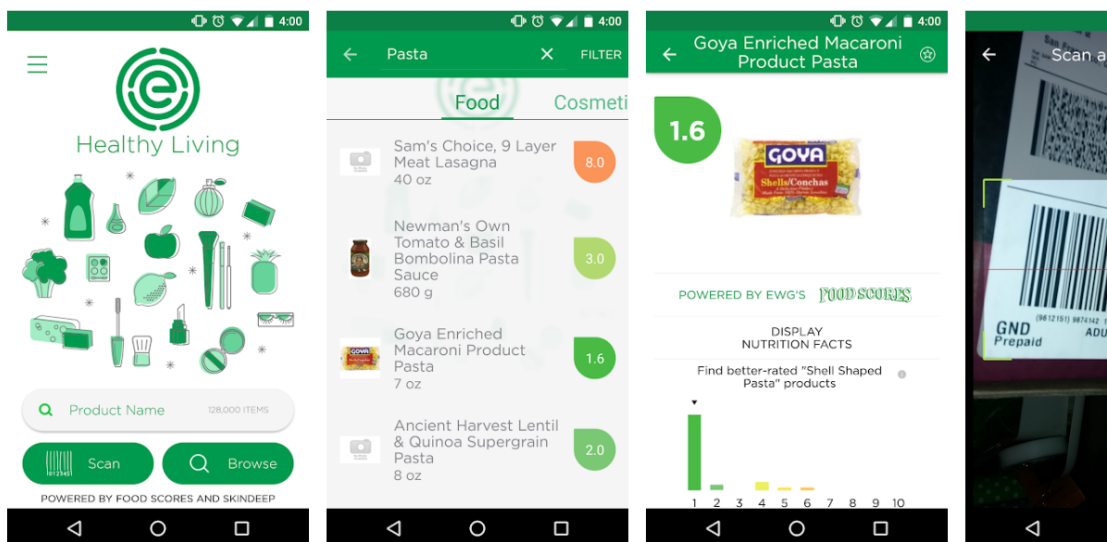
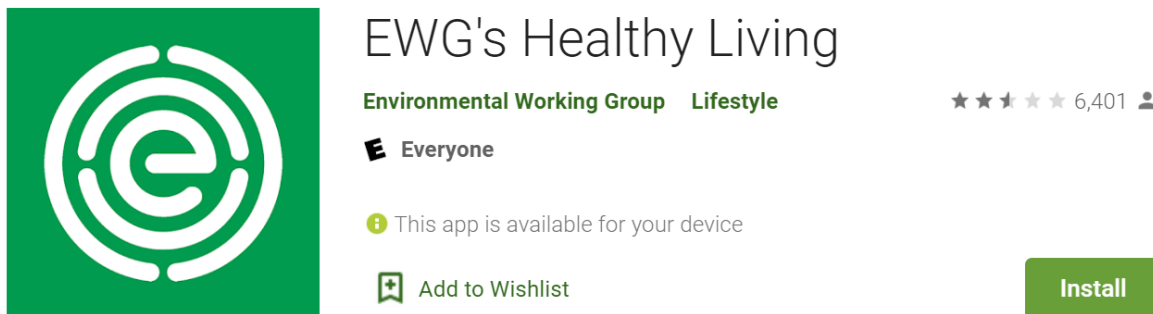


Figure B3

California Department of Public Health's Environmental Health Investigation Branch fact sheet in Hindi alerting community members that some face creams can poison children.

कुछ फेस क्रीम बच्चों के लिए जहरीली हो सकती है

पारा जहरीला होता है। आप इसे अपने हाथों से पूरे घर में फैला सकते हैं। यह लोगों के शरीर में चला जाता है। यह विशेष रूप से बच्चों और गर्भवती महिलाओं के लिए हानिकारक है।



"मेरा भतीजा बीमार था। डॉक्टर के पास ले जाने पर, जाँच से पता चला कि उसका पारा स्तर अधिक था। मेरी बहन काले धब्बे से छुटकारा पाने के लिए एक फेस क्रीम का उपयोग कर रही थी। उसे नहीं पता था कि उस क्रीम में पारा था। उसके बेटे को उस जहरीली क्रीम के कारण नुकसान पहुंचा था, क्योंकि वह अपने चेहरे पर क्रीम लगाने के बाद उसे गोद में उठाई थी।" – आदिल

