

DEPLOYMENT OF AN ELECTRONIC DOCUMENTATION SYSTEM FOR THE IWK REGIONAL POISON CENTRE

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Also, I would like to thank Dr. Raza Abbidi for giving me the opportunity to work on a wonderful project and Janet Curran to recommend the inclusion of Health Informatics' Students in this project.

ENDORSEMENT

This report has been written by me and has not received any previous academic credit at this or any other institution.

OVERVIEW

The Nova Scotia Emergency Management Office (EMO/911) is mandated with coordinating the province's response to emergency situations. EMO/911 provided funding to create an electronic documentation system for the IWK Regional Poison Centre and abolish the manually documented system.

There were several drivers for this project:

- High volume of calls with approximately 10,000 calls per year being handled manually.
- Difficulty in generating meaningful statistics due to manual nature of call handling.
- Community benefit of a database with information regarding the toxicological care of the poison victim in order to identify and predict toxic exposure trends, provide public health surveillance reporting, evaluate products that will reduce morbidity and mortality and provide a data source for future research.

The participants were the IWK Regional Poison Centre in collaboration with the Health Informatics Department at Dalhousie University.

The project was initially designed to be implemented in two phases. The first phase was to be an analysis and design of the tool and the second would focus on developing the tool itself. These two phases were to be split over two internships.

The research done by the first health informatics intern found that there are many documentation systems for Poison Centres being used in North America. Also it was determined that it is cheaper to buy than to develop in-house, also resulting in a faster implementation. Therefore the idea of developing the tool in-house was dropped. The first intern did an extensive analysis of different third party tools in North America and the results suggested buying and deploying a tool called Visual DotLab (VDL), offered by a company in California (WBM).

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1. INTRODUCTION

The goal of the second internship was to facilitate the deployment of the VDL electronic charting and database system for the IWK Regional Poison Centre that was suggested earlier by a health informatics student as a result of the first internship.

The second part of this project consists of the deployment phase that can be divided into six stages:

- Software acquisition. Ensure that the appropriate hardware and software is acquired by the IWK IT department and research contract agreements with a third party company.
- Organizational changes. Evaluate the effects of the new technology for the Poison Centre team by examining user acceptance, expectations, IT knowledge and motivation, as well as support of its adoption.
- Data preparation. Collect all the information necessary to personalize the new software and present an overview of the current information flow.
- Software implementation. Assure that the new software offers sufficient functionality to support the current clinical workflow at the IWK Poison Centre by exploring the new tool and recommending best practices.
- Training and technical support. Support and training of the Specialist in Poison Information (SPI) in the appropriate use of the new software.
- Future projects. Recommend future uses of the clinical information collected in the new software as part of future projects

2. SOFTWARE ACQUISITION

2.1 HARDWARE AND SOFTWARE

The documentation system, Visual Dot Lab (VDL), purchased by the IWK Poison Centre is third party software that was sold by the California company WBM. This software is client/server based and uses a distributive database schema, therefore some of the lookup tables have a local installation and any change in their data must be distributed to all the workstations running the software. The software package includes an electronic documentation system, a report bank and an audit trail.

- The electronic documentation system is a client tool that is used by the Specialist in Poison Information (SPI) to document any of the toxicological calls received at the center.
- The report bank contains more than 100 Crystal Reports that generate statistics about case management, case outcomes, and team performance, among others.
- The audit trail tracks all the transactions completed in VDL by SPIs, Clinical Leaders and the Medical Director. For instance, the audit trail will have a record of who has created a new chart, what time the new chart was created, who has made changes to the chart, etc.

The hardware and software needed as a basic platform for the third party software, VDL, was acquired by the IWK Information Technology (IT) department.

Following the internal policies of the IWK IT department, the Poison Center opened a project initiation form at the IT department help desk. The project initiation form is a detailed description of an IWK IT project that includes hardware specifications, software specifications, etc. So for this specific case it was filled out with information on the hardware and software requirements as documented by the VDL vendor (see Appendix I). This task was initiated by the Poison Center Clinical Leaders as well as the first intern and the progress was tracked during the second internship term.

During the week when the second internship started, the manager of the IT technical support who was responsible for the Poison Center project initiation left IWK. This issue delayed the acquisition of the software and hardware needed before the installation of VDL. Once the new IT technical support manager was appointed, the Clinical Leaders and the second intern met with the new manager to discuss the project initiation and clarify doubts about the hardware and software requirements. After the hardware and software was purchased and installed, the IT department gave virtual access to the second intern who tested the server installation, the SQL server and explored the possibility of future web-based development by installing an Apache server and PHP on this machine.

Before buying VDL one important issue was resolved, the legal agreement between vendor and IWK hospital.

2.2 LEGAL ASPECTS

The contract was revised by an IWK lawyer who required the inclusion of some documentation to detail minimum hardware specification, current support policy and features and functionalities of the software.

Some questions in relation with the contract were raised by the new intern. Would personally identifiable information need to be disclosed by the U.S. based third party vendor to its government because of the “Patriot Act”? Is it reasonable to assume that the annual fee increase should not be more than the increase in the Consumer Price Index (U.S. CPI)? Does the contract need to be under California law or Nova Scotia law?

To clarify the legal questions and to discuss the questions raised by the health informatics intern the clinical leader met with the IWK lawyer. As a result of the meeting, the vendor attached new documents to the contract and signed a confidentiality agreement.

The USA Patriot Act

With the incursion of information technology in the Health Care system, security and confidentiality of personally identifiable information has become an issue. Projects that involve third party software, specifically out-of-country software companies require a detailed investigation of national and international laws.

For this project, it was essential to investigate The USA Patriot Act and ensure that there are not going to be breaches of patient confidentiality by the U.S. government. The U.S. Patriot Act (The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001) was created as a response of the terrorism act of September 11, 2001. This law extends the authority of American law application in the U.S. and abroad to combat terrorism.

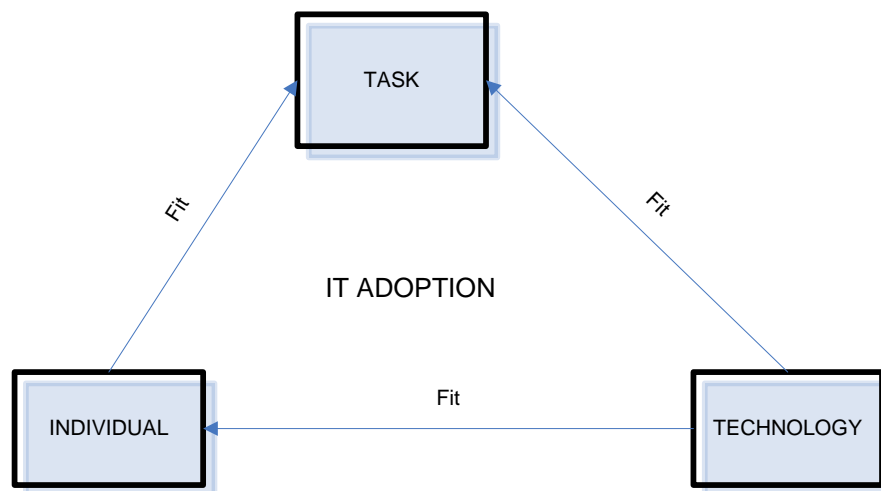
“. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA Patriot Act) Act of 2001, PUBLIC LAW 107-56 [H.R. 3162], An Act To deter and punish terrorist acts in the United States and around the world, to enhance law enforcement investigatory tools, and for other purposes. (OCTOBER 26, 2001)”{1}

According to {2} “The risk of USA Patriot Act access is not just an issue for the public sector of this country. It is also an issue for the private sector and will have to be addressed by all jurisdictions across Canada and at international level.”

3. ORGANIZATIONAL CHANGES

When the legal aspect was resolved, assessing the readiness for adoption of the new software by the Specialists of Poison Information (SPIs) became a priority. According to {3} “the availability of a tool to assess readiness is a key to the development of implementation plans that will optimize the fit between the innovative system and the organizational characteristics”.

In {4} the author purposes that the success or failure in IT projects in Health care depends on the balance of the interaction between individuals who are part of the project, technology that is been adopted and tasks inherent to the job{4}. See figure below.



{4} identified that the following factors influenced positively the interaction (fit) between task, technology and individuals during the implementation of a nursing documentation system in a German university hospital:

- Individual-technology fit
 - Training sections
 - Selection of super users
 - Acceptance of computerization in their field
 - A certain minimum level of computer literacy
 - Reduction of workload during the initial part of the implementation project
 - Introduction of new functionalities of the software in a step-wise manner
 - Commitment to the nursing documentation and nursing job
 - Team and management support

- Individual-task fit
 - Reformation of the nursing documentation process
 - Succinct documentation of nursing notes
 - Internal norms
 - Understand responsibilities within nursing documentation
 - Use of policies and guidelines used by the nurses in their practice

- Task-technology fit
 - Software adaptation of policies and guidelines used by the nurses in their practice
 - Availability of appropriate hardware resources
 - Completeness of software functionality
 - Reformation of the nursing documentation

As a result of the literature review, the health informatics intern and the clinical leaders amalgamated different techniques as strategies to prepare the Poison Centre team in the adoption of the electronic documentation system. The strategy included a readiness assessment interview, weekly update of the project on WebCT, basic computer skills training, VDL open forum in WebCT, an extensive VDL training session, detailed VDL documentation and technical support 7/24 hours provide by the IT helpdesk, SPI from the Toronto Sick Kids hospital who has been using the tool for years, the VDL vendor and the Dalhousie intern.

3.1 READINESS ASSESSMENT INTERVIEW

As a result of the literature review and an interview with a Dalhousie PhD student who is working on the development of an organizational readiness scale for e-health innovation, a readiness assessment interview was designed. The interviews were directed by the clinical leaders and the Dalhousie intern. The duration of each interview was around 40 to 50 minutes and each of them was tape recorded. The questions were open-ended, semi-structured questions that were divided into three sections: Part I were questions to identify work satisfaction with the nursing documentation tasks, Part II addressed the acceptance of computers as part of nursing documentation and Part III questioned the SPIs perception of overall affects of the new electronic system on nursing workflow. Five interviews were face-to-face interviews and two were completed by correspondence (see interview at the end of Appendix II). A summary of the answers of each question can be found in Appendix II.

