

Appendix D: MEDICAL SUPERVISOR SURVEY

A mail-in medical supervisor survey was conducted to supplement the ChE test results analysis. The goals of the survey were to:

- Confirm that persons identified as ordering physicians in the submitted ChE test results are medical supervisors.
- Evaluate a medical supervisors' familiarity with the reporting requirements of HSC §105206.
- Evaluate a medical supervisors' understanding of his or her role and responsibilities as a medical supervisor (HSC §105206, 3CCR §6728, OEHHA's *Guidelines for Physicians*) as well as compliance with specific elements of the Program (3CCR §6728).

There were 1,021 names recorded as an 'ordering physician' on the submitted ChE test reports from 2011 to 2013. We used *BreZE*¹ and/or an extensive internet search to confirm that an 'ordering physician' was a California-licensed physician. Of the possible 1,021 names, we uncovered a variety of occupations of the persons who ordered a ChE test. Confirmed physicians practice various specialties ranging from Occupational Medicine to Psychiatry. Non-physicians, such as nurses, physician assistants, front office administrators, and farm managers, were also entered as the 'ordering physician'. The professions of individuals identified as an 'ordering physician' are summarized in Table D1.

Individuals that we could not confirm were licensed physicians were excluded from receiving the survey (Figure D1). We were aware that this would exclude healthcare providers who could potentially be working under a medical supervisor. However, we wanted to focus on the licensed physicians because the Program specifies that an employer enters a contract/agreement with a physician for medical supervision services. A total of 699 licensed physicians were mailed a survey.

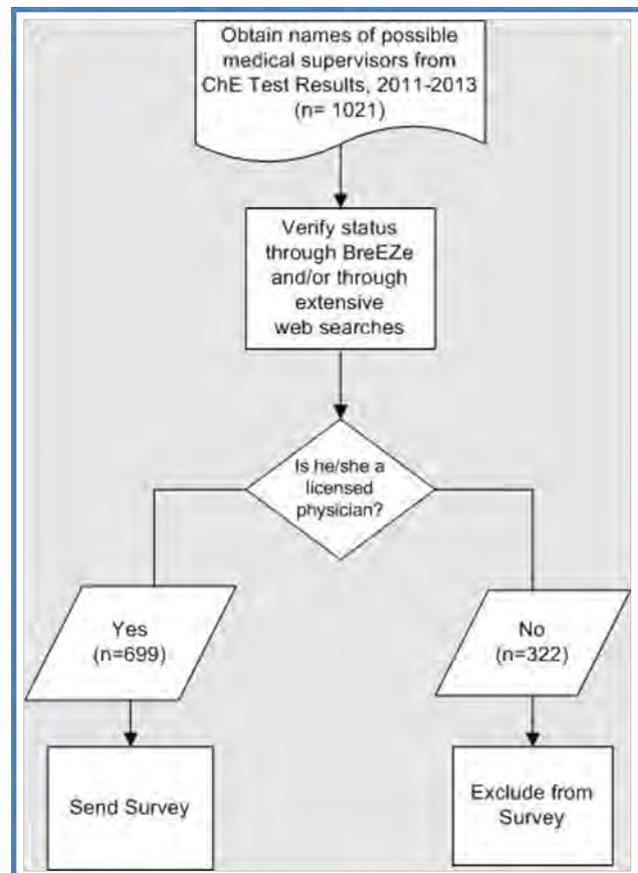


Figure D1: Flowchart to identify recipients of the Medical Supervisor Survey.

¹ *BreZE* is the Department of Consumer Affairs' web-based licensing and enforcement system which allows license searches (https://www.dca.ca.gov/webapps/breeze/about_breeze.php).

Results of the Survey

Of the 699 surveys sent to physicians, 257 (37%) were returned completed and 41 (6%) were returned as 'undeliverable'. Only 31 (12%) of the 257 mailed-in responses confirmed that the respondent was a medical supervisor from 2011 to 2014. (Table D2)

We attempted to call the 401 (57%) physicians who did not return the questionnaire to complete the survey over the phone or to offer resending the survey. On some of our calls – using telephone numbers obtained through internet searches – we were informed that the number called was for a hospital or medical center.

These facilities informed us that the physician was not listed in the

hospital directory, no longer working at that facility, or had retired. On other calls, we were placed on hold for periods exceeding 15 minutes and we had to end the call.

Reason for Exclusion	Count
1. Not a Medical Doctor (MD/DO)	
a. Certified Nurse Midwife	1
b. Chiropractor	2
c. Naturopathic Doctor	1
d. Nurse Practitioner	35
e. PhD	1
f. Physician Assistant	52
g. Registered Nurse	7
2. Deceased	1
3. No license found in BreEZe	9
4. Occupational Health physician for Non-Agriculture employees ¹	2
5. Physician, license could not be verified	11
6. Unknown	200

Table D1: Professions of individuals who were excluded from the Medical Supervision Survey.

Table D2: Response to DPR's Medical Supervisor Survey		
Number of physicians who were mailed a survey		699
SURVEY OUTCOME		
Survey returned as undeliverable		41
Survey completed and returned		257
a. Respondent confirmed that they were NOT a medical supervisor	226	
b. Respondent confirmed that they were a medical supervisor	31	
Follow-up to physicians who did not return survey and survey was not returned undeliverable		401
a. Respondent confirmed that they were NOT a medical supervisor	41	
b. Respondent confirmed that they were a medical supervisor	10	
c. Called and survey resent – but no response	59	
d. Called but no response	138	
e. Not contacted	153	

As of December 2014, we made 248 (62%) calls. However, only 51 calls were successful with another 10 physicians confirming that they were a medical supervisor. For the remaining 197 calls, we were referred to a medical assistant or an office manager who requested that the survey be resent to them (Table 9). To date, and even after several follow-up attempts, we have yet to receive the surveys from these physicians. Of the 153 physicians that have not been contacted, 57 (38%) were from predominantly urban counties (Los Angeles, San Diego, Santa Clara). Moreover, the top three specialties of the physicians in these counties were Internal Medicine, Family Medicine and Anesthesiology suggesting that they are not involved in the Program.

