HAWAII INFORMATION CONSORTIUM

AMENDMENT I

STATEMENT OF WORK

DEPARTMENT OF HEALTH
OFFICE OF HEALTH STATUS MONITORING

HAWAII ELECTRONIC DEATH REGISTRATION SYSTEM
VIOLENT DEATH REPORTING

Version 1.5

DOH-20160816

HAWAII INFORMATION CONSORTIUM

OVERVIEW

This is an amendment to the Statement of Work (SOW) document entitled Electronic Death Registration System dated on February 11, 2005 and signed by Alvin Onaka Ph.D., State Registrar, for the Department of Health (DOH), Office of Health Status Monitoring (OHSM) "PARTNER" and Dan Morrison, General Manager, for the Hawaii Information Consortium, LLC (HIC).

The purpose of this document is to include the addition of the violent death reporting module (VDR).

BACKGROUND

State of Hawaii has always been a leader in vital statistic reporting and the use of technology to improve reporting accuracy and speed. The Hawaii Electronic Death Registration System (EDRS) was implemented as one of the nation's first back in 2006. It has won the 2007 Digital Government Achievement Award regarding improving the timeliness and accuracy of processing and registering all deaths in the State of Hawaii that involves Hawaii mortuaries, the medical examiner on Oahu, law enforcement agencies and coroner physicians on the neighbor islands.

The Center for Disease Control (CDC) has established National Violent Death Reporting System (NVDRS). State of Hawaii Department of Health has been awarded a CDC federal grant to improve timeliness and accuracy of violent death information through use of their NVDRS

Currently DOH gathers case information from the EDRS. Case information are be received through a direct, secure Internet electronic data transfer process from the medical examiner's Quincy System, or by manual data entry from he Coroner's Physician's system from the neighbor islands. Hawaii NVDRS information is then manually entered into the online CDC NVDRS system.

One major goal in this project is to automate this transfer of Hawaii VDRS information and increase accessibility of Hawaii VDRS to key stakeholders such as the ME, Coroner Physicians, law enforcement, and DOH that is currently not available with on the CDC NVDRS. Implementation of a Hawaii VDRS will provide this access and increase long term sustainability of violent death reporting in the State of Hawaii when federal grant funds run out.

As stated the addition of the Hawaii VDRS which is a modification and enhancement to the Hawaii EDRS, is to improve the timeliness and accuracy of reporting violent deaths (CDC defined as murder or suicides) that DOH envisions to be utilized by law enforcement agencies in Hawaii, the medical examiner and the coroner physicians, in addition to research purposes to better analyze suicides and homicides in the State of Hawaii, so that the local and state agencies can better address the growing suicide problem in the State of Hawaii.

Public will also benefit as it improves timeliness and accuracy for the registration of non-natural (ex. violent) neighbor island deaths, that will result to improvement in the ability for DOH to provide certified copies of death and timeliness of approving disposition permits needed to bury, cremate or remove a body out of the State of Hawaii. (i.e. a visitor who dies in Hawaii)

SCOPE STATEMENT

The scope and requirements for this project have been defined by DOH in their document NVDRS Requirements Detail 07-27-16_DRAFT.pdf, which is attached hereto as Attachment A ("Preliminary SRS"). HIC has relied on the content of that document in preparing the schedule and cost estimates provided herein.

In addition, EDRS will be modified with the following:

1. â Modification of the direct data transfer from the ME Quincy system to EDRS to include additional death related information elements.
2. â Modify EDRS to allow neighbor island coroner physician system to securely and electronically transfer cause of death information to DOH.

It is recommended that this project be conducted in phases: Phase 0, Phase 1, Phase 2, and Phase 3 as defined below:

Phase 0 = Preparation of final design specification
Phase 1 = System Construction, Implementation, and Testing
Phase 2 = Pilot Implementation and Testing; Debugging, User Feedback, Final Modifications
Phase 3 = System Launch and Maintenance

In Phase 0, HIC will work with DOH to prepare the final System Requirements Specification (SRS) for the system. This will include use cases, technical requirements, external integrations, and user interface design requirements.

