

ProvLab's Transition to Cerner Millennium[®] Laboratory Information System

Communication to Clients and Stakeholders
January 22, 2014

Outline

- Key Messages
- Laboratory Reports
 - Sample reports
 - Report Delivery
 - Paper
 - Electronic
- ER4 Web Portal
- Alberta Netcare and NWT HealthNet
- Laboratory Requisitions
- Miscellaneous

Key Messages

- On February 2, 2014 ProvLab will begin using the Cerner Millennium[®] Laboratory Information System (LIS).
- ProvLab's hard copy laboratory report will be in a new format.
- The laboratory report may contain test results from both ProvLab and Calgary Laboratory Services (CLS).
- Methods of report delivery may change. Whenever possible electronic report delivery, e.g. Sunrise Clinical Manager and Physician Electronic Medical Records (EMR's) will be implemented in the Calgary Zone.

Key Messages

- ProvLab's ER4 web portal will continue to be populated with laboratory reports and will include laboratory test results performed by CLS as well.
- The electronic display of ProvLab's test results in Alberta Netcare will change:
 - The test name instead of the specimen type will display for look up.
 - If the result is abnormal the test name will be displayed in red text.
- ProvLab and CLS are sharing the LIS database and, because CLS maintains the patient demographic and provider database, physicians may receive calls from CLS requesting information to update records.

Laboratory Reports

- For physicians and clients receiving laboratory reports from Calgary Laboratory Services (CLS) the format will be familiar.
- Examples of reports follow on the next three slides.

ProvLab Microbiology Report Example



Alberta Health
Services

Calgary Laboratory Services
(403) 770-3600

Provincial Laboratory for Public Health
Calgary (403) 344-1200 Edmonton (780) 407-7121

PATIENT LAST, First

Chart ID:

Physician Name, MD
AHS Location or Clinic Name
Address
City AB T6G 2J2
Canada

MRN: 45498361321
PHN:
ACB:
DOB/Gender: 1991-05-14 Male
Telephone: (000)000-0000
Encounter: CG002684082
E/ProvLab Study:

Location: AHS Clinic or other location
Ordering: Physician Name, MD

Microbiology Wound/Abscess

TEST: Wound Culture
SPECIMEN TYPE Swab
SPECIMEN SOURCE Leg

COLLECTED: 2013/10/10 14:07 MDT
RECEIVED: 2013/10/10 14:08 MDT
ACCESSION: WN-13-7000220

GRAM STAIN REPORT

2+ Polymorpha
2+ Gram-positive cocci in clumps

Verified: 2013/10/10 14:09 MDT

FINAL REPORT

2+ Staphylococcus aureus

Verified: 2013/10/10 14:11 MDT

SUSCEPTIBILITY RESULTS ***

	Staphylococcus aureus
	Interp
Cefazolin	S
Clindamycin	S
Cloxacillin	S
Trimethoprim-sulfamethoxazole	S

2013/10/10 14:09 MDT Wound Culture:
Performed at ProvLab Edmonton

Report Legend

LEGEND: @=Abnormal C=Critical *=Footnotes #=Corrected L=Low H=High
Cc:

Chart Request ID: 24364830
Print Date/Time: 2013-10-10 18:38

Accession #: WN-13-7000220

www.calgarylabservices.com
www.provlab.ab.ca

Page 1 of 1

ProvLab Prenatal Testing Report Example



Calgary Laboratory Services
(403) 770-3600

Provincial Laboratory for Public Health
Calgary (403) 344-1200 Edmonton (780) 407-7121

PATIENT LAST NAME, PATIENT FIRST

Chart ID: ABC123PRENATAL

Physician Name, MD
AHS or Clinic Name Here
2, 12345 99 Street
City Name AB T6G 2J2
Canada

MRN: 000088195
PHN:
ACB:
DOB/Gender: 1987-06-05 Female
Telephone: (123)456-5432
Encounter: CG0023456789
EI/ProvLab Study: 2013-7