A. Confirmed Medical Supervisors

Thirty seven of the 41 confirmed medical supervisors reported that they were acting in that capacity when we conducted the survey in 2014. Four said that they were medical supervisors only from 2011 to 2013. The 41 medical supervisors we confirmed through the survey is much less than the 101 medical supervisors identified by OEHHA through their survey in 1995 (Ames and Menendez, 2001). A possible explanation for this difference is the 73% decrease in the use of all ChE-inhibiting pesticides over the past 20 years (Figure D2) which may have resulted in the need for fewer medical supervisors.

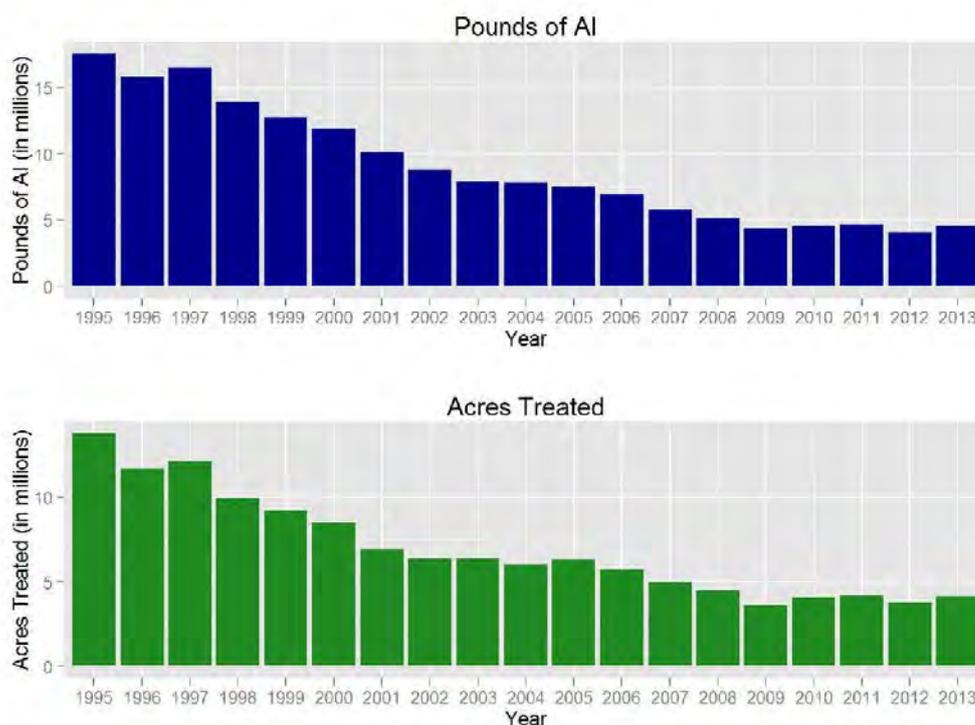


Figure D2: Use trends of ChE-inhibiting pesticides. These pesticides are organophosphate and carbamate active ingredients. Reported pounds of active ingredient (AI) applied include both agricultural and non-agricultural applications. The reported cumulative acres treated include primarily agricultural applications. Data are from the Department of Pesticide Regulation’s Pesticide Use Reports. Source: Summary of Pesticide Use Report Data - 2013. Accessed from <http://www.cdpr.ca.gov/docs/pur/pur13rep/figures/fig7.htm> on July 10, 2015.

B. Region and Specialty (Figure D3)

- Over half of the confirmed medical supervisors were located in Central California (51%, n=21). The geographic distribution of medical supervisors in the survey is consistent with DPR's PUR database which shows that growers who apply OP/CBs pesticides were mostly in the state's central region (Figure 2).
- The majority of the medical supervisors who responded specialize in occupational medicine (71%, n=29). This branch of clinical medicine centers on preventive medicine and management of illness, injury or disability that is related to the workplace. The remaining physicians specialize in family medicine (20%, n=8), internal medicine (2%, n=1), or other unspecified medical specialty (2%, n=1). Two medical supervisors (5%) did not indicate their specialty.

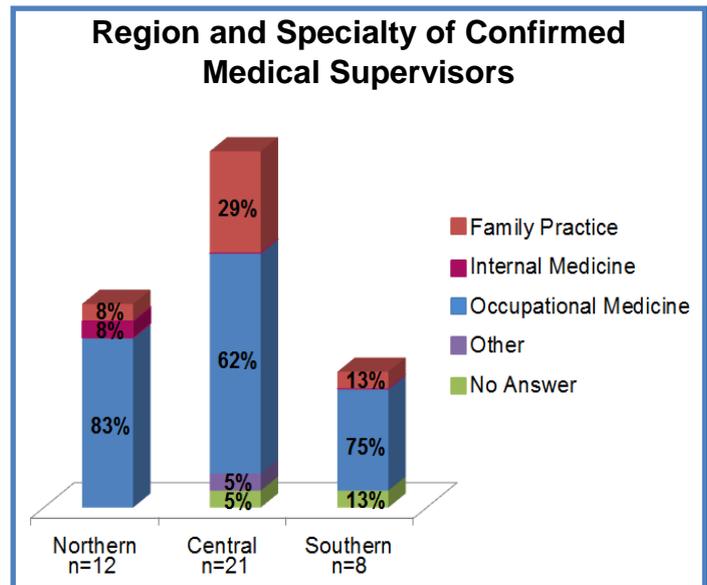


Figure D3: Region and specialty of confirmed medical supervisors. (Total number of medical supervisors who responded to the survey, n=41.)

C. Medical supervisors contract with employers

- Thirty-four of the 41 confirmed medical supervisors listed a total of 105 employers with whom they were contracted. The remaining seven medical supervisors did not write down the name of a grower/employer with whom they had a contract. Nine of the 105 employers were identified as a client by more than one medical supervisor.
 - Fifteen (44%) medical supervisors reported having a contract with only one employer. Nineteen (56%) medical supervisors reported having a contract with more than one employer (range: 2 - 27) with two stating that they had a contract with more than 10 employers.