अगले पृष्ठ पर दिखाई गई क्रीम में पारा है।

प्रयोग नहीं करें:

- अगले पृष्ठ पर दिखाई गई क्रीम
- यूएस के बाहर की कोई भी फेस क्रीम जिसका उपयोग "गोरापन बढ़ाने" या "रूप निखारने" या "सुंदरी, बढ़ती उमर के धब्बों, झाँपों, मुँहासों या अन्य दोषों से छुटकारा पाने के लिए" किया जाता है।
- इस वेब पेज पर दिखाई गई कोई भी क्रीम: [CDPH Face Creams Containing Mercury](#)
- इंटरनेट, किसी व्यक्ति, कबाड़ी बाज़ार या स्वेप मीट, या दक्षिण एशिया के उत्पादों की बिक्री करने वाले किसी विशेष स्टोर से खरीदी गई कोई भी फेस क्रीम, क्योंकि कोई व्यक्ति क्रीम को इन स्थानों पर बेचने से पहले पारा मिला सकता है। वेबलपरिसद, चेन स्टोर जैसे Walgreens या Target से फेस क्रीम खरीदें
- बिना लेबल वाले डिब्बों या घर के बनाये लेबल वाले क्रीम

नि:शुल्क चिकित्सा सलाह के लिए, 1-800-222-1222 पर पॉइज़न कंट्रोल को कॉल करें यदि आपके पास अगले पृष्ठ पर दिखाया गया कोई क्रीम है, तो उसे एक सील बैग में डालें और हमसे संपर्क करें (510) 981-4354 या AskEHI@cdph.ca.gov

05/20



यदि आप अगले पृष्ठ पर दिखाए गए क्रीमों का उपयोग करते हैं:



इन क्रीमों का उपयोग करना बंद कर दें



अपने डॉक्टर से मिलें और इस पत्रक और अपनी क्रीम को साथ ले जाएँ



पारा के लिए एक रक्त और मूत्र जाँच करवाएँ

सावधान रहें! इनका उपयोग न करें! पारा मौजूद होता है इन क्रीमों में

ये क्रीम इंटरनेट पर पाई गई, या किसी व्यक्ति, कबाड़ी बाज़ार या स्वेप मीट, या दक्षिण एशिया के उत्पादों की बिक्री करने वाले किसी विशेष स्टोर से खरीदी गई। फेस क्रीम केवल प्रसिद्ध, चेन स्टोर से खरीदें।

पारा युक्त क्रीम—अन्य देशों के ब्यूटी क्रीम



पारा युक्त क्रीम—कोई लेबल नहीं या घर का बना लेबल



कैलिफोर्निया सार्वजनिक स्वास्थ्य विभाग
पर्यावरणीय स्वास्थ्य जांच शाखा, स्वस्थ परिवार और समुदाय परियोजना



Appendix C. MPH Program Competency Inventory

Competency	Description of How Each Was Achieved
1. Foundational Competency 4. Interpret results of data analysis for public health research, policy, and practice	Evaluated policy options using a decision rubric
2. Foundational Competency 9. Design a population-based policy, program, project or intervention	Developed a strategy for furthering adoption of the policy solution to reduce mercury in skin lightening and blemish removing cosmetics.
3. Foundational Competency 13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	Identified strategies to address the needs of various stakeholders and how this can be leveraged to improve public health outcomes.
4. Health Policy Leadership Competency 4. Develop recommendations to improve organizational strategies and capacity to implement health policy or service change with an interprofessional team at a local, regional, national, or international level	Identified recommendations to address the availability of skin creams contaminated with mercury using a dual approach of education and enforcement, which requires an interprofessional team to implement.
5. Foundational Competency 14. Advocate for political, social, and economic policies and programs that will improve health in diverse populations.	Identified a policy approach that combined community health education with enforcement to address the complex problem of increased exposure to toxic chemicals in cosmetics within communities of color.