Phase 1 will encompass system construction, implementation, and unit testing. At the conclusion of Phase1, the VDRS will be ready for pilot implementation and end-user testing. We will employ the JIRA project tracking and bug reporting system in Phase 1 and subsequent phases.

In Phase 2, HIC will support DOH in end-users in testing the pilot implementation of system if needed.

In Phase 3, the completed and approved system will be launched, monitored, and maintained.

The activities to be undertaken in Phases 1 –3 will be further defined during Phase 0. Upon delivery of Phase 0, HIC and DOH will review the requirements for Phases 1-3 and the resources that will be required for HIC to accomplish the tasks in a timely manner. A revised cost estimate, if necessary, for Phases 1 – 3 will be provided to DOH after the Phase 0 requirements are documented in the SRS and approved by DOH. When the SRS is approved and the revised cost estimate is accepted by DOH, then the SRS and cost estimate will be appended to this Statement of Work as an Amended Scope Statement, subject to approval of the Access Hawaii Committee.

The following criteria must be satisfied before proceeding with Phases 1 - 3: 1) The Phase 0 SRS is accepted by DOH as defined above, and 2) the revised cost estimate is provided by HIC and accepted by DOH if necessary. The parties will negotiate in good faith to reach agreement on those matters.

DELIVERABLES

Deliverables based on the project phases:

- Statement of Work – Project Kick Off
- System Requirements Specification (SRS) – Phase 0
- Functional application deployed in TEST environment – Phase 1
- Functional application deployed in PROD environment – Phase 2

PROJECT DEVELOPMENT COSTS

The project has a fixed price project based on the definition of requirements provided in the Preliminary SRS (Attachment A).

Tasks	Resource	Rate	Hours	Amount
Phase 0				
Requirement Gathering & Documentation	Project Manager	$80.00	163	$13,040.00
UI Design	Designer	$60.00	80	$4,800.00
System Design	Software Architect	$120.00	24	$2,880.00
				$20,720.00
Phase 1				
System Development & Testing	Senior Developer	$100.00	360	$36,000.00
Project Management	Project Manager	$80.00	100	$8,000.00
Internal Testing	Project Manager	$80.00	120	$9,600.00
Project Oversight	Senior Project Manager	$120.00	20	$2,400.00
				$56,000.00
Phase 2				
Project Coordination	Project Manager	$80.00	20	$1,600.00
System Modification & Testing	Senior Developer	$100.00	40	$4,000.00
Project Oversight	Senior Project Manager	$120.00	4	$480.00
				$6,080.00
Subtotal				$82,800.00
Tax		4.71%		$3,900.00
Total				$86,700.00

The System Requirements Specification (SRS) will not be finalized until the end of Phase 0, and will include a complete and accurate definition of the scope of work, explicitly defined technical requirements, and clearly defined management requirements. The business analysis approach of Phase 0 will be key to a successful end result in which the quality, schedule and cost objectives of the project are met. The detailed preparation of the SRS will help ensure that the scope of the contract is well defined and the potential for significant changes is very low.

Disbursement Schedule:

The total amount of compensation payable to HIC for services provided under this Statement of Work shall not exceed $86,700 unless amended in writing with the consent of both parties.

At the completion of Phase 0, in the event that HIC determines that compensation may exceed the amounts set forth above, HIC shall immediately notify OSHM in writing and obtain prior written approval from OSHM (including written amendment as provided in this SOW) to perform and provide services and/or incur out-of-pocket expenses in excess of the amounts set forth above. Absent such prior written approval from DOH/OHSM, HIC shall not be entitled to nor shall HIC receive any monies from DOH/OHSM in excess of the amounts set forth above.

Funds for development shall be disbursed to HIC according to the following schedule.