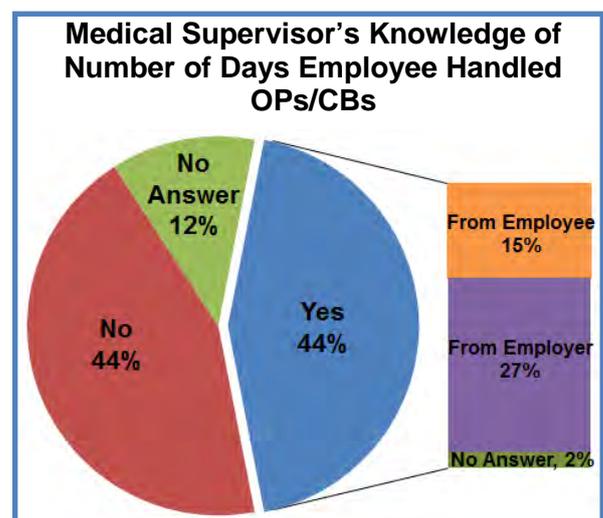


Figure D4: Information on the number of days an employee handled OPs/CBs and who provided it to the medical supervisor. (Total number of medical supervisors who responded to the survey, n=41.)

D. Medical supervisors' activities

➤ Knowledge of patient's OP/CBs exposure (Figure D4)

The Program requires employers to provide medical supervision for any worker who regularly handles OPs/CBs (more than six days in a 30-day period).

- Eighteen (44%) medical supervisors indicated they were aware of the number of days an employee handled OP/CBs within a 30-day period. Two-thirds stated that this information was provided by the employer (n=11) and a third were informed by the employee (n=6).

➤ Obtaining ChE levels for employees (Figure D5)

The Program requires that medical supervisors establish baseline ChE levels that shall be verified every two years. Routine monitoring shall be at intervals specified in writing by the medical supervisor, or every 60 days if the medical supervisor has made no written recommendation for continued periodic monitoring.

- *Baseline ChE levels:* The majority of medical supervisors obtained baseline ChE levels for new hires (73%, n=30) while only four (10%) did not. Seven (17%) medical supervisors did not respond to this question.
- *Frequency of obtaining baseline ChE levels:* Twenty-seven (66%) medical supervisors obtained baseline ChE levels every 2 years while 6 (15%) did not. Eight (20%) medical supervisors did not respond.
- *Routine monitoring/ Frequency of periodic testing:* Twenty two (54%) medical supervisors conducted periodic monitoring of employees while 11 (27%) did not. Eight medical (20%) supervisors did not respond. Of those who performed periodic monitoring, 17 (77%) conducted ChE testing every 60-days, 3 (14%) every 30 days, and 2 (9%) every 365 days.

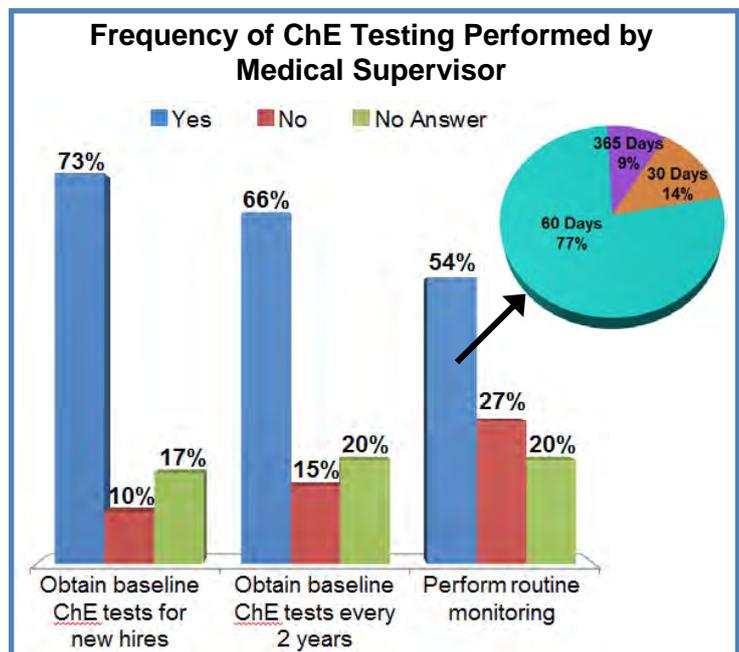


Figure D5: Frequency medical supervisors obtain baseline for new hires, verifying baselines and perform periodic monitoring. (Total number of medical supervisors who responded to the survey, n=41.)

➤ **Informing a worker of his/her ChE test results and recommendations from the medical supervisor (Figure D6 and Table D3)**

HSC §105206 requires that medical supervisors, within 14 days of receiving the ChE test results, shall ensure that the person tested receives a copy of the results and any of their recommendations. However, neither HSC §105206 nor the Program specifies the method in which employees receive their test results (from the medical supervisor or via employer).

- Nineteen (46%) medical supervisors informed both the employee and employer of the ChE test results, 13 (32%) only informed the employer and 5 (12%) only informed the employee. Four (10%) did not respond. It is not known whether results given to the employer were then relayed to the employee.
- The methods of communication varied from telephone, mail, fax, or a combination. Medical supervisors who informed the employee directly also indicated that results were given in person.

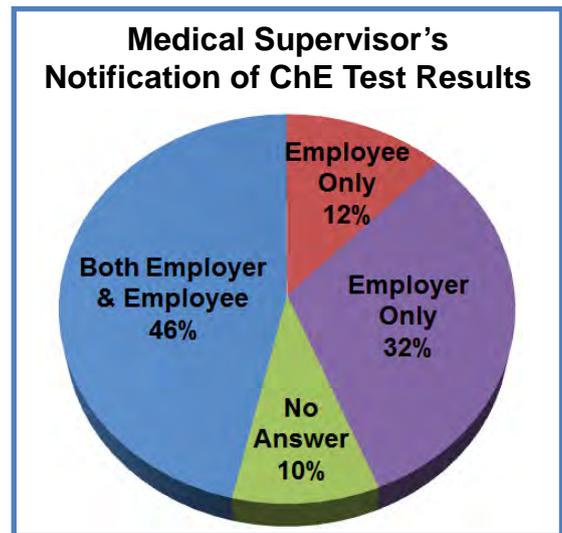


Figure D6: Person notified by medical supervisor of the ChE test results. (Total number of medical supervisors who responded to the survey, n=41.)