4. DATA PREPARATION

4.1 WORKFLOW PROCESS

Before VDL deployment, the IWK Regional Poison Centre workflow was supported by paper-based charts that were filled out manually after or during a call (see Appendix III). The flow of information started by documenting the call in the “Poison Information Call Form” gathering demographic information of the caller, victim's medical history, call reasons, circumstances of the exposure, assessment, symptoms and nurses recommendations and follow-up notes. The flow of information was extended to fulfill internal and health authorities’ policies by collecting information on additional forms and reporting them to the Ministry of Fisheries and Agriculture and IWK Child Links among others.

The IWK Regional Poison Centre workflow was divided during this internship into seven processes as listed in Figure 1.

IWK Regional Poison Centre Information Flow

Monday, September 11, 2006

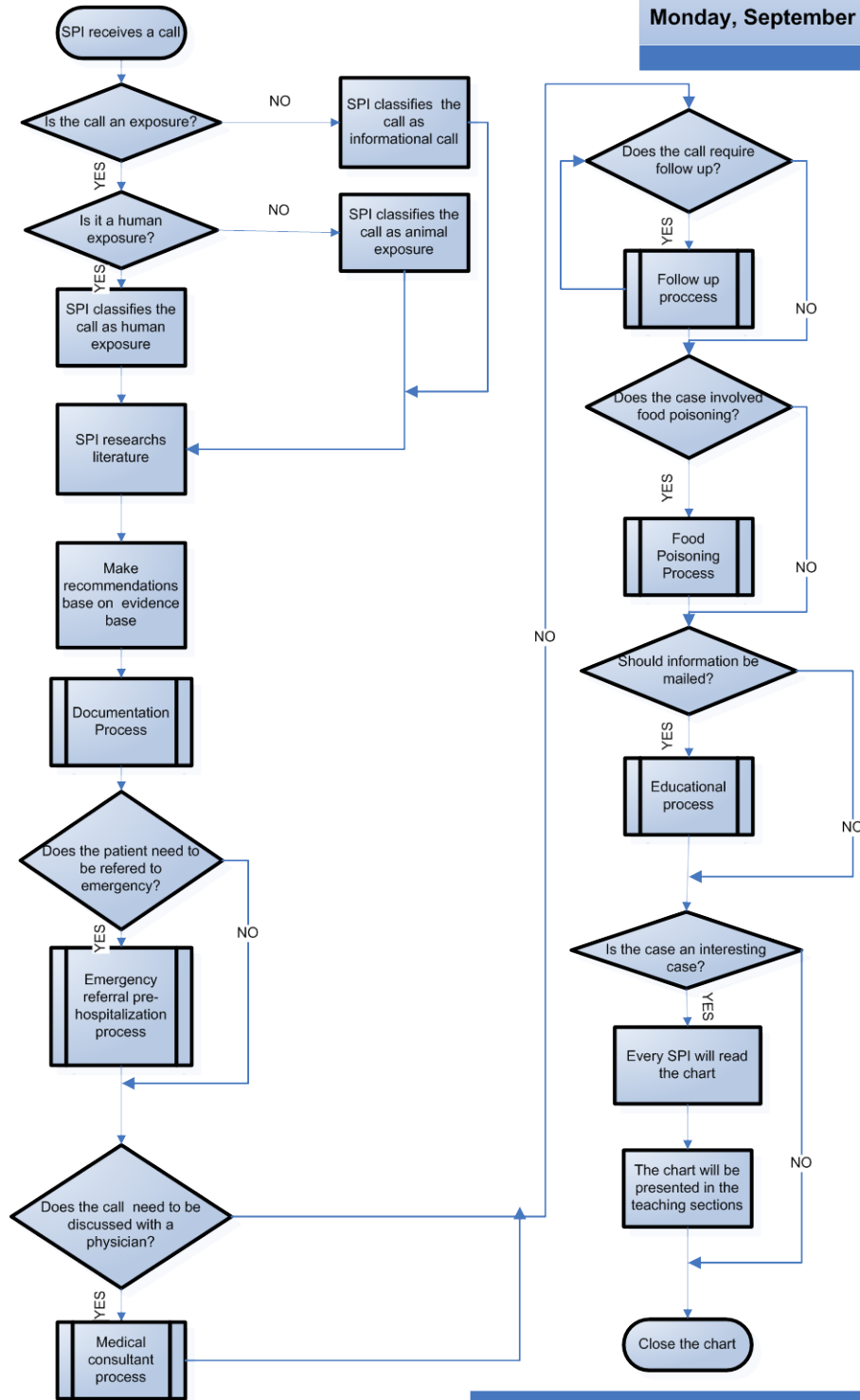


Figure1. IWK Regional Poison Centre information flow diagram before VDL

Documentation Process

The IWK Poison Centre receives calls from Nova Scotia, PEI and occasionally from New Brunswick. Currently, there are four lines open and technically they should never be busy. Also, there is a direct line with 911 for emergency. During the documentation process the SPIs collect patient identification information, reason of call, type of call, route of ingestion, circumstances of the call (unintentional or intentional), location of the call, substance involved in the exposure, medical history, symptoms of the victim, assessment (asymptomatic, symptomatic), condition management, medical outcome and resources used. See a step by step documentation of this process in Appendix IV.

Treatment recommendation process

This covers the process to refer a patient to her/his closest hospital emergency department. During this process, SPIs fax to the emergency department a list of treatment and medical tests that should be applied to the patient. As well, a copy of literature that is relevant to the case such as online clinical database, Micromedex {4}, books and Google searches. This literature along with the SPIs experience constitutes the evidence based clinical knowledge that supports the patient treatment. See a step-by-step documentation of this process in Appendix IV.

Medical consultant process

Some calls received by the IWK Regional Poison Centre require medical judgment. In this case, the SPIs will contact the doctor on call. After the case is documented, the physician who was on call will review the chart and will write his/her comments in an in-house access database software. A copy of the Physician's comments is attached to the chart and the entire package would be reviewed in the training rounds. See a step-by-step documentation of this process in Appendix IV.

Food Poisoning process

Cases that involve food poisoning in a local establishment (e.g. food that was bought in a restaurant, pizza place, corner hotdog stand, etc.) need to be brought to the attention of the Department of Agriculture and Fisheries. In this case, the DOAF/Public Health Services/Poison Control Food Borne Event Report Form will be filled by the SPIs. This form gathers information related to the location where the food was eaten, address, date, time, recent travel, destination, place of employment, if patient attends child care, child care facility and SPI signature. See a step-by-step documentation of this process in Appendix IV.

Follow up process

Most of the acute calls that the IWK Regional Poison Center receive need to be followed up until the health outcome is known. The follow up call is done by the SPI who is on shift and not necessarily by who received the call. During this process the patient condition is documented on the follow up sheet of the "Poison Information Call" form. See a step-by-step documentation of this process in Appendix IV.

Plant & Berry identification process

Extra documentation will be collected if the call is classified as plant, flower, leaf or berry exposure. The SPIs will fill the Plant & Berry Identification Guide and will try to match the description collected with Google images or a picture binder that is part of the Poison Centre library. See a step-by-step documentation of this process in Appendix IV.

Educational Material process

For every call where the SPIs will send out educational packages such as pamphlets, handouts etc., the poison/prevention teaching form is filled out. This form collects the number of education materials sent, type of material and mailing address. The parcel will be mailed by the IWK Regional Poison Center if the individual or groups who request it don't require more than five copies; otherwise it will be the Child Safety Link department responsibility. The poison/prevention teaching forms are collected and sent to Child Link to keep statistics. See a step-by-step documentation of this process in Appendix IV.

4.2 PREPARING DATA TO PERSONALIZE THE TOOL

Two pieces of information constitute the main elements to customize the new software; the contact information of the staff and the hospital data. The intern organized a package with this information and provided the vendor with a word document of IWK Regional Poison Centre Staff contact information, an access database with demographic information of hospitals in Nova Scotia, PEI and New Brunswick and a list of hospitals by health authorities in an Excel format. See Appendix V.

Another piece of information - a list of Maritime cities by province was provided by the first Dalhousie intern. The vendor of the software acquired a Canadian postal code database to populate all this information into VDL.

4.3 MAPPING INFORMATION

A comparison of the information collected between the paper based documentation form and the new software resulted in a decision to document any gaps in VDL history notes. An Excel document that is listed in Appendix VI shows a parallel between the data attributes of the two systems. It is clear that the electronic documentation system collects almost the same information as the manual system. Also, it can be seen that the new system uses a subcategory field to classify information calls in more detail.

The parallel between the two systems showed that the followings fields were not included as part of the electronic chart: medical history of the patient, medications patient is under at the moment of the exposure, allergies, description of the packages involved in the exposure (e.g. does the package have information warning symbols, is the container available, etc), assessment of the patient (symptomatic or asymptomatic), time when the medical consultant was called and time of response, resources used, research charting time and number of faxes sent while the chart was open.

The new tool provides the users with unlimited free text fields for the nursing notes, therefore all the information but the statistical information is collected there. The research

charting time, number of faxes sent and response time by medical consultant is no longer collected.

5. SOFTWARE IMPLEMENTATION

5.1 INSTALLING AND CONFIGURING THE SOFTWARE

In the second week of July the vendor of the software visited the IWK facility to install and provide training to all the Poison Centre team. The installation and configuration of the software was completed in four steps.

Server installation

First, the SQL server was set up with the entire VDL database schema. Then a Windows NT account was created in the server with all the rights to access the SQL database schema. Finally, Novell rights were provided to the Windows NT account and the login userid and password were synchronized between Novell and NT so users have to login just once.

