



Washington DC Automated Disease Surveillance System (WADSS)

DC Department of Health



Linking Non-Traditional Data to the Washington Automated Disease Surveillance System (WADSS): Poison Control & EMS Data

May 25, 2004



The Problem

No comprehensive approach to surveillance (traditional and non-traditional) data gathering and integration across the Metropolitan Washington, DC area.

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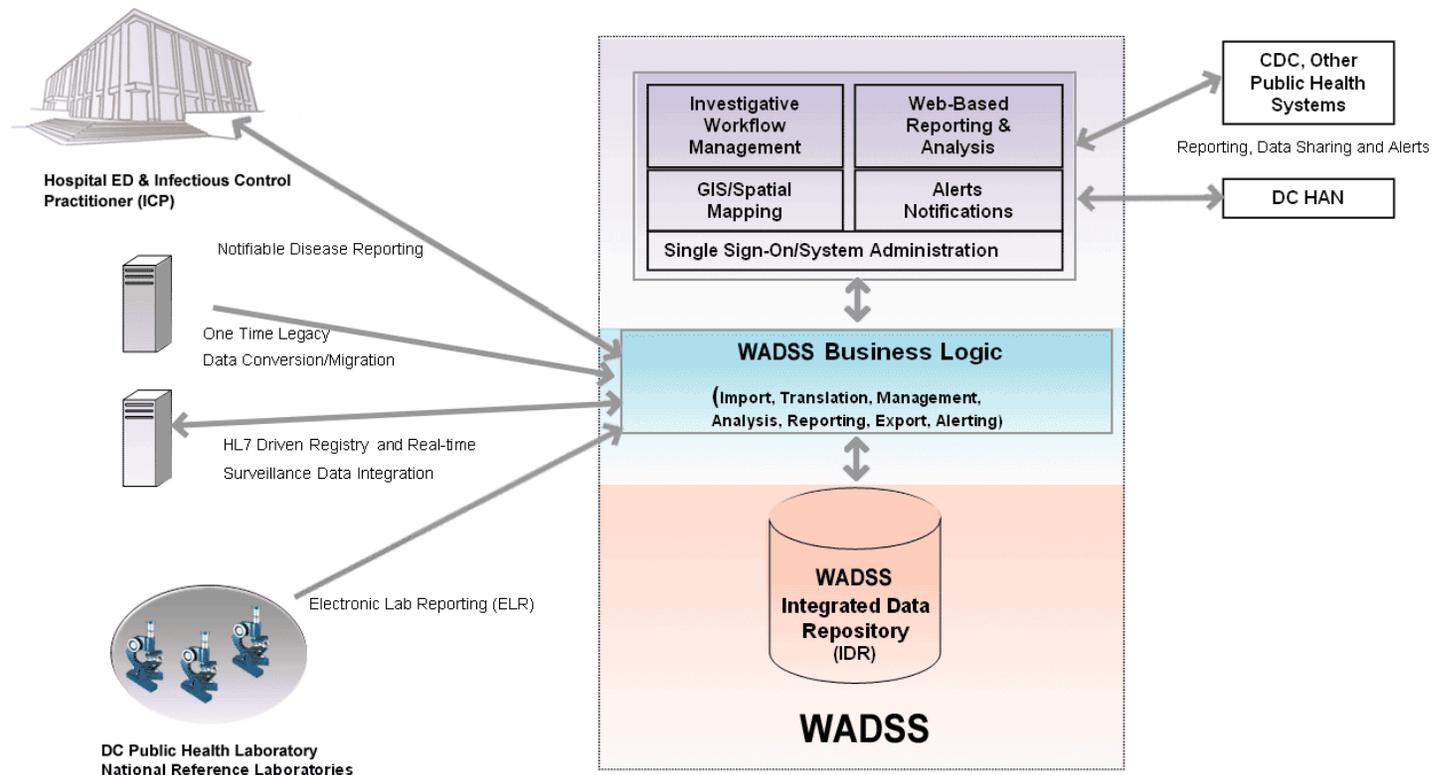
The Solution

Linking sources to the Washington (DC) Automated Disease Surveillance System (WADSS) provides:

- **A secure core repository that supports rapid access to real-time clinical and incident data for analysis and response.**
- **A regional approach producing a regional message via Web-based reporting and information exchange.**
- **The data integration needed to keep everyone from epidemiologists and investigators to First Responders on the same page.**

The Solution Context

WADSS Solution Context



The Objective

Electronically linking such non-traditional data sources as the National Poison Control Center and DC Fire and EMS to WADSS enhances the topicality of the overall crisis and incident management process.

