



**Mailing Address:**  
1 Baldwin Street  
Drawer 33  
Montpelier, Vermont 05633-5701

Tel.: (802) 828-2295  
Fax: (802) 828-2483

**STATE OF VERMONT  
JOINT FISCAL COMMITTEE**  
1 Baldwin Street  
Montpelier, Vermont 05633-5701

## MEMORANDUM

---

**To:** James Reardon, Commissioner of Finance & Management

**From:** Rebecca Buck, Staff Associate *RB*

**Date:** April 12, 2006

**Subject:** Status of Grant and Position Requests

---

No Joint Fiscal Committee member has requested that the following items be held for review:

**JFO #2252** – \$5,000 grant from the National Alcohol Beverage Control Association to the Department of Liquor Control. These grant funds will be used print updated training manuals to be used at alcohol server/seller education seminars.  
[JFO received 03/13/06]

**JFO #2253** – Request from the Department of Health to establish one (1) new limited service position: Systems Developer II. This sponsored position is 100% federally funded and associated with a continuing Epidemiology and Laboratory Capacity grant from the Centers for Disease Control and Prevention. The Department has been assured that the CDC is committed to providing support for this project through 03/31/09.  
[JFO received 03/13/06]

**JFO #2254** – Request from the Department of Health to establish two (2) new limited service positions: one (1) Administrative Assistant B and one (1) Health Systems Training and Technical Assistance Specialist. These sponsored positions are 100% federally funded and associated with a continuing Immunization Program grant from the Centers for Disease Control and Prevention.  
[JFO received 03/13/06]

In accordance with 32 V.S.A. §5, the requisite 30 days having elapsed since these items were submitted to the Joint Fiscal Committee, the Governor's approval may now be considered final. We ask that you inform the Secretary of Administration and your staff of these actions.

cc: Linda Morse  
Michael Hogan  
Cynthia LaWare  
Paul Jarris  
Molly Paulger  
Laurie Grimm



**Mailing Address:**  
1 Baldwin Street  
Drawer 33  
Montpelier, Vermont 05633-5701

Tel.: (802) 828-2295  
Fax: (802) 828-2483

**STATE OF VERMONT**  
**JOINT FISCAL COMMITTEE**  
1 Baldwin Street  
Montpelier, Vermont 05633-5701

## MEMORANDUM

---

**To:** Joint Fiscal Committee Members

**From:** Rebecca Buck, Staff Associate *RB*

**Date:** March 16, 2006

**Subject:** Grant and Positions Requests

---

Enclosed please find three (3) requests which the Joint Fiscal Office recently received from the Administration:

**JFO #2252** – \$5,000 grant from the National Alcohol Beverage Control Association to the Department of Liquor Control. These grant funds will be used print updated training manuals to be used at alcohol server/seller education seminars.  
[JFO received 03/13/06]

**JFO #2253** – Request from the Department of Health to establish one (1) new limited service position: Systems Developer II. This sponsored position is 100% federally funded and associated with a continuing Epidemiology and Laboratory Capacity grant from the Centers for Disease Control and Prevention. The Department has been assured that the CDC is committed to providing support for this project through 03/31/09. (Due to the size of the background information package regarding this long-standing grant, I have not included the entire submission in this mailing. I would be pleased to provide the entire package upon request.)  
[JFO received 03/13/06]

**JFO #2254** – Request from the Department of Health to establish two (2) new limited service positions: one (1) Administrative Assistant B and one (1) Health Systems Training and Technical Assistance Specialist. These sponsored positions are 100% federally funded and associated with a continuing Immunization Program grant from the Centers for Disease Control and Prevention. (Due to the size of the background information package regarding this long-standing grant, I have not included the entire submission in this mailing. I would be pleased to provide the entire package upon request.)

*[JFO received 03/13/06]*

The Joint Fiscal Office has reviewed these submissions and determined that all appropriate forms bearing the necessary approvals are in order.

In accordance with the procedures for processing such requests, we ask you to review the enclosed and notify the Joint Fiscal Office (Rebecca Buck at 802/828-5969; [rbuck@leg.state.vt.us](mailto:rbuck@leg.state.vt.us) or Stephen Klein at 802/828-5769; [sklein@leg.state.vt.us](mailto:sklein@leg.state.vt.us)) if you would like any item(s) held for legislative review. Unless we hear from you to the contrary by March 30 we will assume that you agree to consider as final the Governor's acceptance of these requests.

cc: Michael Smith, Secretary  
James Reardon, Commissioner  
Linda Morse, Administrative Assistant  
Michael Hogan, Commissioner  
Cynthia LaWare, Secretary  
Paul Jarris, Commissioner  
Molly Paulger, Classification Manager  
Laurie Grimm, Human Resources Specialist

## INFORMATION NOTICE

The following items were recently received by the Joint Fiscal Committee:

**JFO #2252** – \$5,000 grant from the National Alcohol Beverage Control Association to the Department of Liquor Control. These grant funds will be used print updated training manuals to be used at alcohol server/seller education seminars.

*[JFO received 03/13/06]*

**JFO #2253** – Request from the Department of Health to establish one (1) new limited service position: Systems Developer II. This sponsored position is 100% federally funded and associated with a continuing Epidemiology and Laboratory Capacity grant from the Centers for Disease Control and Prevention. The Department has been assured that the CDC is committed to providing support for this project through 03/31/09.

*[JFO received 03/13/06]*

**JFO #2254** – Request from the Department of Health to establish two (2) new limited service positions: one (1) Administrative Assistant B and one (1) Health Systems Training and Technical Assistance Specialist. These new sponsored positions are 100% federally funded and associated with a continuing Immunization Program grant from the Centers for Disease Control and Prevention.

*[JFO received 03/13/06]*

**From:** "Leach, Gary" <GLEach@vdh.state.vt.us>  
**To:** <rbuck@leg.state.vt.us>  
**Date:** 3/15/2006 2:30:10 PM  
**Subject:** Position Request from Health Department - Epidemiology and Laboratory Capacity Grant

As we discussed, the Health Department has been assured by the Centers for Disease Control that funding for this grant and for this position will be continued, at the current level, beyond the 3/31/06 end date of the current budget period. CDC is committed to providing support for this project through 3/31/09. Please let me know if you need additional information in support of this request. And, as always, thank you for your help throughout this process.

STATE OF VERMONT  
POSITION ACCEPTANCE FORM

JFO #  
2253

GRANT SUMMARY: Support of the state's epidemiology and laboratory capacity

DATE: March 3, 2006

DEPARTMENT: AHS / Health

GRANT AMOUNT: \$900,333

GRANT PERIOD: 4/1/05 - 3/31/06

GRANT/DONOR: Centers for Disease Control & Prevention

POSITIONS REQUESTED (LIMITED SERVICE):

1 FTE - Systems Developer II

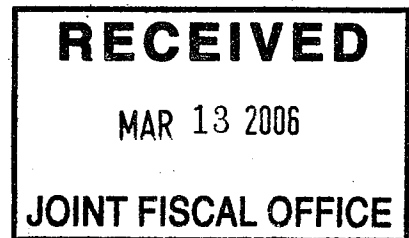
LONG-TERM COSTS TO STATE: None

COMMENTS: This is an ongoing federal grant program to all states to provide basic epidemiology and laboratory capacity throughout the nation.

---

DEPT. OF FINANCE & MANAGEMENT: (INITIAL)  
SECRETARY OF ADMINISTRATION: (INITIAL)  
SENT TO JOINT FISCAL OFFICE: (DATE)

*cur*  
*MSS*  
3/9/06



301110



**STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form**

This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Human Services Date: December 27, 2005

Name and Phone (of the person completing this request): Kate Dawson

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # 17 87



1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):

Centers for Disease Control & Prevention, Atlanta, GA 30341-3724

Epidemiology and Laboratory Capacity for Infectious Diseases

This grant provides continued funding to support Vermont's Epidemiology and Laboratory Capacity program (see attached summary)

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Systems Developer II	1	Information Tech	4/1/04 - 3/31/09 (end date 3/31/09)

\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The Systems Developer II would function as the Operational Data Store (ODS) Manager. Responsibilities include: providing database support; administration of scheduled tasks; implementing electronic lab reporting; miscellaneous upgrade/patch support; and interfacing between the NBS and LITS Plus.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b)).

Stan J. [Signature]  
Signature of Agency or Department Head

11/20/05  
Date

Molly Paul [Signature]  
Approved/Denied by Department of Human Resources

1/27/06  
Date

Susan [Signature]  
Approved/Denied by Finance and Management

2/27/06  
Date

[Signature]  
Approved/Denied by Secretary of Administration

2.28.06  
Date

Comments:

REC'D JAN 31 2006

DATE	DESCRIPTION	AMOUNT



**State of Vermont**

Agency of Human Services  
Office of the Secretary

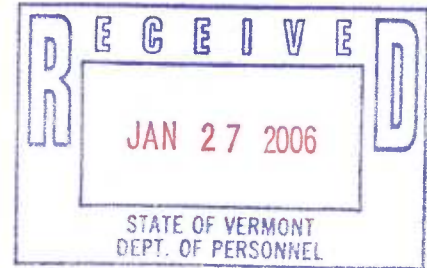
103 South Main Street  
Waterbury, Vermont 05676  
(802) 241-2220

**To:** Molly Ordway Paulger, Human Resources  
Jan Westervelt, Finance and Management

**From:** Kevin O'Connell, Analyst

A handwritten signature in blue ink, appearing to read "Kevin".

**Date:** January 23, 2006



**Re:** Health Department Position- Epidemiology and Lab Capacity Grant

The Health Department is requesting a new, sponsored, limited service position, Systems Developer II, to be funded from the Epidemiology and Laboratory Capacity Grant. Attached is the grant application and materials for the current fiscal year and the following forms:

- AA-1, Grant Acceptance Form
- State of Vermont, Department of Human Resources – Position Request Form
- Department of Human Resources – Request for Classification Action, Position Description, Form C
- Joint Fiscal Committee Review, Limited Service – Grant Funded Position Request Form

The entire grant is funded at \$900,333 for the current fiscal year, about the amount in years past. To fund this position, operating expenses would be reduced and employee personal services increased by about \$83,000 from last year.

The internal review process at the Agency of Human Services has been completed and the Secretary's Office has signed off on this request.

The detail costing of the position, completed by the Health Department, is attached.

Please feel free to contact me at 241-2977 with any questions.

Thank you.

CC: Allan Merritt, AHS  
Gary Leach, Health Department



**Kevin O'Connell - ELC Position Request**

---

**From:** "Dawson, Kate" <kdawson@vdh.state.vt.us>  
**To:** <kevino@wpgate1.ahs.state.vt.us>  
**Date:** 1/24/06 3:09PM  
**Subject:** ELC Position Request

---

Hi Kevin,

Gary asked if I could forward you the following information.

Systems Developer II - paygrade 23  
Starting salary is \$18.70/hour  
Step raise after 6 months \$19.59/hour

Please let me know if you need any additional information.

Thanks,  
Kate

*Kate Dawson  
Grants Specialist  
Vermont Department of Health  
802-657-4286*

Request to Establish Positions - Narrative  
Epidemiology and Laboratory Capacity grant - U50/CCU123665-02  
December 5, 2005

The Department of Health has received its annual grant award from the Centers for Disease Control and Prevention to continue the Department's longstanding Epidemiology and Laboratory Capacity for Infectious Diseases Program. The Epidemiology and Laboratory Capacity for Infectious Diseases Program supports surveillance and support in several areas including Antimicrobial Resistance, Foodborne Diseases, Hepatitis Prevention and Control, Influenza Surveillance and Response, the National Electronic Disease Surveillance System, West Nile Virus, and general Epidemiology and Laboratory Capacity. This year's grant award is for \$900,331 and includes funding to establish the requested position.

The funds provided would support 100% of the Systems Developer II position. We are attaching a copy of the grant award and the Grant application budget showing the new position.

The Systems Developer II would function as the Operational Data Store (ODS) Manager. Responsibilities include: providing database support; administration of scheduled tasks; implementing electronic lab reporting; miscellaneous upgrade/patch support; and interfacing between the NBS and LITS Plus.

The Health Department is, therefore, requesting the establishment of one limited-service position. The completed "Request to Approve the Establishment of Positions" form is attached. We expect that funding for this position will be continued in the annual CDC grant for the Epidemiology and Laboratory Capacity for Infectious Diseases program and the Department will include these funds in its annual State budget.

**Request for Classification Action**  
**New or Vacant Positions**  
**EXISTING Job Class/Title ONLY**  
**Position Description Form C/Notice of Action**  
**For Department of Personnel Use Only**

Notice of Action # _____	Date Received (Stamp) _____
Action Taken: _____	
New Job Title _____	
Current Class Code _____	New Class Code _____
Current Pay Grade _____	New Pay Grade _____
Current Mgt Level _____ B/U _____ OT Cat. _____	EEO Cat. _____ FLSA _____
New Mgt Level _____ B/U _____ OT Cat. _____	EEO Cat. _____ FLSA _____
Classification Analyst _____	Date _____ Effective Date: _____
Comments: _____	Date Processed: _____
Willis Rating/Components: Knowledge & Skills: _____	Mental Demands: _____ Accountability: _____
Working Conditions: _____	Total: _____

**Position Information:**

Incumbent: **Vacant or New Position**

Position Number:  Current Job/Class Title:

Agency/Department/Unit:  AHS/Health/Information Technology GUC:  74002

Pay Group:  74A Work Station:  Burlington Zip Code:  05401

Position Type:  Permanent  Limited Service (end date )

Funding Source:  Core  Sponsored  Partnership. For Partnership positions provide the funding breakdown (% General Fund, % Federal, etc.)  100

Supervisor's Name, Title and Phone Number:

**Check the type of request (new or vacant position) and complete the appropriate section.**

**New Position(s):**

a. **REQUIRED:** Allocation requested: Existing Class Code  058000 Existing Job/Class Title:  System Developer II

b. Position authorized by:

- Joint Fiscal Office – JFO #  Approval Date:
- Legislature – Provide statutory citation (e.g. Act XX, Section XXX(x), XXXX session)
- Other (explain) -- Provide statutory citation if appropriate.

**Vacant Position:**

- a. Position Number:
- b. Date position became vacant:
- c. Current Job/Class Code:  Current Job/Class Title:
- d. REQUIRED: Requested (existing) Job/Class Code:  Requested (existing) Job/Class Title:
- e. Are there any other changes to this position; for example: change of supervisor, GUC, work station? Yes  No  If Yes, please provide detailed information:

**For All Requests:**

1. List the anticipated job duties and expectations; include all major job duties: Professional programming database administration, and systems analysis work. Analyzes the performance of hardware and software interfaces and identifies alternatives for optimizing the usage of computer resources. Applies generally accepted programming standards and techniques to assure efficient program logic and data manipulation. Participates in designing, coding, testing, debugging, configuring, and documenting operating systems and software applications. Installs software and user utilities for modifications and upgrades of operating systems and workstation environments. Confers with personnel of organizational units involved to analyze current operational procedures, identify problems, and learn specific input and output requirement such as forms of data input, how data is to be summarized, and formats for reports. Writes detailed description of user needs, program functions, and steps required to develop or modify computer program. Studies existing information processing systems to evaluate effectiveness and develops new systems to improve production or workflow as required. Responsible for the supervisory and technical work maintaining and updating department or agency computer databases. Establishes data base administration procedures, sets standards, educates system staff on effective programming techniques, and discusses with other System Developers the appropriate design and development applications. Supervision of subordinate System Developer positions may be required.

2. Provide a brief justification/explanation of this request: The Systems Developer II will function as the Operational Data Store (ODS) Manager. Responsibilities will include: providing NBS database support (e.g., applying table changes resulting from new releases, extending SRT tables, adding outbreak names); administration of scheduled NBS tasks (e.g., verifying RDB population, verifying outgoing (NND) message creation, verifying incoming (ELR) message creation, verifying data mart population, verifying de-duplication process); implementing electronic lab reporting (e.g., incoming message parsing, outgoing message creation, LOINC code mapping, SNOMED code mapping); miscellaneous NBS upgrade/patch support (e.g., CDF import/maintenance, installing validation checklist, creating validation routine for LDF (JavaScript)); and interfacing between the NBS and LITS Plus.



3. If the position will be supervisory, please list the names and titles of all classified employees reporting to this position (this information should be identified on the organizational chart as well).

**Personnel Administrator's Section:**

4. If the requested class title is part of a job series or career ladder, will the position be recruited at different levels? Yes  No

5. The name and title of the person who completed this form:

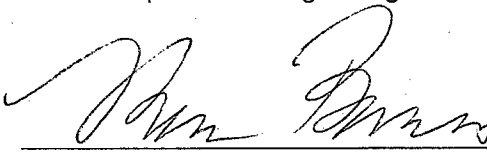
6. Who should be contacted if there are questions about this position (provide name and phone number):

7. How many other positions are allocated to the requested class title in the department:

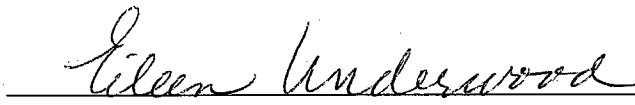
8. Will this change (new position added/change to vacant position) affect other positions within the organization? (For example, will this have an impact on the supervisor's management level designation; will duties be shifted within the unit requiring review of other positions; or are there other issues relevant to the classification process.)

**Attachments:**

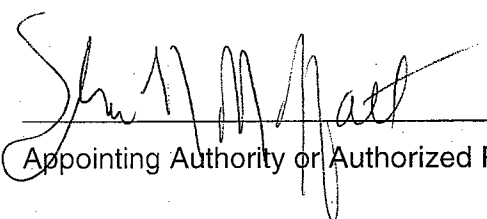
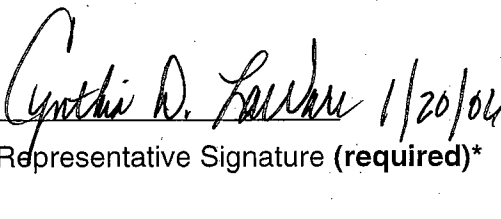
- Organizational charts are **required** and must indicate where the position reports.
- Class specification (optional).
- For new positions, include copies of the language authorizing the position, or any other information that would help us better understand the program, the need for the position, etc.
- Other supporting documentation such as memos regarding department reorganization, or further explanation regarding the need to reallocate a vacancy (if appropriate).

  
\_\_\_\_\_  
Personnel Administrator's Signature (required)\*

\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Supervisor's Signature (required)\*

11/18/05  
Date

  1/20/06  
\_\_\_\_\_  
Appointing Authority or Authorized Representative Signature (required)\*

11/18/05  
Date

\* Note: Attach additional information or comments if appropriate.

VERMONT DEPARTMENT OF HEALTH  
ADMINISTRATION DIVISION  
Information Technology Services Unit

Jessica Porter  
HD Operations Chief  
740192 PG-30

Arthur (Art) Limacher  
IT Manager II  
740150 PG-32

Elizabeth (Liza) Lewis  
Administrative Assistant B  
740037 PG-19

Brent Maggari  
AIS Associate CIO

Eileen Underwood  
IT Manager I  
740317 PG-28

New Co-Sig  
IT Systems Developer III

Edward (Ed) Andrus  
IT Manager I  
740345 PG-28

John Ravel  
IT Specialist III  
740277 PG-26

Darin Prall  
Network Administrator II  
740403 PG-26

Vacant  
Systems Developer III  
740422 PG-26

System Developer III  
BP/VITL  
740761 PG-26

Craig Benson  
Systems Developer III  
740346 PG-26

Becky Jo Cyr  
Systems Developer III  
740063 PG-26

Dan Porter  
IT Specialist  
740076 PG-23

Raymond Vezina  
(Ray)  
Network Administrator II  
740495 PG-23

Dan McConnell  
Systems Developer II  
741005 PG-23

Nancy Richard  
Systems Developer II  
740302 PG-23

Andrei Goloubev  
Systems Developer II  
740528 PG-23

Linda Mackenzie  
IT Specialist II  
740488 PG-23

Stephen Woodward  
Network Administrator II  
740499 PG-23

Esmey Santos Jensen  
Systems Developer II  
740389 PG-23

Kevin Stapleton  
Systems Developer II  
740498 PG-23

Deanna Prall  
Systems Developer I  
740531 PG-20

Jacqueline Fontaine  
(Jacky)  
IT Specialist II  
740500 PG-22

Laralee Peck  
Network Administrator II  
740548 PG-23

Mark Desrosiers  
Systems Developer II  
740390 PG-23

Roger Gillim  
Systems Developer II  
740571 PG-26

Sandra LeBlanc  
Systems Developer II  
740165 PG-23  
(.5 FTE)

New Emergency  
Preparedness  
Systems Developer II

Tela Torrey  
Systems Developer I  
740520 PG-20

Karen Clark  
Systems Developer II  
740569 PG-23

New ELC  
Systems Developer II

Pat Hickcox  
Systems Developer II  
740291 PG-23

Kim Jones  
Systems Developer II  
740165 PG-23  
(.5 FTE)

Amy Jaquish  
Systems Developer II  
740497 PG-23

October 31,  
2005

VERMONT DEPARTMENT OF HEALTH  
MEMORANDUM

To: Kevin O'Connell  
From: Kate Dawson, Grants Specialist  
Re: Epidemiology and Laboratory Capacity Position Request  
Date: 12/28/05

Enclosed please find a form from the Joint Fiscal Committee pertaining to the Epidemiology and Laboratory Capacity Grant. Please refer to Gary Leach's email from 12/28/05 which explains why it needs to be included with the rest of the packet. Please contact me at 657-4286 with any questions.

**STATE OF VERMONT  
Joint Fiscal Committee Review  
Limited Service - Grant Funded  
Position Request Form**

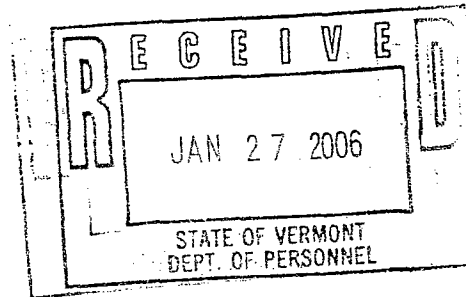
This form is to be used by agencies and departments when additional grant funded positions are being requested. Review and approval by the Department of Human Resources must be obtained prior to review by the Department of Finance and Management. The Department of Finance will forward requests to the Joint Fiscal Office for JFC review. A Request for Classification Review Form (RFR) and an updated organizational chart showing to whom the new position(s) would report must be attached to this form. Please attach additional pages as necessary to provide enough detail.

Agency/Department: Human Services Date: December 27, 2005

Name and Phone (of the person completing this request): Kate Dawson

Request is for:

- Positions funded and attached to a new grant.  
 Positions funded and attached to an existing grant approved by JFO # 17 87



1. Name of Granting Agency, Title of Grant, Grant Funding Detail (attach grant documents):  
 Centers for Disease Control & Prevention, Atlanta, GA 30341-3724  
 Epidemiology and Laboratory Capacity for Infectious Diseases  
 This grant provides continued funding to support Vermont's Epidemiology and Laboratory Capacity program (see attached summary)

2. List below titles, number of positions in each title, program area, and limited service end date (information should be based on grant award and should match information provided on the RFR) position(s) will be established only after JFC final approval:

<u>Title* of Position(s) Requested</u>	<u># of Positions</u>	<u>Division/Program</u>	<u>Grant Funding Period/Anticipated End Date</u>
Systems Developer II	1	Information Tech	4/1/04 - 3/31/09 (end date 3/31/09)

\*Final determination of title and pay grade to be made by the Department of Human Resources Classification Division upon submission and review of Request for Classification Review.

3. Justification for this request as an essential grant program need:

The Systems Developer II would function as the Operational Data Store (ODS) Manager. Responsibilities include: providing database support; administration of scheduled tasks; implementing electronic lab reporting; miscellaneous upgrade/patch support; and interfacing between the NBS and LITS Plus.

I certify that this information is correct and that necessary funding, space and equipment for the above position(s) are available (required by 32 VSA Sec. 5(b)).

<u>[Signature]</u>	<u>[Signature]</u>	<u>1/20/06</u>
Signature of Agency or Department Head		Date
<u>[Signature]</u>		<u>1/27/06</u>
Approved/Denied by Department of Human Resources		Date
<u>[Signature]</u>		<u>2/27/06</u>
Approved/Denied by Finance and Management		Date
<u>[Signature]</u>		<u>2-28-06</u>
Approved/Denied by Secretary of Administration		Date

Comments:

REC'D JAN 31 2006

1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50

**Kevin O'Connell - ELC Position Request**

---

**From:** "Dawson, Kate" <kdawson@vdh.state.vt.us>  
**To:** <kevino@wpgate1.ahs.state.vt.us>  
**Date:** 1/24/06 3:09PM  
**Subject:** ELC Position Request

---

Hi Kevin,

Gary asked if I could forward you the following information.

Systems Developer II - paygrade 23  
Starting salary is \$18.70/hour  
Step raise after 6 months \$19.59/hour

Please let me know if you need any additional information.

Thanks,  
Kate

*Kate Dawson  
Grants Specialist  
Vermont Department of Health  
802-657-4286*



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control  
and Prevention (CDC)  
Atlanta GA 30341-3724

Patsy Tassler, Ph.D.  
Vermont Department of Health  
108 Cherry Street  
Burlington, Vermont 05402

Reference: Notice of Cooperative Agreement Number U50/CCU123665-02  
Epidemiology and Laboratory Capacity for Infectious Diseases

Dear Dr. Tassler:

Enclosed is the Notice of Grant Award for Year 02 of the program entitled "Epidemiology and Laboratory Capacity for Infectious Diseases" under Program Announcement Number 04040. This Notice of Award provides the total funding approved for the budget period which begins April 1, 2005 and ends March 31, 2006. Please refer to the continuation pages of the Award Notice for specific details of funds awarded by budget category and other pertinent information regarding the award.

The Project Officer listed on the enclosed Contact List will be responsible for the review and programmatic monitoring of your assistance award. The Grants Management Specialist listed has been assigned the business management responsibilities of your award.

An annual Financial Status Report (FSR) must be submitted within 90 days after the end of the budget period. This report must be submitted on the enclosed form, Standard Form No. 269, and include only those funds authorized and expended during the budget period. An original and two copies of the semiannual progress report, along with all correspondence, including requests for prior approvals, must be submitted to the Grants Management Officer, Attention: Grants Management Specialist, with a copy to the project officer. All correspondence must include your award number and signatures from both the business office and the program official.

If you have any questions on this matter, please feel free to contact Yolanda Ingram-Sledge, Grants Management Specialist (770) 488-2787.

Sincerely,

Sharron P. Orum  
Grants Management Officer  
Acquisition and Assistance, Branch II  
Procurement and Grants Office

cc: Business Office  
Greg Jones, NCID, MS C-12





03/31/2005

73.203

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
PUBLIC HEALTH SERVICE  
CENTERS FOR DISEASE CONTROL AND PREVENTION

NOTICE OF COOPERATIVE AGREEMENT

AUTHORIZATION (LEGISLATION/REGULATION)

301(A) & 317(K)(2) PHS ACT, AS AMENDED

1. SUPERSEDES AWARD NOTICE DATED \_\_\_\_\_  
EXCEPT THAT ANY ADDITIONS OR RESTRICTIONS \_\_\_\_\_  
PREVIOUSLY IMPOSED REMAIN IN EFFECT UNLESS SPECIFICALLY RESCINDED.

4. GRANT NO. **U50/CCU123665-02**

5. ADMINISTRATIVE CODES **CCU50**

6. PROJECT PERIOD  
FROM **04/01/2004** THROUGH **03/31/2009**

7. BUDGET PERIOD  
FROM **04/01/2005** THROUGH **03/31/2006**

8. TITLE OF PROJECT (OR PROGRAM)  
**EPIDEMIOLOGY AND LABORATORY CAPACITY FOR INFECTIOUS DISEASES**

9. GRANTEE NAME AND ADDRESS  
**VERMONT DEPARTMENT OF HEALTH  
FEDERAL PROGRAM ADMINISTRATOR  
108 CHERRY STREET  
BURLINGTON, VT 05401**

10. DIRECTOR OF PROJECT (PROGRAM DIRECTOR/PRINCIPAL INVESTIGATOR)  
**PATSY TASSLER, PHD  
HEALTH SURVEILLANCE EPIDEMIOLOGIST  
108 CHERRY STREET  
BURLINGTON, VT 05401**

11. APPROVED BUDGET (EXCLUDES PHS DIRECT ASSISTANCE)

PHS GRANT FUNDS ONLY  
I TOTAL PROJECT COSTS INCLUDING GRANT FUNDS AND ALL OTHER FINANCIAL PARTICIPATION  
(PLACE NUMERAL ON LINE) I

.. SALARIES AND WAGES.....	\$	485,397
.. FRINGE BENEFITS.....	\$	104,651
.. TOTAL PERSONNEL COSTS.....	\$	590,048
1. CONSULTANT COSTS.....	\$	0
2. EQUIPMENT.....	\$	0
3. SUPPLIES.....	\$	31,134
4. TRAVEL.....	\$	21,320
5. PATIENT CARE-INPATIENT.....	\$	0
6. PATIENT CARE-OUTPATIENT.....	\$	0
7. ALTERATIONS AND RENOVATIONS.....	\$	0
8. OTHER.....	\$	8,130
9. CONSORTIUM/CONTRACTUAL COSTS.....	\$	7,000
10. TRAINEE RELATED EXPENSES.....	\$	0
11. TRAINEE STIPENDS.....	\$	0
12. TRAINEE TUITION AND FEES.....	\$	0
13. TRAINEE TRAVEL.....	\$	0
.. TOTAL DIRECT COSTS.....	\$	657,632
.. INDIRECT COSTS ( 0.00 X OF 88%/TADC).....	\$	242,699
1. TOTAL APPROVED BUDGET.....	\$	900,331
2. SBIR FEE.....	\$	0
3. FEDERAL SHARE.....	\$	900,331
4. NON-FEDERAL SHARE.....	\$	0

12. AWARD COMPUTATION FOR FINANCIAL ASSISTANCE

A. AMOUNT OF PHS FINANCIAL ASSISTANCE (FROM 11.U).....	\$	900,331
B. LESS UNOBLIGATED BALANCE FROM PRIOR BUDGET PERIODS..	\$	0
C. LESS CUMULATIVE PRIOR AWARD(S) THIS BUDGET PERIOD...	\$	0
D. AMOUNT OF FINANCIAL ASSIST. THIS ACTION	\$	900,331

13. RECOMMENDED FUTURE SUPPORT (SUBJECT TO THE AVAILABILITY OF FUNDS AND SATISFACTORY PROGRESS OF THE PROJECT)

BUDGET YEAR	TOTAL DIRECT COSTS	BUDGET YEAR	TOTAL DIRECT COSTS
A. 3	0	D. 0	0
B. 4	0	E. 0	0
C. 5	0	F. 0	0

14. APPROVED DIRECT ASSISTANCE BUDGET (IN LIEU OF CASH)

A. AMOUNT OF PHS DIRECT ASSISTANCE.....	\$	0
B. LESS UNOBLIGATED BALANCE FROM PRIOR BUDGET PERIODS..	\$	0
C. LESS CUMULATIVE PRIOR AWARDS FROM THIS BUDGET PERIOD	\$	0
D. AMOUNT OF DIRECT ASSISTANCE THIS ACTION	\$	0

15. PROGRAM INCOME SUBJECT TO 45 CFR PART 74, SUBPART F, OR 45 CFR 92.25, SHALL BE USED IN ACCORDANCE WITH ONE OF THE FOLLOWING ALTERNATIVES: (SELECT ONE AND PUT LETTER IN BOX.)

- A. DEDUCTION
  - B. ADDITIONAL COSTS
  - C. MATCHING
  - D. OTHER RESEARCH (ADD/DEDUCT OPTION)
  - E. OTHER (SEE REMARKS)
- B**

THIS AWARD IS BASED ON AN APPLICATION SUBMITTED TO, AND AS APPROVED BY, THE PHS ON THE ABOVE TITLED PROJECT AND IS SUBJECT TO THE TERMS AND CONDITIONS INCORPORATED EITHER DIRECTLY OR BY REFERENCE IN THE FOLLOWING:  
A. THE GRANT PROGRAM LEGISLATION CITED ABOVE. B. THE GRANT PROGRAM REGULATION CITED ABOVE. C. THIS AWARD NOTICE INCLUDING TERMS AND CONDITIONS, IF ANY, NOTED BELOW UNDER REMARKS. D. PHS GRANTS POLICY STATEMENT INCLUDING ADDENDA IN EFFECT AS OF THE BEGINNING DATE OF THE BUDGET PERIOD. E. 45 CFR PART 74 OR 45 CFR PART 92 AS APPLICABLE. IN THE EVENT THERE ARE CONFLICTING OR OTHERWISE INCONSISTENT POLICIES APPLICABLE TO THE GRANT, THE ABOVE ORDER OF PRECEDENCE SHALL PREVAIL. ACCEPTANCE OF THE GRANT TERMS AND CONDITIONS IS ACKNOWLEDGED BY THE GRANTEE WHEN FUNDS ARE DRAWN OR OTHERWISE OBTAINED FROM THE GRANT PAYMENT SYSTEM.

REMARKS (OTHER TERMS AND CONDITIONS ATTACHED) - YES  NO

SPONSOR: NATIONAL CENTER FOR INFECTIOUS DISEASES  
\*IDC RATE BASE: SEE ATTACHED

PHS GRANTS MANAGEMENT OFFICER: (SIGNATURE) *[Signature]* (NAME-TYPED/PRINT) **SHARRON P. ORUM** (TITLE) **GRANTS MANAGEMENT OFFICER**

7. OBJ. CLASS. **41.51** 18. CRS.EIN: **1-036000274-A1** 19. LIST NO.: **C0-004-U05**

FY-CAN	DOCUMENT NO.	ADMINISTRATIVE CODE	AMT.ACTION FIN.ASST	AMT.ACTION DIR.ASST
1. 05-19116 05-9211109	a. CCU123665	c. CCU50	D. 297,257	E. 0
1. 05-19126 05-9211180	a. CCU123665	c. CCU50	D. 61,674	E. 0
2. 05-19116 05-9210976	a. CCU123665	c. CCU50	D. 2,000	E. 0

PHS-5152-1 (CONTINUED)

DATE ISSUED.....: 03/31/2005  
GRANT NO.....: U50/CCU123665-02  
APPROVAL LIST NO: C0-004-U05

FY CAN -----	DOCUMENT NO. -----	ADM.CODE -----	FIN.ASST -----	DIR.ASST -----
05-19116 05-9211388	CCU123665	CCU50	270,000	0
05-193YD 05-9213773	CCU123665	CCU50	171,580	0
05-19116 05-9213126	CCU123665	CCU50	97,820	0

DIRECT ASSISTANCE BUDGET:  
=====

PERSONAL SERVICE: 0  
TRAVEL.....: 0  
VACCINE.....: 0  
OTHER SERVICE...: 0

**NOTICE OF AWARD**  
(Continuation Sheet)

PAGE 2 OF 4

DATE ISSUED

GRANT NO. U50/CCU123665-02

GRANTEE: VERMONT DEPARTMENT OF HEALTH

**TERMS AND CONDITIONS OF THIS AWARD**

**INCORPORATION:**

Program Announcement Number 04040 entitled "Epidemiology and Laboratory Capacity for Infectious Diseases" and the application dated November 29, 2004, are made a part of this award by reference.

**INDIRECT COST:**

Cost Allocation plan for Vermont, as approved by the DHHS Division of Cost Allocation is predicated upon conditions that (1) no costs, other than those incurred pursuant to the approved State Plan, are included in claims to the HHS and that such costs are legal obligations, (2) the same cost treated as indirect costs have not been claimed as direct costs, and (3) similar types of costs have been accorded consistent treatment. Cost Allocation Agreement 04/17/2003.

**HUMAN SUBJECTS:**

Should any of the employees whose salaries are funded by this award engage in human subjects research as defined by Title 45 Code of Regulations part 46, the institution must be covered by or apply for an assurance from the Office of Human Research Protection.