Location: ABC Community Health Services
Ordering: Ordering Physician Name, MD

Provincial Laboratory

Prenatal Testing

Prenatal Expected Date of Delivery 2014-03-17
Prenatal Last Menstrual Period 2013-07-17
Prenatal Gravida 2
Prenatal Para 1
Prenatal Delivery Hospital City Centre Hosp

Collected Date 2013-10-17
Collected Time 08:07 MDT

	Units
Prenatal Hepatitis B Surface Antigen	Non Reactive
Prenatal Syphilis EIA	Non Reactive *
Prenatal HIV	Non Reactive
Prenatal Rubella IgG	75.000 * IU/mL
Prenatal Varicella Zoster IgG	Positive

Asterisk indicates comment below

2013-10-17 08:07 MDT Prenatal Syphilis EIA:
Syphilis serology may be negative shortly after infection in patients with incubating or early primary syphilis.

If clinically indicated, submit a follow-up specimen in 2-4 weeks to rule a out recent infection.

2013-10-17 08:07 MDT Prenatal Rubella IgG.:
Rubella IgG antibody levels of >15 IU/mL are indicative of immunity.
2013-10-17 08:07 MDT Prenatal Varicella Zoster IgG:

Performed at ProvLab Edmonton
2013-10-17 08:07 MDT Prenatal Rubella IgG, Prenatal HIV, Prenatal Hepatitis B Surface Antigen, Prenatal Syphilis EIA:
Performed at ProvLab Edmonton

Comments

LEGEND: @=Abnormal C=Critical *=Footnotes #=Corrected L=Low H=High
Cc: Consulting Physician Name, MD

Chart Request ID: 24364987
Print Date/Time: 2013-10-17 11:53

Accession #: 13-290-700039

www.calgarylabservices.com
www.provlab.ab.ca

ProvLab Influenza Testing Report Example



Calgary Laboratory Services
(403) 770-3600

Provincial Laboratory for Public Health
Calgary (403) 344-1200 Edmonton (780) 407-7121

PATIENT LAST NAME, FIRST NAME

Chart ID:

MAIL04
Physician Name, MD
Location or Clinic Name
2 - 1234 56 St NW
Edmonton AB T6G 2B7
Canada

MRN: RHRN2180022234
PHN: AB12348-5678
ACB:
DOB/Gender: 1971-02-02 Female
Telephone: (123)123-5421
Encounter: 100041805648
EVProvLab Study: 2013-14

Location: ABC Urgent Care
Ordering: Physician Name, MD

Provincial Laboratory

Collected Date 2013-06-10
Collected Time 11:31 MDT

	RESULTS	Units
INFLUENZA A and B VIRUS PANEL *		
Influenza A Virus (RNA) NAT	Positive @	
Influenza B Virus (RNA) NAT	Negative	
Influenza A Virus (RNA) Hemagglutinin *	subtype 3 (H3)	

@ indicates abnormal result

2013-06-10 11:31 MDT INFLUENZA A and B VIRUS PANEL
Order Information and Comments:
Specimen: Swab - Nasal

2013-06-10 11:31 MDT Influenza A Virus (RNA) Hemagglutinin
Order Information and Comments:
Specimen: Swab - Nasal

2013-06-10 11:31 MDT INFLUENZA A and B VIRUS PANEL:

Method: This Nucleic Acid Test (NAT) was performed using primers and probes targeting the M gene of influenza A and the NS1 gene of influenza B (method developed at CDC (Atlanta)).

Disclaimer: This test was validated at ProvLab. It has not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical context.

2013-06-10 11:31 MDT Influenza A Virus (RNA) Hemagglutinin:

Method: Subtype was determined using primers and probes targeting the hemagglutinin (HA) gene of influenza A (method developed at CDC (Atlanta)) and/or the HA gene of influenza A (H1N1) pdm09 (see J.Clin.Micro 2009 47:3453-3460).

Disclaimer: This test was validated at ProvLab. It has not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical context.