Table D3: Method by which Employers and Employees are Notified of ChE Test Results					
Employee			Employer		
Method	n	% ¹	Method	n	% ¹
Mail	12	38%	Mail	16	30%
Telephone	7	22%	Telephone	12	22%
In Person/Office Visit	7	22%	Email	12	22%
Thru Employer	4	13%	Fax	11	20%
Other, unspecified; only when results are abnormal	1	3%	No Answer	2	4%
No Answer	1	3%	Other, unspecified	1	2%
Total	32	---	Total	54	---

¹ Percentages do not total 100% as respondent may have indicated using more than 1 method to inform patient or employer of ChE test results.

➤ **Interpreting the ChE test and recommendations (Figure D7)**

Interpretation of the ChE test is a medical function. If a worker’s ChE levels reach or exceed action levels ($\geq 20\%$ for both RBC and plasma ChE depression from baseline), the Program requires the medical supervisor to investigate employee’s work practices and modify their work activities until his/her ChE test results are above 80% of baseline levels.

- Nearly all of the medical supervisors interpreted the ChE test results (88%, n=36) and when appropriate, gave the employer recommendations regarding the employee’s work activities.
- The same number of medical supervisors (88%, n=36) ordered immediate re-testing until a worker’s ChE levels for both RBC and plasma returned to 80% or greater of the baseline.
- Although not required by the Program, the *Guidelines for Physicians* recommends that medical supervisors examine employees for fitness and visit the employee’s worksite.
 - ❖ Twenty six (63%) medical supervisors also examined employees for fitness.
 - ❖ Thirteen (32%) medical supervisors visited the employee’s worksite.

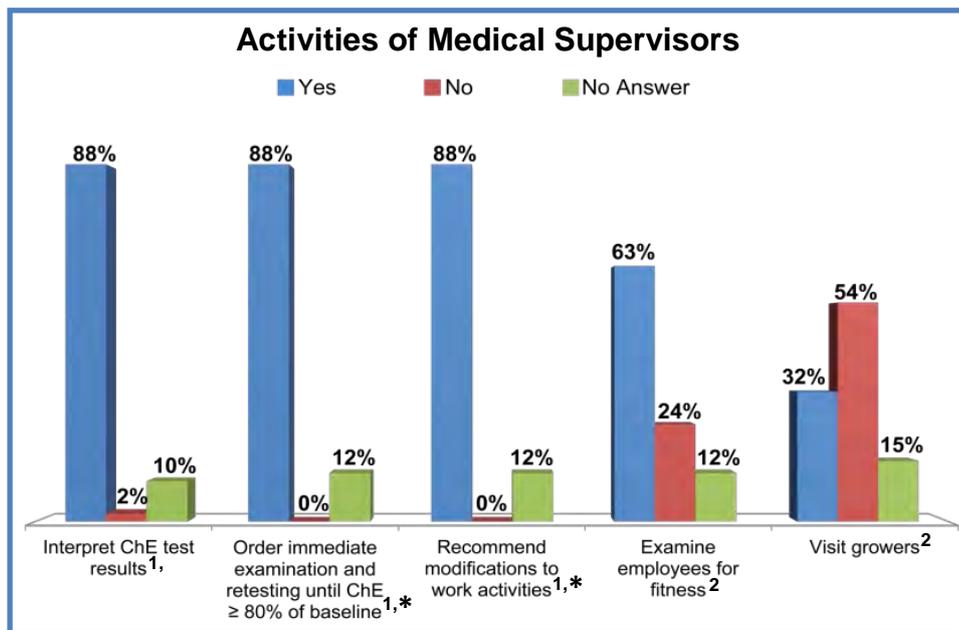


Figure D7: Program required activities ⁽¹⁾ of medical supervisors and those that are recommended in the *Guidelines for Physicians* ⁽²⁾. (Total number of medical supervisors who responded to the survey, n=41.)

* - When employee’s ChE test results reach or exceed action level.

➤ **Knowledge of follow-through with recommendations (Figure D8)**

The medical supervisors were asked if, and how, they knew that their recommendations were followed.

- Twenty three (56%) medical supervisors reported they learned their recommendations were followed through:
 - ❖ Employer (74%, n=17)

- ❖ Employee (48%, n=11)
- ❖ Personal observation (17%, n=4), or
- ❖ Other methods (e.g., the CAC or Local Health Officer (LHO)) (8%, n=2)

Note: Survey respondents were allowed to choose more than one answer.

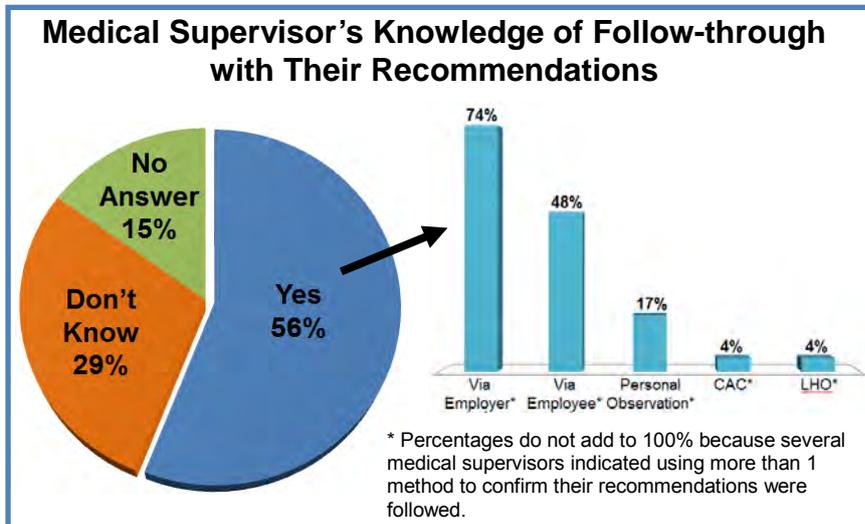


Figure D8: Knowledge of follow-through with recommendations and method by which medical supervisors learned their recommendations were followed. (Total number of medical supervisors who responded to the survey, n=41.)

➤ **Obtaining blood sample and laboratory analysis (Figure D9, Tables D4a and D4b)**

The *Guidelines for Physicians* recommends that the medical supervisor submit the employee's blood specimen sample to the same laboratory for analysis.