**APPROVED BUDGET:**

Budget Category	FOOD & NARMS	HCV	FLU	NEDSS	WNV	CORE	Total Funds
Personnel	\$ 44,072	\$ 54,921	\$ 15,114	\$ 96,754	\$ 137,037	\$ 137,499	\$ 485,397
Fringe	\$ 11,018	\$ 13,730	3,779	24,189	17,560	34,375	\$ 104,651
Consultants	\$ -	\$ -	-	-	-	-	-
Travel	\$ 2,616	\$ 1,708	-	2,260	13,621	1,115	\$ 21,320
Equipment	\$ -	\$ -	-	-	-	-	\$ -
Supplies		\$ -	4,000	-	27,134	-	\$ 31,134
Other	\$ 2,000	\$ -	-	-	6,130	-	\$ 8,130
Contractual	\$ 7,000	\$ -	-	-	-	-	\$ 7,000
<b>Total Direct Costs</b>	<b>\$ 66,706</b>	<b>\$ 70,359</b>	<b>\$ 22,893</b>	<b>\$ 123,203</b>	<b>\$ 201,482</b>	<b>\$ 172,989</b>	<b>\$ 657,632</b>
<b>Indirect Costs</b>	<b>22,036</b>	<b>27,461</b>	<b>7,557</b>	<b>48,377</b>	<b>68,518</b>	<b>68,750</b>	<b>242,699</b>
<b>Total Award</b>	<b>\$ 88,742</b>	<b>\$ 97,820</b>	<b>\$ 30,450</b>	<b>\$ 171,580</b>	<b>\$ 270,000</b>	<b>\$ 241,739</b>	<b>\$ 900,331</b>

**TECHNICAL REPORTING REQUIREMENTS**

An original and two copies of a narrative semi-annual progress report is required. Progress reports should address the status of progress toward specific project objectives and should include copies of any publication resulting from the project.

An ANNUAL financial status report (FSR) is required no later than 90 days after the end of the budget period. The original and two copies of all reports and official correspondence MUST BE IDENTIFIED WITH THE AWARD

**NOTICE OF AWARD**  
(Continuation Sheet)

PAGE 3 OF 4

DATE ISSUED

GRANT NO. U50/CCU123665-02

GRANTEE: VERMONT DEPARTMENT OF HEALTH

NUMBER SHOWN AT THE TOP RIGHT OF THIS DOCUMENT AND must be submitted to the CDC Grants office at the following address:

Grants Management Branch  
Attn: Yolanda Ingram-Sledge  
Centers for Disease Control and Prevention (CDC)  
2920 Brandywine Road, Suite 3000  
Atlanta, Georgia 30341-4146  
Telephone: (770) 488-2787; FAX: (770) 488-2777

**CORRESPONDENCE/REPORTS:**

All correspondence regarding this award must be identified with the award number as shown at the top right of this page.

**PRIOR APPROVAL:**

In accordance with the PHS Grants Policy Statement dated April 1, 1994, Post award Administration, Chapter 8-8, "ALL requests which require prior approval must bear the signature of an authorized official of the business office of the grantee organization as well as the principal investigator or program or project director." Any requests received which reflects only one signature will be returned to the grantee unprocessed. Additionally, any requests involving funding issues must include a new proposed budget and narrative justification of the requested changes.

The deadline date for submitting requests for carryover of unobligated funds and rebudgeting of funds for this budget period is February 1, 2006. Any of the aforementioned requests received after this date will be denied and returned to the grantee. FAXED OR E-MAILED REQUESTS WILL NOT BE ACCEPTED.

**INVENTIONS:**

Acceptance of grant funds obligates recipients to comply with the "standard patent rights" clauses in 37 CFR 401.14.

**PUBLICATION:**

Publications, journal articles, etc., produced under a CDC grant/cooperative agreement project must bear an acknowledgment and disclaimer, as appropriate, such as: This publication (journal article, etc.) was supported by Grant/Cooperative Agreement Number \_\_\_\_\_ from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

**EQUIPMENT AND PRODUCTS:**

To the greatest extent practicable, all equipment and products purchased with CDC funds should be American-made.

**ACKNOWLEDGING FEDERAL SUPPORT:**

When issuing statements, press releases, requests for proposals, bid solicitations and other documents describing projects or programs funded in whole or in part with Federal money, all awardees receiving Federal funds, including and not limited to State and local governments and recipients of Federal research grants, shall clearly state (1) the percentage of the total costs of the program or project which will be financed with Federal money, (2) the dollar amount of Federal funds for the project or program, and (3) percentage and dollar amount of the total costs of the project or program that will be financed by non-governmental sources.

**NOTICE OF AWARD**  
(Continuation Sheet)

PAGE 4 OF 4

DATE ISSUED

GRANT NO. U50/CCU123665-02  
GRANTEE: VERMONT DEPARTMENT OF HEALTH

**INSPECTOR GENERAL:**

For your information, United States Department of Health and Human Services' Inspector General maintains a toll-free telephone number, (800) 368-5779, for receiving information concerning fraud, waste or abuse under grants and cooperative agreements. Such reports are kept confidential, and callers may decline to give their names if they choose to remain anonymous.

**PAYMENT INFORMATION:**

Payments under this award will be made available through the Department of Health and Human Services (HHS) Payment Management System (PMS). PMS is administered by the Division of Payment Management, Program Support Center, HHS. PMS will forward the DHHS Manual for Recipients Financed Under the Payment Management System (PMS), PMS-270 and PMS-272 forms.

A. PMS correspondence, mailed through the U.S. Postal Service, should be addressed follows:  
Division of Payment Management, FMS/PSC/HHS,  
P.O. Box 6021 Rockville, MD 20852.

B. If a carrier other than the U.S. Postal Service is used, such as United Parcel Service, Federal Express, or other commercial service, the correspondence should be addressed as follows:  
Division of Payment Management, FMS/PSC/HHS, Rockwell Building #1, Suite 700, 11400  
Rockville Pike, Rockville, MD 20852.

To expedite your first payment from this award, attach a copy of the Notice of Grant/ Cooperative Agreement to your payment request form.

**CDC CONTACT NAMES:**

**Business and Grants Policy Contact**

Yolanda Ingram-Sledge, Grants Management Specialist  
PGO/GMB, CDC  
2920 Brandywine Road, Room 3000  
Atlanta, Georgia 30341-4146  
Telephone: (770) 488-2787, Internet: yis0@cdc.gov

**Programmatic Contact**

Deborah Deppe  
Centers for Disease Control and Prevention (CDC)  
National Center for Infectious Diseases (NCID)  
1600 Clifton Road, NE, Mailstop C-12  
Atlanta, Georgia 30333  
Telephone: (404) 639-4668  
E-mail Address: dad1@cdc.gov

# FACSIMILE TRANSMISSION

---

National Center for Infectious Diseases  
Centers for Disease Control and Prevention  
1600 Clifton Rd., NE, M/S C-12  
Atlanta, GA 30333

---

DATE:

3-25-2005

TO: Patsy Tassler

COMPANY: Vermont Dept of Health

PHONE: 802-863-7286

FAX: 802-951-4061

---

FROM: Sherry L. Orloff, MPH  
ELC Program Consultant  
404-639-1442

CDC/NCID/OD

FAX NUMBER: (404) 639-3106

NUMBER OF PAGES: 1 OF 2

---

MESSAGE:

Please find attached your *unofficial* budget mark-up for your Epidemiology and Laboratory Capacity Cooperative Agreement continuation and does not authorize grantees to begin incurring costs. You will receive the **official** notice from PGO of the award amount. Even though both should show the same amounts, it is possible that there will be variation. If this is the case, again, the PGO notice is the official award.

---

Questions about this mark-up should be directed to Sherry Orloff, 404-639-1442.

**Epidemiology and Laboratory Capacity (ELC) Cooperative Agreement  
FY2005 Continuation Awards**

PAGE 02/21

NCID OD

Grantee:	VERMONT		Pgm Ann:	04040		Award Type:	Noncompeting Continuation									
Grant #:	123655		Budget Period:	02		Award Effective:	04/01/05									
	AR-Jud Use	AR-other	FoodSafety	NARMS	HCV Coord	Influenza	NEDSS	WNV	Core	BIDS	CJD/CWD					Total
REQUEST=																0
Personnel			44,072		54,921	15,114	96,754	137,037	137,499							485,397
Fringe			11,018		13,730	3,779	24,189	17,560	34,375							104,651
Travel			2,818		1,708		2,260	13,621	1,115							21,320
Equi																0
Supp			7,000			4,000		27,134								38,134
Contr																0
Construct																0
Other				2,000				6,130								8,130
Total Direct	0	0	64,706	2,000	70,359	22,893	123,203	201,482	172,989	0	0	0	0	0	0	657,632
Indirect			22,036		27,461	7,557	40,377	68,518	68,750							242,699
TOT REC =	0	0	86,742	2,000	97,820	30,450	171,580	270,000	241,739	0	0	0	0	0	0	900,331
Charged to:																
EI CAN (1109)			25,068			30,450			241,739							297,257
DP CAN 1 \$\$		0	61,674		97,820		171,580	270,000		0	0					601,074
CAN 1	0970	1218	1180	V090	3126		3773	1388		1127	3699					
DP CAN 2 \$\$				2,000												2,000
CAN 2				0978												
DP CAN 3 \$\$																0
CAN 3	030M			030M					030M							
Subtot New \$:	0	0	86,742	2,000	97,820	30,450	171,580	270,000	241,739	0	0	0	0	0	0	900,331
Unob Request																0
Unob Offset																0
Total Unoblig	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL AUTH	0	0	86,742	2,000	97,820	30,450	171,580	270,000	241,739	0	0	0	0	0	0	900,331
							CAN TOTAL ROLLUP:		CAN \$\$\$							
Unobligated funds summary							EI	1109	297,257							
Available Prior BP (per GMIS)							FSI	1180	61,674							
Reported est current BP (per 424A)							FSI FDA	V090	0							
0	Total Available						FSI nanms	0976	2,000							
0	Total applied						WNV	1388	270,000							
0	remainder (hold for future c/o)						OD AR	1218	0							
							BMD AR	0970	0							
							NEDSS	3773	171,580							
							HCV	3126	97,820							
							CJD/CWD	3699	0							
							BIDS	1127	0							
							NCID AR	030M	0							
							DRSP mtg	02HE	0							
							AR HCS	1079								
							Unob		0							
									900,331	should match tot Auth						

4045333039

03/25/2005 08:23

*F105 Vermont*

**Budget Justification – Antimicrobial Resistance  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel** \$0

**Indirect Costs** \$0

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits** \$0

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** ~~\$48,000~~

Consultation service for hospitals \$12,000  
Purpose: Estimated 80 hours of medical doctor service at \$150 per hour to provide consultation to physicians regarding antibiotic choice for clinical treatment.

Site visits for handwashing study \$36,000  
Purpose: To support one medical doctor's and one ICP's time for 18 one-day trips to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention. The medical doctor will be supported at \$150 per hour for 8 hours per day; the ICP will be supported at \$100 per hour for 8 hours per day.

**Equipment** \$0

**Supplies** ~~\$3,000~~

Laptop for handwashing study \$3,000  
Purpose: To facilitate on-site data collection at pre- and post-intervention site visits.

**Other** ~~\$38,506~~

Website, listserv and teleconference support \$1,750  
Purpose: To support the creation of a website and a listserv.



Handwashing study \$24,706

Purpose: To support the study design, training for data collectors, data collection, data analysis, and reporting for the hospital handwashing intervention study. These tasks will be accomplished by a VPQHC employee, with professional consultation from an infectious disease physician.

Steering committee meetings \$7,050

Purpose: To support conference room rental, lunch, supplies, mailings, and printing for semi-annual meetings with intervening regular conference calls.

Project management \$5,000

Purpose: Management of the handwashing initiative project (100 hours @ \$50/hour). VPQHC is currently managing the Regional Infection Control Resource Planning Committee.

**In-state Travel** ~~\$6,000~~

Mileage reimbursement \$6,000

(64 trips x 250 roundtrip miles/trip @ \$0.375/mile)

Purpose: Funds are requested to reimburse steering committee members, medical doctors, and infection control professionals (ICPs) for the following in-state travel:

- 28 trips for 14 steering committee members to attend 2 statewide meetings
- 18 trips for MDs to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention
- 18 trips for ICPs to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention

**Out-of-state Travel** ~~\$958~~

\$958 One member of the Regional Infection Control Resource Planning Committee to attend a national meeting on appropriate antibiotic use in Atlanta, GA. Estimated expenses are:

- Plane Fare \$500
- Hotel (3 nights @ \$110/night) \$330
- Meal Allowance (4 days @ \$32/day) \$128

**TOTAL FUNDS REQUESTED: ANTIMICROBIAL RESISTANCE \$96,464** ~~0~~

**Budget Justification - Foodborne Diseases  
Vermont Department of Health (VDH)  
04/01/05 - 03/31/06**

**Personnel** \$44,072 OK

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Foodborne Epidemiologist	\$36,947	100%	\$36,947
Microbiology Technician II	\$28,500	25%	\$7,125

Foodborne Epidemiologist

Continuation item. The Foodborne Epidemiologist's primary role is to enhance foodborne disease surveillance capacity and improve capacity for outbreak investigations. Dina Itani, M.S. continues in this position.

Microbiology Technician II

Continuation item. This position provides technical support for the Microbiology Program for both ELC and bioterrorism activities, with 0.50 FTE funded by each cooperative agreement. Under the ELC grant, this position spends 25% of time on foodborne diseases and 25% of time on WNV activities (see WNV budget). The main focus of this position for the ELC grant is accessioning specimens, preparing samples and doing quality control of media and reagents for parasitology and enteric bacteriology testing, expanding in-house media and reagent preparation capability, and assisting with dead bird surveillance for WNV. The position reports to the Microbiology Program Chief.

**Indirect Costs**

**\$22,036 OK**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

**\$11,018 OK**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual**

\$0

**Equipment**

\$31,315 Smart Cycler II add-on block

~~\$31,315~~  $\emptyset$ 

Purpose: The VDHL was initially using the Smart Cycler to detect WNV in dead birds and to detect bioterrorism agents. The Smart Cycler is now being used to detect SARS-coV, Shiga-toxin producing *E. coli*, influenza virus A and B and soon for the detection of H1, H3, H5, and H7 subtypes as well. The food microbiology testing program is being expanded to include real-time PCR detection of bacterial pathogens and, as noted above, we will soon be validating a real-time PCR assay for the detection of *B. pertussis*. The CDC is establishing a real-time assay for the detection of Noroviruses and this will be incorporated into the VDHL norovirus testing algorithm when this assay becomes available. Hence, this equipment is needed to increase capacity to perform additional real-time PCR diagnostic assays.

**Supplies**

\$2250 Meridan Premier EHEC EIA kits 5 @ \$450 each

~~\$11,570~~

7000

Purpose: Increase surveillance for non-O157 Shiga-toxin-producing *E. coli* (STEC)

\$775 Remel *E. coli* O157:H7 latex test (5@\$155 each)\$225 *Salmonella* antisera (5@\$45/vial)\$385 *Shigella* antisera (5@\$77/vial)

Purpose: Detection of *E. coli* O157:H7; serotyping of *Salmonella* and *Shigella*

\$550 Rotavirus EIA (3@\$183 each)

Purpose: Provide rotavirus testing for enhanced surveillance specimens

\$4000 Restriction enzymes

\$600 BSA

\$190 Tris-EDTA buffer

\$360 Microcentrifuge tubes

\$235 Seakem agarose

Purpose: Reagents and supplies needed for PFGE typing of the foodborne pathogens *E. coli*, *Salmonella*, *Shigella*, and *Listeria*.

\$1000 Reagents and supplies for Norwalk-like virus detection using traditional PCR (RNA extraction kits, Rnase Inhibitor, gel extraction kits, primers, enzymes, buffers, microcentrifuge tubes, tips, agarose, etc.)

Purpose: Needed for to perform Norovirus testing during outbreak situations.

\$1000 Reagent and supplies for detection of non-Shiga toxin-producing *E. coli* using real-time PCR (primers, probes, DNA extraction kits, Proteinase K, RNAase, microcentrifuge tubes, pipette tips, reaction tubes, etc.)

Purpose: Needed to detect -Shiga toxin-producing *E. coli* using real-time PCR.

NARMS

**Other**

Purpose: Funds for NARMS to ship requested isolates to the CDC for antimicrobial susceptibility testing.

~~\$2,000~~ OR

**In-state Travel**

\$750 Mileage reimbursement

~~\$750~~ Ø

Purpose: Funds are requested to reimburse the Foodborne Disease Epidemiologist for in-state travel related to outbreak investigations (2000 miles x \$0.375/mile).

**Out-of-state Travel**

\$1,308 One epidemiologist to attend the 2005 PulseNet/National Foodborne Disease Epidemiologists Meeting in Seattle, WA May 9-11, 2005. Estimated expenses are:

~~\$4,740~~ 2616

- Plane Fare \$700
- Hotel (4 nights @120/night) \$480
- Meal allowance (4 days @ \$32/day) \$128

\$1,308 One microbiologist to attend the 2005 PulseNet/National Foodborne Disease Epidemiologists Meeting in Seattle, WA, May 9-11, 2005. Estimated expenses are:

- Plane Fare \$700
- Hotel (4 nights @120/night) \$480
- Meal allowance (4 days @ \$32/day) \$128

\$1,008 Microbiology Program Chief to attend 2006 International Conference on Emerging Infectious Diseases in Atlanta, GA, March 19-22, 2006. Estimated expenses are:

- Plane Fare \$400
- Hotel (4 nights @ \$120/night) \$480
- Meal Allowance (4 days @ \$32/day) \$128

\$1,116 Two microbiologists to attend the Annual Meeting of the Northeast Association for Clinical Microbiology and Infectious Disease in Portland, ME in June 13-15, 2004. Estimated expenses are:

- Hotel (2 x 3 nights @ \$110/night) \$660
- Meal Allowance (2 x 4 days @ \$32/day) \$256
- Workshops (2 @ \$100) \$200

**TOTAL FUNDS REQUESTED: FOODBORNE DISEASES**

~~\$127,501~~

88,742

also

**Budget Justification – Hepatitis Prevention and Control  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

<b>Personnel</b>			\$54,921 <i>ok</i>
	PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME
			AMOUNT REQUESTED
<hr/>			
	Hepatitis Surveillance Coordinator	\$54,921	100% \$54,921

Hepatitis Surveillance Coordinator

Continuation item. This position collaborates with the Health Surveillance Epidemiologist, the AIDS Program Chief, the Office of Drug Abuse Programs, and other VDH staff to integrate hepatitis C prevention information into existing programs. This position reports to the Health Surveillance Epidemiologist.

**Indirect Costs** \$27,461 *ok*

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits** \$13,730 *ok*

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** \$0

**Equipment** \$0

**Supplies** \$3,600 *o*

\$3,600 Abbott HCV EIA 2.0 kits (5 @ \$720 each)

Purpose: Kits are needed to maintain the VDH Laboratory's capacity to provide HCV testing.

**Other** \$0

**In-state Travel**

\$750 *slw*

\$750 Mileage reimbursement

Purpose: Funds are requested to reimburse the Hepatitis Surveillance Coordinator for in-state travel related to hepatitis prevention activities (2000 miles x \$0.375/mile).

**Out-of-state Travel**

\$958 *slw*

\$958 Hepatitis Surveillance Coordinator to attend a national hepatitis meeting. Estimated expenses are:

Plane Fare	\$500
Hotel (3 nights @ \$110/night)	\$330
Meal Allowance (4 days @ \$32/day)	\$128

**TOTAL FUNDS REQUESTED: HEPATITIS**

~~\$101,420~~

*97,820 slw*

**Budget Justification – Influenza Surveillance and Response  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel**

(\$15,114) OK

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Nurse Epidemiologist	\$53,236	25%	\$13,309
Microbiologist II	\$36,100	5%	\$1,805

Nurse Epidemiologist

Continuation item. Funding is requested to support twenty five percent effort for the nurse epidemiologist who is the year-round influenza surveillance coordinator. This position reports to the Epidemiology Field Unit Chief.

Microbiologist II

Continuation item. Funding is requested to support five percent effort for the microbiologist who performs year-round influenza testing. This position reports to the Microbiology Program Chief.

**Indirect Costs**

(\$7,557) slo ok

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

(\$3,779) slo

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual**

\$0

## Equipment

\$0

## Supplies

~~\$19,063~~

4000

\$810 M5BL Multi-Microbe Media (viral transport media) (600@ \$135/100)  
 Purpose: Media needed for influenza specimen collection and transport to the VDH Laboratory.  
 Providers are supplied with influenza specimen collection kits.

\$2,600 Directigen™ Flu A + B rapid *in vitro* enzyme immunoassay (5@ \$520 each)  
 Purpose: Kits needed to conduct rapid influenza assays for patients in nursing homes and other group living situations or by special request.

\$1,500 RMK cells in shell vials (600@ \$2.50 each)

\$1,350 RMK cells in tubes (600@ \$2.25 each)

\$3,045 SimulFluor® Flu A/Flu B conjugate (15@ \$203 each)

\$625 ATCC Influenza A control (5@ \$125 each)

\$625 ATCC Influenza B control (5@ \$125 each)

\$550 Influenza A/B control slides (10@ \$55)

\$600 Serum free medium (100@ \$6/bottle)

\$600 Hank's balanced salt solution (100@ \$6/bottle)

\$650 Light Diagnostics Mounting Fluid, cryovials, U-bottom microtiter plates, PBS with Tween, Pasteur pipets, tips, etc.

Purpose: Materials needed to culture influenza virus and for the detection, identification and subsequent subtyping of influenza A and influenza B viruses.

\$4,478 ZstatFlu™ rapid influenza test kits (15@ \$298.50 each)

Purpose: Sentinel influenza providers are supplied with these CLIA-waived rapid influenza test kits to facilitate testing and surveillance for influenza.

\$490 Forward and reverse primers for Influenza A, B, H1, H3, H5, H7, and RNP control. (14@ \$35)

\$1050 Probes for Influenza A, B, H1, H3, H5, H7, and RNP control. (7@ \$150)

\$690 Qiagen RNA extraction kit

Purpose: Needed to perform real-time PCR detection of Influenza virus A and B and H1, H3, H5, and H7 subtypes.

## Other

~~\$34,350~~

\$1,850 Courier transport charges

Purpose: For specimens from influenza sentinel physicians (200 @ \$9.25 each).

\$32,500 Laptop computers with Internet access

Purpose: To support web-based reporting of surveillance data by 13 sentinel provider practices to the CDC (13 @ \$2,500 each)



In-state Travel

\$0

Out-of-state Travel

\$0

TOTAL FUNDS REQUESTED: INFLUENZA

~~\$80,463~~

30,450 *sk*  
*slw*

**Budget Justification - NEDSS**  
**Vermont Department of Health (VDH)**  
**04/01/05 - 03/31/06**

**Personnel**

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Security Administrator	\$72,796	100%	<del>\$72,796</del> ✓
Registry Manager	\$51,937	100%	\$51,937 OK
Systems Developer II	\$44,817	100%	\$44,817 OK

~~\$169,550~~

96,754

slw

Security Administrator

Continuation item. This position is directly related to "Implementing a Security System", one of the critical NEDSS Elements. Support for this position, an Information Technology Specialist III, enables the ITS Unit to fill the roll of Security Administrator. The critical nature of security administration deserves dedicated full time attention.

Registry Manager

Continuation item. The Registry Manager will assume responsibility for maintaining data and functions in the IDR, triaging incoming data according to program needs and authorizations, supporting the de-duplication of person records, and directing the data and reports to appropriate personnel.

Systems Developer II

New FTE. The Systems Developer II will function as the Operational Data Store (ODS) Manager. Responsibilities will include: providing NBS database support (e.g., applying table changes resulting from new releases, extending SRT tables, adding outbreak names); administration of scheduled NBS tasks (e.g., verifying RDB population, verifying outgoing (NND) message creation, verifying incoming (ELR) message creation, verifying data mart population, verifying de-duplication process); implementing electronic lab reporting (e.g., incoming message parsing, outgoing message creation, LOINC code mapping, SNOMED code mapping); miscellaneous NBS upgrade/patch support (e.g., CDF import/maintenance, installing validation checklist, creating validation routine for LDF (JavaScript)); and interfacing between the NBS and LITS Plus.

Indirect Costs

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

~~\$84,775~~

48,377

AB

Fringe Benefits

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary,

~~\$42,368~~

24,189

slw

dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** \$0

**Equipment** \$0

**Supplies** ~~\$2,000~~ 0 *slw*  
\$2,000 Workstation and standard software  
Purpose: This personal computer workstation will be for the new Systems Developer II.

**Other** \$0

**In-state Travel** \$0

**Out-of-state Travel** ~~\$4,580~~ 2260 *slw*  
Funding is requested to support travel to the 2005 Public Health Information Network meeting in Atlanta for two ITS Unit staff and two epidemiology program staff. Estimated expenses are:

Plane fare (4 @ \$600)	<del>\$2,400</del>	1200
Meal allowance (4 x 4 days @ \$32/day)	\$512	256
Hotel (4 x 3 nights @ \$129/night)	<del>\$1,548</del>	774
Ground transportation (4 x \$30)	<del>\$120</del>	30

**TOTAL FUNDS REQUESTED: NEDSS**

~~\$303,293~~  
171,580 *slw*

Fund  
as  
requested  
slo

**Budget Justification – West Nile Virus**  
**Vermont Department of Health (VDH)**  
**04/01/05 – 03/31/06**

**Personnel****\$ 137,037**

PERSONNEL	ANNUAL SALARY	FTE	AMOUNT REQUESTED
Microbiology Technician II	\$28,500	0.25	\$7,125
Epidemiology Associate	\$47,287	0.80	\$37,830
Vector Management Specialist	\$45,344	0.90	\$40,810

TEMPORARY PERSONNEL	#	PAY RATE PER HOUR	HOURS PER WEEK	NUMBER OF WEEKS	AMOUNT REQUESTED
Epidemiology Field Agents (part time)	12	\$11.75	20	12	\$33,840
Epidemiology Field Agent (full time)	1	\$11.75	40	14	\$6,580
Vector Technicians	2	\$12.56	36	12	\$10,852

Microbiology Technician II

Continuation item. This position is funded 50% by the Public Health Preparedness and Response for Bioterrorism grant and 50% by the ELC grant. The main focus of this position for the ELC grant will be accessioning specimens, testing dead birds for WNV, preparing samples and doing quality control of media and reagents for parasitology and enteric bacteriology testing, and expanding in-house media and reagent preparation capability. It is expected that this person will spend 25% of time on foodborne diseases (see Foodborne Disease budget) and 25% of time on WNV activities. The position reports to the Microbiology Program Chief.

Epidemiology Associate

The Epidemiology Associate position focuses on zoonotic disease surveillance, including West Nile virus, Lyme disease, and rabies. She coordinates Vermont's statewide West Nile surveillance activities, including database management and data reporting to CDC. She also provides back up for the Epidemiology Field Unit for data entry, outbreak investigations, and other tasks as needed. This position reports to the Health Surveillance Epidemiologist.

Vector Management Specialist

The Agency of Agriculture contracted with Alan Graham, a masters level entomologist, during the 2001, 2002, 2003 and 2004 West Nile transmission seasons, with funds awarded through the ELC cooperative agreement. Mr. Graham has been hired by the Vermont Agency of Agriculture as the Vector Management Specialist *contingent on continued funding*. A primary focus of this position is sorting mosquitoes to species. The Vector Management Specialist also coordinates mosquito surveillance activities of the Vector Technicians and assists the State Entomologist with other surveillance activities as requested. He is accountable to the Secretary of the Agency of Agriculture.

Epidemiology Field Agents

Continuation item. Funds are requested to hire twelve half-time Epidemiology Field Agents and one full-time Epidemiology Field Agent for twelve weeks during the peak of West Nile virus surveillance season. These temporary positions will work out of the District Health Offices, but will spend a significant amount of their time in the field. Activities of the Epidemiology Field Agents include receiving dead bird reports, entering dead bird reports into the Dead Bird Database, maintaining manual records, collecting and submitting dead birds for testing, engaging in public outreach and educational activities, such as giving presentations on West Nile virus prevention and distributing posters and informational pamphlets. The full-time Epidemiology Field Agent will work in the Department of Health Central Office taking dead bird reports on the toll-free line and referring those calls to the District Offices when collection is indicated. This position may assist in picking up and transporting dead birds to the Vermont Department of Health Laboratory. The Central Office Epidemiology Field Agent also assists the Epidemiology Associate in transmitting West Nile virus data to the CDC and in generating other data reports. It is a fourteen week position.

Vector Technicians

Continuation item. Funds are requested to hire two full-time Vector Technicians to assist the State Entomologist with larval surveys, mapping wetlands, and trapping adult mosquitoes in the counties with the highest percentage of wetlands and human population. The Vector Technician positions will be temporary positions and will be hired by and work under the supervision of the State Entomologist and the Vector Management Specialist in the Agency of Agriculture.

**Indirect Costs****\$68,518**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits****\$17,560**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary for the Microbiologist, 7.65 % of salary for the temporary Epidemiology Field Agents and 6.25% of salary for the Agency of Agriculture Vector Technicians and Vector Management Specialist.

**Equipment** **\$0**

**Supplies** **\$27,134**

\$1,014 Miscellaneous supplies for mosquito surveillance

Purpose: Supplies will be used for mosquito surveillance including CO 2, batteries for mosquito traps, trap replacement parts, containers.

\$10,320 Reagents and supplies for RT-PCR testing of mosquitoes

Purpose: Supplies will be used by the Agency of Agriculture to conduct RT-PCR testing of mosquito pools (800 pools @ \$12.90 per pool)

\$13,740 Reagents and supplies for RT-PCR testing of dead birds

\$1,035	Scalpels
\$ 950	Viral transport media
\$1,825	Tough tags
\$4,235	Master Mix reagents
\$2,825	Qiagen RNA extraction kits
\$1,345	Primers and probes
\$ 600	Ethyl alcohol, pipet tips,
\$ 925	Cepheid PCR reaction tubes

Purpose: Supplies needed by the VDH laboratory to perform bird autopsies, extract and purify viral RNA from bird brain tissue, and to conduct RT-PCR testing. Expect to test approximately 900 birds.

\$1,500 Shipping boxes with Styrofoam liners

Purpose: Packaging dead birds for shipment to laboratory (150 @ \$10 each).

\$560 Toll-free central dead bird reporting line

Purpose: To support a toll-free hotline in the Department of Health Central Office so that Vermont residents throughout the state can continue to report dead birds while relieving the District Offices of these calls. The full-time Epidemiology Field Agent and the Epidemiology Associate will be responsible for taking calls on this line.

**Other** **\$6,130**

\$2,050 Shipping

Purpose: Funds will be used for the following shipments:

Dead birds to the VDH Laboratory - \$1,800

Human specimens to the NH Laboratory (10 shipments @ \$12.50 each) - \$125

Equine samples (25 shipments @ \$5 each) - \$125

\$1,050 West Nile virus posters and Fact Sheets

Purpose: Funds will be used for the printing of posters to encourage the public to report dead birds and of 'Don't Let it Bug You' posters that educate the public about West Nile virus prevention. Funds will also be used for the printing of fact sheets on West Nile virus and insect repellents. (5,000 @ \$.21 each)

**\$1,530 Magnets**

Purpose: Funds are requested to produce refrigerator magnets that encourage the public to report all dead bird sightings to the Department of Health and refrigerator magnets that encourage the public to engage in simple prevention measures. (3,000 @ \$.51)

**\$1,500 Newspaper advertisements for dead bird reports**

Purpose: Funds are requested to place advertisements soliciting dead bird reports from the public. In previous years newspaper advertisements were associated with increased reporting from the public during the week following the advertisement.

**In-state Travel**

**\$12,506**

**\$12,506 Mileage reimbursement**

Purpose: Funds are requested to reimburse the following for mileage related to West Nile virus surveillance activities:

- Epidemiology Field Agents (12 x 100mi/wk x 12wks x \$0.375/mi) - \$5,400
- Epidemiology Field Agent (1 x 25mi/wk x 14 wks x \$0.375/mi) - \$131
- Entomologists (2 x 300mi/wk x 20wks x \$0.375/mi) - \$4,500
- Vector Technicians (2 x 275 mi/wk x 12wks x \$0.375/mi) - \$2,475

**Out-of-state Travel**

**\$1,115**

**\$1,115 Attendance at the annual West Nile virus conference**

Purpose: Funds are requested to support travel, lodging and meals for one Department of Health staff member to attend the annual national conference on West Nile virus. Estimated expenses are:

- Plane fare (1 @ \$600) \$ 600
- Meal allowance (1 x 4 days @ \$32/day) \$ 128
- Hotel (1 x 3 nights @ \$129/night) \$ 387

**TOTAL FUNDS REQUESTED: WEST NILE VIRUS**

**\$270,000** *ok slo*

**Budget Justification – General Epidemiology and Laboratory Capacity  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel**~~\$144,264~~ 137,499

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Health Surveillance Epidemiologist	\$58,119	90%	\$52,307 OK
Microbiologist III	\$40,375	100%	\$40,375 OK
Systems Developer II	\$44,817	100%	\$44,817 OK
Administrative Assistant	\$27,061	25%	<del>\$6,765</del> Ø

Health Surveillance Epidemiologist

Continuation item. Patsy Tassler, Ph.D. is responsible for the daily activities of the ELC grant. She works closely with other members of the Infectious Disease Epidemiology Section, the VDH Laboratory, and public health nurses in the District Health Offices. She is an Assistant Professor of Medicine in the School of Medicine at the University of Vermont. Dr. Tassler reports to the State Epidemiologist.

Microbiologist III

Continuation item. This microbiologist conducts DNA fingerprinting of foodborne pathogens, maintains local databases of PFGE patterns, and participates in the national PulseNet network. She has developed and implemented molecular procedures for the detection of WNV in birds and for detection of Norwalk-like virus and bioterrorism agents. She is responsible for the overall operation of the molecular laboratory and for training other microbiologists in molecular methods. This position reports to the Microbiology Program Chief.

Systems Developer II

Continuation item. The systems developer position is responsible for leading the ITS effort in the integration of the LITS Plus application with the Department of Health's NEDSS-compliant SPHINX System. In addition, this position will assist in the research and development and/or acquisition of a PHIN-compliant LIMS for the VDH Public Health Laboratory in the effort to facilitate the electronic lab result feed to the NBS. The position reports to the Systems Development Manager.

Administrative Assistant

New FTE. The Administrative Assistant is responsible for data entry for all communicable disease reports for the state. She has played an important role in the implementation and parallel production of the NEDSS Base System, and will be the primary source of notifications to the CDC using the NBS. She also has primary responsibility for managing all paper disease and laboratory reports and for answering the main telephone line for the Infectious Disease Epidemiology section. In addition, she provides general administrative support for the section. With the discontinuation of support for hepatitis C surveillance activities under the hepatitis



program area of the ELC grant, the administrative assistant will take on many of the provider follow-up tasks previously performed by the Hepatitis Coordinator.

**Indirect Costs**

~~\$72,132~~ 60,750

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

~~\$36,066~~ 34,375

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual**

\$0

**Equipment**

\$0

**Supplies**

~~\$3,050~~ 0

LightCycler-FastStart DNA Master Hybridization Probes kit	\$900
Primer Bptaq-F	\$35
Primer Bptaq-R	\$35
Taqman probe Bpertprobe524T	\$150
Taqman probe Bicoid-P (internal control)	\$150
2% IGEPal	\$47
GeneAmp 10X PCR buffer	\$20
QIAPrep Spin Plasmid Miniprep Kit	\$65
QIAGEN Plasmid Midi Kit	\$198
Cepheid <i>B. pertussis</i> PCR Kit	\$1450

Purpose: Supplies and reagents needed to validate real-time PCR procedures for the detection of *B. pertussis*. Cepheid kit and Wadsworth procedures will be compared. QIAGEN kits are to isolate high-purity plasmid DNA (containing *B. pertussis* DNA from *B. pertussis* for internal assay control) from transformed *E. coli* host.

**Other**

\$0

**In-state Travel**

\$750 Mileage reimbursement

~~\$750~~ ✓

Purpose: Funds are requested to support in-state travel (2000 miles at \$0.375 per mile) by the Health Surveillance Epidemiologist to give presentations at conferences, visit district offices, and investigate outbreaks as necessary.