Client installation

The VDL client was installed in five workstations: one used by the Medical Director, one used by the clinical leaders, two used by the SPIs and one used for technical support and teaching purposes. Local databases that back-end the VDL lookup tables were installed in C: /VDL/data folder of each computer. VDL reports were installed locally in the C:/VDLCFG folder

Production and test environment

For teaching and debugging purposes it was suggested by the Dalhousie intern to install two VDL database schemas in the server; Test and Production. A folder with two keys was created on the computer used by the Dalhousie intern to allow the switch between the two environments.

General VDL settings

The number of workstations, VDL users, scenarios to be used, VDL userid and password among others were created in the administration module.

5.2 SOFTWARE INTEGRATION

The integration of VDL in the IWK Regional Poison Centre workflow can be seen in the figure below (Figure 2).

IWK Regional Poison Centre Information Flow after VDL

Monday, September 11, 2006

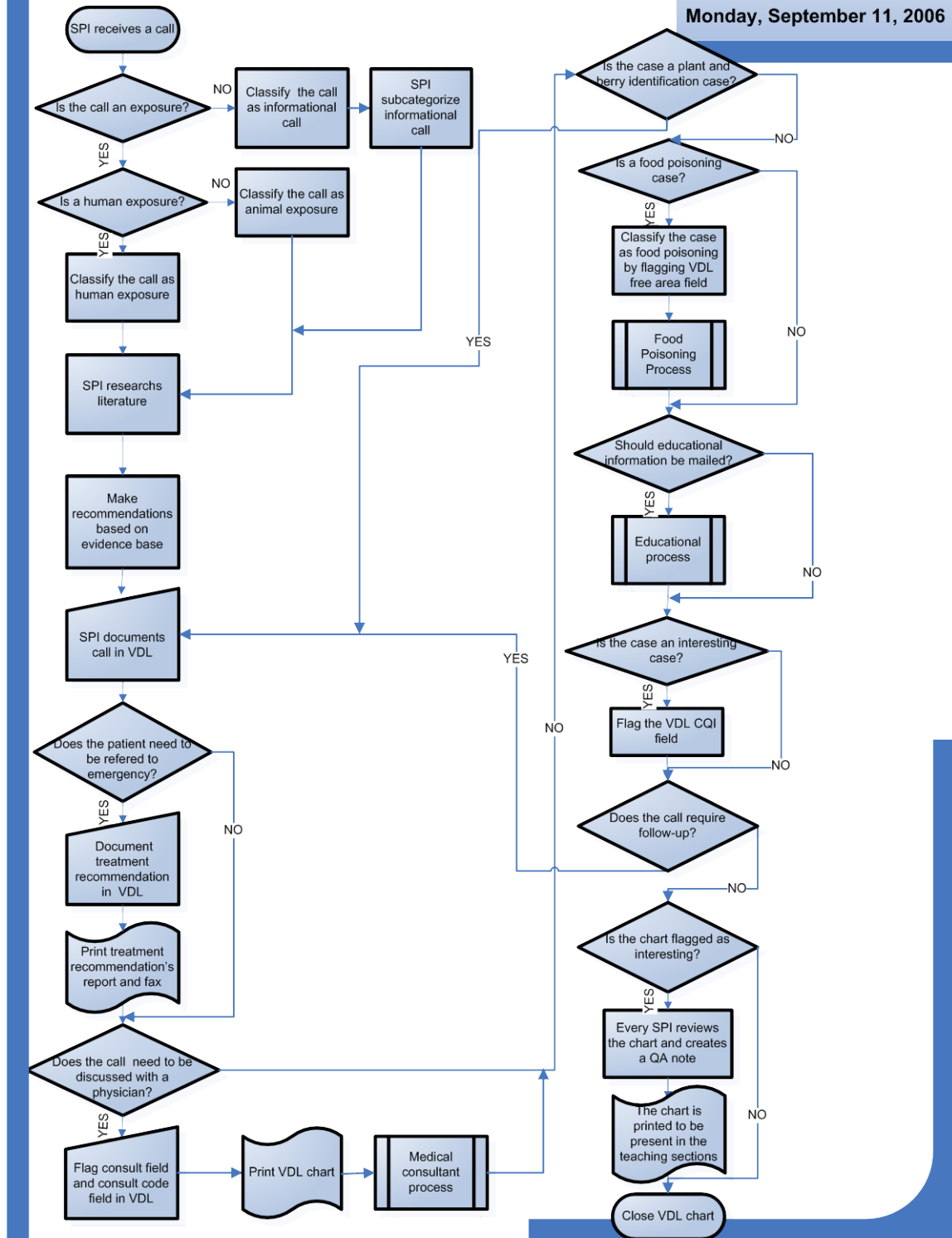


Figure2. IWK Regional Poison Centre information flow diagram after VDL.

Some of the manual processes are no longer required. This is the case for the treatment recommendation process, the plant and berry identification process, the follow-up process and the review of interesting cases.

Treatment recommendation process

It was embedded into VDL by the use of a VDL functionality call template and a VDL output report. The form that used to be filled out manually was replaced by an electronic template pasted in the nursing notes and a VDL case report to be faxed. The possibility of incorporating the Windows fax utility to send the fax electronically is being considered.

Plant and Berry identification process

An electronic template was created to replace the paper form used as a guideline to identify plants, flowers or berries involved in the call. The template contains the same information as the paper form guideline and it can be included as part of the VDL history notes (nursing notes).

Follow-up process

The first thing that a SPI does when connected into VDL is to check the follow up list. The follow-up list is a screen with the patient, caller information, substance involved in the case, reason for follow-up and time and date of follow-up. After a follow-up call, the nurse will create a new VDL history note (nursing note) and will reschedule the next follow-up. If the case doesn't need to be followed-up, the SPI will close the case.

Interesting cases

Cases flagged as interesting cases (CQI VDL field) will be selected by clinical leaders to be reviewed in the monthly teaching sections. The clinical leaders will select all the interesting cases using the VDL filter utility. Two choices can be used to present the case in the teaching sections. One prints all the cases and passes them around and the second goes through the cases using VDL. Also, if the clinical leader considers that it is high priority for the SPIs to read an interesting case, the case will be left open in the follow-up list with a follow-up comment "Interesting case to be read". After the SPI has read the case it will create a public QA notes in VDL with a legend "Chart has been read by *SPI name*" and with her general comments, if applicable. The clinical leader will close the case when all the SPIs have written a QA note.

Other processes are still being handled manually because they are not part of the center workflow. This is the case for the educational process and the food poisoning process.

Educational process

This process is still being dealt with manually because it has a low priority since the information collected is part of the workflow of another hospital unit. For example, when as a result of a call, SPIs have to mail educational material to individual, groups or institutions, they manually fill out a form with the number of items sent, type of item sent and where it was sent. This form is passed to child safety link; another hospital unit that will keep track of this information and generates statistics for IWK. In the future, it is

recommended to consider integrating the educational module of VDL as part of Child Safety Unit workflow.

Food Poisoning Process

This is another process that is still manual and has low priority among the others. The extra information gathered by the SPIs in this process (e.g. name of the restaurant where the food was bought, address, etc.) is the concern of the Ministry of Agriculture and Fisheries. For now a paper form will be filled out with this extra information and faxed to this government entity. In the future, it is recommended to negotiate the incorporation of a new data entry form into future VDL versions for this purpose.

Other processes are being re-evaluated and for now are partly in VDL. This is the case of the medical consultant process where SPIs will select in VDL if a physician was contacted or not and who they contacted. Then the SPIs will have to print a case report to be reviewed manually by the doctor who was asked (medical consultant process). The physician will write her/his comments in the case review form and the case report with the case review form attached will be passed around the SPIs. Every SPI will read the whole package as part of a learning experience and will check the box with their name on the case review form. In the future, it is recommended the creation of a web environment interface connected to VDL for physicians to input their comments.

6. TRAINING AND TECHNICAL SUPPORT

Two types of technical training were provided to the Clinical Leaders and SPIs of IWK Poison Centre; basic computer training and VDL training. As well, a self-taught study in AAPCC codification system was encouraged to be completed before VDL training.

Basic computer training

The basic computer training was designed by using the results of a computer skills survey. The computer skills survey that can be seen in Appendix VII covered the skills that are necessary to run the electronic documentation system. To select the survey content, the intern explored VDL functionalities by reading the first intern report and looking through the screen shots of the VDL tool. A demo of VDL was requested, but due to internal policies of the software company it was not possible to obtain this before the software installation. Ten SPIs were surveyed and six answered the questionnaire. From the six that responded:

- All of them knew how to navigate in the Internet.
- Four of them were totally comfortable with the Windows operating system, and two could perform the task with minimal confidence.
- Two of them didn't feel confident manipulating files and four were totally confident.
- Five of them understood group wise email service but didn't feel confident doing some of the tasks. One of them was totally confident.
- Two of them were comfortable using a Word editor. The rest didn't feel confident in most of the tasks.

The basic computer training was provided by an IWK IT department trainer. Two sections were scheduled to accommodate all the shifts. Based on the results of the survey and the analysis of VDL functionalities, the basic training focused on:

- Finding technical documentation on the IWK intranet
- Review of email tasks
- Basics of Word editor
-

VDL training

During the week of July 9th to 16th an intensive VDL training session was provided by the VDL creator and owner. The Poison Centre team was divided into two groups. One group attended the session on Tuesday and the second group the session on Wednesday. These sessions were long and intensive and faces of frustration and worry were seen in the late afternoon, close to the end of the session.

AAPCC codification system

A workshop book was distributed to the SPIs before the VDL training to facilitate becoming familiar with the AAPCC codification system used by the American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS) which is the codification system used by VDL.

Technical support

A Quick guide documentation of VDL functionalities with a step-by-step description and screen shots was written by the Dalhousie intern to support the learning process of the Poison Centre team.