LEGEND: @=Abnormal C=Critical *=Footnotes #=Corrected L=Low H=High

Cc:
Calgary Public Health MOH

Chart Request ID: 24365023
Print Date/Time: 2013-06-12 13:46

Accession #: 13-161-700011

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www.provlab.ab.ca

Comments

Laboratory Report Delivery

A summary of how laboratory reports will be delivered to physicians and clients:

- Walter McKenzie (U of A Hospital) – charts print directly to printers on nursing units
- All other Edmonton area hospitals – charts printed and delivered
- Edmonton physician's offices – charts printed and delivered.
- All other provincial locations:
 - ER4 (ProvLab's web portal) or
 - Charts printed and delivered
- Northwest Territories and Nunavut – faxing of reports

Electronic Result Delivery

- ProvLab has maintained and expanded electronic reporting capabilities.
- ProvLab will continue electronic reporting to:
 - E-Clinician – Edmonton Zone ambulatory clinics
 - ProvLab's ER4 Web Portal

Electronic Result Delivery

ProvLab will be expanding electronic results delivery to the following applications:

- Sunrise Clinical Manager – all hospitals in Calgary
- E-Lab Delivery – Physician EMR applications in Calgary
- PARIS – Calgary Renal
- ARIA - Tom Baker Cancer Center
- eCritical – Provincial ICU application – Microbiology results only for UAH patients.

ProvLab Portal ER4

- ProvLab's ER4 Portal will continue to be populated with laboratory reports for current clients.
- Lab accession numbers/specimen numbers will be in new formats.
- The lab reports will be posted in pdf format.
- Testing performed by Calgary Laboratory Services will be included in ER4 folders along with ProvLab reports.
- Access to folders and the content remain unchanged.
- A screen shot of ER4 follows on the next slide.

Welcome to ProvLab Portal

Portal Help Desk:
portal.help@albertahealthservices.ca
InfoCentre: 1.866.448.4359

User Name: abc123

Last Login Time: 2013-10-08 11:55:28.0

[ER4](#) [EI](#)

[Profile](#) [RS](#) [Help](#) [Contact Us](#) [Logout](#)

[Select Client\(s\)](#)
[Report Auditor](#)
[Client Auditor](#)

Report List (MIC)

Number of Reports = 29

	Patient	Received Date	Specimen #	Reported Date	PHN
<input type="checkbox"/>	CRTTest Prov, Staff	02/10/2013 08:30	13-275-700056	02/10/2013	
<input type="checkbox"/>	CRTTestMB, UAH	01/10/2013 14:34	UR-13-7000242	03/10/2013	
<input type="checkbox"/>	CRTTestMB, UAH	01/10/2013 14:55	UR-13-7000244	03/10/2013	
<input type="checkbox"/>	CRTTestPL, CapitalHR	02/10/2013 08:30	13-275-700053	02/10/2013	
<input type="checkbox"/>	CRTTestPL, CapitalHR	02/10/2013 08:30	13-275-700060	02/10/2013	
<input type="checkbox"/>	CRTTestSystem, East Edmonton HC	04/10/2013 11:30	13-277-700089	04/10/2013	
<input type="checkbox"/>	CRTTestSystem, Edmonton General	02/10/2013 08:17	13-275-700044	02/10/2013	
<input type="checkbox"/>	CRTTestSystem, Glenrose	02/10/2013 08:22	13-275-700047	02/10/2013	
<input type="checkbox"/>	CRTTestSystem, Grey Nuns	27/09/2013 14:51	13-270-700163	03/10/2013	
<input type="checkbox"/>	CRTTestSystem, Grey Nuns	27/09/2013 14:51	13-270-700164	03/10/2013	
<input type="checkbox"/>	CRTTestSystem, Grey Nuns	27/09/2013 14:51	13-270-700165	03/10/2013	
<input type="checkbox"/>	CRTTestSystem, Grey Nuns	02/10/2013 08:30	13-275-700057	02/10/2013	
<input type="checkbox"/>	CRTTestSystem, Leduc	02/10/2013 08:17	13-275-700042	02/10/2013	
<input type="checkbox"/>	CRTTestSystem, Northeast CHC	02/10/2013 08:19	13-275-700046	02/10/2013	
<input type="checkbox"/>	Crtestsystem, Babyboy	02/10/2013 08:17	13-275-700038	02/10/2013	