**Out-of-state Travel**

\$2,230 Two epidemiologists to attend the 2006 International Conference for Emerging Infectious Diseases in Atlanta. Estimated expenses are:

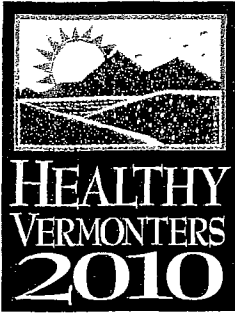
~~\$2,230~~ 1115 ✓

Plane fare (2 @ \$600)	\$1,200
Hotel (2 x 3 nights @ \$129/night)	\$774
Meal allowance (2 x 4 days @ \$32/day)	\$256

1 person

**TOTAL FUNDS REQUESTED: EPI AND LAB CAPACITY**

~~\$258,492~~  
241,739 ✓



**Vermont Department of Health**  
Division of Health Surveillance  
Infectious Disease Epidemiology

*Agency of Human Services*

November 29, 2004

Centers for Disease Control and Prevention  
Acquisition and Assistance Branch B  
Attn: Yolanda Ingram-Sledge  
Procurement and Grants Office  
2920 Brandywine Road, Room 3000  
Atlanta, Georgia 30341-4146

Reference: Non-Competing Continuation Application/Interim Progress Report  
Program Announcement 04040, Epidemiology and Laboratory Capacity  
Cooperative Agreement Number U50/CCU123665

To Whom It May Concern:

Enclosed you will find the original and two copies of Vermont's non-competing continuation application/interim progress report for program announcement 04040, Epidemiology and Laboratory Capacity for Infectious Diseases. Please direct any questions regarding this application to Dr. Patsy Tassler, Division of Health Surveillance, Vermont Department of Health at (802) 863-7286.

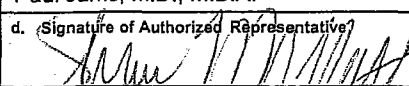
Sincerely,

Patsy Tassler, Ph.D.  
Principal Investigator

Gary Leach  
Federal Programs Administrator

# APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

<b>1. TYPE OF SUBMISSION:</b> Application <input type="checkbox"/> Construction <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Non-Construction <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		<b>2. DATE SUBMITTED</b> 11/29/2004	Applicant Identifier
		<b>3. DATE RECEIVED BY STATE</b>	State Application Identifier
		<b>4. DATE RECEIVED BY FEDERAL AGENCY</b>	Federal Identifier
<b>5. APPLICANT INFORMATION</b>			
Legal Name: State of Vermont		Organizational Unit: Department of Health, Division of Health Surveillance	
Address (give city, county, state, and zip code): 108 Cherry Street Burlington, VT 05401 Chittenden County		Name and telephone number of the person to be contacted on matters involving this application (give area code) Dr. Patsy Tassler (802) 863-7286	
<b>6. EMPLOYER IDENTIFICATION NUMBER (EIN):</b> 03 - 6000274		<b>7. TYPE OF APPLICANT: (enter appropriate letter in box)</b> <b>A</b> A. State      H. Independent School Dist. B. County      I. State Controlled Institution of Higher Learning C. Municipal      J. Private University D. Township      K. Indian Tribe E. Interstate      L. Individual F. Intermunicipal      M. Profit Organization G. Special District      N. Other (Specify): _____	
<b>8. TYPE OF APPLICATION:</b> <input type="checkbox"/> New <input checked="" type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): <input type="checkbox"/> <input type="checkbox"/> A. Increase Award      B. Decrease Award      C. Increase Duration D. Decrease Duration      Other (specify): _____		<b>9. NAME OF FEDERAL AGENCY:</b> Department of Health and Human Services - CDC	
<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:</b> 93 - 283 TITLE: Epidemiology and Laboratory Capacity		<b>11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b> Epidemiology and Laboratory Capacity for Infectious Diseases	
<b>12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.):</b> Vermont			
<b>13. PROPOSED PROJECT:</b> Start Date      Ending Date 04/01/2004      03/31/2009		<b>14. CONGRESSIONAL DISTRICTS OF:</b> a. Applicant      b. Project Vermont      Vermont	
<b>15. ESTIMATED FUNDING:</b>		<b>16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?</b>	
a. Federal	\$ 1,237,633.00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____	
b. Applicant	\$ .00	b. NO. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 12372	
c. State	\$ .00	<input checked="" type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED STATE FOR REVIEW	
d. Local	\$ .00		
e. Other	\$ .00		
f. Program Income	\$ .00		
g. TOTAL	\$ 1,237,633.00	<b>17. IS APPLICATION DELINQUENT ON ANY FEDERAL DEBT?</b> <input type="checkbox"/> YES If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	
<b>18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.</b>			
a. Typed Name of Authorized Representative Paul Jarris, M.D., M.B.A.		b. Title Commissioner of Health	c. Telephone number (802) 863-7280
d. Signature of Authorized Representative 		e. Date Signed 11/29/2004	

**BUDGET INFORMATION - Non-Construction Programs**

SECTION A - BUDGET SUMMARY						
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Epi & Lab Capacity	93.283	\$ 0.00	\$	\$ 1,237,633.00	\$	\$ 1,237,633.00
2.						0.00
3.						0.00
4.						0.00
5. TOTALS		\$ 0.00	\$ 0.00	\$ 1,237,633.00	\$ 0.00	\$ 1,237,633.00
SECTION B - BUDGET CATEGORIES						
6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)	
	(1) Antimicrobial	(2) Foodborne	(3) Hepatitis	(4) Influenza		
a. Personnel	\$ 0.00	\$ 44,072.00	\$ 54,921.00	\$ 15,114.00	\$ 114,107.00	
b. Fringe Benefits	0.00	11,018.00	13,730.00	3,779.00	28,527.00	
c. Travel	6,958.00	5,490.00	1,708.00	0.00	14,156.00	
d. Equipment	0.00	31,315.00	0.00	0.00	31,315.00	
e. Supplies	3,000.00	11,570.00	3,600.00	19,663.00	37,833.00	
f. Contractual	48,000.00	0.00	0.00	0.00	48,000.00	
g. Construction	0.00	0.00	0.00	0.00	0.00	
h. Other	38,506.00	2,000.00	0.00	34,350.00	74,856.00	
i. Total Direct Charges (sum of 6a - 6h)	96,464.00	105,465.00	73,959.00	72,906.00	348,794.00	
j. Indirect Charges	0.00	22,036.00	27,461.00	7,557.00	57,054.00	
k. TOTALS (sum of 6i and 6j)	\$ 96,464.00	\$ 127,501.00	\$ 101,420.00	\$ 80,463.00	\$ 405,848.00	
7. Program Income		\$	\$	\$	\$	\$ 0.00

**BUDGET INFORMATION - Non-Construction Programs**

<b>SECTION A - BUDGET SUMMARY</b>						
Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Epi & Lab Capacity	93.283	\$ 0.00	\$	\$ 1,237,633.00	\$	\$ 1,237,633.00
2.						0.00
3.						0.00
4.						0.00
5. TOTALS		\$ 0.00	\$ 0.00	\$ 1,237,633.00	\$ 0.00	\$ 1,237,633.00
<b>SECTION B - BUDGET CATEGORIES</b>						
6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY					Total (5)
	(1) NEDSS	(2) West Nile	(3) General Epi/Lab	(4)		
a. Personnel	\$ 169,550.00	\$ 137,037.00	\$ 144,264.00	\$	\$ 0.00	\$ 450,851.00
b. Fringe Benefits	42,388.00	17,560.00	36,066.00		0.00	96,014.00
c. Travel	4,580.00	13,621.00	2,980.00		0.00	21,181.00
d. Equipment	0.00	0.00	0.00		0.00	0.00
e. Supplies	2,000.00	27,134.00	3,050.00		0.00	32,184.00
f. Contractual	0.00	0.00	0.00		0.00	0.00
g. Construction	0.00	0.00	0.00		0.00	0.00
h. Other	0.00	6,130.00	0.00		0.00	6,130.00
i. Total Direct Charges (sum of 6a - 6h)	218,518.00	201,482.00	186,360.00		0.00	606,360.00
j. Indirect Charges	84,775.00	68,518.00	72,132.00		0.00	225,425.00
k. TOTALS (sum of 6i and 6j)	\$ 303,293.00	\$ 270,000.00	\$ 258,492.00	\$	\$ 0.00	\$ 831,785.00
7. Program Income		\$	\$	\$	\$	\$ 0.00

**SECTION C - NON-FEDERAL RESOURCES**

	(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8.		\$	\$	\$	\$ 0.00
9.					0.00
10.					0.00
11.					0.00
12.	TOTALS (sum of lines 8 and 11)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**SECTION D - FORECASTED CASH NEEDS**

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	\$ 0.00	\$	\$	\$	\$
14. Non-Federal	0.00				
15. TOTAL (sum of lines 13 and 14)	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00

**SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT**

(a) Grant Program	FUTURE FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16.	\$	\$	\$	\$
17.				
18.				
19.	\$	\$	\$	\$
20. TOTALS (sum of lines 16 - 19)	\$0.00	\$0.00	\$0.00	\$0.00

**SECTION F - OTHER BUDGET INFORMATION**

21. Direct Charges:	22. Indirect Charges:
23. Remarks	

**ASSURANCES - NON-CONSTRUCTION PROGRAMS**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**


**Note:** Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standard or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standard for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685- 1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §§794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age;
- (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to non-discrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Title II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327- 333), regarding labor standards for federally assisted construction subagreements.



10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetland pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§ 469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, re-gulations and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL 	TITLE Deputy Commissioner Commissioner of Health
APPLICANT ORGANIZATION Vermont Department of Health	DATE SUBMITTED 11/29/2004

## CERTIFICATIONS

### 1. CERTIFICATION REGARDING DEBARMENT AND SUSPENSION

By signing and submitting this application, the prospective primary participant as defined in 45 CFR Part 76 is providing certification regarding debarment and suspension as set out in Appendix A of 45 CFR Part 76. The applicant agrees that by submitting this application it will include, without modification, the clause in Appendix B of 45 CFR Part 76 in all lower tier covered transactions and in all solicitations for lower tier covered transactions in accordance with 45 CFR Part 76. Should the applicant not certify regarding debarment and suspension, an explanation as to why should be placed after the assurances page in the application package.

### 2. CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS

By signing and submitting this application, the applicant is providing certification regarding drug-free workplace requirements as set out in Appendix C to 45 CFR Part 76. For purposes of notification of criminal drug convictions, the DHHS has designated the following central point for receipt of such notices:

Division of Grants Policy and Oversight  
Office of Management and Acquisition  
Department of Health and Human Services  
Room 517-D  
200 Independence Avenue, S.W.  
Washington, D.C. 20201

### 3. CERTIFICATION REGARDING LOBBYING

Title 31, United States Code, Section 1352, entitled "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions," generally prohibits recipients of Federal grants and cooperative agreements from using Federal (appropriated) funds for lobbying the Executive or Legislative Branches of the Federal government in connection with a specific grant or cooperative agreement. Section 1352 also requires that each person who requests or receives a Federal grant or cooperative agreement must disclose lobbying undertaken with non-Federal (nonappropriated) funds. These requirements apply to grants and cooperative agreements exceeding

\$100,000 in total costs (45 CFR Part 93). By signing and submitting this application, the applicant is providing certification set out in Appendix A to 45 CFR Part 93.

### 4. CERTIFICATION REGARDING PROGRAM FRAUD CIVIL REMEDIES ACT (PFCRA)

The authorized official signing for the applicant organization certifies that the statements herein are true, complete, and accurate to the best of his or her knowledge, and that he or she is aware that any false, fictitious, or fraudulent statements or claims may subject him or her to criminal, civil, or administrative penalties. The official signing agrees that the applicant organization will comply with the DHHS, PHS, and CDC terms and conditions of award if a grant is awarded as a result of this application.

### 5. CERTIFICATION REGARDING ENVIRONMENTAL TOBACCO SMOKE

Public Law 103-227, also known as the Pro-Children Act of 1994 (Act), requires that smoking not be permitted in any portion of any indoor facility owned, leased, or contracted for by an entity and used routinely or regularly for the provision of health, day care, early childhood development services, education or library services to children under the age of 18, if the services are funded by Federal programs either directly or through State or local governments, by Federal grant, contract, loan, or loan guarantee. The law also applies to children's services that are provided in indoor facilities that are constructed, operated, or maintained with such Federal funds. The law does not apply to children's services provided in private residences, portions of facilities used for inpatient drug or alcohol treatment, service providers whose sole source of applicable Federal funds is Medicare or Medicaid, or facilities where WIC coupons are redeemed.

Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty of up to \$1,000 for each violation and/or the imposition of an administrative compliance order on the responsible entity.

The authorized official signing for the applicant organization certifies that the applicant organization

will comply with the requirements of the Act and will not allow smoking within any portion of any indoor facility used for the provision of services for children as defined by the Act. The applicant organization agrees that it will require that the language of this certification be included in any subawards which contain provisions for children's services and that all subrecipients shall certify accordingly.

CDC strongly encourages all grant recipients to provide a smoke-free workplace and promote the non-use of tobacco products. This is consistent with the DHHS and CDC mission to protect and advance the physical and mental health of the American people.

**CHECKLIST**

**Public Burden Statement:** Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate, or any other aspect of this collection of information, including suggestions for reducing this burden, to the OS Reports Clearance Officer, ASMB/Budget/DIOR, Room 503H, HHH Bldg., 200 Independence Ave., S.W., Washington, D.C., 20201.

**NOTE TO APPLICANT:** This form must be completed and submitted with the original of your application. Be sure to complete both sides of this form. Check the appropriate boxes and provide the information requested. This form should be attached as the last page of the signed original of the application. This page is reserved for CDC staff use only.

Type of Application:  NEW  Noncompeting Continuation  Competing Continuation  Supplemental

**PART A:** The following checklist is provided to assure that proper signatures, assurances, and certifications have been submitted.

	Included	NOT Applicable
1. Proper Signature and Date for Item 18 on SF 424 (FACE PAGE) .....	<input checked="" type="checkbox"/>	
2. Human Subjects Certification, when applicable (45 CFR 46) .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**PART B:** This part is provided to assure that pertinent information has been addressed and included in the application.

	YES	NOT Applicable
1. Has a Public Health System Impact Statement for the proposed program/project been completed and distributed as required?.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Has the appropriate box been checked for item # 16 on the SF-424 (FACE PAGE) regarding intergovernmental review under E.O. 12372 ? (45 CFR Part 100) .....	<input checked="" type="checkbox"/>	
3. Has the entire proposed project period been identified in item # 13 of the FACE PAGE? .....	<input checked="" type="checkbox"/>	
4. Have biographical sketch(es) with job description(s) been attached, when required? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Has the "Budget Information" page, SF-424A (Non-Construction Programs) been completed and included? .....	<input checked="" type="checkbox"/>	
6. Has the 12 month detailed budget been provided? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Has the budget for the entire proposed project period with sufficient detail been provided? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. For a Supplemental application, does the detailed budget address only the additional funds requested? .....	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. For Competing Continuation and Supplemental applications, has a progress report been included? .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**PART C:** In the spaces provided below, identify the applicant organization's administrative official to be notified if an award is made and the individual responsible for directing the proposed program/project.

Name, title, organization, address, E-mail address (if any), FAX, and telephone number of the administrative official to be notified if an award is to be made.

Patrick Burke  
 Federal Programs Administrator  
 Vermont Department of Health  
 108 Cherry St., Burlington, VT 05401  
 (802) 863-7257 pburke@vdh.state.vt.us

APPLICANT ORGANIZATION'S 12-DIGIT DHHS EIN (if already assigned)

Name, title, organization, address, E-mail address (if any), FAX, and telephone number of the program director/project director/principal investigator designated to direct the proposed project or program.

Patsy Tassler, Ph.D.  
 Health Surveillance Epidemiologist  
 Vermont Department of Health  
 108 Cherry St., Burlington, VT 05401

SOCIAL SECURITY NUMBER

HIGHEST DEGREE EARNED

Ph.D.

(OVER)

**PART D:** A private, nonprofit organization must include evidence of its nonprofit status with the application. Any of the following is acceptable evidence. Check the appropriate box or complete the "Previously Filed" section, whichever is applicable.

- (a) A reference to the organization's listing in the Internal Revenue Service's (IRS) most recent list of tax-exempt organizations described in section 501(c)(3) of the IRS Code.
- (b) A copy of a currently valid Internal Revenue Service Tax exemption certificate.
- (c) A statement from a State taxing body, State Attorney General, or other appropriate State official certifying that the applicant organization has a nonprofit status and that none of the net earnings accrue to any private shareholders or individuals.
- (d) A certified copy of the organization's certificate of incorporation or similar document if it clearly establishes the nonprofit status of the organization.
- (e) Any of the above proof for a State or national parent organization, and a statement signed by the parent organization that the applicant organization is a local nonprofit affiliate.

If an applicant has evidence of current nonprofit status on file with an agency of PHS, it will not be necessary to file similar papers again, but the place and date of filing must be indicated.

Previously Filed with: (Agency)

on (Date)



**INVENTIONS**

If this is an application for continued support, include: (1) the report of inventions conceived or reduced to practice required by the terms and conditions of the grant; or (2) a list of inventions already reported, or (3) a negative certification.

**EXECUTIVE ORDER 12372**

Effective September 30, 1983, Executive Order 12372 (Intergovernmental Review of Federal Programs) directed OMB to abolish OMB Circular A-95 and establish a new process for consulting with State and local elected officials on proposed Federal financial assistance. The Department of Health and Human Services implemented the Executive Order through regulations at 45 CFR Part 100 (Inter-governmental Review of Department of Health and Human Services Programs and Activities). The objectives of the Executive Order are to (1) increase State flexibility to design a consultation process and select the programs it wishes to review, (2) increase the ability of State and local elected officials to influence Federal decisions and (3) compel Federal officials to be responsive to State concerns, or explain the reasons.

Department's programs that are subject to the provisions of Executive Order 12372. Information regarding PHS programs subject to Executive Order 12372 is also available from the appropriate awarding office.

States participating in this program establish State Single Points of Contact (SPOCs) to coordinate and manage the review and comment on proposed Federal financial assistance. Applicants should contact the Governor's office for information regarding the SPOC, programs selected for review, and the consultation (review) process designed by their State.

Applicants are to certify on the face page of the SF-424 (attached) whether the request is for a program covered under Executive Order 12372 and, where appropriate, whether the State has been given an opportunity to comment.

The regulations at 45 CFR Part 100 were published in the *Federal Register* on June 24, 1983, along with a notice identifying the

**THE FOLLOWING ASSURANCES/CERTIFICATIONS ARE MADE AND VERIFIED BY THE SIGNATURE OF THE OFFICIAL SIGNING FOR THE APPLICANT ORGANIZATION ON THE FACE PAGE OF THE APPLICATION:**

**Civil Rights** - Title VI of the Civil Rights Act of 1964(Pub.L. 88-352), as amended, and all the requirements imposed by or pursuant to the DHHS regulation (45 CFR 80).

**Handicapped Individuals** - Section 504 of the Rehabilitation Act of 1973(Pub.L. 93-112), as amended, and all requirements imposed by or pursuant to the DHHS regulation (45 CFR 84).

**Sex Discrimination** - Title IX of the Educational Amendments of 1972(Pub.L. 92-318), as amended, and all requirements imposed by or pursuant to the DHHS regulation (45 CFR 86).

**Age Discrimination** - The Age Discrimination Act of 1975(Pub.L. 94-135), as amended, and all requirements imposed by or pursuant to the DHHS regulation (45 CFR 91).

**Debarment and Suspension** - Title 45 CFR Part 76.

**Certification Regarding Drug-Free Workplace Requirements** - Title 45 CFR Part 76.

**Certification Regarding Lobbying** - Title 32, United States Code, Section 1352 and all the requirements imposed by or pursuant to the DHHS regulation (45 CFR 93).

**Environmental Tobacco Smoke** - Public Law 103-227.

**Program Fraud Civil Remedies Act (PFCRA)**

**Epidemiology and Laboratory Capacity (ELC)  
for Infectious Diseases**

**Program Announcement 04040**

**April 1, 2005 through March 31, 2006**

**Vermont Department of Health  
108 Cherry Street, P.O. Box 70  
Burlington, VT 05402**

---

## TABLE OF CONTENTS

CONTENT	PAGE NUMBER
<b>Program Area Narratives</b>	
<b>Antimicrobial Resistance</b>	<b>4</b>
Progress Report on Current Budget Period Activities	4
Vermont Successes	4
New Budget Period Proposed Program Activities and Objectives	5
Measures of Effectiveness	9
<b>Foodborne Diseases</b>	<b>10</b>
Progress Report on Current Budget Period Activities	10
Vermont Successes	10
New Budget Period Proposed Program Activities and Objectives	19
Measures of Effectiveness	22
<b>Hepatitis Prevention and Control</b>	<b>24</b>
Progress Report on Current Budget Period Activities	24
Vermont Successes	24
New Budget Period Proposed Program Activities and Objectives	27
Measures of Effectiveness	28
<b>Influenza Surveillance and Response</b>	<b>29</b>
Progress Report on Current Budget Period Activities	29
Vermont Successes	29
New Budget Period Proposed Program Activities and Objectives	35
Measures of Effectiveness	35
<b>NEDSS</b>	<b>36</b>
Progress Report on Current Budget Period Activities	36
Vermont Successes	36
New Budget Period Proposed Program Activities and Objectives	37
Measures of Effectiveness	38
<b>West Nile Virus</b>	<b>39</b>
Progress Report on Current Budget Period Activities	39
Vermont Successes	39
New Budget Period Proposed Program Activities and Objectives	45
Measures of Effectiveness	49
<b>General Epidemiology and Laboratory Capacity</b>	<b>50</b>
Progress Report on Current Budget Period Activities	50
Vermont Successes	50
New Budget Period Proposed Program Activities and Objectives	55
Measures of Effectiveness	57

<b>Report on Current Budget Period Financial Progress</b>	<b>58</b>
<b>Budget Justifications 04/01/05 – 03/31/06</b>	<b>59</b>
Antimicrobial Resistance	59
Foodborne Diseases	61
Hepatitis Prevention and Control	64
Influenza Surveillance and Response	66
NEDSS	69
West Nile Virus	71
General Epidemiology and Laboratory Capacity	75
<b>Appendices</b>	
Appendix A – Statewide Plan: Reducing the Occurrence of Hospital Acquired Infections	
Appendix B – Influenza Vaccine Shortage ICS Documents	
Appendix C – Respiratory Illness Infection Control Posters	
<b>Indirect Cost Rate Agreement</b>	



**Vermont Department of Health (VDH)  
Epidemiology and Laboratory Capacity for Infectious Diseases  
Program Announcement 04040**

**ANTIMICROBIAL RESISTANCE  
Vermont Department of Health (VDH)**

**Progress Report on Current Budget Period Activities  
April 1 – November 30, 2004**

**Vermont Successes**

- Convened a working group to develop a state action plan to minimize the incidence of nosocomial infections in Vermont.
- Identified two priority initiatives: a hand washing campaign and consultative services for Vermont physicians regarding antibiotic choice for specific treatment needs.
- With the National Laboratory Training Network, cosponsored a program titled Antimicrobial Resistance: Detection & Reporting from a Clinical & Public Health Perspective in May 2004 for clinical and public health laboratorians.
- Distributed *GET SMART* campaign materials to our sentinel influenza practices throughout Vermont.

Activities under this program area were not funded during the 2004-2005 budget period. However, VDH requested *GET SMART* campaign materials from CDC and distributed them to our sentinel influenza practices throughout the state. In February 2004 the VDH received approval from CDC to redirect funds to convene a working group to develop a state action plan to minimize the incidence of nosocomial infections. In March 2004 the VDH used those funds to provide a grant to the Vermont Program for Quality in Health Care, Inc. to conduct the activities listed under Objectives 1 and 2 below.

**Objective 1**

Convene a working group to develop a state action plan to minimize the incidence of nosocomial infections.

**Activities**

- a. Identify key stakeholders for representation in the working group, including representation from the Vermont Department of Health, the Vermont Program for Quality in Health Care, health care providers, and infection control practitioners.
- b. Convene the working group three times in early 2004.
- c. Evaluate the CDC's future expanded National Nosocomial Infections Surveillance (NNIS) System (i.e., the National Healthcare Safety Network) to determine whether it could meet Vermont's needs for documenting and reporting nosocomial infections. CDC expects the expanded system to be operational in the third or fourth quarter of 2004.
- d. Draft a state action plan to minimize the incidence of nosocomial infections.
- e. Print and disseminate the state action plan.

## **Objective 2**

Increase awareness of antimicrobial resistance and promote the appropriate use of antibiotics.

### **Activities**

- a. Share work previously done in this area with the VDH.
- b. Collaborate with VDH, as resources allow, on efforts to educate providers about antimicrobial resistance and the appropriate use of antibiotics.

The workgroup was convened in June 2004 and includes infectious disease physicians, infection control professionals, a representative from the Vermont Association of Hospitals and Health Systems, the state epidemiologist, the ELC principal investigator, and other VDH staff. With input from Tom Chapel at the CDC we have drafted a logic model addressing the priorities of the workgroup as well as nested logic models based upon the group's priority initiatives related to a hand washing initiative and consultative services for Vermont physicians regarding antibiotic choice for specific treatment needs. A draft of the state plan, including a general description of the problem, impact statements, specific recommendations, and a logic model is included as Appendix A. This work is scheduled to be completed during the current budget period.

In addition, VDH and the National Laboratory Training Network cosponsored a program titled Antimicrobial Resistance: Detection & Reporting from a Clinical & Public Health Perspective in May 2004. Approximately 25 clinical and public health laboratorians who perform antimicrobial susceptibility testing attended the program. Janet Hindler, MCLS, MT(ASCP), F(AAM), gave talks entitled Current Issues in Antimicrobial Susceptibility Testing & Reporting, Recommendations for Preparation of an Antibiogram Report at the Local Level, and Ensuring Accuracy of Antimicrobial Test Results on Patient Isolates. In addition, Dr. Patsy Tassler, ELC Principal Investigator, gave a talk entitled Vermont Epidemiology/Laboratory Perspective.

## **New Budget Period Proposed Program Activities and Objectives April 1, 2005 – March 31, 2006**

### **IMPLEMENTATION OF THE STATEWIDE PLAN TO REDUCE THE OCCURRENCE OF HOSPITAL ACQUIRED INFECTIONS: *AN INITIATIVE TO IMPROVE HANDWASHING AND HAND HYGIENE***

As part of the statewide plan for reducing the occurrence of hospital acquired infections the Regional Infection Control Resource Planning Committee listed three clinical areas for focus. They included:

- Hand hygiene procedures
- Surgical infection prevention procedures
- Respiratory infection control procedures

The first initiative prioritized by the Committee is an initiative to improve handwashing. This section sets forth the major activities and outcomes to be undertaken by the Committee and the Committee staff. A logic model for improving hand hygiene can be referenced at the end of this document.

***Activity #1. Review and measure behaviors, barriers and environment of individuals and hospitals – develop baseline measures.***

The Committee staff member will work with individual hospitals on a voluntary basis to measure the frequency with which staff comply with handwashing guidelines and to explore policies, procedures, environmental and other barriers within the facility enabling or limiting staff adherence to handwashing guidelines. The Committee will oversee and approve the development of standardized methods and measurement tools for the activity, the parameters of the “study” including who will be observed, what departments, what sampling size or time as well as the parameters for the desired analysis.

- ❖ Outcome #1. Study and report on staff compliance with handwashing guidelines and hospital and environmental barriers to CDC hand hygiene compliance.

***Activity #2. Synthesize literature, barriers, best practice information to inform implementation of selected programs on an individual or statewide basis***

At the direction of the Committee, staff will gather existing literature on handwashing, including but not limited to research on behavioral and environmental interventions. Staff will assist hospital Infection Control Professionals (ICPs) in matching interventions that are relevant to the individual hospital study outcomes. ICPs will develop individualized strategic plans for implementing and evaluating appropriate interventions. A mix of process and outcome measures will be used as appropriate to the project and the facility.

- ❖ Outcome #2. Identification, development and implementation of an intervention based upon existing literature, and assessment (#1).

***Activity #3. Provide ongoing individualized support to hospitals implementing various best practices and strategies***

Representatives of the Committee, Vermont Department of Health, Vermont Program for Quality in Health Care and Infectious Disease Specialists will schedule site visits with hospitals undertaking strategies to improve handwashing compliance. A method for providing ad-hoc services will be developed to provide efficient access to technical expertise necessary to address questions and problems regarding best practice implementation.

- ❖ Outcome #3a. Routine site visits by expert regional committee
- ❖ Outcome #3b. ad hoc consultative services as requested by hospital

***Activity #4. Provide opportunities for hospitals to share implementation experience and strategies***

The Committee and Committee staff will facilitate meetings to review the progress and findings of hospitals implementing best practices and other strategies to improve handwashing compliance. Meeting notes and individual discussions and presentations will be recorded for

dissemination to other ICPs unable to attend as well as to document process measures of individual hospitals.

- ❖ Outcome #4. Regular meetings of all hospital infection control professionals and expert regional committee to share progress, success and challenges of implementing programs

***Activity #5. Evaluate the impact of individual or statewide programs***

The Committee staff member will work with individual hospitals on a voluntary basis to measure the frequency with which staff comply with handwashing guidelines and to explore policies, procedures, environmental and other barriers within the facility enabling or limiting staff adherence to handwashing guidelines. The Committee will oversee and approve the development of standardized methods and measurement tools for the activity, the parameters of the “study” including who will be observed, what departments, what sampling size or time as well as the parameters for the desired analysis. The results will be compared to initial measurements taken during Activity #1 to evaluate hospital progress and future project direction.

- ❖ Outcome #5. Study and report on staff behavior to evaluate changes in handwashing compliance.

## LOGIC MODEL: HANDWASHING / IMPROVING HAND HYGIENE

Resources	Activities	Outputs	Short-term Outcomes	Long-term Outcomes	Impact
<p>Centralized system for providing support and consultation to hospitals implementing strategies to reduce hospital acquired infections</p> <p>Financial resources</p> <p>Regional infection control resource planning committee to oversee activities</p> <p>Department of Health staff support</p>	<p>Committee and committee staff oversee the following activities:</p> <ol style="list-style-type: none"> <li>1. Review and measure behaviors, barriers and environment of individuals and hospitals – develop baseline measures</li> <li>2. Synthesize literature, barriers, best practice information to inform implementation of selected programs on an individual or statewide basis</li> <li>3. Provide ongoing individualized support to hospitals implementing various best practices and strategies</li> <li>4. Provide opportunities for hospitals to share implementation experience and strategies</li> <li>5. Evaluate the impact of individual or statewide programs</li> </ol>	<ol style="list-style-type: none"> <li>1. Study and report of staff compliance with handwashing guidelines and hospital and environmental barriers to CDC hand hygiene compliance.</li> <li>2. Identification, development and implementation of an intervention based upon existing literature, and assessment (#1).</li> <li>3. a. Routine site visits by expert regional committee b. ad hoc consultative services as requested by hospital</li> <li>4. Regular meetings of all hospital infection control professionals and expert regional committee to share progress, success and challenges of implementing programs</li> <li>5. Study and report of staff behavior to evaluate changes in handwashing compliance.</li> </ol>	Improved hospitals procedures and policies	Improved hand hygiene procedures	Measurable decreases in the occurrence of specific hospital acquired infections

### **Measures of Effectiveness**

- ❖ Study and report on staff compliance with handwashing guidelines and hospital and environmental barriers to CDC hand hygiene compliance.
- ❖ Identification, development and implementation of an intervention based upon existing literature and an assessment of behaviors, barriers and environment of individuals and hospitals.
- ❖ Routine site visits by expert regional committee.
- ❖ Ad hoc consultative services as requested by hospital.
- ❖ Regular meetings of all hospital infection control professionals and expert regional committee to share progress, success and challenges of implementing programs.
- ❖ Study and report on staff behavior to evaluate changes in handwashing compliance.

## FOODBORNE DISEASE

### Vermont Department of Health (VDH)

#### Progress Report on Current Budget Period Activities

April 1 – November 30, 2004

#### Vermont Successes

- ❖ The Vermont Department of Health Laboratory developed capability to test for noroviruses using reverse transcriptase polymerase chain reaction (RT-PCR). Allowed for the diagnosis of norovirus infection in two Vermont outbreaks of acute gastroenteritis. Investigation of one of the outbreaks lead to the publication "An Outbreak of Norovirus Gastroenteritis at a Swimming Club --- Vermont, 2004" [MMWR September 3, 2004 / 53(34); 793-795].
- ❖ In October 2004 the Foodborne Epidemiologist, a VDHL microbiologist, and a sanitarian attended Epi-Ready Team Training: A Workshop on Foodborne Illness Reporting Strategies.
- ❖ The Vermont Department of Health Laboratory developed capability to detect Shiga toxin-producing *Escherichia coli* using real-time PCR. Will now allow recognition of outbreaks caused by non-O157:H7 *E. coli* as well as those caused by O157:H7.
- ❖ A statewide training for sanitarians and public health nurses from the district offices on food sampling procedures to build capacity to investigate gastrointestinal disease outbreaks in rural Vermont. A hands-on workshop was included in the training and complete food sampling collection kits were distributed to all attendees.
- ❖ The Vermont Department of Health Laboratory (VDHL) utilizes DPDx, an internet-based service developed and maintained by CDC's Division of Parasitic Diseases (DPD) staff, to send digital images of specimens for expedited review and consultation with DPD staff and to strengthen diagnosis of parasitic diseases. DPDx was recently used by the VDHL to confirm a case of schistosomiasis caused by *Schistosoma intercalatum*.
- ❖ The Foodborne Epidemiologist created the Vermont Outbreak Database, the first computerized record of Vermont's outbreak files.
- ❖ The Foodborne Epidemiologist sends a weekly e-mail report to the VDH Laboratory listing all enteric cases reported to the Epidemiology Field Unit; a microbiologist responds regarding the status of each case in the report.
- ❖ The Foodborne Epidemiologist reviews the PulseNet web-board daily to review out-of-state outbreaks that may have associated Vermont cases.

**Objective 1:** Enhance capacity for investigation, control, and reporting of foodborne disease outbreaks.

#### A. Outbreak Investigations – Personnel & Training

The Foodborne Epidemiologist's main role is to enhance foodborne disease surveillance capacity and improve capacity for outbreak investigations. She is able to thoroughly explore community-based clusters and conduct follow-up interviews to obtain source information from cases. She has also been trained to take food complaint calls and to direct information from the calls to the sanitarians in the Division of Health Protection. She has been working with Health Protection to improve communication between the sanitarians and the Epidemiology Field Unit (EFU) and has gone on several inspections with the sanitarians to get a better understanding of how restaurant

investigations are conducted for both routine visits and visits following a complaint. She will continue to participate with sanitarians on inspections during outbreak investigations and on several routine inspections each year.

The Foodborne Epidemiologist has collaborated with Health Protection regarding food complaints from the public, including merging their separate food complaint forms into one. Health Protection and the EFU developed a system for routinely notifying each other of all complaints, regardless of the number of persons reported to be ill. During the current reporting period, two complaints received by Health Protection with only one person reported to be ill have led to foodborne disease outbreak investigations. The Foodborne Epidemiologist will present a year-end report to Health Protection indicating the increased notification and epidemiologic follow-up on foodborne complaints as a result of these collaborative efforts.

The Foodborne Epidemiologist has also worked with the VDH Laboratory (VDHL) in order to strengthen communication and improve surveillance. She sends a weekly e-mail report to the VDHL listing all enteric cases reported to the EFU; a microbiologist responds regarding the status of each case in the report. The Foodborne Epidemiologist has also gained access to the PulseNet web-board. This allows her to review outbreaks in other states and to alert the VDHL when a Vermont case should be compared to out of state cases to determine whether the case may be part of a multi-state outbreak.

The Foodborne Epidemiologist and the Health Surveillance Epidemiologist will conduct an outbreak investigation course (A Multistate Outbreak of *E. coli* O157:H7 Infection) for VDHL staff in December 2004. This one-day course will demonstrate key parts of an outbreak investigation and the critical nature of the VDHL's role in these investigations.

In October 2004 the Foodborne Epidemiologist, a VDHL microbiologist, and a sanitarian attended Epi-Ready Team Training: A Workshop on Foodborne Illness Reporting Strategies in South Bend, Indiana. This training covered the steps in identifying, investigating, and controlling a foodborne outbreak, and demonstrated the key role of each player in the investigation. The training encouraged collaboration amongst the three groups.

The Foodborne Epidemiologist received introductory training in ArcGIS software for GIS. She will play a key role in integrating GIS capacity into the day-to-day operations of the EFU as well as in outbreak investigations.