- Twenty-four (59%) medical supervisors collected the blood specimen from the employee at their clinic or office. Eleven (27%) sent the employee to a drawing laboratory. Two (5%) medical supervisor used both methods. The remaining four (10%) medical supervisors did not provide an answer.
- Of the medical supervisors who collected the employee's blood specimen at their clinic or office:
 - ❖ Thirteen (50%) send the specimen to one of the six laboratories approved by CDPH. Additionally, they stated using the same laboratory consistently for ChE analysis.

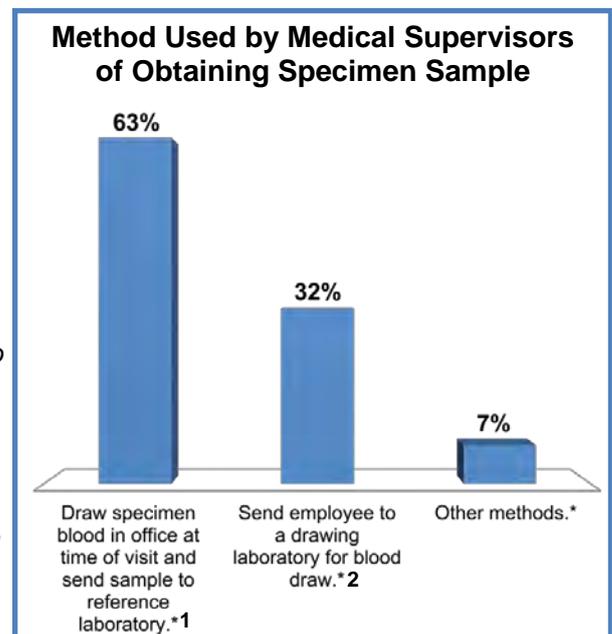


Figure D9: Method used by medical supervisors to obtain employee's blood specimen for ChE testing. (Total number of medical supervisors who responded to the survey, n=41)

* – Percentages do not total 100% because several medical supervisors indicated more than 1 method for obtaining employee's blood specimen.

1 – Three-fourths of these medical supervisors consistently send specimen samples to same reference laboratory.

2 – All of these medical supervisors consistently send employees to the same drawing lab.

- ❖ Four (15%) reported using two different laboratories for ChE analysis. One of these laboratories is not on the list of facilities approved to perform ChE testing for occupational surveillance.
- ❖ One (4%) indicated a drawing laboratory.
- ❖ Eight did not provide an answer.

Table D4a: Laboratories used by medical supervisors for blood specimen analysis.		
Laboratory	n	% ¹
Quest Diagnostics	15	58%
Medtox/LabCorp	3	12%
PALI	1	4%
PACTOX	1	4%
Pacific Diagnostic Laboratory ²	1	4%
Adventist Health-LVN ³	1	4%
No answer	8	31%
Total	30	---

Table D4b: Drawing lab used by medical supervisors to obtain employee's blood.		
Laboratory	n	%
Quest Diagnostics	5	38%
Kaiser Permanente Lab	2	15%
Sutter lab	1	8%
Rideout Hospital	1	8%
PALI	1	8%
No Answer	3	23%
Total	13	100%

¹ Percentages do not total 100% because several medical supervisors indicated using more than one laboratory for blood specimen analysis.

² Not approved by CDPH to perform ChE test analysis for medical supervision program.

³ Adventist Health is a drawing laboratory. The medical supervisor indicated that the blood specimen is obtained at time of office visit and reported sending the blood specimen to this laboratory. He did not indicate if the employee is sent to a drawing laboratory to obtain specimen blood.

➤ **Indicating the Purpose of the ChE test on the laboratory requisition slip (Figure D10).**

HSC §105206 requires medical supervisors to include the purpose of the test when ordering ChE testing. This information is required in the electronic reports submitted by the laboratories.

- Twenty-one (51%, n=21) medical supervisors indicated the purpose of the ChE test when ordering it while 13 (32%) did not. Seven (17%, n=7) did not answer this question.
- The reasons given by the 13 medical supervisors for not indicating the purpose of the ChE test were:
 - ❖ They were unaware of this requirement (46%, n=6).

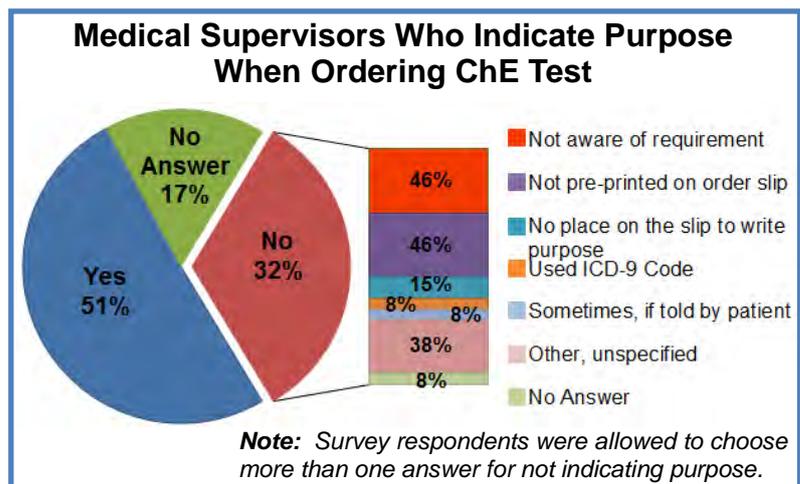


Figure D10: Figure 17: Number of medical supervisors who indicated purpose of test when ordering ChE test and reasons for not indicating for those who do not indicate purpose of test. (Total number of medical supervisors who responded to the survey, n=41.)

- ❖ The “purpose” of the test was not pre-printed on the laboratory requisition slip (46%, n=6).
- ❖ There was no room on the order slip to indicate the purpose of the test (15%, n=2).
- ❖ Other, unspecified reasons (38%, n=5).

➤ **Training for Medical Supervision (Figure D11a and D11b)**

The Program requires that medical supervisors have a copy of “*Medical Supervision of Pesticide Workers – Guidelines for Physicians*” and be aware of its contents.