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Fire and EMS Run Data

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- **Date and Incident Number**
- **Dispatch Code**
- **Response Outcome**
- **Patient Destination**
- **Incident Location**
- **Cause of Injury**
- **Prior Aid Witnessed**
- **Past Medical History**
- **Age, DOB, Gender, Ethnicity**

Fire & EMS Run Data

DC Department of Health



- **First Vital Signs**
- **Glascow Coma Scale**
- **CPR, Respiratory, and Perfusion Information**
- **EKG First/Last**
- **BLS Treatment**
- **ALS Treatment**
- **Medications**
- **Body Substance Isolation**
- **IV Type/Rate**
- **Medical Control**

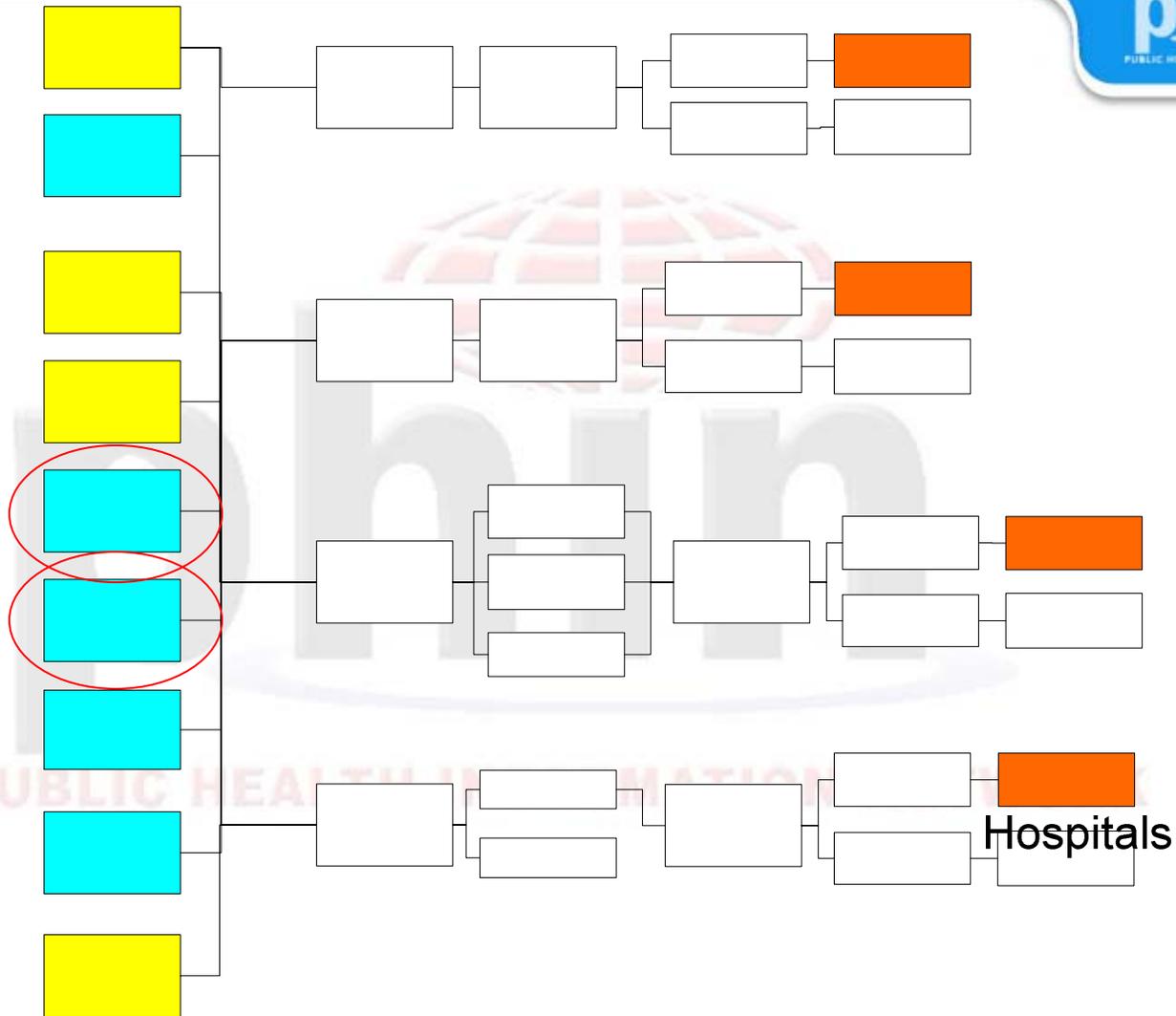
Poison Control Data

DC Department of Health



- **Patient Age**
- **Call Type**
- **Clinical Effects**
- **Follow-up Number**
- **Initial SPI Code**
- **Management Site**
- **Medical Outcome**
- **Therapy**
- **Weight**