In the spring of 2004 the EFU conducted a foodborne outbreak investigation training for sanitarians and public health nurses in the VDH district offices. The training simulated a suspected foodborne outbreak in a school, and demonstrated the roles that the public health nurses, the VDH Laboratory, and the sanitarians play in these types of investigations. There was a strong focus on strengthening the relationship between the sanitarians and public health nurses at the local level. EFU and VDHL staff reviewed with public health nurses the protocols for submitting clinical specimens during an outbreak, as well as the various collection kits used for human specimens. This information was especially helpful as Norovirus testing capacity in outbreak situations was recently implemented in the VDHL. The training involved both classroom instruction and a field exercise in which the public health nurses and sanitarians



“investigated” a suspected outbreak, including the entry of simulated data into an EpiInfo 2002 database. The training resulted in the development of a suspected gastrointestinal illness outbreak form and a case interview form.

As an adjunct to this training, VDHL staff worked with sanitarians to develop a food collection kit for outbreak situations. The training included a demonstration of the contents of the kit and the procedures for submitting food samples to the VDHL.

In the summer of 2004, the VDH became involved with planning for a four-day music festival in the Northeast Kingdom of Vermont for which 70,000 attendees would be camping outdoors. The Foodborne Epidemiologist served as an on-site field epidemiologist conducting surveillance for suspected foodborne or infectious disease outbreaks; she was prepared to begin an outbreak investigation if necessary. She also handed out preventative information regarding hepatitis A to the concert-goers. These efforts were in response to the large number of hepatitis A cases associated similar music festivals in the summer of 2003.

The Foodborne Epidemiologist has developed two databases for the EFU. The first contains all of the VDHL’s antimicrobial resistance test results for *Salmonella typhimurium* and *Salmonella newport* isolates since 1998. The Foodborne Epidemiologist will use the CDC’s 2002 antimicrobial resistance data to guide her analysis and presentation of Vermont’s data.

The second database created by the Foodborne Epidemiologist is the Vermont Outbreak Database. This is the first computerized record of Vermont’s outbreak files. It contains both the state outbreak form and CDC report forms for both foodborne (i.e., EFORS) and waterborne outbreaks. The Foodborne Epidemiologist will enter data for the previous ten years into the database. With this information computerized, the EFU can look at outbreak trends over time and can more efficiently retrieve summary information about specific outbreaks for reports, grants and media requests.

The VDH has conducted syndromic surveillance with hospital emergency department data using the CDC’s Early Aberration Reporting System (EARS) for the past two years. Syndromes evaluated include fever, rash, respiratory, and gastrointestinal illness. The Foodborne Epidemiologist has been trained to run daily EARS reports and provides the hospitals with reports of syndromes flagged for further investigation.

Foodborne Epidemiologist Staff Supported by this Cooperative Agreement

Dina Itani, M.S., 100% of time (40 hours/week)

Training Funded by this Cooperative Agreement April 1 – November 30, 2004

Dina Itani, M.S., Microsoft Access Level 3, Burlington, VT, November 2004

Dina Itani, M.S., Epi-Ready Team Training, South Bend, IN, October 2004

Joyce Oetjen, Ph.D. (microbiologist), Epi-Ready Team Training, South Bend, IN, October 2004

Sherry Sawyer (sanitarian), Epi-Ready Team Training, South Bend, IN, October 2004

Dina Itani, M.S., Introductory ArcGIS 9.0, Burlington, VT, October 2004

Dina Itani, M.S., PulseNet Regional Conference, Boston, MA, June 2004

36 Vermont public health nurses and sanitarians, Foodborne Outbreak Investigation Training, Randolph, VT March 2004

**B. Electronic Foodborne Outbreak Reporting System (EFORS)**

Between April and November 2004, the EFU has investigated two foodborne disease outbreaks (one *Salmonella enteritidis* and one outbreak of acute gastrointestinal illness) as well as identifying two possible foodborne clusters that did not lead to an epidemiologic investigation (one *E. coli* O157:H7, one *Salmonella agona*). The EFU also conducted two waterborne disease outbreak investigations (one Norovirus and one Giardia) and participated in three multi-state *Salmonella* investigations. Since April 1, the numbers of laboratory-confirmed cases and of individuals who met case definition but were not confirmed cases are listed in the table below.

Individuals with Foodborne/Waterborne Disease Illness, Vermont, April 1-November 5, 2004

<u>Agent</u>	<u>Confirmed Cases</u>	<u>Met Case Definition</u>
<i>Salmonella enteritidis</i>	2	0
Acute Gastrointestinal Illness	0	8
<i>E. Coli</i> O157:H7	2	5
<i>Salmonella agona</i>	3	0
Norovirus	4	66
Giardia	10	0
<i>Salmonella newport</i>	4	2
<i>Salmonella braenderup</i>	1	0
<i>Salmonella javiana</i>	1	0

The Norovirus outbreak in the winter of 2004 was Vermont's first outbreak investigation of a recreational water source as a suspected exposure. It was also the first outbreak investigation in which the VDHL had the capacity to identify Norovirus in human specimens using PCR. The outbreak investigation led to the development of a Norovirus Outbreak Investigation Protocol. An MMWR article on this investigation of Norovirus in a recreation pool was published in September 2004.

The EFU submitted the following abstracts regarding foodborne investigations in Vermont: *Campylobacter* in Employees of a Dairy Farm, submitted to the Infectious Disease Society of America; Conducting a Foodborne Disease Outbreak Exercise submitted to the National Environmental Health Association; and *Salmonella* DT104 Linked to Ground Beef, submitted by the CDC to the EIS Conference.

Personnel and Procedures for Reporting Foodborne Outbreaks Using EFORS

The Foodborne Epidemiologist, the Health Surveillance Epidemiologist, and the Epidemiology Field Unit Chief are all trained EFORS users. The Foodborne Epidemiologist has primary responsibility for reporting foodborne outbreaks to the CDC using EFORS. Due to the small number of Vermont foodborne outbreaks, reports are entered into EFORS within two months of the date the first case became ill and within one month of the completion of the epidemiologic investigation. As mentioned above, foodborne outbreaks are also entered into the Vermont Outbreak Database.

EFORS Statistics for 12-Month Period of October 2003 – September 2004 (n=5)

% EFORS preliminary reports submitted within 60 days of illness onset for first case	% EFORS reports with number of laboratory-confirmed cases indicated	% EFORS reports with age of cases indicated	% EFORS reports with sex of cases indicated	% EFORS reports with number of hospitalized cases indicated	% EFORS reports with number of deaths indicated
60% (3/5)	100% (5/5)	100% (5/5)	100% (5/5)	100% (5/5)	100% (5/5)

The two outbreaks for which EFORS reports were not submitted within 60 days of the index case's illness onset occurred in October 2003. The reporting delays may be partly explained by the fact that our current Foodborne Epidemiologist started in her position on September 29, 2003. The two other EFU staff who are knowledgeable about EFORS were both involved with training the new epidemiologist. Both reports were submitted to EFORS within 90 days of the first illness onset.

**C. Collection and Transport of Specimens**

As mentioned above, the EFU conducted a foodborne outbreak investigation training for VDH district office sanitarians and public health nurses in the spring of 2004. The training simulated a suspected foodborne outbreak in a school, and demonstrated the roles that the public health nurses, the VDH Laboratory, and the sanitarians play in these types of investigations. EFU and VDHL staff reviewed with public health nurses the protocols for submitting clinical specimens during an outbreak, as well as the various collection kits used for human specimens. This information was especially helpful as Norovirus testing capacity in outbreak situations was recently implemented in the VDHL. Both emesis and stool specimen collection for Norovirus testing were reviewed, along with a new Norovirus protocol developed by the Foodborne Epidemiologist. A general procedure manual for specimen collection was not developed because specific information related to specimen collection for individual illness is included in each disease protocol.

As an adjunct to this training, VDHL staff worked with sanitarians to develop a food collection kit for outbreak situations. The training included a demonstration of the contents of the kit and the procedures for submitting food samples to the VDHL.

Vermont has a well-established courier delivery system that collects specimens from hospital clinical laboratories for delivery to the VDHL daily.

The Foodborne Epidemiologist analyzed data on enteric disease cases reported by hospital clinical laboratories over a six-month period and provided feedback to the VDHL regarding the

percentage of reported isolates that were submitted to the VDHL by each laboratory. She presented this information at a Clinical Laboratory Managers' meeting to demonstrate the epidemiologic significance of submitting isolates to the VDHL as well as the VDHL's testing capabilities. Since then, the VDHL has been able to track all isolates from hospitals using the weekly report from the Foodborne Epidemiologist. The Foodborne Epidemiologist is currently analyzing isolate submission rates for the subsequent six-month period to determine whether improvements in rates have occurred.

**Objective 2:** Improve laboratory capacity and laboratory-based surveillance for emerging foodborne pathogens.

#### **A. PulseNet**

The VDH Laboratory (VDHL) performs routine molecular subtyping of bacterial foodborne pathogens by pulsed-field gel electrophoresis (PFGE). The standardized PFGE protocols for *E. coli* 0157:H7, *Salmonella*, *Shigella*, and *Listeria* have been implemented and currently all *Salmonella*, *E. coli*, *Shigella*, and *Listeria* isolates received at the VDHL are being fingerprinted. The Laboratory has the capability to normalize PFGE patterns, compare them with other patterns, and maintain local databases of PFGE patterns for each bacterial pathogen of interest. The information is shared routinely with VDH epidemiologists and is being used to investigate potential foodborne disease outbreaks.

#### Laboratory staff performing PFGE and PulseNet Lab Certifications Submitted to CDC October 2003 – September 2004

Natasha Pugsley (position funded 100% by ELC grant), 75% of time (30 hours) on PFGE. Natasha is certified to submit PFGE patterns for *Salmonella*, *E. coli*, and *Shigella*. She submitted certification sets for *Listeria* during 03/04 and received PulseNet communication during 10/04 that additional work was needed.

Laura Finck (position funded by state of Vermont general funds), 30% of time (12 hours) on PFGE. Laura re-submitted certification sets for *Salmonella* and *E. coli* during 01/04 and received PulseNet communication during 06/04 that additional work was needed. Laura resubmitted certification sets for *Salmonella* and *E. coli* during 10/04 and was certified for both of these organisms during November 2004; she also submitted a certification set for *Shigella* during 10/04.

Both microbiologists have received BioNumerics training and the VDHL has received all of the instructions for setting up a SecurID Key Fob, authenticating to the CDC firewall, connecting to the BioNumerics server and converting existing databases to BioNumerics. BioNumerics became fully operational at the VDHL in January of 2004. Both microbiologists were able to attend the PulseNet Annual Update Meeting in San Diego, California in April 2004. This meeting enables microbiologists from participating PulseNet laboratories to discuss new protocols and software upgrades and exchange information on problems and solutions.

In June of 2004, the two PulseNet microbiologists, the foodborne epidemiologist, and the Epidemiology Field Unit Chief attended the PulseNet Regional Meeting in Boston, MA. The goals of this conference were to identify and discuss issues affecting identification and response

to foodborne illness within PulseNet programs, increase the understanding of epidemiology and laboratory roles and activities, develop strategies to increase PulseNet effectiveness and develop action items for implementing these strategies. Action items for the VDHL included improving reports and database connections between epidemiology and the laboratory, increased cross training between epidemiology and the laboratory, increasing awareness in the healthcare community about foodborne diseases, epidemiology investigations, and PulseNet capabilities, and ensuring all key bacterial isolates are submitted to the VDHL for molecular subtyping by PFGE.

Total number of PFGE gels run at the VDHL (October 2003 – September 2004): 85

*PulseNet General Statistics  
for 12-Month period of October 2003 – September 2004*

	Total # of isolates received Oct 03 – Sept 04	Total # of isolates run by PFGE	How many isolates were run with primary enzyme?	How many isolates were run with secondary enzyme?
<i>E. coli</i>	17	17	17	17
<i>Listeria</i>	2	2	2	2
<i>Shigella</i>	5	5	4	1
<i>Salmonella</i>	63	63	63	18
<i>Campylobacter</i>	15	0	0	0

**B. Surveillance for Shiga toxin-producing *E. coli***

The VDHL performs routine screening, isolation, and identification of bacteriological pathogens including *Campylobacter*, *E. coli* O157:H7, *Salmonella*, *Shigella*, and *Yersinia*. *Salmonella* isolates are grouped and serotyped and *Shigella* isolates are grouped. All *Salmonella typhimurium* and *Salmonella newport* isolates are tested for antimicrobial susceptibility. The VDHL participates in the CDC quality control/quality assurance program for *Salmonella* serotyping and susceptibility testing as well the CAP-D bacteriology survey.

During the spring of 2004, a senior microbiologist attended a CDC/APHL sponsored workshop on "Methods for Shiga toxin-producing *Escherichia coli* (STEC) Surveillance." As a consequence, the VDHL has increased its capability to detect all Shiga toxin-producing *E. coli* and not just *E. coli* O157:H7. All stool specimens are now being inoculated into broth as well as onto plates. Subsequently, all broth cultures are tested for Shiga-toxins using the Meridan

Premier EHEC EIA. In addition, bacteria from confluent growth on MacConkey agar plates are being tested for Shiga toxin by real-time PCR. If broth or plate cultures are positive for Shiga toxin, then individual colonies are tested. All *E. coli* isolates, including sorbitol negative isolates recovered from stool specimens and reference isolates received at the VDHL are tested for *E. coli* O157 by the Remel Latex test and for Shiga toxins.

### **C. Telediagnosis and molecular diagnosis of parasitic diseases through DPDx**

The VDHL performs EIA for the detection of *Giardia* (Alexon-Trend ProSpecT® *Giardia* Microplate Assay) and *Cryptosporidium* (Alexon-Trend ProSpecT® *Cryptosporidium* Microplate Assay) in stool specimens. A wet mount microscopic identification technique is used for the detection of protozoan trophozoites, cysts, oocysts, and helminth eggs and larvae and permanent iron-hemotoxylin-stained slides are used for identification of protozoan trophozoites and cysts and for confirmation of species. A modified acid-fast staining procedure is used for the identification of oocysts of the coccidian species (*Cryptosporidium*, *Isospora*, and *Cyclospora*).

The VDHL has full capacity for telediagnosis through the DPDx program. This has been particularly helpful in recent months for diagnosing parasitic diseases in Vermont's refugee population. The VDH Division of Community Public Health helps facilitate the healthy transition of newly arriving refugees by providing a coordinated approach to health care services. Refugees have access to primary care physicians and obtain a domestic health screening within 30 days of their arrival in the United States. Among other things, refugees are screened for parasitic diseases and many carry a heavy parasite burden. The VDHL has sent eight images of several of these parasites to the CDC through the DPDx program for diagnostic confirmation or to contribute images of particular interest. Images have included those of *Iodamoeba butschlii*, *Endolimax nana*, *Blastocystis hominis*, *Entamoeba coli*, *Schistosoma intercalatum*, and *Giardia lamblia* and two images of possible worms. All inquiries were successfully addressed.

The VDHL participates in the DPDx a monthly parasitology case study training program and is currently in the process of contributing a case study involving a *Schistosoma intercalatum* infection. The VDHL teaches the parasitology laboratory section of a course offered in the Medical Laboratory Science Program at the University of Vermont and the DPDx Website has been helpful as a reference and training tool for the students.

Currently the VDHL does not have the capacity to determine the genotype of a parasite causing a certain outbreak. Establishing the capacity for the molecular identification of foodborne parasites by using PCR techniques would be important in outbreak investigations and for the accumulation of molecular data on parasites causing foodborne diseases so that prevalence/incidence of certain genotypes can be established. For example, the VDHL has recently diagnosed several *Entamoeba histolytica/dispar* intestinal infections, but without molecular diagnostic capability, these two species could not be distinguished. The VDHL is currently in the process of purchasing equipment and reagents necessary to establish capacity for molecular identification of food-borne parasites.

Equipment purchased: None

Software purchased: None

Funds used to implement telediagnosis in remote laboratories? None

#### **D. Capacity for molecular identification of foodborne viruses**

The VDHL now has the capability to perform Norovirus testing as needed during outbreak situations. The real-time RT-PCR and traditional PCR procedures have been validated under the guidance of the CDC using stool samples provided by the CDC and by the New Hampshire Department of Health Laboratory. VDHL and Epidemiology Lab personnel worked together to develop testing criteria during an outbreak situation and procedures for specimen collection and subsequent transport to the Laboratory for testing.

During February 2004, two outbreaks of acute gastrointestinal illness caused by Norovirus occurred in Vermont, one in a nursing home and one at a swimming club. The VDHL tested 19 stool and emesis specimens by traditional PCR from these outbreaks and of these, eight were positive for norovirus; one was equivocal. In both outbreaks, specimens and PCR products were sent to the Respiratory and Enteric Viruses Branch of the CDC for testing and sequencing. The CDC confirmed that Vermont specimens from these outbreaks were positive for norovirus by reverse transcription-polymerase chain reaction (RT-PCR). The pool outbreak and subsequent investigation resulted in the publication "An Outbreak of Norovirus Gastroenteritis at a Swimming Club --- Vermont, 2004" [MMWR September 3, 2004 / 53(34); 793-795].

Equipment purchased: None

Software purchased: None

Funds used to implement molecular diagnostic techniques in remote laboratories? None

Training needs addressed or training activities developed with funds received? None

#### **E. NARMS**

The VDHL began participation in the National Antimicrobial Resistance Monitoring System (NARMS) for enteric bacteria in January of 2003. Isolates are being submitted to the CDC according to the NARMS isolate submission guidelines.

#### **F. State-based interventions to mitigate antimicrobial resistance in Salmonella and other foodborne bacteria.**

N/A

#### **G. Other**

Sanitarians in Health Protection and public health nurses from the district offices often collect food samples during foodborne disease outbreak investigations and a proper sample is critical to the microbiological examination of any food product. In order to build capacity to investigate gastrointestinal disease outbreaks in rural Vermont, a senior microbiologist from the VDHL and the sanitarian supervisor from Health Protection conducted a statewide training for all sanitarians and public health nurses on food sampling procedures. The training included proper methods for

collecting, labeling, and transporting food samples as well as chain of custody procedures. A hands-on workshop was included in the training and complete food sampling collection kits were distributed to all sanitarians and public health nurses.

A team from the VDH, consisting of senior microbiologist, the foodborne epidemiologist, and an environmental health professional attended the Epi-Ready Team Training: A Workshop on Foodborne Illness Response Strategies” sponsored by the National Environmental Health Association, in cooperation with the Center for Disease Control and Prevention, National Center for Infectious Diseases-Food Safety Office, and the National Association of County and City Health Officials. This workshop provided up-to-date training and resources in outbreak investigation and surveillance. It emphasized the team effort between epidemiologists, environmental health professionals and laboratorians required during an outbreak. The skill building exercises during the workshop were used to educate each team member about the various roles played by everyone on the team and allow them to interact as a whole. The exercises emphasized environmental assessment, epidemiological investigation, laboratory guidance and final report presentation which will be of benefit during a food borne outbreak.

### **New Budget Period Proposed Program Activities and Objectives April 1, 2005 – March 31, 2006**

**Objective 1:** Enhance capacity for investigation, control, and reporting of foodborne disease outbreaks.

#### **A. Surveillance and Outbreak Investigations**

- a. The Foodborne Epidemiologist e-mails a summary of all reports of enteric disease cases to the VDHL on a weekly basis.
- b. The Foodborne Epidemiologist monitors specimen submissions to the VDHL as well as reports from clinical and reference laboratories daily to identify potential case clusters and outbreaks.
- c. The Foodborne Epidemiologist requests that the VDHL post the PFGE patterns of isolates associated with clusters or outbreaks to PulseNet. She then communicates with the Laboratory about responses to the postings and epidemiologic information obtained.
- d. The Epi Field Unit (EFU) alerts the VDHL of outbreaks in other states so that PFGE patterns of Vermont isolates can be compared in PulseNet to identify multi-state outbreaks.
- e. The Foodborne Epidemiologist evaluates trends in enteric disease prevalence by MMWR week and by quarter on a quarterly basis to document seasonal variations and provide insight into possible control strategies.
- f. The Foodborne Epidemiologist accompanies sanitarians on four regularly scheduled food service establishment inspections per year. This increases her knowledge about food safety and improves her ability to perform onsite investigations during an outbreak. She also collaborates closely with sanitarians on outbreak investigations.
- g. The Foodborne Epidemiologist works with Health Protection and the VDH web keeper to post preventive information related to food safety and enteric disease on the VDH website.
- h. The Foodborne Epidemiologist completes online training courses to increase her awareness regarding food safety and regulations for consumer food products.



- i. The Foodborne Epidemiologist will continue to assist with Vermont's syndromic surveillance system by running EARS reports twice a week and by presenting information about the EARS program to additional hospitals to develop a statewide syndromic surveillance system.
  - j. The EFU will work with local public health nurses to distribute the Primer for Physicians: Diagnosis and Management of Foodborne Illness, which was issued by the CDC. These will be distributed to local physicians' offices, emergency departments and clinics. A follow-up survey will be distributed to assess the Primer's use and to determine the demand for foodborne illness information to guide the distribution of additional resources to Vermont providers.
  - k. The Foodborne Epidemiologist will conduct the CDC's training course titled "A Multistate Outbreak of *E. coli* O157:H7 Infection" for VDHL staff. This training exercise will demonstrate the key roles on an outbreak investigation and give laboratory staff a better understanding of the basic epidemiological principles used during an outbreak investigation.
  - l. The Foodborne Epidemiologist will receive further training in GIS. She will then be able to use this mapping software to provide reports to the EFU and to sanitarians in Health Protection. Summary reports on the location of food complaints and on the geographic distribution of cases for specific diseases will be provided in an end-of-year report.
  - m. The EFU will go live with the NEDSS Base System (NBS) version 1.1.3, including the Foodborne Disease Program Area Module, in December 2004. The NBS will provide both epidemiology and laboratory staff with ready access to case exposure information and lab results. VDHL staff will be trained to access this database to retrieve case demographic information.
  - n. Data for the previous ten years will be entered into the Vermont Outbreak Database. The Foodborne Epidemiologist will provide trend reports on Vermont foodborne disease outbreaks once this data is entered.
  - o. Trends in antimicrobial resistance patterns for all susceptibility results for *Salmonella typhimurium* and *S. newport* specimens tested at the VDHL since 1998 will be analyzed. Information on trends will be shared with the Epi Field Unit, the VDHL and the State Veterinarian in the Agency of Agriculture.
  - p. Review data from the Agency of Agriculture on food or feed handling establishments over which the agency has regulatory authority (i.e., dairy, meat, honey, apples, maple processing, and eggs) to improve surveillance and response capability for epidemiologic investigation of foodborne and waterborne outbreaks.
  - q. The Foodborne Epidemiologist and others in the Epi Field Unit will collaborate with Health Protection to develop a shared database for food complaints. This database will include the information necessary to conduct inspections based on complaints. The database will also be used to monitor complaints and will ensure that both the Epi Field Unit and Health Protection are aware of all food complaints received, increasing VDH's capacity for responding in a timely fashion. Feedback will be obtained from users in how the database improves their ability to respond to complaints.
- B. Electronic Foodborne Outbreak Reporting System (EFORS)**
- a. At least 75% of foodborne disease outbreaks will have a preliminary report in EFORS within two months of the date the first case became ill.

- b. At least 80% of final EFORS reports will have each of the following fields completed:  
Numbers of lab-confirmed cases; Ages of cases; Sex of cases; Number of hospitalizations;  
Number of deaths.

**C. Collection and Transport of Specimens**

- a. The VDHL supplies specimen collection kits to the district offices. The local public health nurses encourage the submission of specimens as appropriate.
- b. Protocols for the collection and testing of outbreak specimens will be updated as necessary.
- c. The VDH will continue to support the transport of specimens by courier using ELC funds.
- d. The Foodborne Epidemiologist reviews the percentage of reported enteric isolates that are submitted to the VDHL by each hospital clinical laboratory every six months. Isolate submission rates are presented at the Clinical Laboratory Managers' meeting to demonstrate the epidemiologic significance of submitting isolates to the VDHL as well as to encourage submissions.

**Objective 2: Improve laboratory-based surveillance for emerging foodborne pathogens.**

**A. PulseNet**

- a. Continue to provide routine screening, isolation, and identification of bacteriological enteric pathogens including *Campylobacter*, *E. coli* O157:H7, *Salmonella*, *Shigella*, and *Yersinia*. Continue participation in CAP Bacteriology, and the WSLH Enteric Bacteriology proficiency tests.
- b. Continue to group and serotype all *Salmonella* isolates and to group all *Shigella* isolates. Participate in CDC quality control/quality assurance program for *Salmonella* serotyping and susceptibility testing.
- c. Continue to perform PFGE subtyping for all *Salmonella*, *E. coli*, *Shigella*, and *Listeria* isolates and to maintain the local PFGE pattern database for *Salmonella*, *E. coli*, *Shigella*, and *Listeria*.
- d. Continue to submit PFGE patterns to the national PulseNet databases for *Salmonella*, *E. coli*, *Shigella*, and *Listeria* and be an active member of the PulseNet national molecular subtyping network.
- e. Continue to participate in the ongoing PFGE proficiency-testing program for *Salmonella* and *E. coli*. When available, begin participation in PFGE proficiency-testing program for *Shigella* and *Listeria*.
- f. Participate in the Annual PulseNet Update meeting.
- g. Obtain certification for first microbiologist to submit *Listeria* PFGE patterns to PulseNet national databases. Obtain certification for second microbiologist to submit *Salmonella*, *Shigella*, and *E. coli* PFGE patterns to PulseNet National databases.
- h. Obtain certification for second microbiologist to submit *Listeria* PFGE patterns to the PulseNet National database.

**B. Surveillance for Shiga toxin-producing *E. coli***

- a. Continue to perform the Shiga-toxin EIA test on all specimens received at the VDHL for enteric screening, on any *E. coli* O157:H7 or non-O157 Shiga toxin producing *E. coli*

isolates (STEC) recovered from an enteric screen, and on *E. coli* reference isolates. Serotype all STEC isolates with the help of the CDC when appropriate

- b. New objective Fall-Winter 2004-2005:** Validate real-time PCR methods for detecting Shiga toxins at the VDHL. Incorporate PCR detection methods into STEC isolation-detection algorithms.

**C. Diagnosis of parasitic diseases through DPDx**

- a. Continue to utilize DPDx teleradiology capability as needed.
- b. Continue to participate in the monthly parasitology case study mailing list offered by DPDx and utilize DPDx resources during the training of laboratory sciences in parasitology to University of Vermont students.
- c. Continue to perform EIAs for the detection of *Giardia* and *Cryptosporidium* in stool specimens and wet mount microscopic identification of protozoan trophozoites, cysts, oocysts, and helminth eggs and larvae and to use permanent iron-hematoxylin-stained slides for identification of protozoan trophozoites and cysts and for species confirmation.
- d. Continue to use a modified acid-fast staining procedure is used for the identification of oocysts of *Cryptosporidium*, *Isospora*, and *Cyclospora*. Enhance capability to diagnose *Cyclospora* by utilizing fluorescence microscopy to detect epifluorescence of oocysts.
- e. Implement PCR detection of parasites at the VDHL. The VDHL has experience with molecular techniques and some of the equipment necessary to achieve this goal (thermocycler, transilluminator). One microbiologist would need training in molecular identification of foodborne parasites and some additional supplies, reagents, and equipment still need to be purchased.

**D. Capacity for molecular identification of foodborne parasites**

See item C. above.

**E. Capacity for molecular identification of foodborne viruses**

- a. Continue to provide Norovirus testing using CDC-developed protocols for traditional PCR. Supply CDC with Norovirus amplicon to be sequenced for genotype and cluster identification.

**F. NARMS**

- a. Continue to do antimicrobial susceptibility testing on all *Salmonella typhimurium* and *S. newport* isolates.
- b. Continue to participate in NARMS by sending requested isolates to the CDC for antimicrobial susceptibility testing.

**G. State-based interventions to mitigate antimicrobial resistance in *Salmonella* and other foodborne bacteria**

There are no veterinary diagnostic laboratories or schools of veterinary medicine in Vermont.

**Measures of Effectiveness**

- 75% of foodborne disease outbreaks have a preliminary report in EFORS within two months (60 days) of the date the first case became ill.

- ❖ 80% of reported foodborne disease outbreaks have each of the following fields completed in the final EFORS report:
  - Numbers of lab-confirmed cases
  - Ages of cases
  - Sex of cases
  - Number of hospitalizations
  - Number of deaths
- ❖ Appropriate epidemiologic follow-up is completed on all enteric isolates that have matching PFGE patterns within a 3-month period.
- ❖ A suspected etiologic agent is identified for at least 25% of foodborne disease outbreaks.
- ❖ Foodborne bacterial pathogen surveillance data are reported to CDC at least monthly, using either the Public Health Laboratory Information System (PHLIS) or the NEDSS Base System (NBS).
- ❖ The Foodborne Epidemiologist accompanies sanitarians on four regularly scheduled food service establishment inspections per year.

## **HEPATITIS PREVENTION AND CONTROL**

### **Vermont Department of Health (VDH)**

#### **Progress Report on Current Budget Period Activities** **April 1 – November 30, 2004**

##### **Vermont Successes**

- Hepatitis A and B immunization clinics were held in September and October 2004 at a gay, lesbian, bisexual, and transgender community center in Vermont's most populous county. Twenty-five doses of vaccine were administered to 18 adults at risk of infection with hepatitis C. Additional clinics are scheduled for November 2004 and January 2005.
- The Vermont Department of Health will pilot New York's Viral Hepatitis Curriculum training for drug treatment counselors in July 2005.
- Vermont will begin transmitting hepatitis cases to CDC using the NEDSS Base System version 1.1.3 before the end of calendar year 2004.

**Objective 1:** Develop, coordinate, and evaluate a hepatitis C virus prevention and control program that is integrated into existing public health prevention services and programs.

In collaboration with the STD Program Manager and other partners, the Hepatitis Coordinator drafted a written viral hepatitis plan for Vermont with detailed recommendations in the areas of surveillance, primary and secondary prevention, long-term care management and professional education. The plan includes information on the natural history of HCV, risk factors for transmission, treatment and management, surveillance, the incidence of HCV in Vermont, analysis of prevalence among high risk populations in Vermont, an estimate of the current disease burden, and preliminary estimates of the future burden based on models of disease progression. The draft plan is currently being reviewed by the Commissioner's Office.

The Health Surveillance Epidemiologist and Hepatitis Coordinator, in conjunction with AIDS Program and STD Program staff, have begun the activities necessary to integrate hepatitis C education and training into HIV/AIDS prevention programs. HIV/AIDS service providers in Vermont receive comprehensive HIV prevention training, but are not currently receiving comprehensive hepatitis virus prevention training. An inventory of approximately 30 VDH-supported programs and activities was completed in February 2004. Further action was delayed pending the hiring of a new AIDS Director, however work on some of the new budget period activities (see Objective 1 below) has begun.

The Hepatitis Coordinator has also conducted a preliminary assessment of hepatitis C education and screening activities in residential substance abuse and methadone treatment programs in Vermont. An expansion of methadone treatment in the state is underway, and further work in this area will be a priority.

The Hepatitis Coordinator worked with the Immunization Program, the AIDS Program, and the STD Program to identify adult populations at risk of infection with hepatitis C who should receive hepatitis A and hepatitis B vaccine. Hepatitis A and B immunization clinics were held in

September and October 2004 at a gay, lesbian, bisexual, and transgender community center in Vermont's most populous county. Twenty-five doses of vaccine were administered to 18 adults at risk of infection with hepatitis C. Additional clinics are scheduled for November 2004 and January 2005. The Hepatitis Coordinator is working with the Immunization Program to explore other partnerships so that additional clinics can be held in other counties.

The Training and Technical Assistance Specialist in the VDH AIDS Program has been serving on the New York state department of health's Viral Hepatitis Curriculum Advisory Council for the past year. New York is funded by a CDC grant to develop, test and evaluate a comprehensive viral hepatitis curriculum. The advisory council for this project is made up of individuals with diverse areas of expertise (e.g., drug treatment, harm reduction, corrections, veterans' affairs) from public health, community-based organizations, and the CDC.

The Council has reviewed the curriculum, which is designed to train health professionals and paraprofessionals in five major categories of human service - substance use treatment, HIV/AIDS services, corrections, STD treatment and "general" human services. This year the Council will pilot the five versions (for the five target audiences named above) in diverse settings nationwide. The VDH Alcohol & Drug Abuse Program will pilot the training for drug counselors in July 2005.

**Objective 2:** Plan, implement, and evaluate a laboratory-based surveillance system for individuals with chronic hepatitis B virus and hepatitis C virus infection.

### **Epidemiology**

The Vermont Communicable Disease Regulations require reporting by healthcare workers of hepatitis cases and by laboratories of test results indicating infection with hepatitis viruses to the VDH. These reports are queried against the NETSS database, which contains reports since 1982, and also against a database containing earlier reports.

Reports of individuals infected with hepatitis B who are not already in NETSS or the earlier database are followed up by a Disease Intervention Specialist from the Sexually Transmitted Disease Unit or by a public health nurse. When follow-up has been completed a case status is assigned and the case report information is entered into NETSS. Reports of individuals infected with hepatitis B who were already in one of the databases are being retained as paper files for future surveillance activities as resources allow. The VDH Immunization Program is responsible for securing and distributing vaccine and immune globulin for hepatitis B. The Immunization Program also coordinates follow-up of the small number of reported cases of perinatal hepatitis B infection each year.

The VDH has successfully implemented the new Council of State and Territorial Epidemiologists case definition for Past/Present Hepatitis C Virus Infection effective January 1, 2003. Reports of individuals infected with hepatitis C who are not already in NETSS or the earlier database are entered into NETSS as pending cases. The Hepatitis Coordinator mails a form to the attending physician to collect relevant demographic, clinical, diagnostic, and risk

factor information. This information is used to determine case status (acute, past/present or probable), and the case report is completed in NETSS.

An evaluation of the hepatitis C case surveillance system using CDC criteria for surveillance system performance is currently in progress. Preliminary data indicates that the surveillance system is meeting CDC's performance measures. Preliminary analysis of the 2003 data indicates that a case determination was made in 80 percent of newly opened cases. Further, a determination of case status was made within six months in 83 percent of cases.

The VDH completed parallel production in the NEDSS Base System (NBS) version 1.1.1 in the spring of 2004 and will go live with the NBS version 1.1.3 in December 2004. Information from the CDC Viral Hepatitis Case Report Form that is currently being entered into NETSS will be entered into the Hepatitis Program Area Module in the NBS beginning in January 2005. Legacy communicable disease case data (including hepatitis C case data) will remain in NETSS.

The fall 2004 issue of the Disease Control Bulletin, which is mailed to all health care providers in the state, contained an article titled "Hepatitis C Infection: Prevalence and Recommendations for Testing". The article contained data on the estimated average prevalence of hepatitis C virus infection in the United States by various characteristics, and the estimated prevalence of persons with these characteristics in the population.

Revision of the Infectious Disease Regulations is currently underway. Proposed changes related to hepatitis C surveillance are to require laboratory reporting of all viral load test results (whether detectable or non-detectable) and to require laboratory reporting of intermediate and low-level reactive antibody test results. These revisions are currently under review by the State Epidemiologist prior to submission to the Administrative Rules Committee of the Vermont General Assembly.

### **Laboratory**

The VDH Laboratory (VDHL) provides screening for HCV infection. Patient specimens are tested using Abbott Laboratories enzyme immunoassay (ABBOTT HCV EIA 2.0). The VDHL has incorporated CDC guidelines for laboratory testing and result reporting of antibody to HCV. Initially reactive specimens are repeated in duplicate and the screening-test-positive signal to cut-off (s/co) ratio is now used to determine the need for supplemental testing. Screening-test-positive samples with s/co ratios  $\geq 3.8$  are reported as anti-HCV positive; those with s/co ratios  $< 3.8$  are sent to a reference laboratory for supplemental RIBA™ testing. From 04/01/03 to 03/31/04, the VDHL has screened 595 specimens for HCV antibodies and 11 of these have been positive; only 2 of the positive specimens have needed reflex supplemental testing based on screening-test-positive s/co ratios. Adopting the CDC guidelines has resulted in a decrease in testing cost for the VDH and has improved turnaround times for positive specimens.

The VDHL provides screening for Hepatitis B (HBV) serologic markers, including HBV surface antigen, as well as HBV core IgG and IgM total antibody, HBV core IgM antibody, and HBV surface IgG antibody. The VDHL notifies the Epi Field Unit and providers immediately of specimens testing positive for HBV surface antigen and/or anti-HCV antibodies.