There is a plan to provide 7/24 technical support to the SPIs team. During the work hours, the SPIs could contact the IT help desk and after work hours nurses from the Sick Kid's Toronto hospital are willing to pass their experience of many years working with the VDL tool. Also there is a one year maintenance contract signed with the vendor

7. FUTURE PROJECTS

- Create a knowledge base repository with frequent questions and answers about poison and prevention. Release this information to the community by pulling the data from the repository and pushing it to a web tool such as the IWK emergency portal.
- Identify surveillance reporting (e.g. who needs to report about incidents involving pesticide products?) and create the reports tools necessary to support this.
- Develop research to identify indicators of success and evaluate the success of the implementation of an Electronic chart in the IWK Poison Centre.

- Identify cluster, patterns and trends of exposures, treatments and procedures in the IWK Poison Center database that could lead to new educational campaigns, public health campaigns, create community awareness and guidelines updates. This research could involve the use of OLAP and data mining techniques.
- Explore VDL educational materials module and analyze the possibility of implementing it in Child Safety Link.
- Create a training module. This training module would be linked to VDL and can be used for two purposes. First, to share knowledge between Poison Centre team members, medical consultants and students and second to provide SPIs and medical consultants a space for questions and feedback on any case. It is recommended to develop this tool in a web environment so it will give every user the flexibility to access the tool at any place and at any time.

8. ANALYSIS

All users learned how to use the tools after an initial two weeks of frustration. By the end of the internship every nurse was feeling comfortable using VDL and less questions were being asked.

The new database is starting to build toxicology knowledge where circumstances, procedures and outcomes are being recorded so nurses and physicians will have important sources for future research. This will bring significant benefits to the Maritime community. Internally, the new database is providing information for quarterly and annual reports that are discussed in administrative meetings. The VDL's mini-annual report plus others that were created during the second internship provide a good picture of number of calls, nature of the calls and a break down by products and outcomes of acute calls.

A month after the installation, VDL has demonstrated good performance. Some minor problems related with RAM memory have been resolved by exiting the tool or in some cases restarting the workstation. The biggest advantage of VDL is that the vendor, creator and owner of the software is a poison control specialist with a strong computer science background. Therefore the software functionality fits very well with the IWK poison center daily tasks. The disadvantages found prior to and after the installation of the software has been the response time by the WBM vendor's "one man shop" when technical support is required.

9. LESSONS LEARNED

In this internship, the Dalhousie intern had the opportunity to gain practical experience in a health care facility that provided an excellent environment to apply and develop organizational, leadership and project management skills. Also the student applied the

discussions of the information flow class to understand the information flow of the IWK Poison Centre and suggest workflow software integration. These discussions motivated the Dalhousie intern to investigate how other country's laws could affect patient confidentiality.

The Dalhousie intern participated in the knowledge transformation process that has been occurring since VDL went live, facilitating the process of capturing tacit knowledge and transforming it into explicit knowledge and suggesting future research and tools where this knowledge could be applied and shared.

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11. APPENDICES

APPENDIX I

<u>Software</u>	<u>Hardware</u>
Crystal report	19" Monitor Dell LCD (optional)
SQL Server 2000	Dual video cards (optional)
Windows 2003 OS	HP Compaq desktop
Windows client Access Licenses	Server Hardware
SQL Client Access Licenses	

APPENDIX II

Readiness Assessment Interviews

Introduction

1. This interview will take about 40 minutes
2. We are going to ask few questions about the VDL program and your feelings about it.
3. Then we will show some of the program computer planning to date and strategies to facilitate the transition between paper documentation to electronic documentation.

What do we expect to accomplish with the focus group?

- Identify work attitude of Poison Centre staff
- Evaluate concerns and worries related with the use of the new technology
- Identify Poison Centre team perception about overall affects of the new system on nursing workflow

Part I. Identify work satisfaction with the documentation tasks

Questions

1. What do you like the most about the documentation you do as a SPI?
 - I like the easiness
 - Everything flows well
 - Doesn't have to be a lot of writing
 - The chart is easy to follow
 - It is personal. What you tell people is written from the heart
 - Flexibility
 - I am familiar with the chart we use
 - Feel it covers all necessary areas to document the interaction between the caller and myself.
2. What do you like the least about the documentation process?
 - Hard to read people's writing
 - Sometimes information is not documented
 - You don't know if the questions have been asked or not because it is not written down
 - Sometimes a lack of follow-up
 - Spelling mistakes
 - It is not easy to find things

Part II. Computer use

Questions

3. Do you use a computer at home?
 - Yes
 - Not a lot

4. How often do you use a computer at home?
 - Not as often as I used to
 - Once every six to eight weeks
 - Because I am in dial-up, it is difficult for me to use as often as I used to
 - Once a day for 5 or 10 minutes
 - When kids in school
 - Twice a week
 - Every day – many times

5. What do you usually use the computer for?
 - Email
 - Banking
 - Online shopping
 - To write letters, memos etc
 - To e-mail only a few friends
 - Google searches
 - Regular email from work
 - To play music, games and movies
 - Pay bills
 - Check weather
 - Read news

6. Do you find computer useful?
 - Yes and very convenient when you know what you are doing,
 - Sometimes
 - Extremely

7. If yes, what is the most useful thing you can do with the computer?
 - Find information quickly on almost any subject
 - Word processing
 - Search on a subject
 - Do a project

8. What if any specific concerns or worries do you have about using an electronic poison information call chart?
 - Confidentiality, there is a lot of security in place but computers get hacked into all the time
 - Damaging information about people on our chart, especially information that is really touchy likes overdoses. I am worried about hitting a button and the chart disappear, losing information
 - The unknown, for instance if I get a call and I start a chart in my computer, how can the person who is just coming from lunch and gets the follow-up call, access the chart?
 - A lot of questions will be easily explained once the vendor is here
 - I worry about the follow-up calls

- In VDL, the SPIs will be able to write down time and date of the follow-ups. This can be a potential problem because follow-ups are done at SPIs discretion so some of them could be just do the follow-up every two days, for others every day.
- Follow-up procedures need to be clarified
- It will be more time consuming, more complex and therefore more difficult to use
- Not having enough time to do all the documentation in one shift
- Fear of the unknown
- Staffing, when we first talked about this we talked about having double coverage all the time
- I am concerned about you being alone at night and all the calls and charts have to be completed by you.
- If there is a problem and you need to get the chart finished and you cannot close the chart
- Concerns regarding several calls coming in at one time
- Don't have enough technical support after September
- The only thing at this point I see, as a possible problem may be in the beginning I may not have time on a busy shift to enter the data in a timely fashion.
- The initial learning phase

Part III. Overall affects of the new system

Questions

9. What is your expectations about this new software, what do you think it will do for you?
 - It will make life hard for a little while
 - It will increase stress levels in the Centre for a while
 - It has created a lot anxiety already
 - That our questions will be answered – lots of unknowns now
 - Do we have the proper infrastructure in place?
 - Have to deal with one call at a time
 - After a couple of months we will probably laugh about all this
 - No opinion
 - No expectations
 - No big expectations
 - I believe this system will save time and also will bring to mind important facts that otherwise might have been left out.

10. What is your personal opinion about the implementation of an electronic chart? Do you think this new software will benefit the Poison Centre and your work? If yes, in what way?
 - Inappropriate time for implementation with staff shortages and summer holidays.
 - Implementation should be done with test programs and not going “live” post brief training.
 - Have reservations about this being the best system for the Centre

- The software has been around for more than a decade and only one other Canadian Centre is using it
- Would have thought that experts would have looked at this system before going to Prod-Tox.
- Previous Centre staff looked at this system
- With the new TESS classification Centre exposure numbers will drop
- I feel that we have been forced into it without concern of how staff feel about it
- Hoping to not go home with a headache
- Deal with the learning curve in the best way
- It is coming so let it come
- Time consuming
- Way overdue, 21 century, huge learning curve, disappointed that happened in the middle of the summer, our summer vacation time is limited this year, the number of staff doesn't help us to double up the resources.
- I believe it will eventually be a big improvement to the Center

11. Do you think this new software will benefit the Poison Centre and your work? If yes in what way?

- Computerized statistics
- Ability to access old cases
- New research
- Auditing
- All the benefits remain to be seen but I believe overall this system will ensure more thorough charting, better and easier statistics and will save everyone time.

12. How do you think clinical leaders and health informatics staff could help you in this transition?

- Be available during all shifts including night shift
- Update people about project situation
- Provide training
- Figuring out how this software works
- Be available during some of our busiest times (4 pm to 10 am)
- Retraining people after summer vacations

13. Is there anything you would like to add or suggest?

- Difficult to comment on a system nobody has seen
- More detailed planning
- More information up front
- It is something inevitable
- A way to the future
- Scary but we have to do it
- It will help to have extra staff until midnight
- Queuing system will release my stress
- Implementing the Queuing system at the same time as VDL could be more stressful

- Another headphone for the second desk
- Having the people who are covering most of the shifts as key user
- There may not be time to do much practice before going live but it would be helpful to have a practice module available for staff
- I am anxious to learn this program so I can help make the transition easier for others

INTERVIEWS SCHEDULE

SPI name	Date	Time	Clinical leader	
Joan	Thursday, June 8	2:30 pm	Eileen	
Kim	Monday, June 12t	2:00 pm	Ruth	
Mary Anne	Tuesday, June 13 th	2:00 pm	Eileen	
Thelma	Wednesday, June 14 th	2:00 pm	Eileen	
Dianne	Thursday, June 15 th	2:00 pm	Eileen	
Laurie	Monday, June 19 th	2:00 pm	Ruth	
Debbie	By email			