- Thirty (73%) medical supervisors indicated they are familiar with this document.
- Six (15%) medical supervisors reported they have attended a Medical Supervision Training class.
- Ten (24%) medical supervisors indicated they do not remember having attended a Medical Supervision Training class.
- Twenty-one (51%) of the medical supervisors reported they have not attended a Medical Supervision Training class.

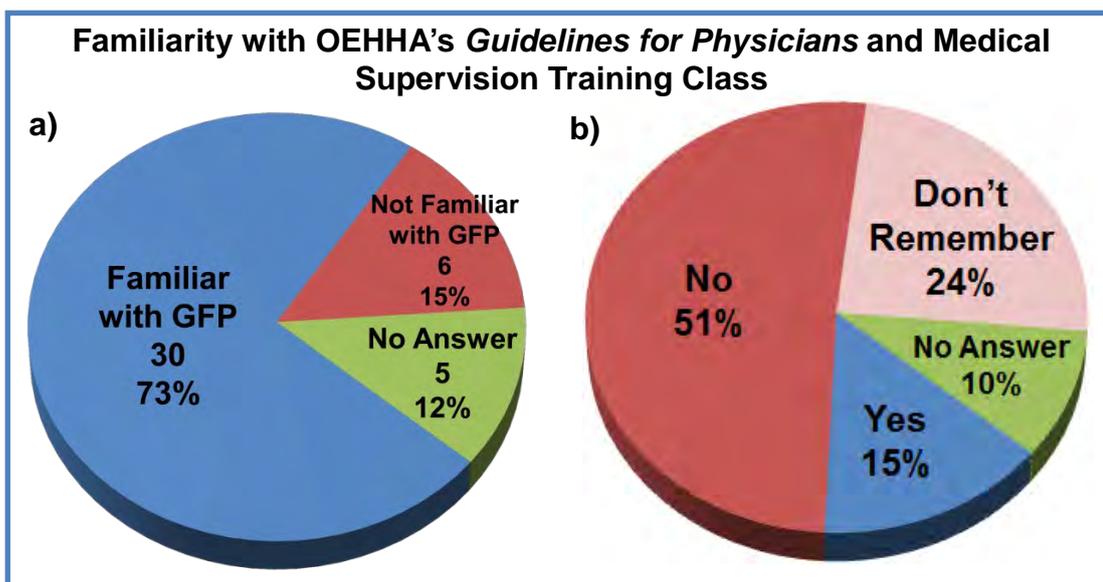


Figure D11: **a)** Number of medical supervisors who indicated familiarity or not with the Guidelines for Physicians. **b)** Number of medical supervisors who indicated they have attended a medical supervisor training class or not. (Total number of medical supervisors who responded to the survey, n=41.) GFP: Guidelines for Physicians.

Summary of Findings from the Medical Supervisor Survey

Finding 1: We suspect that approximately 70% of the ChE test results submitted by the laboratories are probably unrelated to occupational health surveillance that are under the Program (Figure C22 from Appendix C). Of the 1,021 names entered as the ‘ordering physician’ in the ChE test reports, DPR verified that only 699 are licensed physicians. We could not determine the occupation for 200 names. The remaining 120 names were: a) not medical doctors, b) supposedly physicians but their license could not be verified, or c) were deceased. During the verification process, we came across two occupational health physicians who work

with non-agricultural employees (e.g., Department of Toxic Substance Control and HazMat employees). While performing follow-up calls, we spoke with physicians who confirmed they have submitted blood specimen samples for ChE analysis for occupational purposes but not for the Program.

Finding 2: Most of the physicians surveyed were aware of their responsibilities as a medical supervisor, although they had varying degrees of understanding of specific requirements.

- Three-fourths of the medical supervisors obtain baseline ChE tests for new hires, however, only 54% indicated they perform periodic testing.
- Half of the medical supervisors indicated the purpose of the ChE test when ordering it. One of the main reasons medical supervisors provided for not indicating purpose was that they were unaware of this requirement.
- A third of all medical supervisors gave the ChE test results to the employers. However, it is unclear if these results were relayed to the employees.
- While nearly all of the medical supervisors made recommendations when the employee's ChE levels reached action level, only 56% knew if an employer followed the recommendations.
- Although most medical supervisors were familiar with the *Guidelines for Physicians*, few (15%) have attended a Medical Supervisor Training class. Training provides the physician with the knowledge necessary to properly implement the Program.
- Based on the telephone call surveys, some physicians who managed pesticide related illnesses in agricultural workers were not necessarily medical supervisors. They were not aware that a state ChE monitoring program exists. These physicians (15%, n=6) thought they 'could be medical supervisors', but were unclear on what this entails.

Finding 3: A medical supervisor's ability to indicate the true purpose of a ChE test, and for the laboratories to capture and report this information, is limited by the current test ordering structure.

- Although half of the medical supervisors we identified in our survey reported that they indicate the purpose of the ChE test when ordering it, numerous submitted ChE test reports continue to have vague entries entered as the purpose of the test. These are difficult to interpret in relation to the workers' activities (Table B2e in Appendix B).
- The survey suggests that laboratory requisition slips are essential in capturing the necessary information to adequately evaluate the Program. One of the main reasons medical supervisors gave for not indicating the purpose of the ChE test is that there is no designated place on the requisition slip to provide this information.
 - All six laboratories have the ability to customize their requisition slips or electronic ordering interfaces based on client's needs. However, for them to modify their requisition slips to include ChE test types and purpose, the request must be initiated by a physician or healthcare provider. The following are minor modifications made by laboratories to their requisition slips based on clients' requests:
 - ❖ ARUP and MEDTOX requisition slips allow specifying a ChE test but not the purpose of the test (Figures D12a and D12b).

- ❖ In 2014, PALI and PACTOX modified their requisition form to reflect the ChE test purpose (Figures D12c and D12d). However, the physician will need to request this modification and check the appropriate test purpose when submitting a ChE test order.
- ❖ In 2013, QDI laboratories in San Juan Capistrano included “Ask and Order Entry (AOE)” questions on their online test order interfaces. This prompts the ordering physician to specify, in their own words, the purpose of the ChE test that is automatically included in their reports to DPR. QDI followed suit in 2014.
- Despite the modifications made by some laboratories to their requisitions slips, this has not improved reporting the true purpose of the ChE tests submitted to DPR.