**New Budget Period Proposed Program Activities and Objectives**  
**April 1, 2005 – March 31, 2006**

**Objective 1:** Integrate hepatitis C virus infection prevention and control information into existing public health prevention services and programs.

- A. Continue to support a Hepatitis Coordinator position at the VDH. This position collaborates with the Health Surveillance Epidemiologist, the AIDS Program Chief, the Office of Drug Abuse Programs, and other VDH staff and programs to integrate hepatitis C prevention information into existing programs.
- B. Identify additional sites for HAV and HBV immunization in conjunction with the Immunization Program and the AIDS Program, and implement vaccination clinics at identified sites. Site to be targeted will include organizations serving MSM and youth at risk for substance abuse, including the AIDS Project of Southern Vermont's Men's Program, Outright Vermont, Spectrum Youth and Family Services, RU12, and needle exchange program sites.
- C. Investigate and learn from other states' hepatitis prevention and control programs.
- D. Present information on the epidemiology of viral hepatitis in Vermont to the HIV/AIDS Community Planning Group.
- E. Review the hepatitis prevention component of the Red Cross's HIV prevention curriculum and identify and address gaps.
- F. Integrate viral hepatitis information into existing VDH-sponsored websites and public health informational campaigns (e.g., [www.healthyvermonters.org](http://www.healthyvermonters.org), [www.themanphone.org](http://www.themanphone.org), [www.vtM4M.net](http://www.vtM4M.net)).
- G. Conduct a needs assessment and identify resources (e.g., University of Vermont College of Medicine, Area Health Education Center) for provider education and training around hepatitis C.
- H. Work with the Counseling & Testing Coordinator in the AIDS Program to begin to integrate hepatitis prevention into the five-day counseling and testing training for VDH grantees.
- I. Develop and maintain a resource guide identifying available social support and medical services for individuals infected with hepatitis C.
- J. Work with the Department of Corrections to identify needs regarding counseling and testing for hepatitis C virus infection within the corrections system in Vermont.
- K. Provide education about hepatitis C virus to personnel in correctional facilities as requested.
- L. Integrate viral hepatitis prevention into the VDH AIDS Program's future Partner Counseling and Referral Service implementation plan.
- M. Explore the possibility of funding the Training and Technical Assistance Specialist in the VDH AIDS Program and the public health nurses in the district offices who are "HIV Designees" to do hepatitis prevention work.

**Objective 2:** Conduct laboratory-based surveillance for individuals with chronic hepatitis B virus and hepatitis C virus infection.

**Laboratory:**

- A. Continue to provide screening for HCV infection; provide supplemental RIBA testing through ViroMed for all screening-test positive specimens with s/co ratios  $\geq 3.8$ .



- B. Continue to provide screening for HBV serologic markers, including HBV surface antigen, as well as HBV core IgG and IgM total antibody, HBV core IgM antibody, and HBV surface IgG antibody.

**Measures of Effectiveness**

- Hepatitis C virus prevention is integrated into three existing programs.
  - All AIDS Program-funded service providers receive comprehensive viral hepatitis prevention training.
  - Three hepatitis A and B immunization clinics targeting adults at risk of infection with hepatitis C have been held.
-

## INFLUENZA SURVEILLANCE AND RESPONSE Vermont Department of Health (VDH)

### Progress Report on Current Budget Period Activities April 1 – November 30, 2004

#### Vermont Successes

- Three sentinel influenza surveillance practices report influenza-like illness activity through the summer months as part of Vermont's year-round sentinel influenza surveillance program.
- Unlimited year-round influenza testing is offered free of charge at the Vermont Department of Health Laboratory.
- The Vermont Department of Health Laboratory performs strain typing on all positive influenza cultures. Viruses that cannot be typed by the VDH Laboratory are sent to the CDC for further analysis.
- Transportation of influenza cultures to the Vermont Department of Health Laboratory is provided free of charge for sentinel influenza surveillance practices.
- The CDC's Early Aberration Reporting System (EARS) is used to track influenza-like illness at Vermont hospitals.

**Objective 1:** Maintain the capacity of the VDH Laboratory (VDHL) to obtain appropriately collected respiratory samples, culture specimens for influenza viruses, and type and subtype influenza isolates.

The VDHL participates in the U.S. WHO collaborating laboratories influenza virus surveillance program and, beginning in 2002, the VDHL expanded influenza testing capability and now offers testing throughout the year. The VDHL uses the Becton and Dickinson Directigen™ Flu A + B rapid *in vitro* enzyme immunoassay (EIA) membrane to test all specimens from patients living in group settings (e.g. nursing homes) or at special request from the VDH Influenza Surveillance Coordinator. All Directigen™ Influenza A+B EIA results (both positive and negative) are subsequently confirmed at the VDHL by cell culture methods. All specimens received at the VDHL from other providers are tested for influenza virus by cell culture.

For influenza viral culture, specimens are inoculated into shell vials containing Rhesus Monkey Kidney (RMK) cell lines. Light Diagnostics SimulFluor® Flu A/Flu B immunofluorescence assay is used for the detection and identification of influenza A and influenza B virus in cell culture. If either influenza A or B is identified, the specimen is passed into RMK cell culture tubes. The virus grown in the cell culture tubes is used in hemagglutination inhibition strain typing procedures utilizing reagents supplied to the VDHL by the CDC. The VDHL sends influenza isolates to the CDC periodically as requested by the U.S. WHO surveillance program.

From 04/01/03 through 03/31/04, the VDHL tested 465 specimens for influenza by cell culture; 195 were positive for influenza A; none were positive for influenza B. All positive Directigen™ and early season cell culture results are telephoned immediately to the VDH Influenza Surveillance Coordinator and to providers. Two VDH microbiologists are fully trained in all aspects of influenza virus testing, typing and subtyping.

Sentinel influenza providers are supplied with CLIA-waived ZstatFlu™ rapid influenza test kits (Zymetx, Inc) to facilitate testing and surveillance for influenza. All specimens from sentinel physicians, whether positive or negative for influenza virus by the ZstatFlu™ test, are sent to the VDHL for cell culture. Courier service for influenza specimens from sentinel providers is provided through the ELC grant.

In October 2004, one senior microbiologist from the VDHL attended a CDC/APHL sponsored course "Modern Methods for Influenza Detection and Subtyping". The VDHL has obtained all of the reagents required to perform RT-PCR procedures for the detection of influenza A and B viruses and the procedure has been validated using patient specimens previously tested at the VDHL by cell culture and subsequently confirmed by the CDC. During the 2004-2005 influenza season, the VDHL plans to develop the capability to detect influenza subtypes H1, H3, H5, and H7 as well. RT-PCR will be performed on specimens from patients meeting the influenza A (H5) surveillance criteria.

**Objective 2:** Maintain the Vermont influenza sentinel physician surveillance system, including year-round influenza surveillance.

Vermont has implemented the new Council of State and Territorial Epidemiologist's influenza-like illness (ILI) activity level definitions, with four regions (i.e., NW, NE, SW, SE) and four levels of activity (i.e., no activity, sporadic, local, and widespread). Twelve sentinel practices reported ILI activity to the CDC during the 2003-2004 season, and 13 practices are reporting during the 2004-2005 season. Three sentinel practices continue to report through the summer months as part of CDC's year-round sentinel influenza surveillance program. Unlimited year-round influenza testing continues to be offered free of charge at the VDHL. Rapid (Directogen A/B) testing is available for specimens submitted by nursing homes and in other special circumstances. Transportation of influenza cultures to the VDHL is provided free of charge for the sentinel practices.

#### 2003 – 2004 Influenza Season

The first positive influenza culture was collected on November 19, 2003. Vermont reported sporadic ILI activity beginning the week ending 11/22/03, local activity the week ending 12/6/03, and widespread activity from the week ending 12/13/03 through the week ending 1/17/04. At that point ILI activity steadily decreased, and the last positive viral cultures were reported on 3/22/04. Vermont, like the rest of the New England states, began seeing ILI and reported widespread ILI activity two to three weeks later than much of the U.S.

Of the 186 influenza isolates identified by the VDHL and the Fletcher Allen Health Care Laboratory, all were influenza A viruses except for one isolate, an influenza B virus which was among the last reported positive cultures. All influenza A viruses that were subtyped by the VDHL were H3N2 viruses. The sixteen influenza isolates submitted to CDC for antigenic analysis were all confirmed as H3N2, and were further identified as influenza A/Korea/770/2002-like, which is similar to the A/Fujian strain. Laboratory-confirmed influenza cases ranged from 12 days to 99 years of age and represented all 14 Vermont counties. Over 400 positive rapid influenza tests were also reported by hospital laboratories and medical practices.

The CDC's Early Aberration Reporting System (EARS) was used to track ILI at two Vermont hospitals. In addition, public health nurses in the district offices reported school absenteeism and hospital emergency department ILI rates on a weekly basis; both rates peaked in late December to early January. Nine nursing homes reported cases of influenza among residents, but no large outbreaks of ILI were reported from nursing homes. There were culture-confirmed outbreaks at a Job Corps site, a private school, and at public schools. In late December 2003 the VDH reported the death due to influenza of a three-year-old child with a pre-existing serious medical condition.

#### 2004 – 2005 Influenza Season

As of November 10, no influenza activity has been reported in Vermont. The Vermont Department of Health has activated the Incident Command System structure to respond to the current influenza vaccine shortage. The Organizational Chart and Master Plan documents from this incident are included as Appendix B.

As of November 12, six health care provider alerts with the following key points have been released:

ALERT #1 October 6, 2004

There is an influenza vaccine shortage this year;  
Vaccine should be targeted to patients at highest risk;  
Influenza prevention strategies

ALERT #2 October 8, 2004

Providers who have vaccine should hold, temporarily, further use of vaccine unless they have patients with exceptional circumstances who are already scheduled to receive the vaccine;  
VDH is working to inventory available vaccine supply and to develop a strategy to ensure those most at risk of severe complications or death receive vaccine.

ALERT #3 October 14, 2004

New recommendations for vaccinating children 6 months – 18 years of age;  
Plan for vaccinating all nursing home residents

ALERT #4 October 20, 2004

Plan to redistribute available vaccine;  
New recommendations for vaccinating persons older than 18 years of age;  
Health Order including the following:

1) Health care providers are ordered to make every reasonable attempt to follow the most recent Vermont Department of Health *Recommendations for Pediatric Use of Influenza Vaccine, Recommendations for Adult Use of Influenza Vaccine* and *Recommendations for Use of Influenza Vaccine for Health Care Workers Providing Direct Patient Care* except where it is the professional opinion of the clinician that there is medical need sufficient to deviate from these recommendations.

2) Health care providers are ordered to cease giving influenza vaccine to anyone who is NOT in a high-risk category. Until further notification, high-risk categories are

defined by the October 5, 2004 recommendations of the U.S. Centers for Disease Control and Prevention Advisory Committee on Immunization Practices.

3) Health care providers and pharmacists are ordered to cooperate with the Vermont Department of Health in an effort to assure that influenza vaccine is distributed to those at highest risk of suffering complications of influenza.

4) Effective immediately, any entity or individual who has privately purchased vaccine including, but not limited to, health care providers, health care organizations, pharmacists and employers, are ordered to hold a minimum of 25 percent of their supply for redistribution through the Vermont Department of Health.

5) Health care providers are ordered to maintain written documentation of every influenza vaccination, giving the reason for that vaccination.

Recommendations for use of influenza vaccine for health care workers providing direct patient care;

Recommendations for adult use of influenza vaccine;

Information on use of pneumococcal polysaccharide vaccine

ALERT #5 October 25, 2004

Frequently asked questions related to the health order issued October 20, 2004

ALERT #6 November 4, 2004

Final influenza vaccination plan, organized by risk groups

The topics of planned future provider alerts include information regarding the use of FluMist and antiviral medications and information on influenza testing and reporting.

Epidemiology and laboratory staff met on November 1 to review current plans for laboratory based surveillance and management of testing and to identify any changes that needed to be made in response to the vaccine shortage. The Surveillance Planning Objectives that resulted from that meeting are listed in the table below.

**2004 – 2005 Influenza Vaccine Shortage  
Surveillance Planning Objectives**

<b>Objective</b>	<b>Activities</b>	<b>Timeline</b>
Review & ensure implementation of current plan for lab-based flu surveillance	<ol style="list-style-type: none"> <li>1. Sentinel flu sites have kits and are testing as needed</li> <li>2. Review/ update test kit prep instructions for sending out flu kits</li> <li>3. Determine what data are available regarding requests for kits</li> </ol>	<ol style="list-style-type: none"> <li>1. Completed</li> <li>2. 11/5/04</li> <li>3. 11/5/04</li> </ol>
Ensure key information (travel history; date collected; vaccine status) needed for culture processing is available	<ol style="list-style-type: none"> <li>1. Highlight questions on form and/or add brightly colored reminder to package</li> <li>2. Add reminder to alert and any info sent to clinicians</li> <li>3. Follow up with clinicians</li> </ol>	<ol style="list-style-type: none"> <li>1. 11/5/04</li> <li>2. As needed</li> <li>3. As needed</li> </ol>
Clarify issues related to use of rapid flu tests	<ol style="list-style-type: none"> <li>1. Review discrepant rapid flu and culture results from October to identify any correctable issues</li> <li>2. Determine whether Emergency Departments are performing rapid tests in house, and if the Epi Field Unit receives those results               <ol style="list-style-type: none"> <li>2a. Create short survey</li> <li>2b. Ask epi designees to query their Emergency Department contacts</li> <li>2c. Responses returned &amp; results incorporated into surveillance interpretation</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. 11/8/04</li> <li>2a. 11/2/04</li> <li>2b. 11/8/04</li> <li>2c. 11/10/04</li> </ol>
Ensure prompt reporting of flu test results	<ol style="list-style-type: none"> <li>1. Revise database used for flu surveillance</li> </ol>	<ol style="list-style-type: none"> <li>1. 11/5/04</li> </ol>
Review timing of reporting and release of flu activity level to CDC, website, and media	<ol style="list-style-type: none"> <li>1. Determine flexibility in timing of reporting flu status to CDC</li> <li>2. Review timing of CDC report, web posting, and issues related to media concerns</li> </ol>	<ol style="list-style-type: none"> <li>1. 11/2/04</li> <li>2. 11/4/04</li> </ol>
Identify new issues to anticipate for lab-based flu surveillance given vaccine shortage:	<ol style="list-style-type: none"> <li>1. Possibility of shortage of rapid flu test kits: Asses number kits available and order more</li> <li>2. Determine if clinical labs plan anything different for testing this year: Survey clinical lab managers</li> </ol>	<ol style="list-style-type: none"> <li>1. 11/5/04</li> <li>2. 11/5/04</li> </ol>

Health care providers and hospitals have been asked to limit the number of specimens submitted for viral culture once influenza has been confirmed in a community, since culture are of little diagnostic value due to the length of time it takes to obtain a final result. Influenza test kit requests from nursing homes will be referred to epidemiology staff. Sentinel surveillance

practices can request as many test kits as desired. The VDHL will document test kit requests and the number shipped to each facility/practice.

The influenza culture VDHL requisition form includes questions about travel history, vaccine status, and date of symptom onset. These questions are important for laboratory safety issues (i.e., travel), interpreting results, and for surveillance. In order to increase compliance with providing this information, these questions will be highlighted on the forms, brief "IMPORTANT" instructions on brightly colored paper will be inserted into the kits; the importance of this information will be emphasized in provider alerts and a Disease Control Bulletin article, and follow-up with providers will be conducted as necessary.

Anticipating that an increase in the use of rapid tests may lead to a shortage of test kits, the VDHL is assessing the number of kits on hand and will order additional kits if needed. The VDHL Director will survey the state's clinical laboratory managers by e-mail to inquire whether they are planning any changes in their influenza testing protocols for this year.

The Epidemiology Field Unit has asked public health nurses in the district offices to survey their local emergency departments for answers to the following questions regarding rapid influenza testing:

Is rapid flu testing done in your Emergency Department? (Yes/No)

If yes, what type of test kit are you using?

Who collects the specimen (e.g., clinical staff, laboratory staff)?

Who performs the test (e.g., done in ED, test sent to lab)?

Are positive rapid test results reported to your hospital laboratory?

Staff in the Epidemiology Field Unit created a new influenza surveillance database that combines data on the number of positive rapid tests by region, reported sentinel activity by region, the number of specimens submitted to the VDHL for influenza culture, and culture and strain typing results. This database will import laboratory data directly from the LITS Plus application.

The Epidemiology Field Unit (EFU) is conducting surveillance for outbreaks of ILI in schools, since school-based outbreaks can reflect ILI activity in a geographical area. All school nurses have been asked to notify their district health office when the school is experiencing an outbreak of ILI; district offices will then notify the EFU. In some situations (e.g., when the school is the first in its area to report ILI activity) the EFU may ask the district office to help encourage influenza testing at pediatric and family practice settings in the school's community. Once a school outbreak has been reported, the district office will conduct active surveillance with the school nurse weekly to determine whether the outbreak appears to be ongoing and will report this information to the EFU. This information will be used in calculating Vermont's influenza activity level.

Two new respiratory illness infection control posters – one for general use and one for hospital and nursing home entrances – were developed and are included in Appendix C.

**New Budget Period Proposed Program Activities and Objectives**  
**April 1, 2005 – March 31, 2006**

**Objective 1:** Maintain laboratory capacity to perform virus isolation and typing and subtyping of influenza viruses.

- A. Continue to provide year round influenza virus culture, isolation, typing, and subtyping (using hemagglutination inhibition) for sentinel as well as other healthcare providers.
- B. Continue to participate in the U.S. WHO collaborating laboratories influenza virus surveillance program.
- C. Continue to provide Directigen™ Flu A + B rapid EIA testing for patients living in group settings or by special request.
- D. Continue to provide ZstatFlu™ rapid influenza test kits (or other appropriate CLIA-waived rapid test kits) to sentinel influenza providers during the influenza season.
- E. Develop capacity to subtype influenza H1, H3, H5, and H7 strains using RT-PCR procedures. There is equipment and expertise for real-time PCR at the VDHL. Funding may be needed to purchase another Smart Cycler processing block.
- F. Train two additional microbiologists to perform Directigen™ Flu A + B rapid EIA testing and to perform virus isolation and typing and subtyping of influenza viruses.

**Objective 2:** Maintain the Vermont sentinel influenza physician surveillance system, including year-round influenza surveillance.

- A. Continue to support an Influenza Surveillance Coordinator who is responsible for recruiting sentinel physicians who will report weekly on influenza-like illness, coordinating submission of respiratory specimens for influenza culture, and interacting with the CDC.
- B. Continue to support the mailing of respiratory specimens and testing of viral specimens at no charge to the physician.
- C. Continue to support the use of the Internet by sentinel provider offices to transmit surveillance data to the CDC.
- D. Continue to conduct year-round influenza sentinel physician surveillance, with at least three practices reporting.
- E. Educate health care providers about high-risk populations who should receive influenza vaccine.

**Measures of Effectiveness**

- ☛ At least ten sentinel influenza surveillance practices are reporting ILI activity to the CDC during each influenza season.
- ☛ At least three sentinel influenza surveillance practices are reporting ILI activity to the CDC through the summer months as part of Vermont's year-round sentinel influenza surveillance program.
- ☛ Transportation of influenza cultures to the VDHL is provided free of charge for the sentinel practices.
- ☛ Unlimited year-round influenza testing is offered free of charge at the VDHL.
- ☛ Appropriate epidemiologic follow-up is conducted on all institutional outbreaks.



**NATIONAL ELECTRONIC DISEASE SURVEILLANCE SYSTEM (NEDSS)  
Vermont Department of Health (VDH)**

**Progress Report on Current Budget Period Activities  
April 1 – November 30, 2004**

**Vermont Successes**

- The Vermont Department of Health will go live with the NEDSS Base System version 1.1.3 before the end of calendar year 2004.
- The Registry Manager has been hired.
- VDH and Fletcher-Allen Health Care have implemented the PHIN-MS and have successfully sent and received test messages in preparation for the planned January 2005 deployment of the newly developed Electronic Birth Registration System.

The VDH NEDSS Base System (NBS) deployment team continued to work with CDC and Computer Sciences Corporation (CSC) during the implementation of the NBS. The VDH NBS Team has conducted weekly telephone conferences with CSC staff.

VDH completed the NEDSS Base System Version 1.1.1 Operational Readiness Assessment and the NEDSS Base System Parallel Process Protocol in early 2004. Parallel testing on NBS version 1.1.1 was completed during four weeks in March 2004 with no disparities between reported results generated by the NETSS and NBS systems. In May 2004 the VDH decided to delay implementation until version 1.1.3 was available.

Vermont currently plans to use thirteen Locally Defined Fields (LDFs). The Registry Manager (hired during the current budget period and supported by NEDSS funding) has populated the NBS test server environment with those LDFs and will populate the new production environment in the next few weeks.

The Registry Manager has also executed patient de-duplication and validated the results in test.

The VDH NBS Team completed beta testing of the CSC Entity Migration Tool for migrating organizations (e.g., laboratories, providers) into the NBS. A database administrator has configured the necessary SRT tables on the test server.

With technical assistance from CSC, Vermont successfully implemented aggregate case reporting by age group for varicella.

Messaging using PHIN-MS HL7 is currently operational.

---

VDH epidemiology staff have entered approximately 40 Nationally Notifiable Disease (NND) test cases from the CDC into NBS version 1.1.3. The Certification Testing Results from these messages have not detected any critical configuration problems.

During a telephone conference on November 30, 2004 CDC, CSC, and the VDH NBS Team will review the NBS Version 1.1.3 Operational Readiness Assessment and the NBS Production

Checklist for the test server. VDH will go into production with NBS version 1.1.3 in December 2004. All 2004 NND cases will be entered into NETSS as well as the NBS to simplify future 2004 data summaries. VDH has decided not to migrate any legacy data into the NBS.

Epidemiology program staff are not yet sufficiently trained in reporting out of the NBS. VDH epidemiology and information technology staff will participate in a webinar training on the Reporting Database for NEDSS Analysis, Visualization & Reporting in November 2004.

Three epidemiology staff and two information technology staff attended 2004 Public Health Information Network Stakeholders' Conference. The Health Surveillance Epidemiologist gave a presentation titled "Vermont's LDFs: Local Data Flexibility or Limited Development Functionality?" during a session on NBS LDFs and Collaboratively Defined Fields.

### **New Budget Period Proposed Program Activities and Objectives April 1, 2005 – March 31, 2006**

**Objective 1:** Develop and sustain a core personnel infrastructure to provide a focus for coordination, management, and implementation of standards-based interoperable public health information systems, including NEDSS.

- A. The VDH NBS team, including both information technology and epidemiology staff, will continue to function as an oversight and advisory group as the NBS continues to be enhanced with the release of new versions.
- B. Continue current financial support for the NEDSS Security Administrator.
- C. Continue current financial support for the NEDSS Registry Manager.
- D. Support an Operational Data Store (ODS) Manager (System Developer II) position. Responsibilities will include: providing NBS database support (e.g., applying table changes resulting from new releases, extending SRT tables, adding outbreak names); administration of scheduled NBS tasks (e.g., verifying RDB population, verifying outgoing (NND) message creation, verifying incoming (ELR) message creation, verifying data mart population, verifying de-duplication process); implementing electronic lab reporting (e.g., incoming message parsing, outgoing message creation, LOINC code mapping, SNOMED code mapping); miscellaneous NBS upgrade/patch support (e.g., CDF import/maintenance, installing validation checklist, creating validation routine for LDF (JavaScript)); and interfacing between the NBS and enhanced LITS Plus.

**Objective 2:** Define and execute specific public health surveillance activities that implement key aspects of the NEDSS vision of integrated surveillance systems that transfer appropriate public health, laboratory, and clinical data efficiently and securely over the Internet.

- A. Electronic exchange of information between state health departments and the CDC via standards-based electronic messaging. The VDH will go live with the NBS version 1.1.3 before the end of calendar year 2004.
- B. Electronic exchange of data within health departments between laboratories and surveillance activities. The VDH will continue its commitment to and use of LITS Plus for its public health laboratory information management system and will support an effort to redevelop LITS Plus to become PHIN-compliant. When LITS Plus achieves compliance we will

- establish the exchange protocols and procedures to enable ELR between the VDH Laboratory and the NBS.
- C. Electronic laboratory-based reporting from large national laboratories to state health departments. The VDH currently does not utilize most CDC-recognized "large national laboratories"; it does have relationships with Mayo Medical Laboratories and Path Labs. The VDH will request CDC assistance with the establishment of ELR capability based on the PHIN-MS standards presently in place with Lab Corp.
  - D. Electronic exchange of data between emergency departments and public health agencies. Currently, the VDH Epidemiology Field Unit receives medical data from several of the state's hospitals for the purposes of syndromic surveillance using the CDC's Early Aberration Reporting System application. These data are sent as a plain text attachment to an email message. The VDH, with technical assistance from CDC, will collaborate with these partner hospital emergency departments to implement the PHIN-MS for automated electronic messaging.
  - E. Electronic exchange of information between local and state health departments, using web browser-based access to the state health department. Since our "local health departments" are remote VDH district offices, the exchange of information will be accomplished by the planned distributed access and use of the NBS to these district offices.
  - F. Electronic exchange of data between hospitals or hospital systems and public health agencies. In addition to the syndromic surveillance data described under D above, the VDH is collaborating with Fletcher-Allen Health Care and its OBnet initiative to serve as the source of birth registry data. This collaborative effort along with the redevelopment of the department's birth registry in the NEDSS-IDR will depend on the PHIN-MS for electronic transmittal of data from the hospital's system.
  - G. Execute an MOU with CDC to allow the VDH to analyze the NBS code in order to understand how VDH-developed systems may be integrated with the NBS by doing one or more of the following: extending the ODS to accommodate VDH-developed PAMs, analyzing and potentially replicating the entity de-duplication/merge logic for use in the SPHINX person control. This analysis will help current and future NBS sites which are planning or developing new systems or already have systems that will need to be integrated with the NBS. Ultimately this exercise will enable the NBS to more effectively meet the needs of the VDH and its partners, such as acute care hospitals, clinical laboratories, infection control practitioners, etc., as well as those of CDC, the other States and other CDC Public Health partners.

### **Measures of Effectiveness**

- NBS version 1.1.3 in production by the end of 2004.
- Case investigations are transmitted as they are completed.
- Successful deployment of the OBnet-Electronic Birth Registry messaging interface.
- The NBS is receiving ELR from the major testing laboratories.
- The VDH receives electronic transmission of syndromic observation data utilizing the PHIN-MS.
- Progress is made toward integration of the NBS and SPHINX data stores through the technical assistance and NBS source code analysis.

## WEST NILE VIRUS

### Vermont Department of Health (VDH)

#### Progress Report on Current Budget Period Activities

April 1 – November 30, 2004

##### Vermont Successes

- The Vermont Department of Health maintained a toll-free telephone line for receiving dead bird reports and answering questions from the public about West Nile virus.
- The Vermont Department of Health Laboratory used real-time-PCR assays to test 560 dead birds, representing every county in the state, for West Nile virus in 2004.
- An updated West Nile virus surveillance map was posted on the Vermont Department of Health website on a weekly basis.
- The Vermont Agency of Agriculture developed and implemented the capacity to test mosquito vectors for West Nile virus using PCR.
- The Vermont Department of Health participated in ArboNet, the computerized national West Nile virus surveillance system.
- In 2004, Vermont Department of Health staff gave presentations about West Nile virus to at least 1,500 individuals from a minimum of 90 organizations (e.g., senior citizen centers and meal sites, elderly housing, gardening groups, equestrian and 4-H groups, and naturalist and outdoors sportsman groups).
- Over 20,000 “Have You Seen a Dead Bird?” refrigerator magnets, “West Nile Virus – Don’t Let It Bug You” posters, and “Fight the Bite” refrigerator magnets were distributed throughout Vermont.
- Two new fact sheets, “Insect Repellent and DEET” and “West Nile Virus: Controlling Mosquito Larvae with *Bacillus thuringiensis israelensis* (Bti)”, were distributed throughout Vermont.

**Objective 1:** Conduct avian mortality surveillance activities for West Nile virus, including data analysis and interpretation and dissemination of results.

For the second season, a central, toll-free telephone line was utilized in the Epidemiology Field Unit in the VDH Central Office. The purpose of this line was to receive dead bird reports and to answer questions from the public about West Nile virus. A full-time Epidemiology Field Agent was hired to staff the line during regular working hours and to assist with West Nile virus data entry and weekly data reports. In addition, eleven Epidemiology Field Agents were hired in early June on a part-time basis to assist the District Health Offices in both mosquito and dead bird surveillance activities. One of the most northern District Offices was unable to staff the Epidemiology Field Agent position so existing District Office staff made an effort to complete as much of the job duties of the Epidemiology Field Agent position as was feasible.

The West Nile virus Steering Committee comprised of two District Office Directors, the Health Surveillance Epidemiologist, the Epidemiology Associate and the Town Health Officer Liason met in early April 2004 to plan for statewide West Nile virus surveillance. Three regional

trainings on dead bird surveillance were held in June for District Office staff and Epidemiology Field Agents.

The Dead Bird Database allows for dead bird reports to be entered from the twelve District Offices and from the Central Office as the reports are received. In 2004 changes were made to the database to ensure consistency in the data. Queries and reports were developed to summarize data on a regular basis in order to evaluate disease risk and obtain numerator and denominator data for ArboNet. Statewide dead bird surveillance was initiated in June and ended on October 15, 2004, two weeks after the State Entomologist ended mosquito surveillance due to the cold weather and the very low levels of mosquito activity. A total of 1093 dead birds were reported to the VDH during the 2004 season.

A total of 567 birds were submitted to the VDH Laboratory for West Nile virus testing. The only contraindication to testing was decomposition. A total of 560 birds, from every county in the state, were tested. Nine birds tested positive, 550 birds tested negative, results for one bird were equivocal, and seven birds were unsuitable for testing. Four of the birds that tested positive were crows and two were raptors. The first bird which tested positive for West Nile virus was collected on August 6, 2004, three weeks later than the first positive bird was collected in 2003. The positive birds came from five of the state's fourteen counties, with two-thirds of the birds coming from two counties. In 2004 1.6% of the birds that were tested were positive for West Nile virus. This is significantly less than in 2003 when 15% of the birds that were tested were positive or in 2002 when 8% of the birds that were tested were positive.

Each week an updated surveillance map was posted on the VDH website. Throughout the season, dead bird density by county was graphed by MMWR week and used to assess the risk of human cases. This is the second year that Vermont has calculated dead bird density, and further data and analyses are needed to determine whether this will be a useful predictor of human risk in Vermont.

At the end of the 2004 West Nile virus season, a qualitative assessment questionnaire was sent to all surveillance staff. This feedback is being considered in planning the West Nile virus surveillance program for 2005.

#### Progress on Measures of Effectiveness

- 25 birds reported per county from at least 10 counties – Thirteen counties reported at least 34 dead birds. The maximum number of dead bird reports from one county was 326.
- Dead bird(s) tested from every county (dependent upon local resources for collecting birds) – Thirteen counties submitted a minimum of 10 birds for West Nile virus testing. The maximum number of birds submitted for testing from one county was 166.

**Objective 2:** Conduct mosquito surveillance activities for West Nile virus, including data analysis and interpretation and dissemination of results.

In early April 2003, the Health Surveillance Epidemiologist and the Epidemiology Associate met with the Agency of Agriculture State Entomologist and the master's level contract entomologist

(i.e., the Vector Management Specialist) to coordinate surveillance activities. The Vector Management Specialist assisted the State Entomologist with field work and mosquito identification to species. In addition, the Agency of Agriculture hired three full time vector technicians who assisted with trap placement, larval sampling, specimen collection, limited species identification of specimens, and data entry.

New and upgraded equipment necessary to further develop a statewide program of mosquito surveillance (i.e., CDC light traps, gravid traps, microscopes, GPS units, dry ice makers, coolers, and hay infusion supplies) was obtained. The State Entomologist continued to catalog all of this equipment so that it could be accounted for and maintained in good working condition.

The three vector technicians, the Vector Management Specialist, and the State Entomologist trapped mosquitoes on a weekly basis from June until mid-October, at which time the State Entomologist ended mosquito surveillance due to low mosquito activity related to the onset of cold weather (based upon egg deposition of *Culex pipiens*). Gravid and light trap samples were shipped by Federal Express on dry ice to either the lab of the Vector Management Specialist or to the State Entomologist at the Agency of Agriculture Entomology Laboratory, where they were stored at minus 45 degrees centigrade. Selected gravid mosquitoes were identified, pooled, and tested for West Nile virus using PCR technology, which was acquired through funding from this cooperative agreement.

A total of 402 sites in nine counties were surveyed and a minimum of 42,695 mosquitoes were trapped and speciated. Twenty-eight mosquito species out of forty-two species on the state list were trapped. Over the next several months, additional mosquitoes from light trap samples will be counted and speciated.

A total of 1,007 mosquito pools from gravid traps, representing 38,805 mosquitoes, was tested by PCR for West Nile virus. Ninety-three percent of the mosquitoes tested were *Culex pipiens-restuans* (mixed). Seven mosquito pools tested positive for West Nile virus. All of the positive mosquito pools were from two sites in Chittenden County, with six of the positive pools coming from one site on six different dates in August and September.

Mosquito surveillance in the Northeast Kingdom of Vermont was enhanced in advance of a four-day music festival for which 70,000 attendees would be camping outdoors. None of these mosquito pools tested positive for West Nile virus.

The development of a Microsoft Access database to store information (e.g., species, trap location, collection date) on all mosquitoes trapped was completed by the Vector Management Specialist. On a weekly basis, data from this database was imported into ArboNet and uploaded into the CDC Secure Data Network. Both the Vermont Agency of Agriculture and the Vermont Department of Health have the capability to access this data through a server maintained at the Agency of Agriculture.

The State Entomologist has been monitoring the findings of positive Eastern Equine Encephalitis surveillance indicators in states bordering Vermont. Based on his surveys, the mosquito species most commonly associated with Eastern Equine Encephalitis are present in Vermont but are not

in great abundance. The State Entomologist and the Vector Management Specialist are planning to attend a regional entomology conference in December 2004, at which time they will consult with entomologists from neighboring states about EEE.

#### Progress on Measures of Effectiveness

- ☛ Mosquitoes trapped in every county with  $\geq 1$  trap night per county every two weeks (dependent upon weather and Agency of Agriculture resources) – Mosquitoes were trapped in nine counties with a range of three to fourteen collection weeks in each county.
- ☛ Mosquitoes tested from every county (dependent upon Agency of Agriculture resources and species of mosquitoes trapped) – Mosquitoes were tested from each of the nine counties in which trapping occurred. A total of 1007 mosquito pools were tested.

**Objective 3:** Conduct enhanced passive human surveillance for West Nile virus and other medically important arboviruses, including data analysis and interpretation and dissemination of results.

Enhanced passive human surveillance was conducted throughout the 2004 transmission season. Physicians were asked to report hospitalized patients with encephalitis, meningitis of suspected viral origin, or Guillain-Barré syndrome. Testing was not recommended or provided for suspected cases based on mild illness. Specimens from two individuals with encephalitis that tested positive for West Nile virus at Mayo Laboratory were sent to public health laboratories for confirmatory testing. The specimen from one individual subsequently tested negative for West Nile virus at the New Hampshire Public Health Laboratory and the specimen from the other individual tested positive for West Nile virus at the Massachusetts Public Health Laboratory. The individual who tested positive for West Nile virus resides in Illinois and is being counted as a case in that state, but was visiting Vermont at the time of hospitalization. This individual's likely exposure was in Illinois or Indiana, or while traveling to Vermont.

The August 2004 issue of the Vermont Department of Health Disease Control Bulletin contained an article addressing which individuals should be tested for West Nile virus, as well as information on specimen collection and transport. An article in the October 2004 Disease Control Bulletin provided updated national and regional information on West Nile virus activity. The article delineated possible factors in the reduction of WNV activity in Vermont and surrounding areas. These factors include the possibility that public interest in reporting dead birds may have declined and that the relatively cool, rainy weather in Vermont during this past summer may have caused a true reduction in West Nile virus activity this season. The Health Surveillance Epidemiologist also presented on West Nile virus to a physicians' group in southern Vermont.

#### Progress on Measures of Effectiveness

- ☛ Hospitalized individuals with encephalitis or meningitis (without other etiology) or Guillain-Barré Syndrome were tested, and all human cases were reported to CDC – One Vermont resident and one out-of-state resident who was hospitalized in Vermont while traveling were tested for West Nile virus. The Vermont resident tested negative; the other individual was confirmed and counted as a case in his state of residence.