APPENDIX III



IWK Health Centre
 Caller Status

POISON INFORMATION CALL FORM

#F/U

Involved

Caller Name	Public <input type="checkbox"/> Parent <input type="checkbox"/> Other <input type="checkbox"/> Patient <input type="checkbox"/> Relative	Age <input type="checkbox"/> Years <input type="checkbox"/> Months	Weight kg lbs	Sex <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown <input type="checkbox"/> N/A	
Ph#	Professional <input type="checkbox"/> RN <input type="checkbox"/> Other <input type="checkbox"/> MD <input type="checkbox"/> Pharmacist <input type="checkbox"/> Veterinarian	Route		Circumstance	Location
County/Province		<input type="checkbox"/> Oral	<input type="checkbox"/> Unintentional	<input type="checkbox"/> Intentional	Exposure <input type="checkbox"/> Home <input type="checkbox"/>
Patient Name		<input type="checkbox"/> Dermal	<input type="checkbox"/> Accidental	<input type="checkbox"/> Suicide/Gesture	<input type="checkbox"/> Work <input type="checkbox"/>
Other Ph #		<input type="checkbox"/> Ocular	<input type="checkbox"/> Administration Error	<input type="checkbox"/> Abuse	<input type="checkbox"/> Farm <input type="checkbox"/>
Date/Time		<input type="checkbox"/> Inhalation	<input type="checkbox"/> Environmental	<input type="checkbox"/> Misuse	<input type="checkbox"/> School <input type="checkbox"/>
		<input type="checkbox"/> Parenteral	<input type="checkbox"/> Unknown	<input type="checkbox"/> Inflicted	<input type="checkbox"/> Hosp <input type="checkbox"/>
		<input type="checkbox"/> Unknown	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown	<input type="checkbox"/> Other HCF <input type="checkbox"/>
		<input type="checkbox"/> Bite/Sting	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other <input type="checkbox"/>
		<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other	<input type="checkbox"/> Other <input type="checkbox"/>

Type of Call 1. <input type="checkbox"/> Human <input type="checkbox"/> Animal 2. <input type="checkbox"/> Exposure: <input type="checkbox"/> Acute <input type="checkbox"/> Chronic <input type="checkbox"/> Unk 3. <input type="checkbox"/> Info: <input type="checkbox"/> Poison <input type="checkbox"/> Medical <input type="checkbox"/> Drug 4. <input type="checkbox"/> PC Admin <input type="checkbox"/> Food <input type="checkbox"/> Other	Pertinent Medical History <input type="checkbox"/> None <input type="checkbox"/> Yes - Specify _____ <input type="checkbox"/> Pregnant _____ weeks/months	Medications <input type="checkbox"/> None <input type="checkbox"/> Yes - Specify _____ Allergies <input type="checkbox"/> None <input type="checkbox"/> Yes - Specify _____
---	---	--

Class	Product/Ingredients	Strength	Amount	Total Dose	Mg/kg

Package Information: N/A Original Y N UNK Child Resistant Cap Y N UNK Warning Symbol Y N UNK
 Container: available unavailable

Symptoms (F/U)		Further History	
C.N.S. <input type="checkbox"/> Agitation <input type="checkbox"/> <input type="checkbox"/> Ataxia <input type="checkbox"/> <input type="checkbox"/> Coma <input type="checkbox"/> <input type="checkbox"/> Confusion <input type="checkbox"/> <input type="checkbox"/> Drowsiness <input type="checkbox"/> <input type="checkbox"/> Dystonia <input type="checkbox"/> <input type="checkbox"/> Hallucinations <input type="checkbox"/> <input type="checkbox"/> Headache <input type="checkbox"/> <input type="checkbox"/> Hyperactivity <input type="checkbox"/> <input type="checkbox"/> Irritability <input type="checkbox"/> <input type="checkbox"/> Miosis <input type="checkbox"/> <input type="checkbox"/> Mydriasis <input type="checkbox"/> <input type="checkbox"/> Psychosis <input type="checkbox"/> <input type="checkbox"/> Seizure <input type="checkbox"/> <input type="checkbox"/> Slurred Speech <input type="checkbox"/> <input type="checkbox"/> Syncope <input type="checkbox"/> <input type="checkbox"/> Tinnitus <input type="checkbox"/> <input type="checkbox"/> Tremors <input type="checkbox"/> <input type="checkbox"/> Vertigo/Dizziness <input type="checkbox"/> <input type="checkbox"/> Weakness <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/>	G.I. <input type="checkbox"/> Abdominal Pain <input type="checkbox"/> <input type="checkbox"/> Diarrhea <input type="checkbox"/> <input type="checkbox"/> Dysphagia <input type="checkbox"/> <input type="checkbox"/> Nausea <input type="checkbox"/> <input type="checkbox"/> Vomiting <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/> Respiratory <input type="checkbox"/> Apnea <input type="checkbox"/> <input type="checkbox"/> Choke <input type="checkbox"/> <input type="checkbox"/> Cough <input type="checkbox"/> <input type="checkbox"/> Cyanosis <input type="checkbox"/> <input type="checkbox"/> Dyspnea <input type="checkbox"/> <input type="checkbox"/> Resp Depression <input type="checkbox"/> <input type="checkbox"/> Tachypnea <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/> C.V.S. <input type="checkbox"/> Arrest <input type="checkbox"/> <input type="checkbox"/> B/P (high/low) <input type="checkbox"/> <input type="checkbox"/> Chest Pain <input type="checkbox"/> <input type="checkbox"/> Rate Disturbance <input type="checkbox"/> <input type="checkbox"/> Rhythm Disturbance <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/> Local <input type="checkbox"/> Dermal Irrit. <input type="checkbox"/> <input type="checkbox"/> Diaphoresis <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/>	Time Since Exposure <input type="checkbox"/> Now <input type="checkbox"/> Unknown <input type="checkbox"/> ≤ 30 min. <input type="checkbox"/> 30-60 min. <input type="checkbox"/> > 60 min. at _____ hrs.	
		Circumstances: _____ _____ _____	
		Assessment <input type="checkbox"/> Asymptomatic <input type="checkbox"/> Unknown <input type="checkbox"/> Symptomatic <input type="checkbox"/> Related to Exposure <input type="checkbox"/> Unrelated to Exposure <input type="checkbox"/> Unknown if Related	
		<input type="checkbox"/> Fever <input type="checkbox"/> <input type="checkbox"/> Oral Irrit. <input type="checkbox"/> <input type="checkbox"/> Eye Irrit. <input type="checkbox"/> <input type="checkbox"/> Other <input type="checkbox"/>	

Form 8382-5/95

Follow-up at	Medical consultant	Called at	Responded at
[]			
[]			
[]			

Disposition Recommendations

Remain at [] Home [] Office/Clinic [] ER [] ICU [] Inpt [] Other

To: [] ER Now [] MD [] Via Ambulance [] Other

Receiving HCF

Name _____

Telephone _____

Notified at _____

Management

Already Done Advised by PIC (Home/HCF) Tx Summary

Already Done Advised by PIC Tx Summary

	General				Life Support
<input checked="" type="checkbox"/>	None/Reassurance/call prn				Intubation
<input checked="" type="checkbox"/>	Milk				Ventilation
<input checked="" type="checkbox"/>	Fluids po (sweetened/clear)				ACLS
<input checked="" type="checkbox"/>	IV Fluids				Antidotes
<input checked="" type="checkbox"/>	Symptomatic Support				Dextrose (50%)
<input checked="" type="checkbox"/>	Observation				Naloxone Bolus
<input checked="" type="checkbox"/>	Fresh Air/Ventilate				Naloxone Infusion
<input checked="" type="checkbox"/>	Decontamination/Elimination				Atropine
<input checked="" type="checkbox"/>	Ipecac				2 - PAM
<input checked="" type="checkbox"/>	Other Emetic				N Acetylcysteine Oral
<input checked="" type="checkbox"/>	WBI				N Acetylcysteine IV 20/48*
<input checked="" type="checkbox"/>	Lavage				O2 Treatment
<input checked="" type="checkbox"/>	Charcoal				Ethanol - Oral
<input checked="" type="checkbox"/>	Cathartics				Ethanol - IV
<input checked="" type="checkbox"/>	Multidose Charcoal				Digibind
<input checked="" type="checkbox"/>	Eye Irrigation 20min/30 min				Bicarb
<input checked="" type="checkbox"/>	Oral rinse				Flumazenil
<input checked="" type="checkbox"/>	Skin Irrigation				Other
<input checked="" type="checkbox"/>	Alkalinization (urine)				Additional Drugs
<input checked="" type="checkbox"/>	Hemodialysis/Hemoperfusion				Antihistamine
<input checked="" type="checkbox"/>	Diagnostics				Chelation
<input checked="" type="checkbox"/>	Medical Assessment				Other
<input checked="" type="checkbox"/>	EKG/Monitor				Consults/Referrals
<input checked="" type="checkbox"/>	Chest X-ray (+ve/-ve)				Ophthalmic
<input checked="" type="checkbox"/>	Abdominal X-ray (+ve/-ve)				ENT/Surgery
<input checked="" type="checkbox"/>	Esophagoscopy (+ve/-ve)				Psychiatry
<input checked="" type="checkbox"/>	pH urine/blood/tears				PHN
<input checked="" type="checkbox"/>	Lytes/Gases				Other
<input checked="" type="checkbox"/>	Osmolality				
<input checked="" type="checkbox"/>	Glucose				
<input checked="" type="checkbox"/>	Other				
<input checked="" type="checkbox"/>	Blood Levels - ASA/APAP				
<input checked="" type="checkbox"/>	L FT/RET				
<input checked="" type="checkbox"/>	ETOH/MEOH/ETGL				

Disposition Outcome

1. Highest Level of Care Received
 Home Office/Clinic ER
 Ward ICU Unknown Other

2. Patient Transfers if Applicable
 Clinic/Office to ER
 Local HCF to _____ hospital
 Initial Home Mgmt., later PIC advised transfer to ER

VIA Car Air Evac Ambulance
 Other Unknown

3. Refused Advice /FU Yes Home HCF

Medical Outcome

No Effect Unknown - Nontoxic
 Minor Effect Unknown - Potentially Toxic
 Moderate Effect (lost to F/U)
 Major Effect Unknown - Potentially Toxic (FU NDA)
 Death

Resources Used

Product Label
 Poisindex Company
 Other MDX MSDS
 Texts: Specify Medical Consultant
 Protocols PharmConsultant
 PC Files Resource consultant
 CCINFO Other
 Personal knowledge Other- SPI