Event	Description	Amount Due
Delivery of the TEST system	Completion of Phase 0 & 1 and start of Phase 2 user testing (Payment for Phase 0)	$20,720
Acceptance and Launch	Completion of Phase 2 and Launch of the System (Payment for 70% of Phase 1 & 2)	$43,456
30 Days after initial launch	30 Days after deployment to production environment (Payment for 30% of Phase 1 & 2 + Tax)	$22,524
	TOTAL	$86,700

In the event if DOH accepts the SRS and elects to use a third party vendor to develop and host the system, HIC shall be compensated in full for the completion of Phase 0 in the amount specified above in the disbursement schedule.

SCHEDULE ESTIMATES

The project will be carried out according to a Milestone Schedule, which will be agreed upon by HIC and PARTNER. It is understood that the milestones and timeline below are estimated, and may be changed to accommodate new requirements of PARTNER or HIC, or to comply with guidance received by HIC from the Access Hawaii Committee, or be extended by the delay in signing of the Statement of Work. All time estimates can be extended if mutually agreed upon.

Milestone Schedule		
Estimated Completion	**Description**	**Deliverable**

Date		
09/20/2016	Complete Statement of Work	Signed SOW
11/2016	Complete Functional and Requirement Definition	System Requirements Specification (SRS)
09/2017	Application Testing	Application deployed in TEST environment
11/2017	Application Launch	Application deployed in PROD environment

TERM OF AGREEMENT

This Agreement will remain in force until such time as PARTNER and/or HIC decides to terminate it with 90 days written notice to the other party.

SOFTWARE DEVELOPMENT PROCESS

The following outline explains the steps in the HIC software development process that will be followed during the course of this project.

STAGE 1 – PROJECT DEFINITION – INFORMATION GATHERING

- Gather information on PARTNER business practices
- Gather information on end user needs and preferences
- Gather information on existing information systems used
- Document PARTNER's functional requirements of the system

STAGE 2 – PROTOTYPE and SPECIFICATION

- Design the user interface
- Develop a prototype that simulates the flow and functionality of the application
- Review the prototype with PARTNER and make changes as necessary
- Write the System Requirements Specification (SRS) document
- Obtain PARTNER sign-off on the SRS prior to Application Development

STAGE 3 - APPLICATION DEVELOPMENT

- Create system design
- Code the application
- Write technical documentation as needed
- Test in conjunction with PARTNER
- Obtain PARTNER sign-off prior to application launch

STAGE 4 – APPLICATION LAUNCH

- Produce and disseminate press releases as needed
- Produce and disseminate operations/user manual and/or marketing materials as needed
- Launch application in production environment

STAGE 5 - APPLICATION MAINTENANCE

- Implement "bug" fixes

- Enable online feedback form for all users
- Manage and respond to customer feedback

STAKEHOLDERS

Department Of Health

Office of Health Statistic & Monitoring

1250 Punchbowl Street

Honolulu, HI 96813

Hawaii Information Consortium, LLC

201 Merchant Street Suite 1805

Honolulu, HI 96813

CHAIN OF COMMAND

Department of Health

Virginia Pressler, Director

Keith Yamamoto, Deputy Director

Alvin Onaka, State Registrar

Brian Pang, Project Manager

Hawaii Information Consortium, LLC

Russell Castagnaro, General Manager

Teri Berschneider, Director of Portal Operations

Zheng Fang, Director of Development

Jing Xu, Partner Liaison

SIGN OFF

I, the undersigned, have the authority to make binding decisions on behalf of my respective agency/department regarding projects in collaboration with HIC.

I also have the authority to allocate agency/department resources towards the above-described project.

I have read the above document and understand all implications thereof. Any future changes to this Statement of Work will be made through a formal request to the HIC General Manager.

By signing, I acknowledge that the project described herein has received any required legal reviews and is in compliance with current State of Hawaii statutes and administrative rules.