**Objective 4:** Conduct equine surveillance activities for West Nile virus and other important arboviruses, including data analysis and interpretation and dissemination of results.

Equine surveillance for West Nile virus continues to be coordinated through the State Veterinarian at Vermont Agency of Agriculture and the State Public Health Veterinarian at the Vermont Department of Health. Veterinarians were encouraged to test any horses who exhibited clinical signs of West Nile virus and to submit the specimens to their veterinary diagnostic laboratory. Veterinarians were asked to report any suspect or confirmed equine West Nile virus cases to the Agency of Agriculture. According to the Agency of Agriculture State Veterinarian, approximately 50 horses were tested for West Nile virus in 2004; all were negative.

Information about West Nile virus was communicated to veterinarians in a variety of ways. West Nile virus informational materials were distributed at the 2004 Vermont Veterinary Medical Association annual spring conference. In addition, the USDA Veterinarian spoke on West Nile virus at the Equine Industry Summit at the University of Vermont. The State Public Health Veterinarian sent West Nile virus summaries and updates from ProMED, as well as all West Nile virus press releases, to all the veterinarians on the Vermont VetNET electronic mail system.

#### Progress on Measures of Effectiveness

☛ All horses with compatible clinical symptoms tested and all equine cases reported to CDC – There were no confirmed equine cases in Vermont in 2004.

**Objective 5:** Participate in ArboNet, the computerized national surveillance system developed to track activity of West Nile virus and other arboviruses.

Prior to the start of the West Nile virus season, efforts were made to assess the feasibility of importing dead bird data directly from the Dead Bird database into ArboNet and then uploading the data into the CDC Secure Data Network. Due to the complexities involved with numerous individuals identifying bird species and entering the data into the networked Dead Bird database, it was determined that it would be more efficient to query the Dead Bird database and manually enter the data into the CDC Secure Data Network. The Dead Bird Database was queried weekly to obtain data on corvids reported and tested and on non-corvids reported and tested. Dead bird denominator data was entered into the Secure Data Network on a weekly basis.

Data on the number and species of mosquitoes trapped and tested were entered into a Microsoft Access database by the contract entomologist at the Agency of Agriculture. This data was imported into ArboNet from the Microsoft Access database and then uploaded into the CDC Secure Data Network. As in past years, any numerator data from human and equine cases would have been entered directly into the CDC Secure Data Network as the Epidemiology Field Unit received the information.



**Objective 6:** Enhance laboratory capacity to identify West Nile virus infections in humans and other animal species.

The VDHL has the capability to perform real-time-PCR assays and uses this technology to test dead birds from all regions of Vermont for WNV. Birds testing positive by RT-PCR for WNV with the first WNV primer/probe combination are retested with a different WNV primer/probe combination to confirm the result. During the 2004 surveillance season, 560 birds were tested, and of these, nine (1.6%) tested positive for WNV.

Three microbiologists are now fully trained in all aspects of WNV testing in birds including bird necropsies, extracting RNA from brain tissue, performing RT-PCR, and data management. The VDHL maintained a shared database with Epidemiology that contained pertinent information about each bird submitted to the laboratory including stage of testing and final result.

The VDH recommends that hospitalized patients with encephalitis, meningitis of suspected viral origin, or Guillain-Barré syndrome be tested for WNV through the VDHL. Due to the low numbers of patients matching these criteria and the labor-intensive nature of WNV serology testing, human specimens for WNV testing are forwarded to the NH Department of Health Laboratory for arbovirus testing. Samples testing positive by EIA are confirmed at the MA Department of Health Laboratory using the plaque-reduction neutralization test.

**Objective 7:** Provide education and public outreach to reduce human exposure to West Nile virus and other arboviruses.

In 2004 there was an increased emphasis on prevention messages in public education about West Nile virus. Copies of the CDC video "Protecting yourself and Your Community From West Nile Virus" and the corresponding CD were distributed to all twelve District Offices. Twelve portable televisions with VCR players were purchased so that each District Office had the capacity to show the CDC video to targeted audiences. West Nile virus presentations were made throughout the state to at least 1,500 individuals from a minimum of 90 organizations. These organizations included senior citizen centers and meal sites, elderly housing, gardening groups, equestrian and 4-H groups, Town Health Officers, and naturalist and outdoors sportsman groups.

Posters encouraging people to report dead birds were distributed throughout the state in various retail establishments (e.g., markets, laundromats, sporting goods stores, garden supply stores) as well as fishing access areas, state parks, public information kiosks, town offices, post offices and libraries. In addition, 10,000 "Have You Seen a Dead Bird?" refrigerator magnets with the telephone numbers for reporting dead birds were distributed throughout the state and were sent to dispatchers in each state police barracks and to all game wardens and town police stations. A poster titled "West Nile Virus – Don't Let It Bug You" included information on how to prevent infection with West Nile virus, including using insect repellent, wearing protective clothing, limiting outdoor activity at dawn and dusk, eliminating standing water, and installing and repairing screens. It also encouraged individuals to support disease tracking activities by reporting dead birds. Five thousand of these posters, along with "Have You Seen a Dead Bird?" refrigerator magnets, were delivered by the Vermont Foodbank in their Commodity

Supplemental Foods Program; many recipients of this program are over 60 years of age. These posters were also distributed statewide by the Epidemiology Field Agents.

A new business card size "Fight the Bite" refrigerator magnet listing five simple measures to prevent West Nile virus, along with the Vermont Department of Health website address were also produced. Approximately 5,000 of these magnets were distributed throughout Vermont.

In addition to the Vermont Department of Health Fact Sheet on West Nile virus which is distributed widely on a yearly basis, two new fact sheets relating to West Nile virus were developed. A fact sheet entitled "Insect Repellent and DEET" was produced by the Vermont Department of Health and distributed by the Epidemiology Field Agents and other District Office staff. The Vermont Agency of Agriculture produced a fact sheet, "West Nile Virus: Controlling Mosquito Larvae with *Bacillus thuringiensis israelensis* (Bti)", which was posted on the Agency of Agriculture website and which could be accessed by a link on the Vermont Department of Health website. Up-to-date West Nile virus information and surveillance data (including a map) were posted on the VDH website; the Agency of Agriculture's website also provided a number of WNV resources.

Three press releases relating to West Nile virus were released in 2004. All press releases provided information on prevention. In addition to the press releases, the Health Surveillance Epidemiologist also spoke to television, radio, and newspaper reporters on a regular basis throughout the summer. Several Epidemiology Field Agents also spoke to local radio and television stations about West Nile virus.

During previous seasons newspaper advertisements urging Vermonters to report dead bird sightings have resulted in an increase in dead bird reporting. In July 2004 fourteen advertisements were placed in the seven newspapers covering most of the population centers in the state.

#### Progress on Measures of Effectiveness

- Public educational materials distributed and public outreach, including at least one informational session for a senior audience, conducted in every county – At least eleven of fourteen counties had a minimum of one informational session for a senior audience.
- Press releases issued as indicated – Three press releases relating to West Nile virus were issued by the Vermont Department of Health.

#### **New Budget Period Proposed Program Activities and Objectives April 1, 2005 – March 31, 2006**

**Objective 1:** Conduct avian mortality surveillance activities for West Nile virus, including data analysis and interpretation and dissemination of results.

- A. Conduct dead bird surveillance from June until cold weather significantly reduces mosquito activity. Encourage the public to report all dead bird sightings to either the toll-free central dead bird reporting line or to their district health office. Assess birds for testing based on

- their condition and the feasibility of submitting them to the VDH Laboratory. Test all bird species; consider restricting testing to corvids if lab capacity is reached.
- B. Continue to staff the toll-free central telephone line for receiving dead bird reports and answering questions about West Nile virus during regular working hours.
  - C. Hire twelve part-time Epidemiology Field Agents for the West Nile virus season to support each of the twelve District Health Offices in dead bird surveillance and public education and outreach.
  - D. Hold regional training sessions in June for District Office staff and Epidemiology Field Agents working on West Nile virus surveillance.
  - E. Enter avian numerator and denominator data into the CDC Secure Data Network on a regular basis.
  - F. Continue to refine the Dead Bird Database to increase its usability and applicability.
  - G. Summarize and review data on a regular basis in order to evaluate disease risk and to inform public educational efforts, additional surveillance activities, and potential mosquito control activities.
  - H. Continue to participate in weekly CDC West Nile virus conference calls and attend local, regional and national meetings on West Nile virus.

**Objective 2:** Conduct mosquito surveillance activities for West Nile virus, including data analysis and interpretation and dissemination of results.

- A. Conduct mosquito surveillance from May until cold weather significantly reduces mosquito activity, usually in mid October. Larval surveys will begin in May after the first mosquitoes begin to appear. CDC light traps and gravid traps will be used after the adult mosquito emergence begins, usually at the beginning to June.
- B. Support a full-time masters level Vector Management Specialist to assist the State Entomologist with field work, identification, and data management. The Vector Management Specialist will be hired as a limited full time position with the VT Agency of Agriculture. This position was a contractual position in previous years.
- C. Hire Vector Technicians to work full time with larval surveys, mapping wetlands, and trapping adults in three highly populated regions in the state from May to October (a maximum of 16 weeks). Surveillance activities will focus on counties with the largest human populations and the highest percentage of wetlands. The regions (based on previous mosquito surveys) are as follows: Region 1 - Burlington, Grand Isle Islands and St. Albans; Region 2 - Rutland and towns north to Middlebury; and Region 3 - Brattleboro and Bennington. In addition, the Vector Management Specialist may trap in Windsor County. The State Entomologist will assist in trapping efforts where necessary, such Washington, Lamoille and Caledonia counties.
- D. Conduct training sessions for Vector Technicians in June. The training will include a description of mosquito surveillance activities, including guidelines for identifying larval breeding areas and trapping adult mosquitoes.
- E. Preserve mosquito larvae collected in 70% ethanol for identification. The breeding areas will be visited on a weekly basis to monitor the succession of mosquito species throughout the season. Vector Technicians will use GPS units to record breeding areas. Whenever possible, early instars of mosquito larvae will be collected and identified to help understand the sequence of mosquito emergence and when larval control methods would be most effective.

- F. Place adult mosquitoes trapped by Vector Technicians directly on ice and sort them to remove non-mosquito insects. Store mosquitoes on dry ice or in an appropriate freezer.
- G. Ship sorted mosquitoes taken in gravid traps on dry ice to the Vermont Agency of Agriculture Laboratory or to the lab of the Vector Management Specialist, where the mosquitoes will be separated and identified to the species level. Gravid mosquitoes will be stored at -45 degrees Centigrade and tested for West Nile virus using PCR at the Agency of Agriculture laboratory by certified microbiologists. Light trap collections will be stored in a freezer for identification later in the season. Larval collections stored in ethanol and frozen light trap specimens will be identified by the Vector Management Specialist and the State Entomologist.
- H. Conduct intensified mosquito surveillance within a reasonable distance from positive surveillance indicators (e.g., a horse, a person, or bird epicenter), as resources allow. Gravid trap mosquito specimens from these suspected WNV foci will be tested for West Nile virus.
- I. Conduct localized larval mosquito surveillance in response to a positive surveillance indicator, as resources allow. This will involve larval habitat mapping and sampling for larvae to determine species present, and may involve the application of larvicide where appropriate.
- J. Continue to improve and upgrade the Microsoft Access database to store information (e.g., species, location and date collected) on all mosquito species found in Vermont. Both the Vermont Agency of Agriculture and the VDH will have immediate access to reports through a server maintained at the Agency of Agriculture. Work is continuing to simplify mapping and data inquiries.
- K. Summarize and review data on a regular basis in order to evaluate disease risk and to direct and evaluate control efforts.
- L. Share surveillance data with cooperating agencies and the public on a regular basis, and as situations demand.
- M. Provide GIS maps for larval and adult mosquito surveillance, as resources allow.

**Objective 3:** Conduct human surveillance for West Nile virus and other medically important arboviruses, including data analysis and interpretation and dissemination of results. Document human cases with novel routes of virus transmission.

- A. Conduct enhanced passive human surveillance for hospitalized cases of encephalitis, meningitis of suspected viral origin, and Guillain-Barré syndrome. The VDH will not provide West Nile virus testing for patients with milder illness.
- B. Obtain exposure information on all cases (including history of blood donation, transfusion, organ transplantation, and pregnancy status) and document and investigate novel routes of transmission.
- C. Educate medical providers regarding the importance of considering other arboviruses, such as Powassan encephalitis virus, in the differential diagnosis of patients with encephalitis and aseptic meningitis.
- D. Report cases of West Nile virus or other arbovirus infection to CDC.
- E. Outline the criteria for West Nile virus testing and guidelines for submission of samples to the VDH Laboratory in an article in the Disease Control Bulletin. Samples will be sent to the New Hampshire Department of Public Health Laboratory for testing (see Objective 6 below).

- F. Conduct surveillance for the possible health effects of exposure to pesticides if mosquito control activities are implemented. Data on emergency department visits, hospital admissions for respiratory complaints, and calls to 911 and the poison control center will be compared to data from previous years.

**Objective 4:** Conduct equine surveillance activities for West Nile virus and other important arboviruses, including data analysis and interpretation and dissemination of results.

- A. Give a presentation on West Nile virus at the annual Vermont Veterinary Medical Association meeting or at similar organizational meetings (State Veterinarian or State Public Health Veterinarian).
- B. Share information about West Nile virus and the equine vaccine with veterinarians across the state via the Vermont VetNET listserv, articles in the Vermont Veterinary Medical Association newsletter, and direct mailings to veterinarians.
- C. Conduct enhanced passive equine surveillance for West Nile virus. Veterinarians will be requested to report clinical cases to the State Veterinarian or the State Public Health Veterinarian.
- D. Encourage veterinarians to test any horse exhibiting clinical signs of West Nile virus and to report positive results to the State Veterinarian and to the State Public Health Veterinarian.
- E. Use the revised USDA equine case definition for West Nile virus.

**Objective 5:** Participate in ArboNet, the computerized national surveillance system developed to track activity of West Nile virus and other arboviruses.

- A. Continue to export mosquito numerator and denominator data directly from the Agency of Agriculture Microsoft Access database into ArboNet and then upload the data into the Secure Data Network.
- B. Assess whether entering dead bird, human, and equine data directly into the CDC Secure Data Network continues to be the most efficient means of transmitting data to the CDC.
- C. Continue to upgrade and improve the Dead Bird Database and its reports in order to respond to any changes in data or format of data required by the CDC Secure Data Network.
- D. Coordinate with the Vermont Agency of Agriculture regarding access to their Microsoft Access Mosquito database and the mosquito denominator and numerator data required by ArboNet and the CDC Secure Data Network.
- E. Report the initial human case each season, and all cases of epidemiologic significance, to CDC by telephone in addition to entering them into the Secure Data Network.
- F. Notify neighboring states and Canada by telephone of significant positive surveillance indicators as early as possible.
- G. Integrate various data sources with relevance to West Nile virus surveillance, such as GIS mapping capabilities and census data on human population densities. This will enhance Vermont's ability to use surveillance data to predict public health risk and to guide public health prevention messages and interventions.

**Objective 6:** Maintain laboratory capacity to identify West Nile virus infections in humans and other animal species.

- A. Continue to maintain proficiency in performing WNV testing in birds and to participate in CDC sponsored proficiency testing for WNV detection.
- B. Continue to provide RT-PCR testing for detection of WNV infections in birds.
- C. Continue to provide shipping containers to VDH District Offices.
- D. Continue to send human specimens to the NH DHL for arbovirus testing and to the MA DHL for confirmatory testing.
- E. Attend 2005 National Planning Meeting for the Surveillance, Prevention, and Control of West Nile virus.

**Objective 7:** Provide education and public outreach to reduce human exposure to West Nile virus and other arboviruses.

- A. Continue to support the central toll-free dead bird reporting line for answering questions concerning West Nile virus and providing information to the public.
- B. Increase public education efforts that are targeted to senior citizens.
- C. Continue to encourage the public to report all dead bird sightings (e.g., using "Have you seen a dead bird?" newspaper advertisements).
- D. Update West Nile virus informational materials (e.g., fact sheets, posters, magnets) as necessary.
- E. Provide public education and outreach on a local level (Epidemiology Field Agents and local Public Health Nurses).
- F. Distribute informational posters and dead bird flyers to increase public knowledge about West Nile virus, prevention methods, and surveillance efforts.
- G. Maintain a VDH website with current and relevant information about West Nile virus.

**Measures of Effectiveness**

- ☒ At least 25 birds reported per county from at least ten Vermont counties.
- ☒ Dead bird(s) from every county tested.
- ☒ At least one trap night per county every two weeks (dependent upon weather and Agency of Agriculture resources).
- ☒ Mosquitoes from every county tested (dependent upon Agency of Agriculture resources and species of mosquitoes trapped).
- ☒ All human cases reported to CDC.
- ☒ All equine cases reported to CDC.
- ☒ Public outreach, including at least one informational session for a senior audience, conducted in every county.
- ☒ Press releases issued as indicated.

## GENERAL EPIDEMIOLOGY AND LABORATORY CAPACITY Vermont Department of Health (VDH)

### Progress Report on Current Budget Period Activities April 1 – November 30, 2004

#### Vermont Successes

- Progress towards a PHIN-compliant Laboratory Information Management System with the receipt of Version 1 Service Pack 1 of PHIL (the LITS+ add on software from ASSL).
- The VDH presented the CDC's *Making the Case for Case Investigation and Response* course for district office public health nurses in September 2004.

**Objective 1:** Obtain a PHIN-compliant LIMS system that will facilitate the electronic exchange of information between the VDH Laboratory and the Epidemiology Field Unit.

The Microbiology Program at the VDH Laboratory (VDHL) went online with Laboratory Information Tracking System (LITS Plus) in July 2002. The system tracks specimen, patient and submitter information, and generates test reports for submitters. Currently there are 19 testing modules in microbiology which are online, including enteric bacteriology, reference bacteriology, parasitology, hepatitis, influenza, virology and West Nile virus. All Microbiology and Customer Service Staff at the VDHL and all Epidemiology Field Unit (EFU) and ELC staff have received training in the use of LITS Plus. All EFU and ELC staff have browse rights in LITS Plus and retrieve information on specimens submitted for testing and individual patient results in real time. This capacity has enhanced collaboration between epidemiology and laboratory practice through more timely and efficient information exchange.

In September 2003 the CDC announced that the development and support of LITS Plus would be discontinued. Advanced Software Solutions, LLC of Arizona (ASSL) conducted a technical assessment of LITS Plus and its conformity to the PHIN standards. The VDH laboratory has a development contract with ASSL to provide a PHIN-capable enhancement to LITS Plus to ensure its future viability. The initial build of this product has been installed in the VDH test environment, and VDH is currently evaluating the following capabilities:

- Ability to report specimen results using HL7;
- Ability to modify HL7 element mapping;
- Ability to manipulate SNOMED and LOINC Codes;
- Ability to manipulate HL7 definitions for site-specific formatting;
- Ability to map LOINC codes to LITS Plus (tm) data;
- Ability to map SNOMED codes to LITS Plus (tm) data;
- Ability to create custom mapping rules for LOINC and SNOMED codes;
- Ability to version LOINC, SNOMED, and HL7 definitions;
- Other functionality for PHIN-compliance.

**Objective 2:** Increase surveillance for enteric diseases throughout Vermont, with a focus on emerging infections that are being increasingly identified in farm settings (e.g., antibiotic-resistant *Salmonella typhimurium*, cryptosporidiosis, pathogenic *E. coli*).

Sentinel influenza providers were offered an expanded battery of enteric testing free of charge for patients who meet the following criteria: three or more loose stools in 24 hours or blood in stools, with diarrhea not known to be from a non-infectious cause. The providers were satisfied with the enteric testing currently provided free of charge by the VDHL. In order to increase surveillance for enteric diseases, the Epi Field Unit and public health nurses in the district offices will continue to actively encourage specimen collection and testing as appropriate.

Regular bi-monthly meetings of epidemiology and laboratory staff to discuss enteric disease surveillance activities are ongoing. In addition to accessing LITS Plus, the Foodborne Epidemiologist has access to the laboratory's Excel spreadsheet containing PFGE results and analyzes matching patterns in real time. She has developed a supplemental database to track all foodborne and waterborne disease cases and available risk and source information. She also accesses the PulseNet web board regularly. These efforts have increased our capacity to recognize case clusters and outbreaks. When Vermont goes live with the NBS version 1.1.3 in December 2004, epidemiology and laboratory staff will have the capacity to obtain demographic, laboratory, and exposure information on enteric disease cases.

**Objective 3:** Collaborate with officials in the Vermont Agency of Agriculture on issues that have cross cutting implications for animal and human health.

The VDH Epidemiology Field Unit worked collaboratively with the Agency of Agriculture in an effort to disseminate public health information and safety tips to farms open to the public and to Agency of Agriculture school programs that introduce agriculture to children. A fact sheet was included in the Agency of Agriculture newsletter, *The Agriview*, that is received by 3,500 paid subscribers.

The Agency of Agriculture sends bovine brain specimens from animals over two years of age that have been screened for rabies to the National Veterinary Services Laboratory in Ames, Iowa for bovine spongiform encephalopathy testing. Results are received by the State Public Health Veterinarian at the Vermont Department of Health, as well as by the State Veterinarians at the Agency of Agriculture.

The State Public Health Veterinarian and the State Veterinarian collaborated, along with law enforcement and town officials, to address a goat hoarding situation which was determined to have health implications to the farm animals, the owner and the public.

Some research indicates that there may be a link between Crohns disease and the Johnes organism. The State Veterinarian at the Agency of Agriculture is aware of this new information and has been keeping abreast of new developments as they emerge.

The Epidemiology Field Unit is developing a survey for Vermont veterinarians regarding veterinary diagnostic testing and which veterinary laboratories are used (there are no veterinary



diagnostic laboratories in Vermont). The Vermont Agency of Agriculture list of Reportable Infectious Diseases in Animals and the VDH list of Reportable Infectious Diseases in Animals will be included in the survey to ensure that Vermont veterinarians are up to date with this information.

When the State Veterinarian or the USDA Veterinarian needs to quickly disseminate information to the veterinarians throughout the state they often contact the Public Health Veterinarian for assistance. The Public Health Veterinarian can send information through the Vermont VetNet, a listserv which he developed of Vermont veterinarians.

The VDH is listed as a supporting agency on the Animal & Plant Emergency Services annex of the State of Vermont Emergency Operations Plan. The mission of this annex is to provide a mechanism for the coordination of local and state resources in response to a significant emergency involving Vermont agriculture.

**Objective 4:** Expand laboratory capacity to detect *Bordetella pertussis*.

Vermont consistently has one of the highest incidence rates of reported pertussis in the country. Laboratory confirmation of pertussis is an important component of epidemiologic follow-up and disease control measures. Currently the VDHL tests for *Bordetella pertussis* using culture, the gold standard test. However, culturing of the organism is not always timely and can be difficult if not performed under ideal conditions. Laboratory and epidemiology staff recognize a need for more rapid testing methods to complement culture as a routine part of surveillance efforts in Vermont. Several studies have demonstrated the potential of PCR assays to detect *B. pertussis* faster and with greater sensitivity than culture. There is at present, however, no universally accepted PCR assay for *B. pertussis*.

During the fall of 2004, the VDH Laboratory and the Epidemiology Field Unit considered participating in a CDC pertussis PCR validation study, "Protocol for Collection of Sera and Nasopharyngeal Swabs to Validate a Polymerase Chain Reaction Assay as a Method of Pertussis Diagnosis". However, after careful deliberation, it was determined that Vermont did not have the resources to participate in the study. The VDHL is currently reviewing a CLEP-approved real-time PCR test for *B. pertussis* that has been developed and validated at the Wadsworth Center of the New York Department of Health.

**Objective 5:** Collaborate with the Agency of Agriculture and the Department of Forest, Parks, and Recreation to conduct tick surveillance to document species distribution and tickborne illness risk and to increase awareness of tickborne illnesses and their prevention.

The veterinarian surveillance project, in which veterinary practices in each county submit ticks from their canine patients to the Forest Biology Laboratory for identification, is ongoing. The Epidemiology Field Agent entered data from this project into an Excel spreadsheet during down time while answering the West Nile virus dead bird reporting line. In November 2004 the Epidemiology Associate assisted with the annual deer rifle season project, in which tick specimens are collected from deer check stations on the opening day of rifle season. These ticks were submitted to the Forest Biology Laboratory for identification and storage.

To increase understanding of the tick population and the prevalence of Lyme disease in Vermont, there was a coordinated effort by the Vermont Department of Health, the Vermont Department of Forest, Parks, and Recreation, the Vermont Agency of Agriculture, and the Maine Medical Center Research Institute Vector Borne Disease Laboratory to collect and test ticks from two areas of Vermont. Over the course of two days in the fall of 2004, personnel from each of these organizations collected a total of 119 deer ticks from Manchester, VT and from Butler Island in Lake Champlain, where there had been three reported cases of Lyme disease during this past summer. The Maine Medical Center Research Institute Vector Borne Disease Laboratory will test these ticks individually by a direct fluorescent antibody test for the presence of the *Borrelia* spirochete.

In August 2004 the State Epidemiologist mailed a letter regarding Lyme disease to all Vermont healthcare providers to encourage testing and reporting. In September 2004 the State Epidemiologist and the State Public Health Veterinarian mailed a canine Lyme disease screening survey to every veterinarian in the state. Results of this study will be mapped using GIS and made available to veterinarians so that they can educate their clients on Lyme disease risk in Vermont. The Epidemiology Field Unit is also developing a questionnaire for veterinarians on diagnostic testing for zoonotic diseases so that VDH has a better understanding of veterinary laboratory testing.

**Objective 6:** Continue to participate in the CDC's Creutzfeldt-Jakob disease (CJD) mortality surveillance system.

The Health Surveillance Epidemiologist reports the number (or absence) of Vermont CJD-related deaths to the CDC on a quarterly basis. There have been no CJD-related deaths among Vermonters since this reporting began.

### **Other ELC Activities**

#### **Capacity-building Activities**

EpiInfo 2002 software has been installed on additional Epi Field Unit laptops to enhance our surge capacity during an outbreak or a bioterrorism event. In addition, digital certificates for the State Epidemiologist, the Epi Field Unit Chief, and the Health Surveillance Epidemiologist have been installed on off-site laptops to ensure 24-hour access to Epi-X.

The Health Surveillance Epidemiologist coordinated a VDH Public Health Grand Rounds in April 2004 titled "GIS in Public Health: Methodologies for the Topographic Visualization of Disease Rates". Six additional VDH staff (including the Foodborne Epidemiologist and the Epi Field Unit Administrative Assistant) received introductory training in ArcGIS 9.0 software in October 2004; the VDH staff who received introductory training in the fall of 2003 will receive more advanced training in November 2004. The Epi Field Unit produced up-to-date West Nile virus surveillance maps for the VDH website weekly throughout the transmission season. This capacity will also be used during future outbreak investigations.

The Health Surveillance Epidemiologist and the Foodborne Epidemiologist along with VDH statisticians attended a one-day training on SPSS 12.0 software in September 2004.

The Medical Epidemiologist, Health Surveillance Epidemiologist, Epidemiology Field Unit Chief, and Foodborne Epidemiologist presented the CDC's Making the Case for Case Investigation and Response course for district office public health nurses in September 2004.

The Health Surveillance Epidemiologist, Epidemiology Field Unit Chief, and Epidemiology Associate attended the 2004 Northeast Epidemiology Conference in New Hampshire in October 2004. The State Epidemiologist was unable to attend due to Vermont's influenza vaccine shortage response efforts.

### **Surveillance Activities**

The State Epidemiologist is heading an effort to make the following changes to the Vermont Communicable Disease Regulations:

- 1) Require the reporting of the results of all CD4 test results (regardless of level);
- 2) Require the reporting of the results of all HIV viral load tests (regardless if detectable or non-detectable);
- 3) Update the rabies chapter to be consistent with a statutory change;
- 4) Require the reporting of the results of all Hepatitis C viral loads test results (regardless if detectable or non-detectable);
- 5) Require the reporting of intermediate or low-level Hepatitis C antibody levels;
- 6) Institute weekly aggregate reporting of positive rapid influenza test results in lieu of individual reporting;
- 7) Require the reporting of deaths in children with influenza-like illness and laboratory evidence of influenza (by culture or rapid test);
- 8) Institute the reporting of influenza clusters or outbreaks in lieu of individual reports;
- 9) Require the submission of the following isolates to the VDH Laboratory: *Neisseria meningitidis* (for serogrouping), *Listeria monocytogenese* (for PFGE analysis), and *Salmonella* sp.(for PFGE analysis).

To educate visitors to Vermont farms, fairs and petting exhibits about the risk of illness, a fact sheet titled "Farm Animals and Visitors" for farms open to the public and a second fact sheet for school trips to farms were developed. These fact sheets were distributed to a professional organization serving farms open to the public and were presented at the organization's annual meeting. Direct outreach was provided through a mailing to farms known to be open to the public, in addition to an insertion of the fact sheet in the *AgReview*, the Agency of Agriculture's monthly newsletter to farmers. Fact sheets were also distributed to "Ag in the Classroom" and the Northeast Organic Farmers Association, two programs which introduce school age children to agriculture. The fact sheet addressing school trips to farms was also sent to all school nurses and principals in Vermont.

The Medical Epidemiologist and the Epidemiology Associate gave a presentation at the Vermont Fair Association annual spring meeting on the importance of providing hand hygiene facilities or products in petting areas. They also provided an in-service training to staff at a farm that has educational programs for children and which is open to the public. Phone consultation on hand hygiene, as well as handwashing posters, were provided to farms, fairs, and schools on request.

**New Budget Period Proposed Program Activities and Objectives**  
**April 1, 2005 – March 31, 2006**

**Objective 1:** Obtain a PHIN-compliant LIMS system that will facilitate the electronic exchange of information between the VDH Laboratory and the Epidemiology Field Unit.

- A. Continue to collaborate with ASSL and other interested state public health laboratories to convert LITS Plus into a PHIN-compliant system.
  - B. Implement new builds of software as distributed.
  - C. Train VDHL and EFU staff on software changes.
  - D. Implement electronic reporting between the PHIN-compliant adaptation of LITS Plus and the NBS.
- 

**Objective 2:** Collaborate with officials in the Vermont Agency of Agriculture on issues that have cross cutting implications for animal and human health.

- A. Maintain collaboration between food safety officials in the Agency of Agriculture and the Foodborne Epidemiologist.
- B. Continue animal disease emergency response planning in relation to possible natural/accidental or bioterrorism events.
- C. Continue to monitor available data on Chronic Wasting Disease and other transmissible spongiform encephalopathies.
- D. Collaborate with the State Veterinarian on equine surveillance for West Nile virus and on promoting the use of the equine West Nile virus vaccine in Vermont.

**Objective 3:** Expand laboratory capacity to detect *Bordetella pertussis*.

**Laboratory**

- A. **Winter-Spring 2004-2005** – Obtain internal plasmid control for the *B. pertussis* PCR assay from the Wadsworth Center; purchase reagents and supplies required for the assay; validate the assay at the VDHL using specimens from Vermont and/or from neighboring regions. For example, nasopharyngeal swab specimens may be tested by both PCR and by culture and results compared.
  - B. After review and validation studies have been completed, epidemiology and laboratory staff will discuss findings and results and decide whether or not PCR will be used to complement testing by culture.
  - C. If PCR is to be added to the *B. pertussis* testing algorithm, the VDHL will assess the need for additional equipment and supplies and may request funding for these items at a later date. The estimated reagent cost for the real-time PCR detection of *B. pertussis* is \$9.00/sample. During calendar year 2003, the VDHL tested 384 specimens for *B. pertussis* and of these, 25 were positive by culture.
- 

**Epidemiology**

- A. *If PCR is added to the B. pertussis testing algorithm*, educate health care providers about the availability of PCR testing for pertussis at the VDHL. Methods may include an article in the Disease Control Bulletin, broadcast faxes to providers' offices, and telephone calls to providers by the district office public health nurses.

- B. Enhance understanding of the epidemiology of pertussis in Vermont among health care providers through dissemination of surveillance data.

**Objective 4:** Collaborate with the Agency of Agriculture and the Department of Forest, Parks, and Recreation to conduct tick surveillance to document species distribution and tickborne illness risk and to increase awareness of tickborne illnesses and their prevention.

- A. Continue veterinarian surveillance project, with the goal of two participating practices in each county. Veterinarians submit ticks that they retrieve from their canine patients to the Forest Biology Laboratory, where entomologists identify, catalog, and store the ticks.
- B. Continue deer rifle season project. Tick specimens are collected from deer check stations on the opening day of each rifle season. Ticks are submitted to the Forest Biology Laboratory, where entomologists identify, catalog, and store the ticks.
- C. Implement PCR testing of competent tick vectors for known human pathogens at the Agency of Agriculture Laboratory.
- D. Compile historical data on tick species in Vermont.
- E. Increase health care providers' awareness of Lyme disease by sharing data on human pathogens in ticks with providers and presenting Lyme disease epidemiology and clinical information at grand rounds.
- F. Increase public awareness of Lyme disease prevention strategies using public education materials promoting daily tick checks and prompt removal of ticks.

**Objective 5:** Continue to participate in the CDC's Creutzfeldt-Jakob disease (CJD) mortality surveillance system.

- A. Vital Records staff review cause of death information when entering death certificate data and will forward to the Health Surveillance Epidemiologist a copy of any certificates listing CJD as a cause of death.
- B. The Office of the Chief Medical Examiner will inform the Health Surveillance Epidemiologist of any CJD deaths.
- C. Vital Records staff query the vital statistics database quarterly in an active case finding effort.
- D. The Health Surveillance Epidemiologist reports the number of CJD deaths among individuals less than 55 years of age, including the absence of cases, to the CDC's CJD surveillance unit during the first week of January, April, July, and October.

**Objective 6:** Conduct laboratory-based surveillance for individuals with chronic hepatitis B virus and hepatitis C virus infection.

#### **Epidemiology**

- A. Continue hepatitis C surveillance activities in the Epidemiology Field Unit, including obtaining information from providers to determine whether the case is an acute or chronic infection, completing the CDC Viral Hepatitis Case Report Form, and assigning a case status for data entry into the NBS. The surveillance system will be reviewed annually to determine whether process changes are warranted.
- B. Ensure the confidentiality of individual identifying information collected.

- C. Educate health care providers regarding the guidelines for hepatitis C virus testing, reporting requirements, the public health importance of surveillance for viral hepatitis, and the importance of risk factor information for surveillance.
- D. Enhance understanding of risk factors and modes of transmission among health care and behavioral health providers through dissemination of surveillance data.
- E. Evaluate the timeliness, completeness, and accuracy of hepatitis C surveillance.

**Laboratory**

- C. Continue to provide screening for HCV infection; provide supplemental RIBA testing through ViroMed for all screening-test positive specimens with s/co ratios  $\geq 3.8$ .
- D. Continue to provide screening for HBV serologic markers, including HBV surface antigen, as well as HBV core IgG and IgM total antibody, HBV core IgM antibody, and HBV surface IgG antibody.
- E. Continue to notify the Epidemiology Field Unit and providers of specimens testing positive for HBV surface antigen and/or anti-HCV antibodies.

**Measures of Effectiveness**

- Electronic data exchange between the PHIN-compliant LIMS and the NBS.
- Collaboration between food safety officials and the Foodborne Epidemiologist as needed.
- Appropriate public health response to possible TSE cases in Vermont animals.
- Appropriate public health response to equine arbovirus cases.
- *B. pertussis* PCR assay from the Wadsworth Center validated by the VDHL.
- Validation study discussed, and a decision on whether or not to implement PCR testing for pertussis has been made.
- Capacity at the Agency of Agriculture laboratory to test ticks for *Borrelia burgdorferi* using PCR.
- Three presentations for health care providers on Lyme disease.
- Timely quarterly reports to the CDC's CJD surveillance unit.
- Appropriate epidemiologic follow-up on all possible CJD cases.
- Completeness of hepatitis C surveillance: Case status is assigned for at least 80% of laboratory reports received.
- Completeness of behavioral risk information: At least 80% of reported cases have information regarding behavioral risk for hepatitis C infection after epidemiologic follow-up is completed.
- Timeliness of hepatitis C surveillance: Provider follow-up initiated within two weeks of receipt of all laboratory reports indicating hepatitis C virus infection.
- Timeliness of hepatitis C surveillance: At least 66% of cases are reported and assigned a case status within six months of diagnosis.