Initial Call _____ # Minutes _____

Follow-up _____

Research/Charting _____

Direct Pt. Care _____

Total time _____

Fax []

Info pkg [] # sent _____

Teaching []

Signature _____

SPI 1 _____

SPI 2 _____

Reviewed by: _____

APPENDIX IV

Step by Step description of Poison Information Flow

- Documentation process
IWK Poison Centre receives calls from Nova Scotia, PEI and occasionally from New Brunswick. Currently, there are four lines open and technically they should never be busy. There is a direct line with 911 for emergency.
 1. The first thing the SPI does is to stamp the call with the time and date.
 2. Ask for the caller phone number and name (Phone number, Caller Name).
 3. Identify why the person is calling? (Type of call). Is an exposure, does happened right now? Just one time?
 4. Ask to the person, where is she calling from (Location)
 5. Ask for the symptoms. How is the patient? What is she/he doing right now? What is she/he like? E.g. Cough, Vomiting etc. According to the symptoms the directions of the call will change. (Symptoms)
 6. If the case scenario involve a medication, it is important to ask, what exactly was the product that they took? Usually the SPI will tell the patient to bring the container to the phone and read the label to her.
 - a. The SPI will search in Macromedex or toxicological books the product recommendations
 - b. The SPI will calculate the total dose the patient took
 7. The SPI will gather information about patient history (Pertinent medical history, Medications, Allergies)
 8. Next, the SPI will ask the patient when is it happened? And will collect the time since exposure.
 9. If there is any container or package involve in the case scenario then it is important to identify if the container is available or not and if there is any warning symbol.
 10. Once all this information is collected the SPI will have a general understanding of the call and she will start to give the directions on how to manage the exposure and will document any recommendation provided.

- Treatment recommendation process (Referrals to IWK emergency department)
The process of refer a child to IWK emergency department because of a Poison Exposure include the following steps:
 1. The SPIs will fill out the emergency telephone referrals.
 2. The SPIs will fill out the treatment recommendations form.
 3. The SPIs will pass to the emergency department “the emergency telephone referrals” and “the treatment recommendation form” with a copy of best evidence such as Micromedex or any textbook SPIs have used to support the case.
 4. After the patient has been admitted to emergency, the SPIs will go in person and will check with the nurse who is looking after the patient, the patient condition. In some cases, the SPIs will talk to the family.
 5. The SPIs will document the information collected in the emergency room in the follow up section of the chart.

6. If the SPIs have talked to family or to the patient, she will document the “emergency chart” form.
 7. The patient will be follow up until known outcome or patient discharge
 8. If there is not any concern about the patient health, the chart will be close.
- Treatment recommendation process (Referrals to Other emergency hospitals)
The followings are the steps SPIs follow to refer a patient to a hospital different from IWK:
 1. The SPIs will fill out the treatment recommendations form.
 2. The SPIs will fill out the fax transmission sheet.
 3. The SPIs will fax the two forms to the hospital’s emergency department.
 4. After the patient has been admitted, the SPIs will call the nurse who is looking after the patient to ask about the patient condition.
 5. The SPIs will document the information collected in the follow up section of the chart.
 6. The patient will be follow up until known outcome or patient discharge
 7. If there are not concerns about the patient health, the chart will be close.
 - Medical Consultant require
Any time the SPIs talk to a medical consultant the case should be review by the physician who was contacted. If the SPIs consider that the case is an interesting case to review in the training rounds, she could flag the case for review.
 1. If the case require to be discuss with a medical consultant, the SPIs will look at the board to see which doctor is available
 2. The SPIs will Pager doctors or will call the doctor to QEII or home
 3. If the doctor is paged, the SPIs will wait for her/his call back
 4. The doctors and the SPIs will discuss the clinical case by phone
 5. The SPIs will write down doctors recommendations in the chart
 6. The SPIs will fill out the “Poison Information Centre case review” form, checking out the name of the doctor who was contacted.
 7. Once the “poison information call” form is filled out, the case review form is attached to the chart. If not follow ups are required, the chart will be file in the “Access entering” folder at the bottom drawer of the file cabinet.
 8. The administrative assistant will get the charts from the Access entering folder.
 9. The administrative assistant will input the information in the access database.
 10. The chart will be classified in the access database as Interesting case/educational, Hospital call or medical consult call.
 11. Once the administrative assistant has input the comments that SPIs had write down in the “Poison information case review”, she/he will stamp the “Poison information case review” and will write down the date
 12. The administrative assistant will file the chart in the folder that corresponds to whoever was the medical consultant for this case.
 13. The Physicians will go to the Poison Center and they will get the charts they have to review that are in the folder with their names.

14. The doctors will review the Poison case again and they will input their comments into the access database. Also, if there is something that need to be remark because of being an interesting case, for instance, the Hospital has not treat the case property, potentially lethal etc. they will highlight this.
 15. The doctors will file the chart back into the “Charts review” folder
 16. The charts in the “Charts review” folder will be review by the SPIs within a month for training proposes.
 17. Once the chart has been review by all the SPIs, the chart will be file and will be send to Iron Mountain.
- Food poisoning process
Cases that involved food poisoning in a local establishment (E.g. food that was bought in a restaurant, Pizza place, corner hotdog etc.) need to be notified to the Department of Agriculture and Fisher. The following are the steps that are followed after the Poison Information Call Form is filled:
 1. The SPIs will fill out the DOAF/Public Health Services/Poison Control Food Borne Event Report form.
 2. The SPIs will fax the DOAF form to the Department of Agriculture and Fisher.
 3. The DOAF form is attached to the chart
 4. If the chart doesn’t require medical consultant review and doesn’t need to be follow-up, the chart will be file
 5. Once the chart is file, it will be send to Iron Mountain
 - Follow up process
If a call need to be follow up, the SPIs will fill out the “follow-up at” field with the time when the patient need to be call.
 1. If the SPI who receive the call is not doing the follow up, she will write a note with her comments about the case and stick it to the chart.
 2. If the patient was admitted to the hospital, the SPIs will call the nurse who is in charge of looking after the patient after 4 hours of admission according to some protocol. The patient’s health condition will be documented in the notes sections. The SPIs will write down the “date” and “time” when the follow up start and also the time spent on follows ups. The “follow up at” box will be check out. (See referrals to IWK emergency department or other hospitals)
 3. If there is a need of a new follow up, the SPI who has done the last follow up call will write down the next follow up time in the “follow-up at” field.
 4. If a Physician needs to be consulted the SPI will follow the “Medical Consultant require” process, if not.
 5. If knowing patient’s health outcomes the follow ups will stop
 6. Before the chart is close, the SPI will refer to the follow ups notes, add the minutes spend in each follow up and write it down in “Follow-up” field, page 2 of “Poison information call” form for statistical purpose.

7. Once the chart is close the SPI will file the chart in the “completed charts” dwarfs. The SPIs will place the chart in the folder that corresponds to the months and day when the chart was close.
- Plant & Berry Identification guide
In the cases when it is necessary to identify a kind of plants, flowers, leaves and berries, the SPIs will do the following:
 1. The SPIs will fill out the Plant & Berry identification guide
 2. After the form is fill out, the SPIs will search a plant or berry with the characteristics collected in the Plant & Berry form, using google image, books and photos.
 3. Once the plant or berry has been identified, comments will be documented in the “Poison information call” form
 4. If the chart doesn’t required medical consultant review or further follow-ups, it will be file.
 5. Once the chart is file it will be send to Iron Mountain.
 - Educational material process
For every call where the SPIs will send out educational package such as pamphlets the following task need to be complete:
 1. Fill the Poison Prevention Program Request form
 2. If the request is for five people or less the SPIs will organize the parcel
 3. The administrative assistant will send the parcel out by mail
 4. The administrative assistant will mail the poison prevention form to child safety link (IWK department)
 5. If the request is for more than five people, the administrative assistant will mail the poison prevention form to child safety link (IWK department)
 6. Child safety link department will mail the parcel.

APPENDIX V

Sample of IWK Regional Poison Centre list of staff

Staff	Accreditation s	Position at Poison Centre	Contact Info
Eileen Gillespie	RN, SPI	Clinical Leader	eileen.gillespie@iwk.nshealth.ca

Sample of the hospital database

membership	ctr	Name	address	city
ACTIVE	002	Annapolis Community Health Centre	821 St. George Street, PO Box	Annapolis Royal
ACTIVE	002	St. Martha's Regional Hospital	25 Bay Street	Antigonish
ACTIVE	002	Victoria County Memorial Hospital Western Kings Memorial Health Centre	30 Old Margaree Rd, PO Box 220	Baddeck
ACTIVE	002	South Shore Regional Hospital	121 Orchard Street, PO Box 490	Berwick
ACTIVE	002	Eastern Memorial Hospital	90 Glen Allan Drive	Bridgewater
ACTIVE	002	Sacred Heart Hospital	1746 Union Street, PO Box 10	Canso
ACTIVE	002	Digby General Hospital	15102 Cabot Trail, PO Box 129	Cheticamp
ACTIVE	002	Glace Bay Health Care Facility	75 Warwick Street	Digby
ACTIVE	002	Guysborough Memorial Hospital	300 South Street	Glace Bay
ACTIVE	002		10560 Route 16, PO Box 170	Guysborough

state	zip	phone	er_phone	fax_number	speed_dial	county	no_of_beds	code_no
NS	B0S1A0	9025322381	EXT 120	9025322112		NS	6	0201
NS	B2G2G5	9028632830	9028674229	9028674432		NS	90	0401
NS	B0E1B0	9022952112		9022953432		NS	12	0454
NS	B0P1E0	9025383111		9025389590		NS	0	1201
NS	B4V3S6	9025434603	9025275216	9025435167		NS	80	0102
NS	B0H1H0	9023362614		9023362227		NS	8	0403
NS	B0E1H0	9022244000		9022242903		NS	10	0456
NS	B0V1A0	9022452501	9022451303	9022456969		NS	20	0153
NS	B1A1K9	9028495511	9028422820	9028422873		NS	74	0452
NS	B0H1N0	9025333702		9025334066		NS	10	0404
NS	B0E1N0	9022582100	9022581900	9022583609		NS	32	0457

