

SCOPE OF WORK

UPDATE OF MORTALITY AMONG VINYL CHLORIDE WORKERS

The Chemical Manufacturers Association (CMA) is interested in receiving proposals to update the mortality experience among an established cohort of workers employed in the vinyl chloride/polyvinyl chloride (VC/PVC) industry. This cohort was previously studied and reported on by Tabershaw and Gaffey (1974), Cooper (1981), and Wong et. al. (1991).

The Scope of Work for this project is outlined below and includes some key elements which should be addressed in any proposals submitted.

As you will note, CMA is interested in receiving two major work products at the conclusion of the project: 1) a written technical report summarizing an epidemiologic evaluation of the mortality experience of the cohort through 1992; and, 2) a manuscript which is suitable for publication in the peer-reviewed scientific literature.

Background

The original record which formed the basis for prior reports on the mortality experience of this cohort are currently in the possession of ENSR Health Sciences, located in Alameda, California. If a different study group is awarded the contract to conduct the update study, CMA will arrange for the transfer of all pertinent records from ENSR to that contractor. However, ENSR did make confidentiality agreements with some states (see attached list) precluding direct transfer of death certificates for some cohort members. Therefore, submitted proposals will need to indicate how other contractors would proceed to obtain such death certificates for persons dying prior to 1983, the end date for follow-up in the most recent update.

Projected Scope of Work

All proposals submitted in response to this request should address the following issues:

- 1) Verification of the completeness of the database, in comparison with the results of the most recent update (see Wong et. al., 1991, attached).
- 2) How to obtain death certificates for employees dying before 1983 which could not be transferred directly from ENSR to a different contractor.
- 3) Ascertainment of vital status for cohort members who survived through the end of the previous update period (i.e. as of 12/31/92).
- 4) Obtaining death certificates for employees determined to have died after 1982 and assigning a nosologically valid underlying cause of death to each.

- 5) Conduct of a Standardized Mortality Ratio (SMR) analysis comparing the cause-specific mortality experience of the cohort with age-, gender-, and period-specific mortality rates for the U.S. male population and individual state male populations. The analyses conducted should consider at least the following factors:
- Age at first exposure;
 - Year of first exposure;
 - Type of plant (VC monomer or PVC);
 - Length of exposure;
 - Elapsed time since first exposure.

In addition to these points, any proposal should also include the investigator's thoughts on the feasibility and technical merit of the following:

- Updating the exposure histories of surviving cohort members from 1982 through 1992;
- Performing internally standardized mortality analysis using such methods as Poisson regression for comparing SMR's or Proportional Hazards modeling of time to death;
- Using race-specific comparison mortality rates in the epidemiologic analyses, which has not been done previously due to small numbers of non-white cohort members;
- Updating uniform coding of all death certificates according to the Eighth or Ninth Revision of the International Classification of Disease (in all previous updates certificates were uniformly coded to the Seventh Revision).

Technical Criteria

You may be interested in the criteria which the CMA Vinyl Chloride Panel Research Coordinators will use to evaluate proposals received. These are listed below for your consideration in the preparation of your response. The criteria are not listed in any particular order and should not be viewed as having equal weight.

- 1) The curriculum vitae for each of the scientists who will participate on your project team;
- 2) Your proposed approach to each of the technical items listed in the projected Scope of Work;
- 3) Your proposed schedule for completion of the required deliverable work products listed below;
- 4) Your description of the technical and physical resources at your disposal for completion of this project.

Required Deliverable Work Products

The deliverables expected by CMA include the following:

- 1) A series of timely progress reports addressing the following:
 - Verification of the completeness of the existing database against the tables presented in the 1986 report to CMA prepared by Wong et. al. (see attachment).
 - Outcome of efforts to ascertain vital status of cohort members through 1992.
 - Outcome of efforts to obtain death certificates for workers dying after 1982, and for employees dying before 1983 if necessary.
- 2) A detailed technical report summarizing the epidemiologic analysis, submitted to CMA for review and commentary by participating member companies.
- 3) A manuscript suitable for publication in the peer-reviewed scientific literature, submitted to CMA for review and commentary by participating member companies.

Timing

Investigators wishing to submit proposals should do so by August 1, 1994. CMA would like to receive proposals in two separate documents -- one containing the technical proposal and the other containing the cost and time schedule proposals. This will allow us to evaluate the technical merits of the proposal independently of cost and time schedule considerations. Please supply one original unbound copy of the technical proposal, and one original unbound copy of the cost/time schedule proposal.