**REPORT ON CURRENT BUDGET PERIOD FINANCIAL PROGRESS**  
**Vermont Department of Health (VDH)**  
**April 1, 2004 – March 31, 2005**

The Vermont Department of Health does not anticipate an unobligated balance for the current budget period.

**Budget Justification – Antimicrobial Resistance  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel** **\$0**

**Indirect Costs** **\$0**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits** **\$0**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** **\$48,000**

Consultation service for hospitals \$12,000  
Purpose: Estimated 80 hours of medical doctor service at \$150 per hour to provide consultation to physicians regarding antibiotic choice for clinical treatment.

Site visits for handwashing study \$36,000  
Purpose: To support one medical doctor's and one ICP's time for 18 one-day trips to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention. The medical doctor will be supported at \$150 per hour for 8 hours per day; the ICP will be supported at \$100 per hour for 8 hours per day.

**Equipment** **\$0**

**Supplies** **\$3,000**

Laptop for handwashing study \$3,000  
Purpose: To facilitate on-site data collection at pre- and post-intervention site visits.

**Other** **\$38,506**

Website, listserv and teleconference support \$1,750  
Purpose: To support the creation of a website and a listserv.



Handwashing study \$24,706  
Purpose: To support the study design, training for data collectors, data collection, data analysis, and reporting for the hospital handwashing intervention study. These tasks will be accomplished by a VPQHC employee, with professional consultation from an infectious disease physician.

Steering committee meetings \$7,050  
Purpose: To support conference room rental, lunch, supplies, mailings, and printing for semi-annual meetings with intervening regular conference calls.

Project management \$5,000  
Purpose: Management of the handwashing initiative project (100 hours @ \$50/hour). VPQHC is currently managing the Regional Infection Control Resource Planning Committee.

**In-state Travel \$6,000**

Mileage reimbursement \$6,000  
(64 trips x 250 roundtrip miles/trip @ \$0.375/mile)

Purpose: Funds are requested to reimburse steering committee members, medical doctors, and infection control professionals (ICPs) for the following in-state travel:

28 trips for 14 steering committee members to attend 2 statewide meetings

18 trips for MDs to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention

18 trips for ICPs to conduct site visits at all Vermont hospitals to study staff compliance with handwashing guidelines pre- and post-intervention

**Out-of-state Travel \$958**

\$958 One member of the Regional Infection Control Resource Planning Committee to attend a national meeting on appropriate antibiotic use in Atlanta, GA. Estimated expenses are:

Plane Fare \$500

Hotel (3 nights@\$110/night) \$330

Meal Allowance (4 days @ \$32/day) \$128

**TOTAL FUNDS REQUESTED: ANTIMICROBIAL RESISTANCE \$96,464**

**Budget Justification – Foodborne Diseases  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel** **\$44,072**

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Foodborne Epidemiologist	\$36,947	100%	\$36,947
Microbiology Technician II	\$28,500	25%	\$7,125

Foodborne Epidemiologist

Continuation item. The Foodborne Epidemiologist's primary role is to enhance foodborne disease surveillance capacity and improve capacity for outbreak investigations. Dina Itani, M.S. continues in this position.

Microbiology Technician II

Continuation item. This position provides technical support for the Microbiology Program for both ELC and bioterrorism activities, with 0.50 FTE funded by each cooperative agreement. Under the ELC grant, this position spends 25% of time on foodborne diseases and 25% of time on WNV activities (see WNV budget). The main focus of this position for the ELC grant is accessioning specimens, preparing samples and doing quality control of media and reagents for parasitology and enteric bacteriology testing, expanding in-house media and reagent preparation capability, and assisting with dead bird surveillance for WNV. The position reports to the Microbiology Program Chief.

**Indirect Costs** **\$22,036**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits** **\$11,018**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual****\$0****Equipment****\$31,315**

\$31,315 Smart Cycler II add-on block

Purpose: The VDHL was initially using the Smart Cycler to detect WNV in dead birds and to detect bioterrorism agents. The Smart Cycler is now being used to detect SARS-coV, Shiga-toxin producing *E. coli*, influenza virus A and B and soon for the detection of H1, H3, H5, and H7 subtypes as well. The food microbiology testing program is being expanded to include real-time PCR detection of bacterial pathogens and, as noted above, we will soon be validating a real-time PCR assay for the detection of *B. pertussis*. The CDC is establishing a real-time assay for the detection of Noroviruses and this will be incorporated into the VDHL norovirus testing algorithm when this assay becomes available. Hence, this equipment is needed to increase capacity to perform additional real-time PCR diagnostic assays.

**Supplies****\$11,570**

\$2250 Meridan Premier EHEC EIA kits 5 @ \$450 each)

Purpose: Increase surveillance for non-O157 Shiga-toxin-producing *E. coli* (STEC)

\$775 Remel *E. coli* O157:H7 latex test (5@\$155 each)\$225 *Salmonella* antisera (5@\$45/vial)\$385 *Shigella* antisera (5@\$77/vial)

Purpose: Detection of *E. coli* O157:H7; serotyping of *Salmonella* and *Shigella*

\$550 Rotavirus EIA (3@\$183 each)

Purpose: Provide rotavirus testing for enhanced surveillance specimens

\$4000 Restriction enzymes

\$600 BSA

\$190 Tris-EDTA buffer

\$360 Microcentrifuge tubes

\$235 Seakem agarose

Purpose: Reagents and supplies needed for PFGE typing of the foodborne pathogens *E. coli*, *Salmonella*, *Shigella*, and *Listeria*.

\$1000 Reagents and supplies for Norwalk-like virus detection using traditional PCR (RNA extraction kits, RNase Inhibitor, gel extraction kits, primers, enzymes, buffers, microcentrifuge tubes, tips, agarose, etc.)

Purpose: Needed for to perform Norovirus testing during outbreak situations.

\$1000 Reagent and supplies for detection of non-Shiga toxin-producing *E. coli* using real-time PCR (primers, probes, DNA extraction kits, Proteinase K, RNAase, microcentrifuge tubes, pipette tips, reaction tubes, etc.)

Purpose: Needed to detect -Shiga toxin-producing *E. coli* using real-time PCR.

**Other** **\$2,000**  
Purpose: Funds for NARMS to ship requested isolates to the CDC for antimicrobial susceptibility testing.

**In-state Travel** **\$750**  
\$750 Mileage reimbursement  
Purpose: Funds are requested to reimburse the Foodborne Disease Epidemiologist for in-state travel related to outbreak investigations (2000 miles x \$0.375/mile).

**Out-of-state Travel** **\$4,740**  
\$1,308 One epidemiologist to attend the 2005 PulseNet/National Foodborne Disease Epidemiologists Meeting in Seattle, WA May 9-11, 2005. Estimated expenses are:

Plane Fare	\$700
Hotel (4 nights @120/night)	\$480
Meal allowance (4 days @ \$32/day)	\$128

\$1,308 One microbiologist to attend the 2005 PulseNet/National Foodborne Disease Epidemiologists Meeting in Seattle, WA, May 9-11, 2005. Estimated expenses are:

Plane Fare	\$700
Hotel (4 nights @120/night)	\$480
Meal allowance (4 days @ \$32/day)	\$128

\$1,008 Microbiology Program Chief to attend 2006 International Conference on Emerging Infectious Diseases in Atlanta, GA, March 19-22, 2006. Estimated expenses are:

Plane Fare	\$400
Hotel (4 nights@\$120/night)	\$480
Meal Allowance (4 days @ \$32/day)	\$128

\$1,116 Two microbiologists to attend the Annual Meeting of the Northeast Association for Clinical Microbiology and Infectious Disease in Portland, ME in June 13-15, 2004. Estimated expenses are:

Hotel (2 x 3 nights @ \$110/night)	\$660
Meal Allowance (2 x 4 days @\$32/day)	\$256
Workshops (2@\$100)	\$200

**TOTAL FUNDS REQUESTED: FOODBORNE DISEASES** **\$127,501**

**Budget Justification – Hepatitis Prevention and Control  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

<b>Personnel</b>			<b>\$54,921</b>
	PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME
			AMOUNT REQUESTED
<hr/>			
	Hepatitis Surveillance Coordinator	\$54,921	100% \$54,921

Hepatitis Surveillance Coordinator

Continuation item. This position collaborates with the Health Surveillance Epidemiologist, the AIDS Program Chief, the Office of Drug Abuse Programs, and other VDH staff to integrate hepatitis C prevention information into existing programs. This position reports to the Health Surveillance Epidemiologist.

**Indirect Costs** **\$27,461**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits** **\$13,730**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** **\$0**

**Equipment** **\$0**

**Supplies** **\$3,600**

\$3,600 Abbott HCV EIA 2.0 kits (5 @ \$720 each)

Purpose: Kits are needed to maintain the VDH Laboratory's capacity to provide HCV testing.

**Other** **\$0**

**In-state Travel**

**\$750**

\$750 Mileage reimbursement

Purpose: Funds are requested to reimburse the Hepatitis Surveillance Coordinator for in-state travel related to hepatitis prevention activities (2000 miles x \$0.375/mile).

**Out-of-state Travel**

**\$958**

\$958 Hepatitis Surveillance Coordinator to attend a national hepatitis meeting. Estimated expenses are:

Plane Fare \$500

Hotel (3 nights@\$110/night) \$330

Meal Allowance (4 days @ \$32/day) \$128

---

**TOTAL FUNDS REQUESTED: HEPATITIS**

**\$101,420**

**Budget Justification – Influenza Surveillance and Response  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

<b>Personnel</b>			<b>\$15,114</b>
PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Nurse Epidemiologist	\$53,236	25%	\$13,309
Microbiologist II	\$36,100	5%	\$1,805

Nurse Epidemiologist

Continuation item. Funding is requested to support twenty five percent effort for the nurse epidemiologist who is the year-round influenza surveillance coordinator. This position reports to the Epidemiology Field Unit Chief.

Microbiologist II

Continuation item. Funding is requested to support five percent effort for the microbiologist who performs year-round influenza testing. This position reports to the Microbiology Program Chief.

**Indirect Costs**

**\$7,557**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

**\$3,779**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual**

**\$0**

**Equipment****\$0****Supplies****\$19,663**

\$810 M5BL Multi-Microbe Media (viral transport media) (600@\$135/100)  
Purpose: Media needed for influenza specimen collection and transport to the VDH Laboratory.  
Providers are supplied with influenza specimen collection kits.

\$2,600 Directigen™ Flu A + B rapid *in vitro* enzyme immunoassay (5@\$520 each)  
Purpose: Kits needed to conduct rapid influenza assays for patients in nursing homes and other group living situations or by special request.

\$1,500 RMK cells in shell vials (600@\$2.50 each)  
\$1,350 RMK cells in tubes (600@\$2.25 each)  
\$3,045 SimulFluor® Flu A/Flu B conjugate (15@ \$203 each)  
\$625 ATCC Influenza A control (5@\$125 each)  
\$625 ATCC Influenza B control (5@\$125 each)  
\$550 Influence A/B control slides (10@\$55)  
\$600 Serum free medium (100@\$6/bottle)  
\$600 Hank's balanced salt solution (100@\$6/bottle)  
\$650 Light Diagnostics Mounting Fluid, cryovials, U-bottom microtiter plates, PBS with Tween, Pasteur pipets, tips, etc.

Purpose: Materials needed to culture influenza virus and for the detection, identification and subsequent subtyping of influenza A and influenza B viruses.

\$4,478 ZstatFlu™ rapid influenza test kits (15@ \$298.50 each)  
Purpose: Sentinel influenza providers are supplied with these CLIA-waived rapid influenza test kits to facilitate testing and surveillance for influenza.

\$490 Forward and reverse primers for Influenza A, B, H1, H3, H5, H7, and RNP control. (14@ \$35)

\$1050 Probes for Influenza A, B, H1, H3, H5, H7, and RNP control. (7@ \$150)

\$690 Qiagen RNA extraction kit

Purpose: Needed to perform real-time PCR detection of Influenza virus A and B and H1, H3, H5, and H7 subtypes.

**Other****\$34,350**

\$1,850 Courier transport charges

Purpose: For specimens from influenza sentinel physicians (200 @ \$9.25 each).

\$32,500 Laptop computers with Internet access

Purpose: To support web-based reporting of surveillance data by 13 sentinel provider practices to the CDC (13 @ \$2,500 each)



<b>In-state Travel</b>	<b>\$0</b>
<b>Out-of-state Travel</b>	<b>\$0</b>
<b>TOTAL FUNDS REQUESTED: INFLUENZA</b>	<b>\$80,463</b>

**Budget Justification – NEDSS  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Security Administrator	\$72,796	100%	\$72,796
Registry Manager	\$51,937	100%	\$51,937
Systems Developer II	\$44,817	100%	\$44,817

**\$169,550**

Security Administrator

Continuation item. This position is directly related to “Implementing a Security System”, one of the critical NEDSS Elements. Support for this position, an Information Technology Specialist III, enables the ITS Unit to fill the roll of Security Administrator. The critical nature of security administration deserves dedicated full time attention.

Registry Manager

Continuation item. The Registry Manager will assume responsibility for maintaining data and functions in the IDR, triaging incoming data according to program needs and authorizations, supporting the de-duplication of person records, and directing the data and reports to appropriate personnel.

Systems Developer II

New FTE. The Systems Developer II will function as the Operational Data Store (ODS) Manager. Responsibilities will include: providing NBS database support (e.g., applying table changes resulting from new releases, extending SRT tables, adding outbreak names); administration of scheduled NBS tasks (e.g., verifying RDB population, verifying outgoing (NND) message creation, verifying incoming (ELR) message creation, verifying data mart population, verifying de-duplication process); implementing electronic lab reporting (e.g., incoming message parsing, outgoing message creation, LOINC code mapping, SNOMED code mapping); miscellaneous NBS upgrade/patch support (e.g., CDF import/maintenance, installing validation checklist, creating validation routine for LDF (JavaScript)); and interfacing between the NBS and LITS Plus.

**Indirect Costs**

**\$84,775\***

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

**\$42,388**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary,

dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual** **\$0**

**Equipment** **\$0**

---

**Supplies** **\$2,000**

\$2,000 Workstation and standard software

Purpose: This personal computer workstation will be for the new Systems Developer II.

**Other** **\$0**

**In-state Travel** **\$0**

**Out-of-state Travel** **\$4,580**

Funding is requested to support travel to the 2005 Public Health Information Network meeting in Atlanta for two ITS Unit staff and two epidemiology program staff. Estimated expenses are:

Plane fare (4 @ \$600)	\$2,400
Meal allowance (4 x 4 days @ \$32/day)	\$512
Hotel (4 x 3 nights @ \$129/night)	\$1,548
Ground transportation (4 x \$30)	\$120

**TOTAL FUNDS REQUESTED: NEDSS** **\$303,293**

---

**Budget Justification – West Nile Virus  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel**

**\$ 137,037**

PERSONNEL	ANNUAL SALARY	FTE	AMOUNT REQUESTED
Microbiology Technician II	\$28,500	0.25	\$7,125
Epidemiology Associate	\$47,287	0.80	\$37,830
Vector Management Specialist	\$45,344	0.90	\$40,810

TEMPORARY PERSONNEL	#	PAY RATE PER HOUR	HOURS PER WEEK	NUMBER OF WEEKS	AMOUNT REQUESTED
Epidemiology Field Agents (part time)	12	\$11.75	20	12	\$33,840
Epidemiology Field Agent (full time)	1	\$11.75	40	14	\$6,580
Vector Technicians	2	\$12.56	36	12	\$10,852

Microbiology Technician II

Continuation item. This position is funded 50% by the Public Health Preparedness and Response for Bioterrorism grant and 50% by the ELC grant. The main focus of this position for the ELC grant will be accessioning specimens, testing dead birds for WNV, preparing samples and doing quality control of media and reagents for parasitology and enteric bacteriology testing, and expanding in-house media and reagent preparation capability. It is expected that this person will spend 25% of time on foodborne diseases (see Foodborne Disease budget) and 25% of time on WNV activities. The position reports to the Microbiology Program Chief.

Epidemiology Associate

The Epidemiology Associate position focuses on zoonotic disease surveillance, including West Nile virus, Lyme disease, and rabies. She coordinates Vermont's statewide West Nile surveillance activities, including database management and data reporting to CDC. She also provides back up for the Epidemiology Field Unit for data entry, outbreak investigations, and other tasks as needed. This position reports to the Health Surveillance Epidemiologist.

Vector Management Specialist

The Agency of Agriculture contracted with Alan Graham, a masters level entomologist, during the 2001, 2002, 2003 and 2004 West Nile transmission seasons, with funds awarded through the ELC cooperative agreement. Mr. Graham has been hired by the Vermont Agency of Agriculture as the Vector Management Specialist *contingent on continued funding*. A primary focus of this position is sorting mosquitoes to species. The Vector Management Specialist also coordinates mosquito surveillance activities of the Vector Technicians and assists the State Entomologist with other surveillance activities as requested. He is accountable to the Secretary of the Agency of Agriculture.

### Epidemiology Field Agents

Continuation item. Funds are requested to hire twelve half-time Epidemiology Field Agents and one full-time Epidemiology Field Agent for twelve weeks during the peak of West Nile virus surveillance season. These temporary positions will work out of the District Health Offices, but will spend a significant amount of their time in the field. Activities of the Epidemiology Field Agents include receiving dead bird reports, entering dead bird reports into the Dead Bird Database, maintaining manual records, collecting and submitting dead birds for testing, engaging in public outreach and educational activities, such as giving presentations on West Nile virus prevention and distributing posters and informational pamphlets. The full-time Epidemiology Field Agent will work in the Department of Health Central Office taking dead bird reports on the toll-free line and referring those calls to the District Offices when collection is indicated. This position may assist in picking up and transporting dead birds to the Vermont Department of Health Laboratory. The Central Office Epidemiology Field Agent also assists the Epidemiology Associate in transmitting West Nile virus data to the CDC and in generating other data reports. It is a fourteen week position.

### Vector Technicians

Continuation item. Funds are requested to hire two full-time Vector Technicians to assist the State Entomologist with larval surveys; mapping wetlands, and trapping adult mosquitoes in the counties with the highest percentage of wetlands and human population. The Vector Technician positions will be temporary positions and will be hired by and work under the supervision of the State Entomologist and the Vector Management Specialist in the Agency of Agriculture.

### **Indirect Costs**

**\$68,518**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

### **Fringe Benefits**

**\$17,560**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary for the Microbiologist, 7.65 % of salary for the temporary Epidemiology Field Agents and 6.25% of salary for the Agency of Agriculture Vector Technicians and Vector Management Specialist.

**Equipment**

\$0

**Supplies**

\$27,134

\$1,014      Miscellaneous supplies for mosquito surveillance  
Purpose: Supplies will be used for mosquito surveillance including CO 2, batteries for mosquito traps, trap replacement parts, containers.

\$10,320      Reagents and supplies for RT-PCR testing of mosquitoes  
Purpose: Supplies will be used by the Agency of Agriculture to conduct RT-PCR testing of mosquito pools (800 pools @ \$12.90 per pool)

\$13,740      Reagents and supplies for RT-PCR testing of dead birds

- \$1,035      Scalpels
- \$ 950      Viral transport media
- \$1,825      Tough tags
- \$4,235      Master Mix reagents
- \$2,825      Qiagen RNA extraction kits
- \$1,345      Primers and probes
- \$ 600      Ethyl alcohol, pipet tips,
- \$ 925      Cepheid PCR reaction tubes

Purpose: Supplies needed by the VDH laboratory to perform bird autopsies, extract and purify viral RNA from bird brain tissue, and to conduct RT-PCR testing. Expect to test approximately 900 birds.

\$1,500      Shipping boxes with Styrofoam liners  
Purpose: Packaging dead birds for shipment to laboratory (150 @ \$10 each).

\$560      Toll-free central dead bird reporting line  
Purpose: To support a toll-free hotline in the Department of Health Central Office so that Vermont residents throughout the state can continue to report dead birds while relieving the District Offices of these calls. The full-time Epidemiology Field Agent and the Epidemiology Associate will be responsible for taking calls on this line.

**Other**

\$6,130

\$2,050      Shipping

Purpose: Funds will be used for the following shipments:

- Dead birds to the VDH Laboratory - \$1,800
- Human specimens to the NH Laboratory (10 shipments @ \$12.50 each) - \$125
- Equine samples (25 shipments @ \$5 each) - \$125

\$1,050      West Nile virus posters and Fact Sheets  
Purpose: Funds will be used for the printing of posters to encourage the public to report dead birds and of 'Don't Let it Bug You' posters that educate the public about West Nile virus prevention. Funds will also be used for the printing of fact sheets on West Nile virus and insect repellents. (5,000 @ \$.21 each)

\$1,530 Magnets

Purpose: Funds are requested to produce refrigerator magnets that encourage the public to report all dead bird sightings to the Department of Health and refrigerator magnets that encourage the public to engage in simple prevention measures. (3,000 @ \$.51)

\$1,500 Newspaper advertisements for dead bird reports

Purpose: Funds are requested to place advertisements soliciting dead bird reports from the public. In previous years newspaper advertisements were associated with increased reporting from the public during the week following the advertisement.

**In-state Travel**

**\$12,506**

\$12,506 Mileage reimbursement

Purpose: Funds are requested to reimburse the following for mileage related to West Nile virus surveillance activities:

Epidemiology Field Agents (12 x 100mi/wk x 12wks x \$0.375/mi) - \$5,400

Epidemiology Field Agent (1 x 25mi/wk x 14 wks x \$0.375/mi) - \$131

Entomologists (2 x 300mi/wk x 20wks x \$0.375/mi) - \$4,500

Vector Technicians (2 x 275 mi/wk x 12wks x \$0.375/mi) - \$2,475

**Out-of-state Travel**

**\$1,115**

\$1,115 Attendance at the annual West Nile virus conference

Purpose: Funds are requested to support travel, lodging and meals for one Department of Health staff member to attend the annual national conference on West Nile virus. Estimated expenses are:

Plane fare (1 @ \$600) \$ 600

Meal allowance (1 x 4 days @ \$32/day) \$ 128

Hotel (1 x 3 nights @ \$129/night) \$ 387

**TOTAL FUNDS REQUESTED: WEST NILE VIRUS**

**\$270,000**

**Budget Justification – General Epidemiology and Laboratory Capacity  
Vermont Department of Health (VDH)  
04/01/05 – 03/31/06**

**Personnel**

**\$144,264**

PERSONNEL	ANNUAL SALARY	PERCENTAGE OF TIME	AMOUNT REQUESTED
Health Surveillance Epidemiologist	\$58,119	90%	\$52,307
Microbiologist III	\$40,375	100%	\$40,375
Systems Developer II	\$44,817	100%	\$44,817
Administrative Assistant	\$27,061	25%	\$6,765

Health Surveillance Epidemiologist

Continuation item. Patsy Tassler, Ph.D. is responsible for the daily activities of the ELC grant. She works closely with other members of the Infectious Disease Epidemiology Section, the VDH Laboratory, and public health nurses in the District Health Offices. She is an Assistant Professor of Medicine in the School of Medicine at the University of Vermont. Dr. Tassler reports to the State Epidemiologist.

Microbiologist III

Continuation item. This microbiologist conducts DNA fingerprinting of foodborne pathogens, maintains local databases of PFGE patterns, and participates in the national PulseNet network. She has developed and implemented molecular procedures for the detection of WNV in birds and for detection of Norwalk-like virus and bioterrorism agents. She is responsible for the overall operation of the molecular laboratory and for training other microbiologists in molecular methods. This position reports to the Microbiology Program Chief.

Systems Developer II

Continuation item. The systems developer position is responsible for leading the ITS effort in the integration of the LITS Plus application with the Department of Health's NEDSS-compliant SPHINX System. In addition, this position will assist in the research and development and/or acquisition of a PHIN-compliant LIMS for the VDH Public Health Laboratory in the effort to facilitate the electronic lab result feed to the NBS. The position reports to the Systems Development Manager.

Administrative Assistant

New FTE. The Administrative Assistant is responsible for data entry for all communicable disease reports for the state. She has played an important role in the implementation and parallel production of the NEDSS Base System, and will be the primary source of notifications to the CDC using the NBS. She also has primary responsibility for managing all paper disease and laboratory reports and for answering the main telephone line for the Infectious Disease Epidemiology section. In addition, she provides general administrative support for the section. With the discontinuation of support for hepatitis C surveillance activities under the hepatitis



program area of the ELC grant, the administrative assistant will take on many of the provider follow-up tasks previously performed by the Hepatitis Coordinator.

**Indirect Costs**

**\$72,132**

The Vermont Department of Health uses a Cost Allocation Plan, not an Indirect Rate. This Cost Allocation Plan was approved by the U.S. Department of Health and Human Services effective October 1, 1987. This plan allocates actual, allowable costs to the several programs in the Department on a salary basis. Based on costs allocated to this program during recent quarters, we would estimate these allocated costs at 50% of the direct salary line.

**Fringe Benefits**

**\$36,066**

The actual cost of fringe benefits (not a fringe benefit rate) will be reported as a direct cost of the program. The actual cost of fringe benefits varies from employee to employee based on salary, employee choice of health care plan, and employee election of certain benefits. The usual components of these fringe benefits are FICA at 7.65% of salary, retirement at 7% of salary, dental and medical and life insurance coverage at 80% of the actual costs of the insurance premium if and as elected by the employee, and \$1.50 per pay period for the employee assistance program. The cost of each employee's fringe benefits will be allocated to the program based on hours worked in the program relative to all hours worked by the employee. Based on the current cost of fringe benefits for employees working in similar programs, we are estimating the cost of these fringe benefits at 25% of salary.

**Contractual**

**\$0**

**Equipment**

**\$0**

**Supplies**

**\$3,050**

LightCycler-FastStart DNA Master Hybridization Probes kit	\$900
Primer Bptaq-F	\$35
Primer Bptaq-R	\$35
Taqman probe Bpertprobe524T	\$150
Taqman probe Bicoid-P (internal control)	\$150
2% IGEPal	\$47
GeneAmp 10X PCR buffer	\$20
QIAPrep Spin Plasmid Miniprep Kit	\$65
QIAGEN Plasmid Midi Kit	\$198
Cepheid <i>B. pertussis</i> PCR Kit	\$1450

Purpose: Supplies and reagents needed to validate real-time PCR procedures for the detection of *B. pertussis*. Cepheid kit and Wadsworth procedures will be compared. QIAGEN kits are to isolate high-purity plasmid DNA (containing *B. pertussis* DNA from *B. pertussis* for internal assay control) from transformed *E. coli* host.

**Other**

**\$0**

**In-state Travel****\$750**

\$750 Mileage reimbursement

Purpose: Funds are requested to support in-state travel (2000 miles at \$0.375 per mile) by the Health Surveillance Epidemiologist to give presentations at conferences, visit district offices, and investigate outbreaks as necessary.

**Out-of-state Travel****\$2,230**

\$2,230 Two epidemiologists to attend the 2006 International Conference for Emerging Infectious Diseases in Atlanta. Estimated expenses are:

Plane fare (2 @ \$600) \$1,200

Hotel (2 x 3 nights @ \$129/night) \$774

Meal allowance (2 x 4 days @ \$32/day) \$256

**TOTAL FUNDS REQUESTED: EPI AND LAB CAPACITY****\$258,492**

## **Appendix A – STATEWIDE PLAN: REDUCING THE OCCURRENCE OF HOSPITAL ACQUIRED INFECTIONS**

### **I. REGIONAL INFECTION CONTROL RESOURCE PLANNING COMMITTEE**

In response to the growing concerns regarding hospital acquired infections, a multidisciplinary team of stakeholders was formed to determine how to reduce the impact of hospital acquired infections on patient outcomes and healthcare costs in Vermont. This team consists of representative Infection Control Professionals from Vermont hospitals, Infectious Disease Specialists from Fletcher Allen Health Care and Dartmouth Hitchcock, the Vermont Association of Hospitals and Health Systems, Vermont Department of Health and the Vermont Program for Quality in Health Care.

### **II. WHY HOSPITAL ACQUIRED INFECTIONS?**

Hospital acquired infections, also known as nosocomial infections, can be defined as: *An infection occurring in a patient in a hospital or other health care facility in whom the infection was not present or incubating at the time of admission. This includes infections acquired in the hospital but appearing after discharge, and also occupational infection among staff of the facility.*

Despite progress in public health and hospital care, infections continue to develop in hospitalized patients. Many factors contribute to infection among hospitalized patients including decreased immunity among patients; increasing medical procedures and invasive techniques; and the emergence and transmission of antibiotic resistant microorganisms. Hospital acquired infections occur worldwide and affect both developed and resource-poor countries. Infections acquired in the hospital setting are leading causes of increased morbidity and mortality among patients.

National studies reveal that 5 to 10 percent of hospitalized patients acquire at least one infection, affecting approximately 2 million persons per year, resulting in 90,000 deaths and adding an estimated \$4.5 to \$5.7 billion to health care costs with increased length of stay the greatest contributor to cost. National studies also show that three conditions account for 80 percent of hospital acquired infections: urinary tract infections, bloodstream infections, and pneumonias. One fourth of all infections occur in patients in intensive care units, particularly if urinary catheters, intravenous devices, and mechanical ventilation are part of the treatment needs. Nearly 70 percent of these infections are due to microorganisms that are resistant to one or more antibiotics, a related, emerging health crisis.

Information about the overall incidence and cost of hospital acquired infections in Vermont is not presently available, however, the Vermont Department of Health has monitored the occurrence of serious infections including hospital acquired infections for decades. The surveillance is based on voluntary reporting by hospitals and practitioners. The Department offers technical expertise to practitioners and hospitals related to the identification and treatment of infections. Additionally, the Department routinely informs all Vermont hospitals about infection trends and sentinel events. A second tier of infection control exists in the hospitals

themselves. All Vermont hospitals support active infection control programs. These programs continuously monitor the occurrence of infections and hospital staff compliance with scientifically proven infection control strategies, including judicious use of antibiotics. Infection control programs are responsible for preventing the spread of infections when there is an occurrence.

### **III. WHAT DO WE WANT TO ACCOMPLISH?**

Scientifically proven interventions to reduce hospital acquired infections are known. These interventions include hand washing strategies for hospital personnel, preventive antibiotics for high risk surgical procedures, improved urinary drainage strategies, better techniques for inserting IVs, antibiotic-coated intravenous devices, increased respiratory infection control and improved care of intensive care patients on ventilators. The implementation of these standards can sometimes be difficult as is the collection of data to determine the effect on hospital acquired infection rates. The Regional Infection Control Resource Planning Committee goals are to work with Vermont Hospitals and health care institutions in order to support their individual and collective efforts to implement and evaluate strategies and interventions proven to reduce hospital acquired infections in a way that is responsive to the individualized needs of each institution.

### **IV. PROJECT OVERVIEW AND SUMMARY**

The Committee held a series of meetings in which they discussed how to accomplish their goals. A series of questions were posed to develop the approach:

- What is the general impact that we should be trying to accomplish?
- What types of specific clinical areas should be the focus of long term strategies?
- What types of changes are reasonable to expect?
- What types of activities do we need to put in place to elicit these changes?
- What is the most reasonable way to measure these changes?
- What resources do we need to be successful?

From these discussions, two specific focuses for the Committee have been developed. One sets forth overall, broad-based direction for the Committee in decreasing the occurrence of specific hospital acquired infections statewide. It is a plan that sets forth several activities which can be applied to numerous specific clinical areas in order to enable hospitals and individuals to improve their compliance with scientifically proven interventions.

The second focus is on development of an implementation plan to support the measurement and execution of strategies in the specific clinical area of hand hygiene and handwashing, a clinical subset of the overall plan to decrease hospital acquired infections statewide. As the Committee continues to progress, additional clinical areas will become the focus of their work towards the final impact of decreasing the occurrence of specific hospital acquired infections statewide.

### **V. STATEWIDE PLAN FOR DECREASING THE OCCURRENCE OF SPECIFIC HOSPITAL ACQUIRED INFECTIONS**

The following page represents the overall plan in a logic model format:

**LOGIC MODEL: DECREASE OCCURANCE OF HOSPITAL ACQUIRED INFECTIONS**

Resources	Activities	Outputs	Short term Outcomes	Long-term Outcomes	Impact
<p>Financial resources</p> <p>Regional infection control resource planning committee to oversee activities</p> <p>Professional expertise</p> <p>Health Department staff</p>	<p>Committee and committee staff oversee the following activities:</p> <p>Review and measure behaviors, barriers and environment of individuals and hospitals – develop baseline measures</p> <ul style="list-style-type: none"> <li>• Assess needs of hospitals</li> <li>• Identify regional experts</li> <li>• Identify resources to support system</li> <li>• Cultivate support among various stakeholders</li> <li>• Provide routine site visits and ad hoc consultative services</li> </ul> <p>Synthesize literature, barriers, best practice information to inform implementation of selected programs on an individual or statewide basis</p> <p>Provide ongoing individualized support to hospitals implementing various best practices and strategies</p> <p>Provide opportunities for hospitals to share implementation experience and strategies</p> <p>Evaluate the impact of individual or statewide programs</p>	<p>Policies, programs, trainings, environmental changes which enable hospitals and individuals to improve compliance in the short term</p> <p>Centralized system to provide individualized support to hospitals.</p>	<p>Compliance with one or more of the CDC hand hygiene guidelines</p> <p>100% Compliance with SIP measures</p> <p>Compliance with one or more of the following:                      - Visual alerts                      - Cough etiquette preparedness                      - Masking and separation of persons with symptoms                      - Droplet precautions</p>	<p>Improvement in specific clinical areas:                      - hand hygiene                      - surgical infection prevention procedures                      - respiratory infection control procedures</p>	<p>Measurable decreases in the occurrence of specific hospital acquired infections</p>

## **A. Resources needed**

In order for this plan to be effective in decreasing the occurrence of hospital acquired infection there need to be a number of resources in place to facilitate the plan implementation.

### *1. Financial resources*

- To assist in expanding the capacity of hospitals to implement programs and measure progress.

### *2. Regional infection control resource planning committee to oversee activities*

- To assure there is one body, working collaboratively with each hospital and stakeholder to provide direction and support to fulfill the components of this plan and continue to revise the plan to respond to emerging needs.

### *3. Professional expertise*

- To assure that there is access to accurate evidence-based information and technical assistance to inform the implementation of programs aimed at reducing hospital acquired infections.

### *4. Health Department staff participation*

- To assist with coordinating state and federal program priorities with the plan priorities and providing surveillance expertise and advice.

## **B. Activities**

Committee members or staff/consultants hired by the committee will oversee the following activities:

### *1. Review and measure behaviors, barriers and environment of individuals and hospitals – develop baseline measures.*

- The measurement of hospital acquired infections is difficult for a number of reasons discussed in the Impact section. The Committee and its staff will oversee the development of measures which are feasible to implement and provide measures or proxy measures to monitor the progression of individual hospitals towards the desired impact of reducing hospital acquired infections. Measures may include process oriented measures such as number of individuals trained, compliance with hand hygiene, SIP or respiratory hygiene procedures, changes in facility environment and changes in hospital policies and procedures, as examples.

### *2. Synthesize literature, barrier and best practice information to inform implementation of selected programs on an individual or statewide basis*

- It is the desire of the Committee that programs and interventions are driven by existing literature and evidence-based models. This activity will be carried out and made available to all hospitals and Infection Control Professionals. While there exists a body of knowledge based upon research, this should not exclude the ability of hospitals to implement innovative, promising practices which have not been rigorously studied.

*3. Provide ongoing individualized support to hospitals implementing various best practices and strategies*

- While the Committee will oversee certain centralized activities and functions, it is imperative that individualized support is provided to hospitals when they are implementing or measuring progress of programs. Each hospital, its environment, volume, staffing and needs will vary throughout the state and success will be dependent on the ability to implement programs responsive to the hospital setting. In order to provide this system, a number of additional activities need to occur, they are:
  - Assess needs of hospitals
  - Identify regional experts
  - Identify resources to support system
  - Cultivate support among various stakeholders
  - Develop a system to provide routine site visits and ad hoc consultative services

*4. Provide opportunities for hospitals to share implementation experiences and strategies*

- Regular meetings between hospitals that are implementing strategies and programs will provide an opportunity for hospitals to share their success and advice with other hospitals that may be encountering the same types of barrier and obstacles in their own institution. Peer support and assistance has shown to be valuable in other similar quality improvement activities implemented with the Vermont Program for Quality in Health Care.