Comments

PKey

ER Phone: (902) 532-2381 ext. 120. MD on-call 24 hours/day; 7days/week. Lab services available: 24 hours/day

website: <http://www.annapolisroyal.com/healthcentre.htm>

ICU Phone: (902) 867-4211. ER Fax: (902) 867-4432. ICU Fax: (902) 867-4401. ER Physician in-house: 24 hours/day; 7days/week. Lab services available: 24 hours/day

MD on-call: 24 hours/day. Lab services available: 24 hours/day

website: http://www.cbdha.nshealth.ca/H_baddeckvictoriacouty.html

Outpatient services: 0800-2200 weekdays & 1000-1800 weekends. Lab services available: 0700-1000 weekdays only. website: <http://www.avdha.nshealth.ca/wkm/>

7

8

9

10

APPENDIX VI

Mapping between paper based form and VDL

Category	Field Name	VDL Category	VDL Screen
Caller Status	Caller_Name	Caller Information	Caller Name
Caller Status	Caller_Phone_Number	Caller Information	Caller Phone
		Caller Information	Hospital
		Caller Information	ER Phone
		Caller Information	PMD
		Caller Information	PMD Phn
Caller Status	County and Province	Patient Information	County
Caller Status	Province	Patient Information	State
		Patient Information	City
Caller Status	Patient Name	Patient Information	Patient
Caller Status	Other_Phone_Number	Patient Information	Patient Phone
Caller Status	Date_of_Call	Date/time of call	Date/time of call
Caller Status	Time_of_Call		
Caller Status	Public	Caller Information	Relation
Caller Status	Professional	Caller Information	Relation
Caller Status	Other	Caller Information	Relation
Age	Age	Patient Information	Age
		Patient Information	YR
Weight	Weight_lbs	Patient Information	Lbs
Weight	Weight_kgs	Patient Information	Kgs
Sex	Sex	Patient Information	Sex
Patient Data	Route_of_Exposure_Oral	Route and Scenarios	Route(s) Coding/ Ingestion
Route	Route_of_Exposure_Dermal	Route and Scenarios	Route(s) Coding/Dermal
Route	Route_of_Exposure_Ocular	Route and Scenarios	Route(s) Coding/Ocular/eye
Route	Route_of_Exposure_Inhalation	Route and Scenarios	Route(s) Coding/Inhalation
Route	Route_of_Exposure_Parenteral	Route and Scenarios	Route(s) Coding/Parenteral
Route	Route_of_Exposure_Unknown	Route and Scenarios	Route(s) Coding/Route unknown
Route	Route_of_Exposure_Bites_and_Stings	Route and Scenarios	Route(s) Coding/Bite/Sting
Route	Route_of_Exposure_Other	Route and Scenarios	Route(s) Coding/Rout other
Circumstance	Circumstance_Unintentional	Nature of Call	Reason
Circumstance	Circumstance_Intentional	Nature of Call	Reason
Location	Site_of_Exposure	Nature of Call	Exposure site
Location	Caller	Nature of Call	Caller site
Type of Call	Type_of_Call	Nature of Call	Call type
Type of Call	Type of Call Exposure	Nature of Call	Call type
Type of Call	Type_of_Call_Info	Nature of Call	Call type
		Nature of Call	Info Sub Category
		Nature of Call	HCF Code

Medical History	Pertinet Medical History None	Hystory Free Areas	NOT BREAK DOWN ??
Medical History	Pertinet Medical History Yes-Specify	Hystory Free Areas	NOT BREAK DOWN ??
Medical History	Medical_History_Pregnant	Hystory Free Areas	NOT BREAK DOWN ??
Medical History	Medical_History_Pregnant_Weeks	Hystory Free Areas	NOT BREAK DOWN ??
Medical History	Medical_History_Pregnant_Months	Hystory Free Areas	NOT BREAK DOWN ??
Medications	Medications_None	Hystory Free Areas	NOT BREAK DOWN ??
Medications	Medications_Yes-Specify	Hystory Free Areas	NOT BREAK DOWN ??
Allergies	Allergies_none	Hystory Free Areas	NOT BREAK DOWN ??
Allergies	Allergies_yes-Specify	Hystory Free Areas	NOT BREAK DOWN ??
Products	Class	Substance(s)(4)	Prod Code
Products	Product/Ingredients	Substance(s)(4)	Substance
Products	Strength	Substance(s)(4)	F
Products	Amount	Substance(s)(4)	Qty/ Kg Calc
Products	Total Dose	Substance(s)(4)	Qty
Products	Mg/Kg	Substance(s)(4)	Units
Products	package_info_N/a		
Products	package_info_original		
Products	package_info_child_resistant_cap	Route and Scenarios	
Products	package_info_warning_symbol		
Products	container_available		
Symptoms	Neuromuscular_Agitation/Irritability	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Ataxia	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Coma	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Confusion	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_CVA	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Dizziness/Vertigo	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Drowsiness/Lethargy	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Dystonia	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Encephalopathy	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Euphoria/Intoxication	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Fasciculations	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Hallucinations/Delusions	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Headache	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Hyperreflexia	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Hyporeflexia	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Insomnia	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Intracranial_Bleed	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Muscle/Joint_Pain	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Muscle_Rigidity	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Muscle_Weakness	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Numbness	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Paralysis	Symptoms(6)/GI/Neuro/Cardio	Neurological

Symptoms	Neuromuscular_Peripheral_Neuropathy	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Rhabdomyolysis	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Seizure	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Seizures_Repeated(status)	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Slurred_Speech	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Stuporous	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Syncope	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Tremor/Twitching	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Pain	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Neuromuscular_Other_Details	Symptoms(6)/GI/Neuro/Cardio	Neurological
Symptoms	Gastro_Abdominal_Pain	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Anorexia	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Blood_Per_Rectum	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Constipation	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Melena	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Nausea	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Hypersalivation	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Excess_Secretions	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Dehydrations	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Diarrhea	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Dry_Mouth	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Dysphagia	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Esophageal_Injury/Stricture	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Fecal_Incontinence	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Gastric_Burns	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Gas/Bloating	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Hematemesis	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Gastro_Ileus/No_Bowel_Sounds	Symptoms(6)/GI/Neuro/Cardio	
Symptoms	Respiratory_Airflow_Obstruction	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Bronchorrhea	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Bronchospasm	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Coughing/Respiratory_Tract_Irritation	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Cyanosis/Hypoxemia	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Dyspnea	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Excess_Secretions(Respiratory)	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Hyperventilation/Tachypnea	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Pneumonitis(Chemical)	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Pulmonary_Edema(Cardiogenic)	Symptoms(6)/Dermal/Ocular/Resp/Mis	
Symptoms	Respiratory_Pulmonary_Edema(Non-Cardiogenic)	Symptoms(6)/Dermal/Ocular/Resp/Mis	

Symptoms	Respiratory_Respiratory_Arrest	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Respiratory_Respiratory_Depression	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Respiratory_X-ray_Findings(+)	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Respiratory_Pain	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Respiratory_Other_Details	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Cardio_Bradycardia	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Chest_Pain_(Include_Non-cardiac)	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Conduction_Disturbance/ECG_Change	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Dysrhythmia	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Hypertension	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Hypotension	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Shock	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Tachycardia	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Pain	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Cardio_Other_Details	Symptoms(6)/GI/Neuro/Cardio
Symptoms	Dermal_Blister/Bullae	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Dermal_Burns_(Superficial)	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Dermal_Burns_2nd_&_3rd_Degree	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Diaphoresis	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Ecchymosis/Bruising	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Edema/Local_Inflammation/Cellulitis	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Erythema/Flushing	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Irritation/Pain	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Necrosis	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Pallor	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Pruritis	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Puncture_Wound/Sting/Bite	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Rash/Hives/Welts	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Pain	Symptoms(6)/Dermal/Ocular/R esp/Mis
Symptoms	Dermal_Other_Details	Symptoms(6)/Dermal/Ocular/R esp/Mis
Assessment	Asymptomatic	
Assessment	Unknown	
Assessment	Symptomatic Related to Exposure	

Assessment	Symptomatic Unrelated to Exposure		
Assessment	Symptomatic Unknown if Related		
Further History	Time_Since_Exposure_Other_Details	Patient Information	Time since
Further History	Circumstance_Details	History note	
Follow-up at		Follow up information	Date/time of Next F/U
		Follow up information	F/U Comment
		Follow up information	Follow up Acuity
		Follow up information	QA Notes
Consultant	Medical consultant	Consult	Consult
		Consult	Consult contacts
		Consult	Primary consultant
		Consult	Secondary consultant
Consultant	Called at		
Consultant	Responded at		
Disposition Recommendation	Disposition_Remain_At	Hospital management	
Disposition Recommendation	Disposition_Remain_At_Other	Hospital management	
Disposition Recommendation	Disposition_Remain_At_Other_Details	Hospital management	
Disposition Recommendation	Disposition_Go_To	Hospital management	
Disposition Recommendation	Disposition_Go_To_Other_Details	Hospital management	
Receiving HCF	Name	HCF Codes	
Receiving HCF	Telephone	HCF Codes	
Receiving HCF	Notified at	HCF Codes	
Management	General_Treatment_Oxygen	Treatment(5)	
Management	Decontamination/Elimination	Treatment(5)	
Management	Decontamination/Elimination_Charcoal_AD	Treatment(5)	Charc-Single Charc-Multi
Management	Decontamination/Elimination_MDAC_AD	Treatment(5)	
Management	Decontamination/Elimination_Lavage_AD	Treatment(5)	Lavage
Management	Decontamination/Elimination_Cathartic	Treatment(5)	Cathartic
Management	Decontamination/Elimination_Ipecac	Treatment(5)	Ipecac
Management	Decontamination/Elimination_Eye Irrigation	Treatment(5)	
Management	Decontamination/Elimination_Oral Rinse	Treatment(5)	
Management	Decontamination/Elimination_Skin Irrigation	Treatment(5)	
Management	Decontamination/Elimination_Skin Irrigation_Details	Treatment(5)	
Management	Decontamination/Elimination_Hemodialysis/Hemoperfusion	Treatment(5)	
Management	Diagnostics	Treatment(5)	
Management	Diagnostics_Medical Assessment	Treatment(5)	
Management	Diagnostics_EKG	Treatment(5)	
Management	Diagnostics_EKG_Serial	Treatment(5)	