Date: 9/26/16

Alvin Onaka, PhD
State Registrar
DOH, OHSM

Russell Castagnaro
General Manager
Hawaii Information Consortium, LLC

Date:

Todd Nacapuy
Chairperson
Access Hawaii Committee

ATTACHMENT A

HAWAII VIOLENT DEATH REPORTING SYSTEM (VDRS)
Requirements Detail (DRAFT)

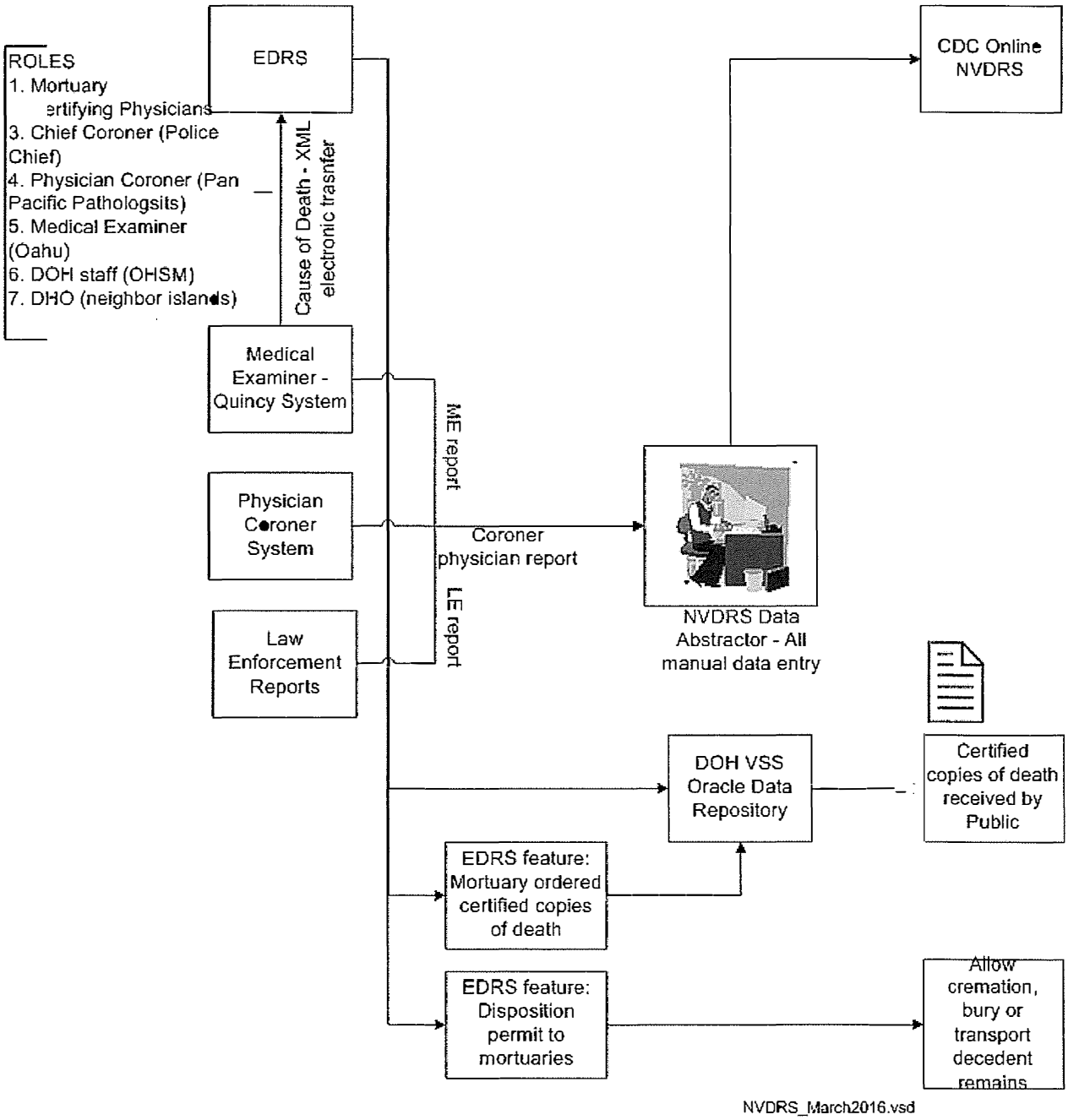
Req. #		Requirement	References
1.0		***Hawaii VDRS***	
1.1		***Physical location and access*** The Hawaii VDRS shall reside with Ehawaii.Gov and could be considered a subset of the Hawaii Electronic Death Registration System (EDRS), however user access to VDRS will have different users and roles but there will be some DOH staff that will have access to both EDRS and VDRS. VDRS like EDRS will have external users and will be roles based with different user's access to the system and functions. Proposed URL address is https://hivdrs.ehawaii.gov	
	1.1.1	***Data structure of the Hawaii VDRS*** • The HI VDRS will consist of the data structure with variables identified in Appendix 1	
	1.1.2	***Relevance of EDRS to VDRS*** • All records in EDRS starting from January 1, 2015 and all current and future records that are violent deaths (i.e. manner of death is either murder or suicide but not accident) shall have key EDRS data fields such as decedent name, DOB, sex, military service, city of death, and cause of death information copied from EDRS to corresponding fields in VDRS. NOTE: Also records with a manner of "Undetermined" will be sent to VDRS as well which could be murder or suicide	•Use cases TBD
	1.1.3	***Data Entry and Review Screens of HI VDRS*** • Data entry screens, navigated through tabs, will be patterned after the online CDC NVDRS data entry and review screens • Error checking will follow already established CDC NVDRS data entry guidelines	•Use cases TBD

