

# **Electronic Medical**

# **Record Extracts**

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## **for a**

# **Personal Health Record**

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# Objectives

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- Importance of Clean Data
  - Three mitigation strategies

- Pros & Cons:

## Standardized Data vs. Natural Language

- Ability to filter information

- Stakeholder Management
  - Requirements



# Challenges

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- Know Your Data
- Ensure Data Quality
- Stakeholder Management
  - Addressing healthcare team concerns
  - Engaging users
  - Meeting information needs



# Know Your Data

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- Historic vs. Current
- Sensitive Information
- Evidence-based vs. Common Practice



# Know Your Data

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- Historic vs. Current
  - Laboratory reference values

# Chemistry/hematology

## Chemistry/Hematology

### Personal Health Record of [REDACTED]

Information last updated in My HealthVet on 06/03/2009 at 09:20.

[Help](#) | [Printer Friendly](#)

### Chemistry/Hematology Summary

Results of tests performed at your VA facility are listed below. Select the Date/Time the test was collected to view test result details.

12 test records found, displaying 1 to 10

First/Prev 1, 2 [Next/Last](#)

Number of rows to display per page: 10 [25](#) 50 100

Date/Time Collected	Specimen	Location
<a href="#">04/29/2008 00:00</a>	SERUM	DAYTON
<a href="#">01/23/2007 00:00</a>	SERUM	DAYTON
<a href="#">11/18/2004 13:08</a>	URINE	DAYTON
<a href="#">11/18/2004 13:08</a>	BLOOD	DAYTON
<a href="#">11/18/2004 13:08</a>	SERUM	DAYTON
<a href="#">02/01/2001 08:54</a>	SERUM	DAYT3
<a href="#">02/01/2001 08:54</a>	SERUM	DAYT3
<a href="#">02/01/2001 08:54</a>	BLOOD	DAYT3
<a href="#">02/01/2001 08:54</a>	URINE	DAYT3
<a href="#">02/08/2000 08:28</a>	URINE	DAYT3

12 test records found, displaying 1 to 10

First/Prev 1, 2 [Next/Last](#)

Number of rows to display per page: 10 [25](#) 50 100

*This information is a copy of your VA medical record, and may not reflect the most recent changes. If you think the information is not accurate, please contact your VA facility directly.*

# Chemistry/hematology

## Chemistry/Hematology

Personal Health Record of [REDACTED]

Information last updated in My Health<sub>et</sub> on 06/03/2009 at 09:46.

[Help](#) | [Printer Friendly](#)

### SERUM Specimen

Collected on 04/29/2008 00:00 at DAYTON

Test results slightly outside the reference range are not unusual. Your provider has reviewed your test results and will contact you for any important issues. If you have further questions, please do not hesitate to contact your primary care provider.

Test Name	Result	Units	Low - High Reference	Indicator
ANION GAP	3.0	mEq/L	5 - 17	L
ANION GAP	3.0	mEq/L	5 - 17	L
CALCIUM	23.0	mg/dl	8.5 - 10.5	H*
CALCIUM	23.0	mg/dl	8.5 - 10.5	H*
CHLORIDE	1	mEq/L	98 - 108	L
CHLORIDE	1	mEq/L	98 - 108	L
CO2	2	mEq/L	23 - 33	L



# Chemistry/hematology

UREA NITROGEN	123	mg/dl	6 - 20	H
UREA NITROGEN	123	mg/dl	6 - 20	H

**Result Comments:**  
For eGFR: Race unknown, if African American multiply result by 1.210

**CALCIUM:**  
Eval: Critical high prior to 6/13/00 = 13 mg/dl

**CO2:**  
Eval: Reference range prior to 5/25/01 was 22-31 mEq/L.

**POTASSIUM:**  
Eval: Eval: Normal Range Prior to 8-22-02 was: 3.6 - 5.0 mEq/L.

**GLUCOSE:**  
Eval: \*\*\*PLEASE NOTE NEW CRITICAL VALUE EFFECTIVE 2/2/98\*\*\*


**CALCIUM:**  
Eval: Critical high prior to 6/13/00 = 13 mg/dl

**CO2:**  
Eval: Reference range prior to 5/25/01 was 22-31 mEq/L.

**POTASSIUM:**  
Eval: Eval: Normal Range Prior to 8-22-02 was: 3.6 - 5.0 mEq/L.

**GLUCOSE:**  
Eval: \*\*\*PLEASE NOTE NEW CRITICAL VALUE EFFECTIVE 2/2/98\*\*\*

[Return To Summary](#)