Management	Diagnostics_Cardiac_Monitor	Treatment(5)	
Management	Diagnostics_O2_Sat_Monitor	Treatment(5)	
Management	Diagnostics_X-ray_Foreign_Body_Search	Treatment(5)	
Management	Diagnostics_X-ray_Chest	Treatment(5)	
Management	Diagnostics_X-ray_Abdomen	Treatment(5)	
Management	Diagnostics_Endoscopy	Treatment(5)	
Management	Diagnostics_Ph	Treatment(5)	
Management	Diagnostics_Ph_Urine	Treatment(5)	
Management	Diagnostics_Ph_Tears	Treatment(5)	
Management	Diagnostics_ASA	Treatment(5)	
Management	Diagnostics_APAP	Treatment(5)	
Management	Diagnostics_Lytes	Treatment(5)	
Management	Diagnostics_Gases	Treatment(5)	
Management	Diagnostics_LFT	Treatment(5)	
Management	Diagnostics_RFT	Treatment(5)	
Management	Diagnostics_Glucose	Treatment(5)	
Management	Diagnostics_PT/PTT	Treatment(5)	
Management	Diagnostics_INR	Treatment(5)	
Management	Diagnostics_CBC	Treatment(5)	
Management	Diagnostics_U/A	Treatment(5)	
Management	Life Support	Treatment(5)	
Management	Life Support_Intubation/Ventilation	Treatment(5)	
Management	Specific_Antidotes	Treatment(5)	
Management	Specific_Antidotes_Atropine	Treatment(5)	
Management	Specific_Antidotes_Bicarb	Treatment(5)	
Management	Specific_Antidotes_Calcium	Treatment(5)	
Management	Specific_Antidotes_Chelation	Treatment(5)	
Management	Specific_Antidotes_Chelation	Treatment(5)	
Management	Specific_Antidotes_Chelation_Details	Treatment(5)	
Management	Specific_Antidotes_Cyanide Kit	Treatment(5)	
Management	Specific_Antidotes_Cyanide Kit	Treatment(5)	
Management	Specific_Antidotes_Cyanide Kit	Treatment(5)	
Management	Specific_Antidotes_Cyanide Kit_Hydroxocobalamine	Treatment(5)	
Management	Specific_Antidotes_Digibind	Treatment(5)	
Management	Specific_Antidotes_Digibind_Details	Treatment(5)	
Management	Specific_Antidotes_Ethanol	Treatment(5)	Ethanol
Management	Specific_Antidotes_Ethanol_Oral	Treatment(5)	Ethanol
Management	Specific_Antidotes_Ethanol_Oral_Details	Treatment(5)	Ethanol
Management	Specific_Antidotes_Ethanol_IV	Treatment(5)	Ethanol
Management	Specific_Antidotes_Ethanol_IV_Details	Treatment(5)	Ethanol
Management	Specific_Antidotes_Flumazenil	Treatment(5)	Flumazenil
Management	Specific_Antidotes_Folic_Acid	Treatment(5)	
Management	Specific_Antidotes_Fomepizol	Treatment(5)	Fomepizol
Management	Specific_Antidotes_Glucagon	Treatment(5)	
Management	Specific_Antidotes_Hyperbaric_Oxygen	Treatment(5)	
Management	Specific_Antidotes_Insulin	Treatment(5)	

Management	Specific_Antidotes_Leukovorin	Treatment(5)	
Management	Specific_Antidotes_Methylene_Blue	Treatment(5)	
Management	Specific_Antidotes_NAC_n-actcysteine	Treatment(5)	
Management	Specific_Antidotes_Naloxone	Treatment(5)	
Management	Specific_Antidotes-Octreotide	Treatment(5)	
Management	Specific_Antidotes_Physostigmine	Treatment(5)	
Management	Specific_Antidotes_Pralidoxime(2-PAM)	Treatment(5)	
Management	Specific_Antidotes_Protamine_Sulfate	Treatment(5)	
Management	Specific_Antidotes_Pyridoxine(Vitamin_B6)	Treatment(5)	
Management	Specific_Antidotes_Other_Details	Treatment(5)	
Management	Specific_Antidotes_Vitamin_K_(Phytonadione)	Treatment(5)	
Management	Other_Drugs_	Treatment(5)	
Management	Other_Drugs_Acetaminophen	Treatment(5)	
Management	Other_Drugs_Antihistamine	Treatment(5)	
Management	Other_Drugs_Benzodiazapine	Treatment(5)	
Management	Other_Drugs_Benztropine(Cogentin)	Treatment(5)	
Management	Other_Drugs_Cyproheptadine	Treatment(5)	
Management	Other_Drugs_Ibuprofen	Treatment(5)	
Management	Other_Drugs_Polysporin	Treatment(5)	
Management	Other_Drugs_Tetanus	Treatment(5)	
Management	Other_Drugs_Thiamine	Treatment(5)	
Management	Other_Drugs_	Treatment(5)	
Management	Other_Drugs_	Treatment(5)	
Disposition_Outcome	Highest_level_of_Care_Received_Home	Patient management flow	Patient flow
Disposition_Outcome	Highest_level_of_Care_Received_Office/Clinic	Patient management flow	Patient flow
Disposition_Outcome	Highest_level_of_Care_Received_ER	Patient management flow	Hospital flow
Disposition_Outcome	Highest_level_of_Care_Received_Ward	Patient management flow	Hospital flow
Disposition_Outcome	Highest_level_of_Care_Received_ICU	Patient management flow	Hospital flow
Disposition_Outcome	Highest_level_of_Care_Received_Unknown	Patient management flow	Patient flow
Disposition_Outcome	Highest_level_of_Care_Received_Other	Patient management flow	Patient flow
Disposition_Outcome	Patient_Transfer_Clinic_Office_to_ER	Patient management flow	
Disposition_Outcome	Patient_Transfer_Local_HCF_to_Hospital	Patient management flow	
Disposition_Outcome	Patient_Transfer_Home_Mgmt_later_PIC_adv_trns_ER	Patient management flow	
Disposition_Outcome	Transportation_Car	911 hazmat	
Disposition_Outcome	Transportation_Air_Evac	911 hazmat	
Disposition_Outcome	Transportation_Ambulance	911 hazmat	

Disposition_Outcome	Transportation_Other	911 hazmat
Disposition_Outcome	Tranportation_Unknown	911 hazmat
Disposition_Outcome	Medical_outcome	Outcome/Misc Flags
Disposition_Outcome	Medical_outcome_follow-up	Outcome/Misc Flags
Disposition_Outcome	Resources_used	
Statistics	# of minutes initial call	Crystal reports
Statistics	follow_up_required	Crystal reports
Statistics	follow_up_time	Crystal reports
Statistics	research/charting_time	
Statistics	Direct Pt. Care	Crystal reports
Statistics	Total time spend in the chart	Crystal reports
Statistics	# of fax sent	
Statistics	# of pkg sent	Crystal reports
Statistics	teaching	Crystal reports
Statistics	Signature SP1	SPI's code
Statistics	Signature SP2	SPI's code
Statistics	Reviewed by	Reviewer code

APPENDIX VII

Poison Centre Information Technology Survey

The following survey is confidential. Please return this survey in a closed envelope to Patricia Figueredo.

Please complete the following survey to assist us in better understanding the support needs required to maximize use of the new documentation system VDL.

For each item below, choose **Yes** if you understand the concept or can perform the task with confidence. Answer, **Somewhat** if you understand the concept but can perform the task with minimal confidence. Choose, **No** if you do not understand the concept or cannot perform the task.

Operating System- Windows XP+Novell	Yes	Somewhat	No
Use the mouse to open an icon			
Resize a window			
Close a window			
Use the scroll bar to view contents of a window			
Go from one window to another			
Work with pull down menus			
Turn up or down the volume on your desk top			
Locking your computer			
Unlocking your computer			
Stopping windows XP			
Stopping a program			
Starting another program			
Turn up or down the volume on your desk top			
Change your screen saver			
File Options	Yes	Somewhat	No
Save a file			

Print a file			
Create a duplicate file in another folder or drive			
Search for a file or folder using the <i>Find</i> command			
Delete a file			
Create a folder			
Internet Navigation	Yes	Somewhat	No
Identify the browser on your computer			
Identify the location/address window for a URL			
Use a search engine			
Go to the home page			
Create and organize (in folders) bookmarks or favorites			
Download a file from the internet			
Group Wise	Yes	Somewhat	No
Send an email			
Send an email with an attachment			
Open an email with an attachment			
Save an attachment from an email			
Create a folder in Group Wise			
Save an email to your folder			
Deleting an email from your folder			
Access the contact list			
Create a new contact in the contact list			
Send an email to a person from my contact list			
Delete contacts			
Create a signature			

Accessing the calendar			
Create and Post appointments			
Sending appointment invitation			
Display calendar by day, week, month			
Text editor (e.g. word document, WordPad, notepad, WordPerfect)	Yes	Somewhat	No
Cut and Paste a word, sentence or paragraph			
Copy and Paste a word, sentence or paragraph			
Find a “word” or “sentence” through a document			
Change font size and select different font			
Use the tab key			
Undo and Redo a typing			
Highlighting text			
Placing the cursor			
Starting a new paragraph			
Typing an using the backspace key			
The delete key			
Inserting text			
Save a file			
Close a file			
Open a new file			
Print a document			

Please leave in **“Poison center incoming”** box on clinical leader’s office
Thank you very much