Req. #		Requirement	References
2.0		ROLE-BASE USER AUTHORIZATION / AUTHENTICATION SECURITY	
2.1		Access to the system must be tightly controlled. Only authorized users will be able to access the system; and depending on the user's predefined role in processing death information, he/she will be assigned special privileges and allowed access to only certain aspects of the HI VDRS. Each user will sign an agreement, stipulating the security and privacy rules for access to the HI VDRS	TBD
	2.1.1	***Each user will fill out a detailed application with his/her signature, accepting responsibility for his/her user name and password.***	
	2.1.2	***DOH creates/updates facility and user profile.*** • Enter profile information for facility. • Enter profile of user. • Validate authorization number and other information. • Issue user ID and password. • Add/remove user access from the system.	•TBD
	2.1.3	***Authentication procedures for ensuring individual participant's identity.*** • System verifies ID and password of the user against the user profile stored in the	

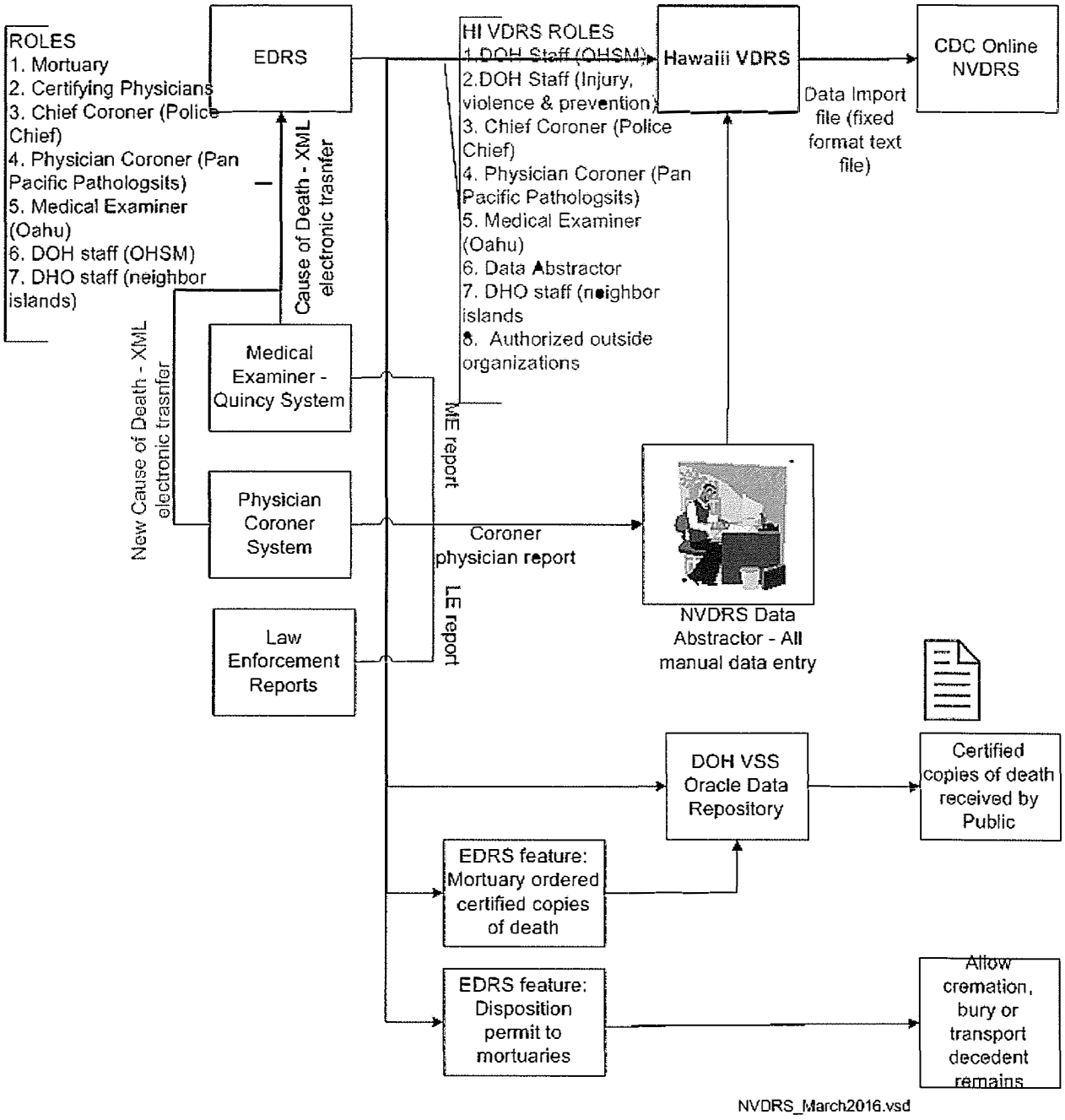
		system. • The user will have a certain number of attempts before the system locks the user ID.	
		Security. • Adhere to accepted industry standards related to security of data transmission and user access. • Must include firewalls and encryption.	•