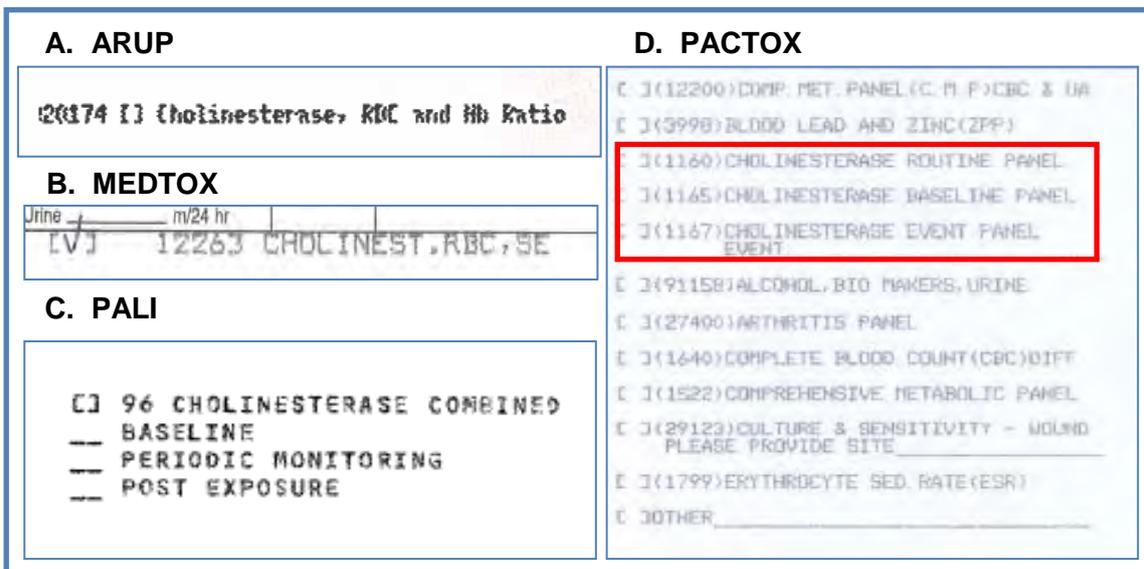


Figure D12: Examples of ChE test orders on laboratory requisition slips based on clients' requests.

- HSC §105206 requires that laboratories, not the medical supervisor, report ChE test results to DPR. This schema works on the assumption that the medical supervisor provides all the information related to the test he/she ordered, including the purpose of the test to the laboratory. The laboratory then simply has to report this information and the ChE test results to DPR. Regardless of how a physician orders a ChE test, the purpose of the test has to be clearly conveyed to the laboratory to be included in the reports. While preparing for the distribution of the survey, we discovered that nurses, physician assistants, medical assistants, and office managers may be ordering the ChE tests. These persons may or may not be aware of the Program or reporting requirements.
- While reporting most of the data elements required by HSC §105206 is straightforward, clearly conveying the purpose of the ChE test is more complicated. It works on the premise that the employer, medical supervisor, their staff, and the drawing and/or reference laboratories all have a clear and consistent understanding of what is meant by the true purpose of a ChE test as it relates to the patient's work

activities handling OPs/CBs. This premise may not be entirely correct based on the reports DPR has received.

- The medical supervisor needs to provide ALL the information required by HSC §105206 to the laboratory so that they are relieved of the burden of having to determine the true purpose of the ChE test.
- Currently, a structure does not exist that allows (1) a medical supervisor to include all the data elements required by HSC §105206 in their test orders, and (2) a laboratory to extract this information from test orders and report this information, along with the test results, to DPR. Unless information through electronic orders or on laboratory requisition slips is captured by the laboratories, it will be challenging to effectively evaluate the Program based solely on the ChE test results.

Unless improvements are made to the way pertinent information is transferred from the medical supervisors to the laboratories, and how the laboratories report this information to DPR, we will continue to receive data that does not accurately reflect the Program.

Letter and Mail-in Survey to Physicians, 2014



Department of Pesticide Regulation



Brian R. Leahy
Director

Edmund G. Brown Jr.
Governor

April 24, 2014

<First name> <Last name>, MD
<address>
<City>, <State> <zip>

Re: Questionnaire for Medical Supervisors contracted with growers or businesses where agricultural workers handle cholinesterase-inhibiting pesticides.

Dear Dr. <Last name>:

In accordance with Title 3 of the California Code of Regulations Section 6728 Medical Supervision (3CCR 6728), employers are required to provide medical supervision for employees who regularly mixes, loads, or applies pesticide with the signal word "DANGER" or "WARNING" that contains an organophosphate or carbamate, for the commercial or research production of an agricultural plant commodity for more than 6 days in any 30 consecutive days in order to monitor for exposure. To meet the requirements of this regulation, a medical supervisor orders red blood cell and plasma (or serum) cholinesterase tests at a laboratory approved by the California Department of Public Health (CDPH), and interprets the test results for cholinesterase (ChE) activity.

The California Health and Safety Code (HSC)105206 requires laboratories that are approved by CDPH to perform cholinesterase testing for occupational health surveillance to report specific information on employees under the Medical Supervision program to the Department of Pesticide Regulation (DPR). The same requirement also applies to persons who have had a suspected or known exposure to pesticide containing cholinesterase inhibitors. DPR may share the information electronically with the Office of Environmental Health Hazard Assessment (OEHHA) and the California Department of Public Health (CDPH). In addition to the tested person's name, date of birth, and the medical supervisor's name, address and telephone number, HSC 105206 also requires laboratories to indicate the "**purpose of test**" on the cholinesterase test results reported to DPR. Reporting laboratories can only include "**purpose of test**" in their reports when an ordering Medical Supervisor has indicated such on the laboratory requisition slip. The Medical Supervisor must indicate whether the "**purpose of test**" is for establishing a worker's **baseline** Cholinesterase level, for routine Cholinesterase **monitoring**, or an **event** to evaluate suspected pesticide illness. These requirements are specified in the HSC 105206, subsection (c).