Additional Information

Please contact Dr. Has Shah of CMA at (202) 887-1192 if you have any questions about this request or about contract administrative details. Our lead scientist for this effort is Dr. Jonathan Ramlow of The Dow Chemical Company. You may contact him at (517) 636-1276 with questions about the scientific aspects of this Scope of Work.

Attachments

1986 Final Report: An Update of An Epidemiologic Study of Vinyl Chloride Workers, 1942-1982

1989 ENSR Reassessment of Liver Cancer Among Vinyl Chloride Workers

1991 An Industry-Wide Epidemiologic Study of Vinyl Chloride Workers, 1942-1982

CMA 116218

Scope of Work
Page 4

1993 Letter to the Editor, Diagnostic Bias in Occupational Epidemiologic Studies (H. Shah)

1993 Response to Letter to the Editor, Diagnostic Bias in Occupational Epidemiologic Studies: An Example Based on the Vinyl Chloride Literature (O. Wong)

CMA 116219

Status of ENSR Confidentiality Agreements with Individual States

ENSR had to enter into agreements with different states to obtain death certificates. In some states there were no restrictions concerning with whom we could share the certificates, while with others there were variable restrictions. The following summarizes the status of agreements with the states as we understand them at this time:

Group A: States that will allow ENSR to give the death certificates to individual companies or CMA as long as we document what is being transmitted.

This group includes the following states: Alaska, California, Connecticut, Washington, D.C., Illinois, Iowa, Maryland, Massachusetts, Minnesota, Nevada, Ohio, and Washington.

Group B: States that will allow ENSR to provide state file numbers, dates of death, and deceased names to companies or CMA.

This group includes the following states: Colorado, Georgia, Idaho, Indiana, Kentucky, Louisiana, Maine, New Mexico, New York, Oregon, Rhode Island, South Carolina, West Virginia, Wisconsin, and Wyoming.

Group C: States that require both ENSR and the companies or CMA to write and request the death certificates based on the study follow-up data. This involves completing application forms for each state (not identical for each), entering the state file numbers, and communicating with each company or CMA.

This group includes the following states: Alabama, Arizona, Arkansas, Delaware, Florida, Kansas, Michigan, Missouri, Mississippi, Montana, New Hampshire, New Jersey, New York City, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Puerto Rico.

We are still investigating the process in three states: Hawaii, Nebraska, and Vermont. They have not as yet responded to multiple inquiries.

ATTACHMENT A

Plants Providing Information Involved in the Vinyl Chloride Update Study

Company	Location	Number of Employees
Air Products	Calvert City, KY	152
Air Products	Pensacola, FL	88
B.F. Goodrich	Avon Lake, OH	620
B.F. Goodrich	Calvert City, KY	280
B.F. Goodrich	Henry, IL	180
B.F. Goodrich	Long Beach, CA	93
B.F. Goodrich	Louisville, KY	2,221
B.F. Goodrich	Niagara Falls, NY	67
B.F. Goodrich Tech	Avon Lake, OH	237
Borden Chemicals	Illioopolis, IL	161
Borden Chemicals	Leominster, MA	241
Borden Petrochemical	Geismar, LA	49
Conoco Chemicals	Aberdeen, MS	225
Conoco Chemicals	Westlake, LA	120
Diamond Shamrock	Deer Park, TX	279
Dow Chemical	Midland, MI	381
Dow Chemical	Ontario, Canada	58
Dow Chemical	Plaquemine, LA	95
Dow Chemical - Oyster	Freeport, TX	66
Dow Chemical - Texas	Freeport, TX	206
Ethyl Corporation	Baton Rouge, LA	558
Ethyl Corporation	Houston, TX	22
Goodyear	Niagara Falls, NY	352
Monsanto	Indian Orchard, MA	225
Monsanto	Texas City, TX	101
Occidental Chemical	Pottstown, PA	507
Tenneco Chemicals	Burlingame, NJ	101
Tenneco Chemicals	Flemington, NJ	103
Tenneco Chemicals	Pasadena, TX	60
Union Carbide	S. Charleston, WV	1,520
Union Carbide	Texas City, TX	289
Uniroyal Chemical	Painesville, OH	335



CHEMICAL MANUFACTURERS ASSOCIATION

August 30, 1994

Howard Rockette, M.D.
Department of Biostatistics
Graduate School of Public Health
University of Pittsburgh
130 De Soto Street
Pittsburgh, PA 15261

Dear Dr. Rockette:

A request for proposal was sent to you on July 26, 1994. A chart of the plants providing information involved in the Vinyl Chloride Update Study is enclosed to help you in preparing your proposal to update the study. Also, in the scope of work for the study update, Texas inadvertently was omitted from Group C in the attachment entitled, "Status of ENSR Confidentiality Agreements with Individual States." If you have any questions, please contact me at (202) 887-1192.