This is TEST DATA
Production Data
will display PHN

New specimen
number format

First Previous [Goto page](#) of 2 [Next](#) [Last](#)

[View selected reports](#)
[View all reports](#)
[Do another search](#)
[Back to client list page](#)

Alberta Netcare and NWT HealthNet

- The following applies to both portal applications:
 - All ProvLab results can be found in the Microbiology folder.
 - In the Clinical Document View (CDV tree) where dates and test names are listed, the name of ProvLab tests will now display. ProvLab tests currently display specimen type and not the name of the test.
 - Abnormal results will be indicated with the font of test name in red.
 - ProvLab results can be identified by hovering the cursor over the test name in the CDV tree. The result source will display as ProvLab.
- Screen shots follow on the next slide.

Netcare Example #1 – ProvLab New Display – Cerner Millennium

ORION HEALTH

russellp...

Logout

- Common
- Favourites
- Searches
 - Search for a Patient
 - Delivery Site Registry (DSR)
- eReferral
- Resources
- Messaging
- Enhancement Request

You last logged in 15-Oct-13 11:20

23087-7114 MILLCRT CB18 MB, Fmc (M/38 years)

Showing all documents

View By: Category Look For: Status: All Clear

Microbiology (89/100)

- 10:17 HSV and VZV Nucleic Acid Test
- 10:17 Enterovirus and Parvovirus
- 10:17 CSF Infection Panel
- 10:17 BK Virus Viral Load (Urine)
- Tue 12:01 WOUND BACTERIAL CULT
- Tue 12:01 URINE BACTERIAL CULT
- Tue 12:01 Stool Culture ProvLab
- Tue 12:01 STOOL BACTERIAL CULT
- Tue 12:01 PBS BACTERIAL CULTURE
- Tue 12:01 BW BACTERIAL CULTURE
- Tue 12:01 Babesia Examination
- Tue 09:35 Influenza A and B Nucleic Acid
- Tue 09:35 BK Virus Viral Load (Blood)
- Tue 09:35 Adenovirus Nucleic Acid Test
- Tue 08:34 Hepatitis B Surface Antibody**
- Tue 08:31 Rubella IgM - Acute
- Tue 08:11 Respiratory DFA
- Tue 08:00 Parvovirus B19 IgM - Acute
- Tue 07:57 Hepatitis C Antibody
- Tue 07:15 Stool Culture ProvLab
- Tue 07:10 URINE BACTERIAL CULTURE
- Tue 07:00 WOUND BACTERIAL CULTURE
- Fri 10:25 BK Virus Viral Load (Urine)
- Fri 10:24 Influenza A and B Nucleic Acid
- Fri 10:24 HSV and VZV Nucleic Acid
- Fri 10:24 Enterovirus and Parvovirus
- Fri 10:24 CSF Infection Panel
- Fri 10:24 BK Virus Viral Load (Blood)
- Fri 10:24 Adenovirus Nucleic Acid
- Fri 08:07 WOUND BACTERIAL CULTURE
- Fri 08:07 URINE BACTERIAL CULTURE
- Fri 08:07 Stool Culture ProvLab
- 08-Oct-13 THROAT CULTURE
- 01-Oct-13 BK Virus Viral Load (Blood)
- 26-Sep-13 Helicobacter pylori Culture
- 26-Sep-13 STOOL BACTERIAL CULTURE
- 26-Sep-13 THROAT BETA STREPTOCOCCUS
- 26-Sep-13 Helicobacter pylori Culture
- 20-Sep-13 Mumps Virus Nucleic Acid
- 19-Sep-13 Leptospira PCR
- 19-Sep-13 Leptospira PCR
- 16-Sep-13 BLOOD BACTERIAL CULTURE
- 16-Sep-13 BLOOD BACTERIAL CULTURE