WADSS Data Flow



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Sierra Systems

Clinics

Viewing Poison Control Data in WADSS

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Washington DC Automated Disease Surveillance System (WADSS)

DC Department of Health

SURVEILLANCE

- Disease Surveillance
- Unusual Cluster
- Syndromic Surveillance

JHU APL

- Essence

QUERIES/REPORTS

- Adhoc Queries
- Stored Results
- Periodic Reports
- Rate Calculator
- Disease Search
- Patient Search

NON-TRADITIONAL

- Poison Control
- EMS
- Animal Reports
- Physician Office
- Over-the-Counter
- School Absenteeism

DATA RECORDS

- GW Hospital
- Lab Corp
- DC Clinics
- Providence Hospital

E-REPORTING FORMS

- Disease Reporting
- Lab Reporting
- Animal Disease Reporting
- LOGOUT

Poison Control

From Start Date: May 09 2004 To Start Date: May 19 2004 Search

#	PC Case#	Age	Sex	Zip	State	Start Date	Chief Complaint	Call Type	Route	Treatment	Syndrome	Asthma	Outcome
1	352887	62	M	20037		2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
2	352878	0	M	20374	DC	2004-05-10	Ocular_IrritationPain	250	Ocular		other	n	201
3	352729	75	M	20010	DC	2004-05-09	Neuro_Syncope Cardio_Hypotension	250	Ingestion		other	n	202
4	352916	3	F	20010		2004-05-10	Derma_Edema Derma_ErythemaFlushed	250	Dermal Ocular	Dec_DiluteIrrWash	unspecified infection	n	0
5	352887	62	M	20037		2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
6	352884	22	F	20016		2004-05-10	Neuro_DrowsLethargy Neuro_Headache Gastro_Vomiting	250	Ingestion		gastrointestinal	n	0
7	352887	62	M	20037		2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
8	353005	14	F		DC	2004-05-11	Neuro_DrowsLethargy	250	Ingestion		other	n	0
9	353005	14	F	20001	DC	2004-05-11	Neuro_DrowsLethargy	250	Ingestion		other	n	0
10	353078	0	F	20060	DC	2004-05-11	Neuro_DrowsLethargy	250	Ingestion		other	n	201
11	353036	0	M	20010	DC	2004-05-11	Neuro_Confusion Misc_Hypoglycemia	250	Ingestion		other	n	0
12	352887	62	M	20037		2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
13	352887	62	M	20037		2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
14	353169	3	F	20010	DC	2004-05-12	Ocular_IrritationPain	250	Ocular		other	n	0
15	353185	17	F	20010		2004-05-12	Misc_Hypoglycemia Neuro_DrowsLethargy Cardio_Tachycardia Cardio_Hypotension	250	Ingestion		other	n	0
16	353180	26	M		DC	2004-05-12	Neuro_DrowsLethargy	250	Ingestion		other	n	0
17	353304	19	M		DC	2004-05-13	Gastro_Vomiting	250	Ingestion		gastrointestinal	n	207
18	353283	28	M		DC	2004-05-13	Ocular_IrritationPain	250	Ocular		other	n	0
19	353389	16	F	20010	DC	2004-05-14	Neuro_DrowsLethargy Misc_Other	250	Ingestion		other	n	202
20	353453	16	F	20009	DC	2004-05-14	Dermal_IrritationPain	250	Dermal		other	n	0
21	353505	41	F	20060	DC	2004-05-14	Misc_Acidosis Misc_ElectrolyteAbn Misc_Alkalosis	250	Ingestion		other	n	202
22	352887	62	M	20037	DC	2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
23	352887	62	M	20037	DC	2004-05-10	Neuro_Confusion	250	Ingestion		other	n	0
24	353437	30	F	20017	DC	2004-05-14	Neuro_AgitatedIrritable Resp_RespDepression Cardio_Tachycardia Neuro_SeizureSingle Neuro_Coma	250	Ingestion	Dec_CharcoalSingle	other	n	0

Current Non-Traditional Messaging Configuration

DC Department of Health



Poison Control Center	→	Extract with HTTPS Post
DC Fire and EMS	→	xml with SFTP over VPN
Animal Disease Control	→	Web user interface
Physician Office Visits	→	xml with SFTP over VPN
School Absenteeism	→	xml with SFTP over VPN
Over the Counter Drug Sales	→	xml with SFTP over VPN
DC Clinics	→	HL7 over VPN

Results & Conclusions

- **Data is extracted from Poison Control via an HTTP post to WADSS.**
- **EMS data is pulled across a VPN via FTP every 5 minutes.**
- **Syndromic surveillance linked to automated disease data collection and analysis provides an expanded opportunity for timely outbreak detection and bioterrorism response.**

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