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<First name> <Last name>, MD

April 24, 2014

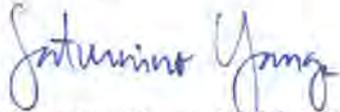
Page 2

You are receiving this letter because you ordered blood Cholinesterase tests from a laboratory approved by CDPH to perform cholinesterase testing for occupational health surveillance. The results of these tests were reported to CDPR under HSC 105206. We request a few minutes of your time to complete the attached questionnaire. Your cooperation is crucial in our effort to evaluate the effectiveness of the Medical Supervision Program for agricultural workers as specified in 3 CCR 6728. Please mail the completed questionnaire in the enclosed self-addressed stamped envelope by May 23, 2014. If we do not receive the completed questionnaire, please expect a follow-up call from either Drs. Lucy Graham or Yvette Nonato in order to help you complete the questionnaire by phone.

If you have any questions on the questionnaire or the cholinesterase reporting requirements, please feel free to contact us.

Thank you for your attention.

Sincerely,



Saturnino Yanga, DVM, MPVM, MS
CDPR/Worker Health and Safety Branch

Encl.

The complete text of 3CCR 6728 (Medical Supervision) can be viewed at
<http://www.cdpr.ca.gov/docs/legbills/calcode/030302.htm#a6728>.

The complete text of HSC 105206 can be viewed at
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=105206.



QUESTIONNAIRE for Medical Supervisors
Please PRINT legibly



First Name: _____ Last Name: _____	
Please check appropriate box: <input type="checkbox"/> MD <input type="checkbox"/> DO <input type="checkbox"/> PA <input type="checkbox"/> NP <input type="checkbox"/> Other, please specify _____	
Type of practice: <input type="checkbox"/> Occupational Medicine <input type="checkbox"/> Family Practice <input type="checkbox"/> Internal Medicine	
<input type="checkbox"/> Other, please specify: _____	
Clinic/Hospital/Affiliation: _____	
Complete address: _____	
Telephone: (____) _____	Email: _____

1. Are you *currently* a Medical Supervisor contracted with a grower or company to supervise agricultural workers handling Cholinesterase (ChE) inhibiting pesticides? Yes No

If YES, please proceed to question 3. If NO, please proceed to question 2.

2. Were you a Medical Supervisor contracted with a grower or company to supervise agricultural workers handling ChE inhibiting pesticides from 2011 to 2013? Yes No

If YES, please proceed to question 3.

*If NO to questions 1 and 2, **STOP** here. Please insert the questionnaire in the self-addressed stamped envelope and **mail it to us**. Thank you for your time.*

3. Have you attended a training class in medical supervision? Yes No Don't remember

4. When you order Blood Cholinesterase (ChE) tests for pesticide handlers, do you indicate the "*purpose of test*" on laboratory requisition slips (i.e., **BASELINE** to establish ChE levels, **MONITORING** for routine ChE testing, or **EVENT** in cases of pesticide exposure)? Yes No

If NO, it is because:

a. The purpose was not pre-printed on the lab requisition slips. Yes No

b. There was no place on the lab requisition slip to write in the purpose. Yes No

c. I was not aware of this requirement. Yes No

d. Other: _____

5. How do/did you obtain employee's blood sample for ChE test analysis?

<p>a. Draw specimen blood in office at time of visit <i>and</i> send sample to laboratory. <i>If no, proceed to 5b.</i> <i>If yes, name of laboratory:</i> _____</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Please continue on the other side.

Do/did you send the employee to this same laboratory for every ChE test ordered? <i>If no</i> , name of laboratory(ies): _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
b. Send employee to a clinical laboratory for blood draw. <i>If no</i> , proceed to 5c. <i>If yes</i> , name of laboratory: _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do/did you send the employee to this same clinical laboratory for blood draw? <i>If no</i> , name of laboratory(ies): _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
c. Other methods. Please specify: _____		

6. Do/Did you or Are/Were you (please answer each question):

Familiar with OEHHA's Guidelines for Physicians?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Visit the grower or employee's worksite?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Examine employees for fitness?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Obtain baseline ChE test for new hires?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Obtain baseline ChE test every 2 years?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Obtain routine ChE tests for employees once every 60-day period? <i>If not</i> , how often do you order routine ChE tests? Every ____ days	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Obtain ChE tests in the event of a pesticide exposure?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Interpret ChE tests results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Informed of the number of days an employee handled ChE-inhibiting pesticides within a 30-day period? <i>If yes</i> , who informed you? <input type="checkbox"/> Employee <input type="checkbox"/> Employer	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Inform employee of ChE test results? <i>If yes</i> , by what method? <input type="checkbox"/> Telephone <input type="checkbox"/> Mail <input type="checkbox"/> Email <input type="checkbox"/> Other: _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Give ChE test results to employers to relay to employee? <i>If yes</i> , by what method? <input type="checkbox"/> Telephone <input type="checkbox"/> Mail <input type="checkbox"/> Email <input type="checkbox"/> Other: _____	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Report pesticide-related illness to your local health officer as required by HSC 105200?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

7. When an employee's ChE test results show a depression of >30% (RBC) or >40% (plasma), do/did you (please answer each question):

Recommend to employer that employee be removed from handling ChE inhibiting pesticides?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Order immediate examination and retesting until enzyme activity levels have returned to 80% or greater of baseline values (RBC and plasma)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Please continue on next page.

8. Does/did the employer comply with the recommendations you had given in relation to an employee's Cholinesterase (ChE) test results?

Yes No Don't Know

If YES, how do/did you know?

From: Employee feedback

Employer feedback

Agricultural Commissioner

County Health Officer

Personal Observation

Other: _____

9. What grower(s) or company(ies) do/did you have a contract with as a Medical Supervisor?

Company: _____
Contact person: _____
Address: _____
Telephone: _____

Company: _____
Contact person: _____
Address: _____
Telephone: _____

Company: _____
Contact person: _____
Address: _____
Telephone: _____

Please PRINT legibly in the space below if you need to provide information on more contracts.

Thank you for your time. Please return questionnaire using the self-addressed, stamped envelope and mail back to us before **May 23, 2014**. If you have any questions regarding this questionnaire, please contact Dr. Yvette Nonato at 916-445-2174 or Dr. Lucy Graham at 916-445-4190.