 The reference ranges may be different from what you have seen in the past. This is because of better technology and changes in testing standards. Ask your health care provider if you have questions.

*This information is a copy of your VA medical record, and may not reflect the most recent changes. If you think the information is not accurate, please contact your VA facility directly.*





# Know Your Data

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- Sensitive Information
  - Chemistry/hematology & HIV results
  - Inconsistent documentation



# Documentation

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- Possible sources
  - Progress note
    - Physician
    - Nurse
    - Clinic
  - Template
  - Lab result comment

# EMR Documentation

**VISTA CPRS in use by: I**

File Edit View Tools Help

**CPRSPATIENT, TEN**    **ANC Mar 19, 01 14:00**    HBPC / CPRSdoctor.Five

000-89-8863 Aug 21, 1949 (55)    Provider: CPRSDOCTOR, TWO    Flag    Remote Data    Postings AD

**Active Problems**

- Unspecified Fall (ICD-9-CM E888.9)
- Urinary Retention
- Ventral Hernia Nec (ICD-9-CM 553.2)
- Hyponatremia (ICD-9-CM 276.1)
- Depression
- Low Back Pain
- Hypertension

**Allergies / Adverse Reactors**

- Ibuprofen
- Topamax 15mg Capsule
- Garlic Oil

**Postings**

- Allergies
- Hbpc Dnr Feb 04, 2004
- Hbpc Dnr Jun 12, 2003
- Hbpc Dnr Nov 13, 2002
- Hbpc Advance Directives Implementation

**Active Medications**

Medication	Status
Artificial Tears Methylcellulose	Active
Lubricating (pf) Oph Oint	Active
Calcium 500mg/Vitamin D 200unt Tab	Active
Docusate Na 100mg Cap	Active
Tamsulosin Hcl 0.4mg Cap	Active
Potassium Chloride 10meq Sa Tab	Active
Cyanocobalamin 1000mcg Tab	Active
Salmeterol 50mcg/Bistr Po Inhl Diskus 60	Suspended
Mirtazapine 30mg Tab	Active
Furosemide 40mg Tab	Active
Sennosides 8.6mg Tab	Active
Non-VA Mannoside 400mg Tab	Active

**Clinical Reminders**    Due Date

No data found

**Recent Lab Results**    **Vitals**    **Appointments/Visits/Admissions**

No data found

Vital	Value	Date/Time	Unit
T	99.7 F	Feb 07, 2004 17:26	(37.6 C)
P	69	Feb 07, 2004 17:26	
R	18	Nov 18, 2003 10:57	
BP	125/69	Feb 07, 2004 17:26	
HT	68 in	Nov 18, 2003 10:57	(172.7 cm)
WT	217 lb	Nov 18, 2003 10:57	(98.6 kg)
PN	6	Feb 07, 2004 17:26	

Appointments/Visits/Admissions: No data found

Cover Sheet    Problems    Meds    Orders    Notes    Consults    Surgery    D/C Summ    Labs    Reports