Hepatitis B Surface Antibody ProvLab

View Cumulative Results

Time Collected	15-Oct-2013 08:34	Time Received	15-Oct-2013 08:34
Time Reported	15-Oct-2013 09:13	Time Transmitted	16-Oct-2013 07:38
Order Number		Ordering Provider	Motan, Tarek
Status	Final	Location	FMC - PCU 42

Relevant Information

Comments: Performed at ProvLab Calgary
Exposure Investigation Number: 2013-8

Report Patient Demographics (for verification purposes)

Name: MillCRT CB18 MB, FMC
PHN/ULI: 230877114
Date of Birth: 23-JUN-1975
Sex: M

Test	Result	Ref. Range (Units)	Abnormality
Hepatitis B Surface Antibody ProvLab	* 2.110 IU/L	>=10.000 (IU/L)	Low

Antibody to Hepatitis B Surface Antigen levels > 10 IU/mL are generally considered protective. Hepatitis B Surface Antibody test performed with Architect Chemiluminescent Microparticle Immunoassay (CMIA) kit. Corrected from 0.000 IU/L [LOW] on 2013-10-16 07:38:07 MDT by JENNIFERCLARKE02.

Accession Number: 13-288-700027
Encounter Number: 100041805669
Patient Location: PCU 42 - FMC

Netcare Example #2 – ProvLab New Display – Cerner Millennium

ORION HEALTH

russellp...

Logout

- Common
- Favourites
- Searches
 - Search for a Patient
 - Delivery Site Registry (DSR)
- eReferral
- Resources
- Messaging
- Enhancement Request

You last logged in
15-Oct-13 11:20

23087-7114 MILLCRT CB18 MB, Fmc (M/38 years)

Showing all documents View By Category Look For Status All Clear

HSV and VZV Nucleic Acid Test

View Cumulative Results

Time Collected	16-Oct-2013 10:17	Time Received	16-Oct-2013 10:19
Time Reported	16-Oct-2013 10:27	Time Transmitted	16-Oct-2013 10:27
Order Number		Ordering Provider	UNKNOWN, PHYSICIAN
Status	Final	Location	FMC - PCU 42

Relevant Information

Comments: Performed at ProvLab Calgary
Exposure Investigation Number: 2013-10

Report Patient Name: MillCRT CB18 MB, FMC
Demographics PHN/ULI: 230877114
(for verification purposes) Date of Birth: 23-JUN-1975
Sex: M

Test	Result	Ref. Range (Units)	Abnormality
ALPHAHERPESVIRUS PANEL	RESULTS Order Information and Comments: Specimen: CSF - CSF Method: This Nucleic Acid Test (NAT) was performed using primers and probes targeting the glycoprotein B gene of HSV 1-2 and DNA polymerase gene of VZV (method developed at ProvLab). Disclaimer: This test was validated at ProvLab. It has not been cleared or approved by the US FDA or Health Canada and results should be interpreted in the clinical context.		
Herpes Simplex Virus type 1 (DNA) NAT	Positive		Abnormal
Herpes Simplex Virus type 2 (DNA) NAT	Negative		
Varicella Zoster Virus (DNA) NAT	Negative		

Accession Number: 13-289-700017
Encounter Number: 100041805669
Patient Location: PCU 42 - FMC

Netcare Example #3 – ProvLab New Display – Cerner Millennium

Showing all documents
View By Category Look For C Status All Clear

Mark selected document as unread

Mark all documents as read

- Mon 10:18 Influenza A Virus NAT
- Mon 10:18 Influenza A and B Nuck
- Fri 08:04 Referred Organism Prov
- Wed 10:18 Mycobacteria (AFB) Sme
- 08-Oct-13 Referred Organism Pro
- 03-Oct-13 Stool Culture ProvLab
- 03-Oct-13 Adenovirus Vfal Load