*5. Evaluate the impact of individual or statewide programs*

- Ongoing monitoring of the impact, whether process or outcome measures, are important to measuring the progress and success of individual and statewide initiatives. Each hospital is dedicated to monitoring their ability and progress in achieving the ultimate impact of decreasing hospital acquired infections.

**C. Outputs**

In order to facilitate improvements in clinical areas, a number of modifications will need to occur which enable hospitals and individuals to implement programs and invoke change in the behaviors and systems which facilitate decreases in hospital acquired infections. These “outputs” are directly related to the activities and interventions which are implemented and are intermediary steps in reaching the short and long-term outcomes. They include:

*1. Policies, programs, trainings, environmental changes which enable hospitals and individuals to improve compliance.*

*2. Centralized system to provide individualized support to hospitals.*

**D. Short-Term and Long-Term Outcomes**

Long-term outcomes should focus upon *improvement in specific clinical areas* that show a significant effect on hospital acquired infections, in which there is a reasonable prospect for

success, and for which there are scientifically proven interventions. The committee prioritized three clinical areas on which this plan should focus:

- Hand hygiene procedures
- Surgical infection prevention procedures
- Respiratory infection control procedures

Based upon emerging needs, research and resources, clinical areas may be added or removed over time.

Short-term outcomes consist of *components* of these specific clinical areas. Efforts will be made to make short-term progress towards implementing each component of the clinical area. Each clinical focus area and the components of those areas are listed below:

*1. Compliance with one or more CDC hand hygiene guidelines.*

The CDC provides guidance on standards for good hand hygiene including:

- Indications for handwashing and hand antisepsis
- Hand hygiene technique
- Surgical hand antisepsis
- Selection of hand hygiene agents
- Skin care
- Health care worker educational and motivational programs
- Administrative measures
- Other aspects of hand hygiene

*2. 100% compliance with surgical infection prevention procedures.*

- Administration of antibiotics 1 hour before surgical incision
- Prescription of antibiotics is consistent with current recommendations
- Prophylactic antibiotics are discontinued within 24 hours of surgery end time

*3. Compliance with one or more respiratory infection control procedures.*

- Visual alerts
- Cough etiquette preparedness
- Masking and separation of persons with symptoms
- Droplet precautions

**E. Impact**

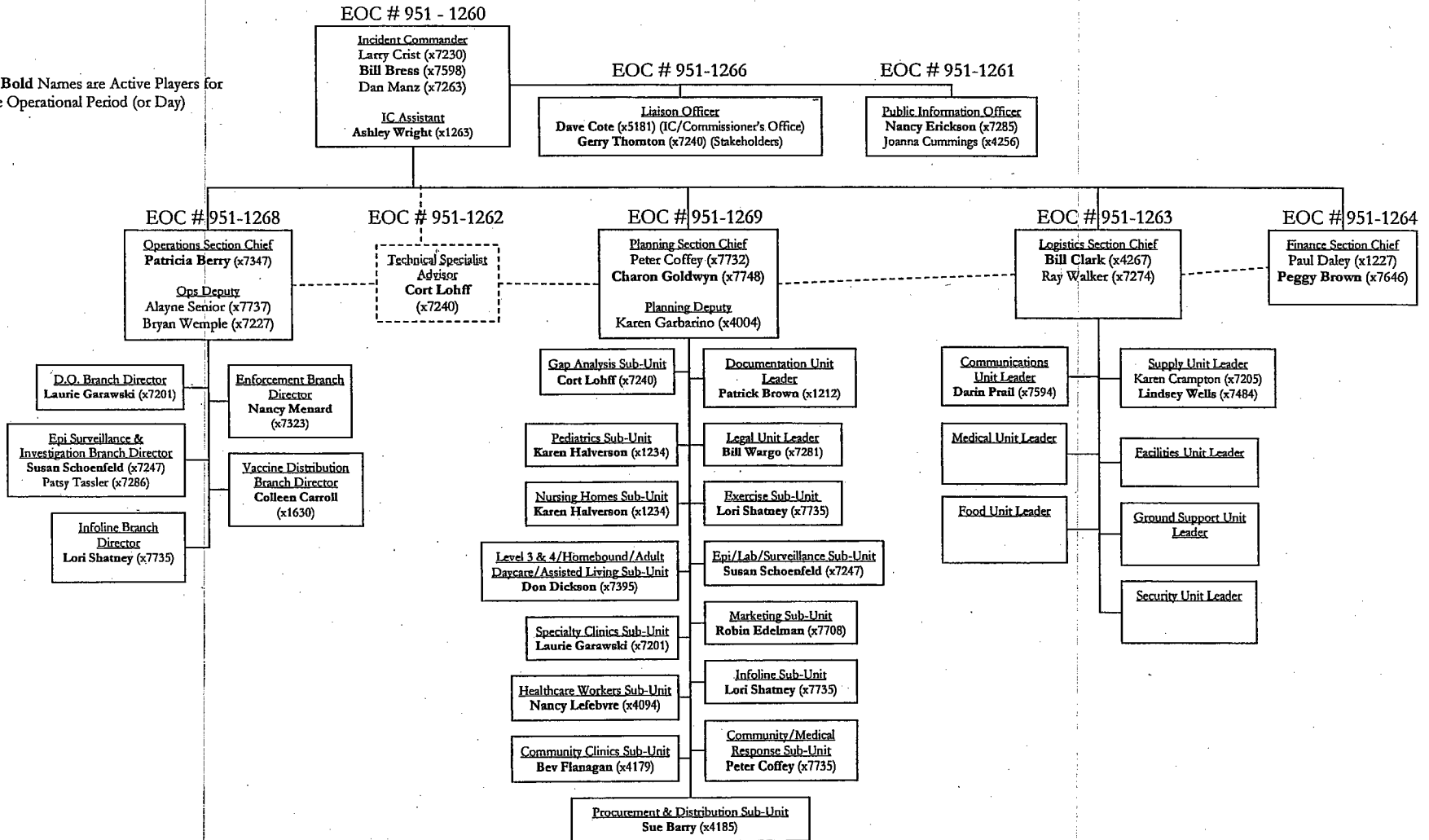
*1. Measurable decreases in the occurrence of specific hospital acquired hospital infections.*

While the measurement of hospital acquired infections is difficult based upon the size of the facility, the definition of an infection, the frequency of occurrences and the resources available to institutions, the Committee generally agrees that the ultimate impact of their work would be to demonstrate decreases in hospital acquired infections. As a result, the plan has a strong focus on the monitoring of process measures as a way to ascertain progress towards the desired impact.



## **Appendix B – Influenza Vaccine Shortage ICS Documents**

**\*\* Bold Names are Active Players for the Operational Period (or Day)**



### Influenza Vaccine Shortage Master Plan

ID	Task Name	Start	Finish	November																																		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3		
1	<b>Sub-Section Unit Plans</b>	11/3/2004	11/3/2004			■																																
	<i>Gap Analysis</i>																																					
1	Obtain # of doses available from Pediatrics	11/5/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
	<i>Exercise</i>																																					
1	(TBD)																																					
	<b>Prioritization Tier</b>																																					
	<i>Pediatrics - District Offices</i>																																					
1	VDH - # of doses that VDH can have to vaccinate adults	11/5/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Redistribute vaccine as needed for high risk	10/29/2004	11/12/2004	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
3	Provide additional vaccine for healthy 6 - 23 month olds	11/29/2004	12/3/2004																																		■	
	<b>Nursing Homes</b>																																					
1	Reimburse for vaccine from nursing homes	10/20/2004	12/31/2004	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Maxim to vaccinate Chittenden County	11/9/2004	11/20/2004																																			
	<b>Level III &amp; IV / Homebound / Adult Daycare / Assisted Living</b>																																					
1	Schedule delivery and administration at each location	11/5/2004	11/19/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Reporting/feedback	11/5/2004	11/22/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Identify procedure for reallocation	11/19/2004	11/22/2004																																		■	
	<b>Specialty Clinics</b>																																					
1	Determine amount of vaccine available for clinics	11/8/2004	11/12/2004																																			
2	Distribute vaccine to clinics	11/8/2004	11/12/2004																																			
	<b>Hospitals / Healthcare Workers</b>																																					
1	Date of arrive of Flu Mist order (TBD)	11/2/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
2	Assess HCW flu vaccine needs	11/4/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Identify dosage needs for both inactivated vaccine and Flu Mist	11/12/2004	11/16/2004																																			
4	Determine Flu Mist distribution process	11/16/2004	11/19/2004																																			
5	Determine need to offer HCW clinics	11/16/2004	11/19/2004																																			
6	Determine amount of vaccine to be allocated to each HCW site	11/16/2004	11/19/2004																																			
7	Communicate with hospitals	11/3/2004	11/3/2004																																			
8	DD to speak with hospital contacts	11/1/2004	11/5/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
9	Distribute vaccine for healthcare workers	11/22/2004	11/26/2004																																			
	<b>County (Community) Clinics</b>																																					
1	Determine clinic dates and locations	11/2/2004	11/8/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2	Identify staffing needs	11/2/2004	11/10/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3	Recruit staff (including volunteers)	11/8/2004	11/10/2004																																			
4	Create participant clinical information verification form	11/3/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
5	Coordinate with VEM and state police for	11/3/2004	11/12/2004					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

### Influenza Vaccine Shortage Master Plan

ID	Task Name	Start	Finish	November																																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	
<i>assistance with security</i>																																					
6	Distribute vaccine to HHAs	11/8/2004	11/15/2004																																		
7	Plan for health fair activities at clinics	11/3/2004	11/8/2004																																		
8	Implement clinic	11/18/2004	11/18/2004																																		
9	Contact AHS regarding transportation options to clinics	11/8/2004	11/10/2004																																		
10	Assess county clinic resource needs	11/10/2004	11/10/2004																																		
<b>Vaccine Tier</b>																																					
<b>Procurement &amp; Distribution</b>																																					
1	Receive information from nursing homes on excess doses for recovery	11/1/2004	11/20/2004																																		
2	Provide accurate information to calls regarding flu vaccine questions	10/1/2004	12/31/2004																																		
3	Educate users about Flu Mist	10/15/2004	12/31/2004																																		
4	Facilitate vaccine distribution for indicated groups	11/1/2004	12/31/2004																																		
<b>Response Tier</b>																																					
<b>Epi / Lab / Surveillance</b>																																					
1	Clarify issues relating to rapid flu tests	11/1/2004	11/10/2004																																		
<b>Marketing</b>																																					
1	Distribute posters/printed material to public via DOs	11/8/2004	11/12/2004																																		
2	Develop TV, radio, print and web-based materials	11/8/2004	11/15/2004																																		
3	Air PSAs ("No shot" and "Pulling together")	11/15/2004	12/7/2004																																		
4	Solicit "consolation gift" and printed material to those turned away at county clinics	11/8/2004	11/18/2004																																		
5	Advertise county clinics	11/8/2004	11/12/2004																																		
6	Issue press release advertising county clinics	11/15/2004	11/15/2004																																		
7	Questionnaire to VNA/VDH clinic supervisors on times, locations, fees, contacts, etc.	11/9/2004	11/9/2004																																		
<b>Infoline</b>																																					
1	Provide adequate staffing of operators	10/25/2004	11/24/2004																																		
2	Provide adequate staffing of supervisors	11/4/2004	11/24/2004																																		
3	Train new VDH supervisors	11/8/2004	11/19/2004																																		
4	Document infoline activities	11/4/2004	11/24/2004																																		
5	Provide accurate information to public on press release and clinic operation days	11/5/2004	11/24/2004																																		
6	Provide accurate information to public on a daily basis	11/5/2004	11/24/2004																																		
<b>Community / Medical Response (TBD)</b>																																					

## Influenza Vaccine Shortage 2004 Master Plan

Each sub-section unit's Objectives, Activities, Status Report, and responsible individuals are listed. Objectives that have been completed are shaded.

<b>Tasks to be completed by November 5<sup>th</sup></b>
---

Sub-section name: **PEDIATRICS**

Assess if all medically high risk kids have been vaccinated	Survey providers	Immunization (IZ) and District Office (DO) staff
Assess provider need for vaccination of healthy 6 – 23 mo. olds	Survey providers, follow up by phone. Determine number of doses needed.	IZ and DO staff

Sub-section name: **NURSING HOMES**

Provide flu vaccine for all nursing home residents	Survey all nursing homes to assess number of doses needed	IZ staff and Home Health staff
Provide flu vaccine for all nursing home residents	Ship vaccine to Home Health for distribution to nursing homes	IZ staff and Home Health staff
Provide flu vaccine for all nursing home residents	Make arrangements with Maxim for Chittenden County nursing homes	IZ staff

Sub-section name: **LEVEL III & IV/HOMEBOUND/ADULT DAYCARE/ASSISTED LIVING**

Identify all locations by type, name, county, no. of doses needed	All HHAs are contacting facilities in their territory	Judy Peterson, VAHHA
Assign specific vaccine lots + shipping procedure to each location: <input type="checkbox"/> Home care <input type="checkbox"/> Level III-IV <input type="checkbox"/> Assisted living <input type="checkbox"/> Adult day care <input type="checkbox"/> Congregate hsg	Chittenden ⇌ Franklin + Addison county, CV ⇌ Lamoille; Caledonia ⇌ Orleans; VNA-VNH ⇌ Windham, Windsor, Orange	Judy Peterson

Sub-section name: **SPECIALTY CLINICS**

Identify types of specialties included in this unit	Discuss with Cort Lohff and Lynn Zanardi-Blevins HIV/AIDS, Pulmonary, Oncology, ID, and Dialysis identified as specialty clinic	Laurie Garawski
Identify specialty clinics in designated categories by county/district	1. Work with DO staff to compile list of providers	DO Staff Laurie Garawski Lynn Zanardi-Blevins

	<p>2. Work with PAG</p> <p>3. Use MVP Spreadsheet as well as VDH spreadsheet of providers</p>	
Inventory needs of specialty clinics	<p>1. Call practices to survey patient #'s</p> <p>2. Cross reference with current information</p>	Laurie Garawski
Identify clinics that have already been served via hospital vaccine supply	<p>1. Contact hospital contacts for this information (Kemper Allston-FAHC, Marie George-SVMC)</p> <p>2. Combine efforts with IZ program inventory</p>	Laurie Garawski Possibly DO staff

**Sub-section name: HOSPITALS/HEALTHCARE WORKERS**

Arrival of FluMist order 980 arrived	Determine arrival date Arrived on 11/9	IZ staff
Develop proposal of guidelines for healthcare workers/nursing home workers		Cort Lohff
Obtain proposal approval by decision triangle		Cort Lohff
Communicate with hospitals		IZ and DO staff
District director speaks with hospital contacts		District Directors

**Sub-section name: COUNTY HIGH RISK CLINICS**

Identification of vaccine allocation amount including specific vaccine amounts to be received per county for clinics	<p>Review of current vaccine amounts received per county (updated 11/17/04)</p> <ul style="list-style-type: none"> <li>• Addison – 1000</li> <li>• Bennington – 1600</li> <li>• Caledonia – 1125</li> <li>• Chittenden – 1800</li> <li>• Essex – 250</li> <li>• Franklin – 670</li> <li>• Grand Isle – 240</li> <li>• Lamoille – 430</li> <li>• Orange – 521</li> <li>• Orleans – 560</li> <li>• Rutland – 1100</li> <li>• Washington – 1010</li> <li>• Windham – 900</li> <li>• Windsor – 1060</li> </ul>	Cort Lohff
--	--	------------

Recruitment of VEM and State police to assist with security/traffic	Ross Nagy recruited	Logistics
---	---------------------	-----------

Sub-section name: **EPI/LAB/SURVEILLANCE**

Review & ensure implementation of current plan for lab-based flu surveillance	1. Sentinel flu sites have kits and are testing as needed	1. Sally Cook and Eunice Froeliger
	2a. Review/ update test kit prep instructions for sending out flu kits 2b. Determine what data are available re request for kits	2. Eunice Froeliger
Ensure key information (travel history; date collected; vaccine status) needed for culture processing is available	1a. Highlight questions on form and/or add brightly colored reminder to package 1b. Add this reminder to alert and any upcoming info sent to clinicians 1c follow call to clinicians as needed	1a. Eunice Froeliger 1b. Susan Schoenfeld, Sally Cook
Review timing of reporting and release of flu activity level to CDC, website, and media	1. Check with Gerry Thornton regarding any flexibility in timing of reporting flu status to CDC 2. Review timing of CDC report versus web posting and issues related to media concerns	1. Susan Schoenfeld 2. Susan Schoenfeld, Sally Cook
Identify new issues that we can anticipate for lab-base flu surveillance given vaccine shortage:	1. Possibility of shortage of rapid flu test kits: a. Asses number kits available and order more 2. Determine if clinical labs plan anything different for testing this year: a. Survey clinical lab managers and ask this question	1a. Eunice Froeliger 2a. Sally Cook

Tasks to be completed by November 8<sup>th</sup>

Sub-section name: **COMMUNITY HIGH RISK CLINICS**

<p>Determination of both clinic dates and locations for VNA and VDH clinics.</p> <p><b>Barre:</b> Barre Auditorium  <b>Bennington:</b> Manchester Health Service; United Church of Dorset, Second Congregational Church  <b>Brattleboro:</b> Brattleboro Transportation Center  <b>Burlington:</b> Fashion Bug  <b>Middlebury:</b> Middlebury College – Kenyon Arena  <b>Morrisville:</b> St. Theresa Church, Hyde Park  <b>Newport:</b> Church of God, Derby and American Legion Hall, Island Pond  <b>Rutland:</b> Eagles Club  <b>St. Albans:</b> American Legion and Grande Isle Fire House, Grande Isle  <b>St. Johnsbury:</b> Lyndonville Municipal Office and Gilman Senior Center (tentative)  <b>Springfield:</b> NO CLINICS  <b>White River:</b> American Legion and Gifford Medical Center, Randolph</p>	<p>Establishment of site requirements with on-site inspection of site as needed.</p> <ul style="list-style-type: none"> <li>• VNAs/HHA to locate large venue sites, gymnasiums, fair grounds, auditoriums, schools, etc. that have ample parking, adequate restrooms, handicap accessibility for clinics.</li> <li>• VDH will review with VNAs/HHA the clinic logistics plan developed by CPH. Plan to be distributed by Judy Peterson.</li> <li>• If sites not acquired by VNA/HHA, VDH will acquire sites with assistance by Logistics</li> </ul>	<p>Bev Flanagan, Judy Peterson, VNAs/HHA</p>
<p>Plan for Health Fair Activities at Clinics</p>	<p>Consideration of health promotional materials to disseminate at clinics (note: this is not needed if the clinics are short)</p>	<p>TBD</p>

Sub-section name: **MARKETING**

<p>Develop ad for clinics</p>		<p>Communications</p>
-------------------------------	--	-----------------------



Tasks to be completed by November 9<sup>th</sup>

Sub-section name: **INFOLINE**

Train new VDH supervisors	One training session for newly appointed supervisors	Lori Shatney
---------------------------	--	--------------

Sub-section name: **MARKETING**

Questionnaire to VNA/VDH clinic supervisors on times, locations, fees, contacts, etc.	Distribute questionnaire	Bryan Wemple
---	--------------------------	--------------

Tasks to be completed by November 10<sup>th</sup>

Sub-section name: **COMMUNITY HIGH RISK CLINICS**

Creation of a screening tool to be utilized during clinics	Draft complete and being reviewed by appropriate groups	Cort Lohff
Contact AHS regarding transportation options to clinics		Patricia Berry

Sub-section name: **EPI/LAB/SURVEILLANCE**

Clarify issues related to use of rapid flu tests	<ol style="list-style-type: none"> <li>1a. Review discrepant rapid flu and culture results from October to identify any correctable issues</li> <li>2. Determine whether emergency dept.'s are performing rapid tests in house, and if we will receive those results</li> <li>2a. create short survey</li> <li>2b. ask epi designees to query their ED contacts</li> <li>2c. response returned to Sally Cook &amp; results incorporated in to surveillance interpretation</li> </ol>	<ol style="list-style-type: none"> <li>1. Sally Cook/Eunice Froeliger</li> <li>2a. Susan Schoenfeld</li> <li>2b. Susan Schoenfeld/Epi Designees</li> <li>2c. Sally Cook</li> </ol>
--	--	--

**Tasks to be completed by November 12<sup>th</sup>**

**Sub-section name: SPECIALTY CLINICS**

Determine amount of vaccine available for specialty clinics	(Need to wait until other units are complete for these numbers)	Laurie Garawski with Cort Lohff IZ program
---	---	---

**Sub-section name: HOSPITALS/HEALTHCARE WORKERS**

Finalize Flu Mist Alert for providers	Get final approval	Cort Lohff
Arrival of FluMist 1600 arrived		

**Sub-section name: COUNTY HIGH RISK CLINICS**

VEM and State Police to assist with security/traffic  Security Sub-Group to develop and manage all aspects of security for clinics.	<ul style="list-style-type: none"> <li>VEM is asking local reps to contact the DDs. DDs, VEM, and the VHA and HHA will work together.</li> <li>Planning meeting with VEM, HOC Planning and Operations</li> <li>Planning meeting to determine security needs and logistics.</li> </ul>	VEM  Bev Flanagan and Bill Clark
Create form for participants to sign stating they are not falsifying their clinical information	Sent to logistics to give to Bill Wargo	? Bill Wargo
Identification of staffing needs	Determination of staffing numbers – Verifiers, vaccinators, observation following injection <ul style="list-style-type: none"> <li>Assuming 50 injections per hour per nurse based on smallpox clinic set up floor plan developed by VDH</li> <li>1 verifier per nurse</li> </ul>	Planning Team/Bev Flanagan
Initiation of staff recruitment including volunteers	Recruitment of staffing – Verifiers, vaccinators, observation following injection	Planning Team/Bev Flanagan
Assess county clinic resource needs	Discussion with DOs	Bev Flanagan
Assure local plans in place for transportation issues	Discussion with DOs	Patricia Berry

**Sub-section name: MARKETING**

Distribute posters/printed material to public via DOs	New posters to workplaces, hospitals, nursing homes, schools, day cares	Robin Edelman
Advertise county clinics		Communications

Tasks to be completed by November 15<sup>th</sup>

Sub-section name: **COMMUNITY HIGH RISK CLINICS**

Distribute vaccine to HHAs	Distribution of vaccine	Karen Halverson
----------------------------	-------------------------	-----------------

Sub-section name: **MARKETING**

Develop TV, radio, print and web-based materials	2 messages: "What to do if you don't get a shot" and "Vermonters pulling together"	Communications
Issue press release advertising county clinics	Updates from Commissioners Office	Communications

Tasks to be completed by November 16<sup>th</sup>

Sub-section name: **HOSPITALS/HEALTHCARE WORKERS**

Identification of vaccine dosage needs for both inactivated and Live Attenuated Influenza Vaccine (LAIV) – FluMist (hospitals)	Review survey results	Cort Lohff
--	-----------------------	------------

Sub-section name: **COUNTY HIGH RISK CLINICS**

Ensure VEM security and traffic control plans in place	<p><b>Vermont Emergency Management:</b></p> <ul style="list-style-type: none"> <li>▪ Contact state police to delegate responsibility for clinic security issues</li> </ul> <p><b>Vermont State Police:</b></p> <p><i>Will-</i></p> <ul style="list-style-type: none"> <li>▪ Ensure security on <u>public roads</u> leading to clinic sites</li> <li>▪ Respond to potentially dangerous or criminal activity at clinic sites</li> <li>▪ Liaise with local police in each clinic jurisdiction</li> <li>▪ Contact each district director on November 16th</li> </ul> <p><i>Will NOT:</i></p> <ul style="list-style-type: none"> <li>▪ Direct traffic in clinic parking lots</li> <li>▪ Come in to clinic buildings UNLESS there is an emergency situation</li> <li>▪ Produce a “plan” for review by VDH staff</li> </ul> <p><b>Vermont Department of Health (Health Operations Center):</b></p> <ul style="list-style-type: none"> <li>▪ Coordinate activities with state police</li> <li>▪ Provide “outside greeters” to manage traffic flow and parking</li> <li>▪ Maintain at least hourly contact with Clinic sites for status reports and resolution of issues which may arise during clinic operation.</li> <li>▪ Maintain contact, as needed, with Public Information Officer designees at each clinic site and provide talking points for same.</li> <li>▪ Coordinate the clinic effort with the State Emergency Operations Center</li> </ul>	Logistics
--	--	-----------

	<p><b>Vermont Department of Health district offices:</b></p> <ul style="list-style-type: none"> <li>▪ Designate a supervisor (preferable the DD) for "outside greeters"</li> <li>▪ Provide a diagram to HOC Planning by 11/17am that includes             <ol style="list-style-type: none"> <li>1. clinic parking capacity</li> <li>2. designated handicapped parking spots</li> <li>3. a patient drop-off location</li> </ol> </li> <li>▪ Call 9-1-1 in case of an emergency</li> </ul>	
--	---	--

Sub-section: **MARKETING**

Provide printed material for county clinics		Robin Edelman
---	--	---------------

Sub-section: **POST-CLINIC VACCINE**

Conduct planning meeting to determine distribution of additional vaccine	Hold meeting	Cort Lohff
--	--------------	------------

Tasks to be completed by November 17<sup>th</sup>

Sub-section: **SPECIALTY CLINICS**

Distribution of vaccine to specialty clinics	Shipping procedures to be determined	IZ staff Laurie Garawski
--	--------------------------------------	-----------------------------

Tasks to be completed by November 18<sup>th</sup>

Sub-section name: **COUNTY HIGH RISK CLINICS**

Implement clinics	VDH clinics in Windham County	VNA VDH
Distribution of patient tracking of vaccine to Home Health Agencies	Patient information tracking/dose information	VNA

Sub-section name: **MARKETING**

Solicit "consolation gift" and printed material to those turned away at county clinics	Meet with Planning on 11/8 to determine issues that need to be addressed in printed materials	Robin Edelman
Distribute printed materials to schools, hospitals, community locations by Dos		DO

Sub-section name: **PUBLIC INFORMATION OFFICE**

Publicize statewide flu clinics	Issue press releases and place ads	Nancy Erickson
Develop talking points	Write talking points	Nancy Erickson
Mange media at clinics	Provide needed information	Nancy Erickson



**Tasks to be completed by November 19<sup>th</sup>**

**Sub-section name: PEDIATRICS**

Plan for distribution to healthy 6-23 month olds	Meetings on 11/12 and 11/15	Planning Section
Redistribute vaccine as needed for high risk kids	Transfer vaccine as needed under the direction of the IZ Program	IZ and DO staff
Obtain number of doses from pediatrics	Continue contact with pediatric providers	IZ and DO staff

**Sub-section name: LEVEL III & IV/HOMEBOUND/ASSISTED LIVING/ADULT DAY CARE**

Schedule for delivery and administration at each location	May depend on available staff.	Judy Peterson
---	--------------------------------	---------------

**Sub-section name: HOSPITALS/HEALTHCARE WORKERS**

Determine best way to distribute LATV (hospitals)		Cort Lohff and IZ staff
Identify dosage need for both inactivated vaccine and Flu Mist (nursing homes)	Surveys	Nancy Lefavre

**Sub-section name: DEMOBILIZATION**

Review process and feedback from clinics	Debriefing at 10:00	Larry Crist
--	---------------------	-------------

Tasks to be completed by November 20th

Sub-section name: **PROCUREMENT AND DISTRIBUTION**

Receive information from nursing homes on excess doses for recovery	Data collection commenced in 11/1	Sue Barry Gerry Thornton
---	-----------------------------------	-----------------------------

Tasks to be completed by **November 22<sup>nd</sup>**

Sub-section name: **LEVEL III & IV/ HOMEBOUND/ADULT DAYCARE/ASSISTED LIVING**

Reporting/feedback mechanism: <input type="checkbox"/> Delivered <input type="checkbox"/> Administered <input type="checkbox"/> Left over	VDH-IZ will adapt usual report format from prior years.	Karen Halverson
Procedure for reallocation to another site or save for public clinics		Bev Flanagan

Sub-section name: **DEMOBILIZATION**

Demobilize HOC	Return 2B to normal use	Carolyn Antone
----------------	-------------------------	----------------

Tasks to be completed by **November 23<sup>rd</sup>**

Sub-section: **PEDIATRICS**

Issue Alert about vaccine for healthy 6-23 month olds	Produce and get approval for Alert	Cort Lohff
---	------------------------------------	------------

Sub-section: **HOSPITALS/HEALTHCARE WORKERS**

Determine need to offer HCW flu vaccine clinics vs. onsite vaccination	Look at vaccination needs	Cort Lohff
	Discuss w/CPH their capacity to hold clinics to administer LAIV	

Sub-section: **EPI/LAB/SURVEILLANCE**

Issue Alert about flu testing and reporting	Produce and get approval for Alert	Cort Lohff
---	------------------------------------	------------

Sub-section: **POST-CLINIC VACCINE**

Conference call with HHAs to discuss vaccine distribution	Conduct conference call	Cort Lohff and Planning
---	-------------------------	-------------------------

**Tasks to be completed by November 24<sup>th</sup>**

Sub-section name: **PEDIATRICS**

Provide additional vaccine for healthy 6 – 23 month olds		IZ staff
--	--	----------

Sub-section name: **INFOLINE**

Staffing – Operators	Seven Kelly Temporary Services staff	Lori Shatney
Staffing- VDH Supervisors	Each division provides 2 supervisors for am/pm shift. Same day each week	Lori Shatney
Documentation of all Infoline activities	<ul style="list-style-type: none"> <li>• Coversheet</li> <li>• ICS 214a-OS</li> <li>• Information Line Manager Daily Email log</li> <li>• VDH General Message</li> <li>• VDH GM Log Form</li> <li>• Infoline Check in sheet</li> <li>• Infoline call sheets</li> <li>• Infoline supervisor shift notes</li> <li>• Infoline Manager Daily Activity Log</li> <li>• Infoline Daily Q &amp; A updates</li> <li>• Infoline Press releases</li> <li>• Infoline other</li> </ul>	Lori Shatney
Provide accurate information to public on press release days and clinic operation days.	Require early arrival of operators and supervisors. Spend 15 to 30 minutes going over information. Hand pick supervisors	Lori Shatney
Provide accurate information to public on a daily basis	SOP for operators SOP for supervisors	Lori Shatney

Sun-section: **HOSPITALS/HEALTHCARE WORKERS**

Determine Flu Mist distribution process (nursing homes)		Cort Lohff and IZ staff
Distribute vaccine for healthcare workers (hospitals)		IZ staff

Sub-section name: **DEMOBILIZATION**

Demobilize Information Line	Continue to document # of calls and questions asked. Move to automated answer when < 30 calls per day.	Lori Shatney
-----------------------------	--	--------------

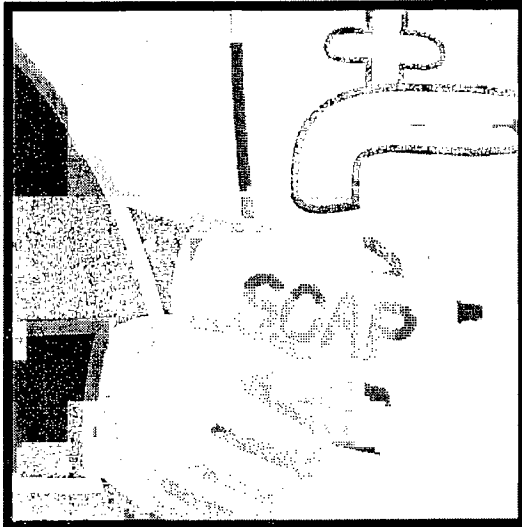
**Appendix C – Respiratory Illness Infection Control Posters**

---

---

# Don't Share

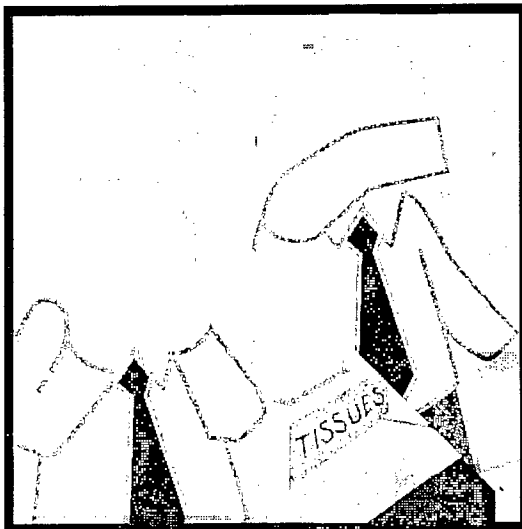
## Keep germs from spreading



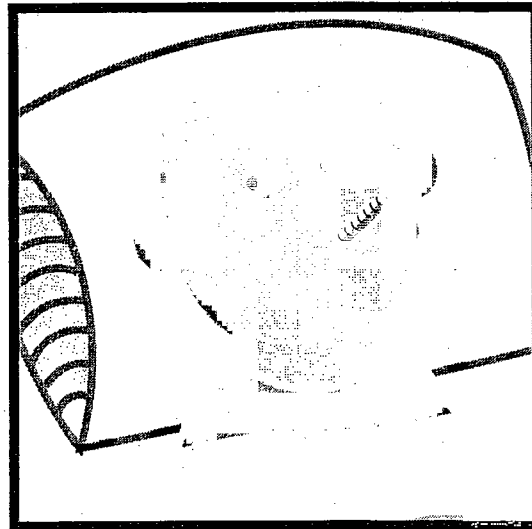
Wash hands often and well  
with soap and water  
or use hand sanitizers.



Cover your cough.



Cover your sneeze with a tissue  
or your sleeve.



Stay home if you are sick.

**Good Health Manners will help keep germs from spreading!**

- Stay at home if you are sick.
- Put used tissues into the trash.
- Cover your mouth and nose with tissues every time you sneeze or cough.
- Wash your hands well and often with soap and water.

For more information on Good Health  
Manners and infection control:  
[www.HealthyVermonters.info](http://www.HealthyVermonters.info)

 **VERMONT**  
DEPARTMENT OF HEALTH

# Visitors



## Caring may mean not visiting.

- If you have a cough or illness: For the safety of your loved ones, please visit on another day.
- All other visitors: Please wash your hands before and after your visit.



For more information on Good Health Manners and infection control go to [www.HealthyVermonters.info](http://www.HealthyVermonters.info).



## Indirect Cost Rate Agreement



DEPARTMENT OF HEALTH & HUMAN SERVICES

Office of the  
Regional Director

Region I  
John F. Kennedy Federal  
Government Center  
Boston, MA 02203

March 2, 1989

Ms. Nancy Clermont  
Agency Financial Management Specialist  
State of Vermont  
Agency of Human Services  
103 South Main Street  
Waterbury, Vermont 05676

Dear Ms. Clermont:

This is to inform you of the approval of the enclosed Administrative Cost Allocation Plan originally submitted on December 30, 1987 and revised May 9, 1988 and September 26, 1988. The approval is effective October 1, 1987 and will remain in effect until such time as the allocation methods contained therein are outdated or otherwise determined to be inappropriate. Responsibility for monitoring the continued accuracy of the plan rests solely with the State.

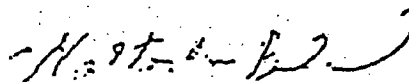
Approval of this plan is predicated upon conditions that (1) no costs, other than those incurred pursuant to the approved State Plan, are included in claims to HHS and that such costs are legal obligations, (2) the same costs treated as indirect costs have not been claimed as direct costs, and (3) similar types of costs have been accorded consistent treatment.

This approval also presumes the existence of an accounting system with internal controls adequate to protect the interests of both the State and Federal governments. Approval of the cost allocation plan does not constitute the approval of the estimated costs submitted with the plan. The approval relates only to the accounting treatment accorded the costs of your programs, and nothing herein should be construed to approve activities or costs not otherwise authorized by program plans, Federal legislation or regulations.

The operation of the plan may, from time to time, be reviewed by authorized Federal staff, including DCA, OPDIV, HHS Audit and General Accounting Office personnel. The disclosure of inequities during such reviews may necessitate changes to the plan and could result in the disallowance of improperly allocated costs.

Thank you for your cooperation in maintaining an accurate and current cost allocation plan.

Sincerely yours,



Walter M. Boland, Director  
Division of Cost Allocation

Enclosure

cc:  
Alfred Fuoroli, HCFA  
Peter Shanley, USDA