# VHA Directives

## VA Public Health Portal Links

- Public Health Strategic Health Care Group  
[vaww.vhaco.va.gov/phshcg](http://vaww.vhaco.va.gov/phshcg)
- VA Hepatitis C Web site  
[vaww.hepatitis.va.gov](http://vaww.hepatitis.va.gov)
- VA Smoking & Tobacco Use Cessation Program  
[vaww.vhaco.va.gov/phshcg/smoking](http://vaww.vhaco.va.gov/phshcg/smoking)
- Infection: Don't Pass It On  
[vaww.vhaco.va.gov/phshcg/InfectionDontPassItOn](http://vaww.vhaco.va.gov/phshcg/InfectionDontPassItOn)
- VA HIV/AIDS Web site  
[vaww.hiv.va.gov](http://vaww.hiv.va.gov)
- Center for Quality Management in Public Health  
[vaww.vhaco.va.gov/phshcg/cqm](http://vaww.vhaco.va.gov/phshcg/cqm)
- New Directive on "National HIV Program" (VHA Directive 2008-082)  
<http://vaww.hiv.va.gov/vahiv?page=prin-va-2008-082>
- New Directive on "National Smoking and Tobacco Use Cessation Program" (VHA Directive 2008-081)  
[http://vaww1.va.gov/vhapublications/ViewPublication.asp?pub\\_ID=1809](http://vaww1.va.gov/vhapublications/ViewPublication.asp?pub_ID=1809)





# Know Your Data

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- Evidence-based vs. Common Practice
  - Informed decision-making
  - PSA results tracking

# Clinical Content Submission Form

**DEPARTMENT OF VETERANS AFFAIRS INTRANET**

**MY HEALTHVET PRODUCT**

### Clinical Content Submission Form

The Clinical Content Submission Form allows VA Staff to Submit Clinical Content Requests to the Clinical Advisory Board for review. Approval will put the request into the My HealthVet Content Management process for the My HealthVet Portal.

**Instructions for Clinical Content Submission Form**

- All information indicated by an asterisk (\*) is mandatory.
- The Request Title entry is limited to a maximum of 100 characters.
- The Description/Goals/Objectives of the request should be brief (2-3 sentences). The field allows for up to 255 characters.
- The Content entry is unlimited and should be in the format you want displayed (e.g. paragraphs, bold/italic/underline, etc.). For modifications, the "current content" to be replaced should be provided first and the "new content" should follow. Both entries should be clearly marked as either "current" or "new" content.
- Entry validation checks will be performed for phone number, email address, and maximum field length. You will be prompted to correct any errors related to these criteria prior to submitting the form.
- On completion of the form click the "Submit" button. You will receive an email confirmation soon after.

If you have any questions, need more information, or are having accessibility problems with this Web site, please contact us by email: [edrice.flores@va.gov](mailto:edrice.flores@va.gov) or by phone: 204.262.7949.

Note: Fields marked with asterisks are required.

1. \* REQUESTOR First/Last Name:
2. \* Phone Number:
3. \* Email:
4. \* POINT OF CONTACT First/Last Name:
5. \* Phone Number:
6. \* Email:
7. \* REQUEST TITLE:
8. \* Description/Goals/Objectives:
9. \* Content Request:  
 Addition  
 Modification  
 Removal
10. \* Content: (If Modification, please indicate current content to new content.)
11. \* Content Context: (Content addresses VA Directive, Performance Measure Standard, Identified Patient Safety Issue, etc. This information is used to establish priority.)

Please send comments to My HealthVet

[vaww1.va.gov/MyHealthVet](http://vaww1.va.gov/MyHealthVet)



# User Request

If you have a technical question related to the My HealthVet website, please fill out the form below completely, and click Submit. Our goal is to reply to your questions by the next business day.

\* Indicates Required Information

**First Name: \***

**MI: Last Name: \***

**Date of Birth [ \*may be required]**

Month: Day: Year:

**Email Address: [ \*either email address or phone number is required]**

**Phone Number: [ \*either email address or phone number is required]**

**Subject of this contact: \***

**If Other, please explain:**

**Comments: \***



## Don't Forget!

Don't forget to protect My HealthVet e-mails from your internet service provider's spam blocker.

Add My HealthVet to your 'safe list' of e-mail addresses.