Source date: 03 October 2013 10:56:00

Category: Microbiology

Subcategory: TEXTUAL

Status: Abnormal

Author: Unknown1, Physician

Result Source: Provincial Laboratory

- 25-Sep-13 Mycobacteria (AFB) Sr
- 25-Sep-13 Mycobacteria (AFB) Sr
- 25-Sep-13 Stool Culture ProvLab
- 25-Sep-13 Stool Culture ProvLab
- 24-Sep-13 NEISSERIA GONORRHOE
- 24-Sep-13 Mycobacteria (AFB) Sr
- 23-Sep-13 Mycobacteria (AFB) Sr
- 23-Sep-13 Mycobacteria (AFB) Sr
- 23-Sep-13 Mycobacteria (AFB) Sr
- 23-Sep-13 Mycobacteria (AFB) Sr
- 22-Sep-13 Mycobacteria (AFB) Sr
- 20-Sep-13 CHLAMYDIA/GC TEST
- 20-Sep-13 Mycobacteria (AFB) Sr
- 20-Sep-13 NEISSERIA GONORRHOE
- 18-Sep-13 Rapid Plasma Reagin (F
- 18-Sep-13 Prenatal Panel
- 18-Sep-13 Prenatal HIV Confirmat
- 18-Sep-13 NEISSERIA GONORRHK
- 18-Sep-13 NEISSERIA GONORRHOE
- 18-Sep-13 NEISSERIA GONORRHOE
- 18-Sep-13 Mycobacteria (AFB) Sm
- 16-Sep-13 Mycobacteria (AFB) Sr
- 11-Sep-13 NEISSERIA GONORRHK
- 11-Sep-13 Plasmodium (Malaria) f
- 11-Sep-13 Neisseria meningitidis

Stool Culture ProvLab

Time Collected	03-Oct-2013 10:56	Time Received	03-Oct-2013 10:56
Time Reported	03-Oct-2013 11:08	Time Transmitted	03-Oct-2013 11:09
Order Number		Ordering Provider	Unknown1, Physician
Status	Final	Relevant Information	
		Location	SCH - 05011

Comments: Performed at ProvLab Calgary

Report Patient Name: MillCRT CB18 GL, Helix SCHC
 Demographics (for PHN/ULI: 320887114
 verification Date of Birth: 02-FEB-1971
 purposes) Sex: F

Stool Culture ProvLab

*****Microbiology Enteric*****

TEST: Stool Culture ProvLab	
SPECIMEN TYPE: Stool	COLLECTED: 10/03/2013 10:56 MDT
SPECIMEN SOURCE: Stool	RECEIVED: 10/03/2013 10:56 MDT
	ACCESSION: ST-13-7000209

FINAL REPORT

Culture POSITIVE for:

Salmonella Enteritidis

.

Specimen routinely cultured for Aeromonas, Campylobacter, Escherichia coli O157:H7, Salmonella, Shigella, and Yersinia.

Verified:10/03/2013 11:08 MDT

Additional info / info provided on requisition:
 Reported to Health Agency Patient Address: 469 Valley Mews NW Calgary
 AB T3K 3T6 (403) 879-5241

Requisitions

- ProvLab's requisitions remain unchanged.
- For physicians and clients in the Calgary Zone, the stamps used to identify physician's on CLS requisitions should now also be used on ProvLab's requisitions.

Miscellaneous

Naming conventions for agencies, clients and generic providers that will appear on laboratory reports have changed, e.g.:

- Nurse in Charge uses the acronym “NIC”
 - **NIC, Name of location**
e.g. NIC, Cape Dorset
- Hospital Laboratories
 - **Lab, Name of Hospital**
e.g. Lab, Bashaw General Hospital
- Clinics
 - **Clinic, Name of Clinic**
e.g. Clinic, Edmonton Royal Alexandra Hospital Perinatal

Questions

For questions or additional information please contact:

- Karen Shimko, Project Manager
Karen.Shimko@albertahealthservices.ca
(780) 407-8962
- Dr. Steven Drews, Clinical Microbiologist
Steven.Drews@albertahealthservices.ca
(403) 944-1068