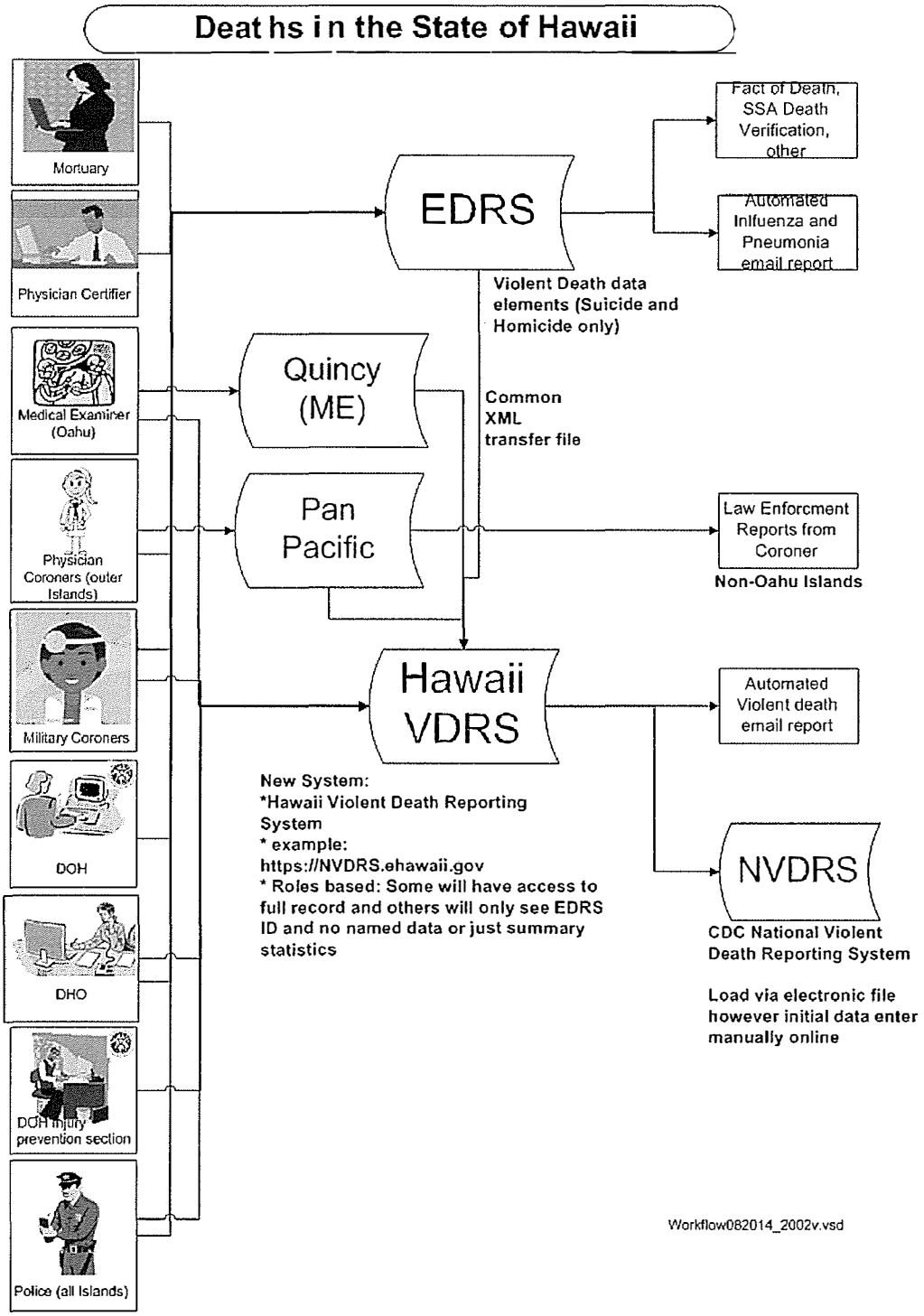
Req. #		Requirement	References
3.0		***DATA QUALITY & EDIT CHECKS***	
3.1		HI VDRS should have comprehensive edit checking capability to ensure the integrity and quality of the data. Adequate online help will be provided to enable users to utilize the system. Variable types and range are specified by the CDC NVDRS data table specifications	• CDC NVDRS data table specifications
	3.1.1	***Mandatory fields that are submitted with no data should be highlighted or reported.*** Allow users who data enter information when they miss information. These are soft edits and will not prevent user from saving data in the record, as long as the data entered meets the specified values. Freeform fields will not have error checking other than that it was completed.	
4.0		***GENERATING FILES AND REPORTS***	
4.1		HI VDRS should be capable of generating files, including import and export capabilities. Exported file can then be imported to the online CDC NVDRS system.	Use case TBD
	4.1.1	***HI VDRS should provide user status reports***	TBD
		NVDRS Requirements Detail 07-27-16.doc	

Current Hawaii EDRS / VDRS Workflow



Proposed New Hawaii EDRS / VDRS Workflow




Deat hs i n the State of Hawaii
Mortuary
Physician Certifier
Medical Examiner (Oahu)
Physician Coroners (outer Islands)
Military Coroners
DOH
DHO
DOH injury prevention section
Police (all Islands)
EDRS
Fact of Death, SSA Death Verification, other
Automated Inlfuenza and Pneumonia email report
Violent Death data elements (Suicide and Homicide only)
Quincy (ME)
Common XML transfer file
Pan Pacific
Law Enforcment Reports from Coroner
Non-Oahu Islands
Hawaii VDRS
Automated Violent death email report
New System:
*Hawaii Violent Death Reporting System
* example: https://NVDRS.ehawaii.gov
* Roles based: Some will have access to full record and others will only see EDRS ID and no named data or just summary statistics
NVDRS
CDC National Violent Death Reporting System
Load via electronic file however initial data enter manually online
Workflow082014_2002v.vsd