Sincerely,

A handwritten signature in dark ink, appearing to read "Has Shah", is written over the typed name.

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116222



CHEMICAL MANUFACTURERS ASSOCIATION

July 26, 1994

Howard Rockette, M.D.
Department of Biostatistics
Graduate School of Public Health
University of Pittsburgh
130 De Soto Street
Pittsburgh, PA 15261

Dear Dr. Rockette:

The CMA Vinyl Chloride Panel requests your proposal to update a vinyl chloride epidemiology study as described in the enclosed scope of work. Additional documents to help you in preparing your proposal also are enclosed. Proposals should be sent to me at CMA by September 2, 1994. If you have any questions, please call me at (202) 887-1192.

Sincerely,

A handwritten signature in cursive script that reads "Has Shah".

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116223



CHEMICAL MANUFACTURERS ASSOCIATION

July 26, 1994

Roy E. Shore, Ph.D.
Professor, Environmental Medicine
New York University Medical Center
341 East 25th Street, Room 204
New York, NY 10010-6500

Dear Dr. Shore:

The CMA Vinyl Chloride Panel requests your proposal to update a vinyl chloride epidemiology study as described in the enclosed scope of work. Additional documents to help you in preparing your proposal also are enclosed. Proposals should be sent to me at CMA by September 2, 1994. If you have any questions, please call me at (202) 887-1192.

Sincerely,

A handwritten signature in cursive script that reads "Has Shah".

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116224



CHEMICAL MANUFACTURERS ASSOCIATION

August 30, 1994

Ken Mundt
University of Massachusetts
School of Public Health
403 Arnold House
Amherst, MA 01003

Dear Mr. Mundt:

A request for proposal was sent to you on July 26, 1994. A chart of the plants providing information involved in the Vinyl Chloride Update Study is enclosed to help you in preparing your proposal to update the study. Also, in the scope of work for the study update, Texas inadvertently was omitted from Group C in the attachment entitled, "Status of ENSR Confidentiality Agreements with Individual States." If you have any questions, please contact me at (202) 887-1192.

Sincerely,

A handwritten signature in dark ink, reading "Has Shah".

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116225





CHEMICAL MANUFACTURERS ASSOCIATION

July 26, 1994

Ken Mundt
University of Massachusetts
School of Public Health
403 Arnold House
Amherst, MA 01003

Dear Mr. Mundt:

The CMA Vinyl Chloride Panel requests your proposal to update a vinyl chloride epidemiology study as described in the enclosed scope of work. Additional documents to help you in preparing your proposal also are enclosed. Proposals should be sent to me at CMA by September 2, 1994. If you have any questions, please call me at (202) 887-1192.

Sincerely,

A handwritten signature in cursive script that reads "Has Shah".

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116226





CHEMICAL MANUFACTURERS ASSOCIATION

July 26, 1994

Otto Wong, Sc.D., F.A.C.E.
Chief Epidemiologist
Applied Health Sciences, Inc.
181 Second Ave., Suite 628
P.O. Box 2078
San Mateo, CA 94401

Dear Dr. Wong:

The CMA Vinyl Chloride Panel requests your proposal to update a vinyl chloride epidemiology study as described in the enclosed scope of work. Additional documents to help you in preparing your proposal also are enclosed. Proposals should be sent to me at CMA by September 2, 1994. If you have any questions, please call me at (202) 887-1192.

Sincerely,

A handwritten signature in dark ink that reads "Has Shah". The signature is fluid and cursive.

Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

CMA 116227

UAB SCHOOL OF
PUBLIC HEALTH

Department of Epidemiology

February 10, 1994

Elizabeth Festa Watson
Panel Manager
Dibenzofuran/Dioxins Panel
Chemical Manufacturers Association
2501 M Street NW
Washington, DC 20037

Dear Ms. Watson,

Enclosed is a draft of our report on an independent
epidemiologic analysis of the NIOSH dioxin study.

We look forward to receiving your questions and comments and
to discussing the report with you.

Sincerely yours,



Elizabeth Delzell, S.D.
Professor

Enclosure

*Delzell Declined to submit a proposal
because of not being able to take on
additional new work.*

*H. Shah
9/94*

DRAFT

POTENTIAL CONTRACTORS

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CMA 116229