[Learn More...](#)

# Informed Decision-making

## Shared Decision-Making® Programs

### End of Life Programs

Peace of Mind: Personal Stories about Advance Directives  
Current Version: POM001 v.02

### Heart Disease Programs

Treatment Choices for Coronary Artery Disease  
Current Version: CAD001 v.02

Living with Coronary Artery Disease: Doing Your Part  
Current Version: CAD002 v.02

Living with Heart Failure: Helping Your Heart Day-to-Day  
Current Version: CHF001 v.01

### Mental Health Programs

Coping with Symptoms of Depression  
Current Version: DEP001 v.01

### Orthopedic Programs

Treatment Choices for Hip Osteoarthritis  
Current Version: HIP001 v.01

Treatment Choices for Knee Osteoarthritis  
Current Version: KOA001 v.02

### Prostate Programs

Treatment Choices for Benign Prostatic Hyperplasia  
Current Version: BPH001 v.02

Treatment Choices for Prostate Cancer  
Current Version: PCA001 v.02

Is a PSA Test Right for You?  
Current Version: PSA001 v.03





# Mitigation Strategies

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- Policy & Standard Operating Procedure
  - Laboratory reference values
  - Implementation of tools for information dissemination
- Workgroup to Address Issues
  - Documentation
  - Organizational culture
- Education
  - Collaborative decision-making
  - Informed consumer



# Data Quality

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- Data Standardization
  - Laboratory test names
  - Actual vs. placeholder appointments
- Duplicates
  - Wellness Reminders
- Meta Data
  - Consistent use of terms
    - Alt tags
    - JAVA script for Web analytics
  - Search engine implications



# Risk Tolerance

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- Filter Information
  - Accurate information
  - Assess degree of harm
- Provide Instructions
  - What to do if problem occurs
- Plan for Meta Data
  - Written guidance



# Stakeholder Management

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- Requirements
  - Addressing healthcare team concerns
  - Engaging users
  - Meeting information needs



# Stakeholder Management

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- Fear of Inundation
  - Workload credit
  - Operational efficiency
- Confusion of Users
  - Medical vs. lay terminology
  - Problem List
  - Progress Notes



# Requirements & Feedback

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- Healthcare Team
  - Policy
  - Data collection
    - Dashboard for feedback
- Consumer
  - Help
  - Data collection
    - American Customer Satisfaction Index

# Widget

The screenshot shows the homepage of the United States Department of Veterans Affairs. The header includes the VA logo, the text "UNITED STATES DEPARTMENT OF VETERANS AFFAIRS", and a search bar. Below the header is a navigation menu with links for "VA Home", "About VA", "Organizations", "Apply Online", "Locations", and "Contact VA".

The main content area is divided into three columns:

- Left Column (Navigation):** A vertical list of menu items: Health Care, Benefits, Burial & Memorials, VA Jobs, Board of Veterans' Appeals, Public Affairs, Congressional Affairs, Business Opportunities, Partners, Veteran Data, Inspector General, Budget and Performance, Recovery Act, and KIDS Page.
- Middle Column (IN THE NEWS):**
  - FY 2010 BUDGET SUBMISSION:** A section with a thumbnail image of a budget document. The text states: "The President's vision for the Department of Veterans Affairs (VA) is to transform VA into a 21st Century organization that is Veteran-centric, results-driven, and forward-looking. The Department's resource request for 2010 is nearly \$113 billion—up \$15.1 billion, or 15 percent, from the 2009 enacted budget. This is the largest one-year percentage increase for VA requested by a President in over 30 years. [VA's budget request for 2010](#) provides the resources critical to achieving the President's vision - [Read more about it here!](#)"
  - The Post-9/11 GI Bill:** A section with a thumbnail image of a soldier. The text states: "We are now accepting applications for the Post-9/11 GI Bill benefit that is effective August 1, 2009. Individuals with active duty service since September 11, 2001, may be eligible for this benefit and can apply on-line at [www.GIBILL.VA.gov](http://www.GIBILL.VA.gov). The program provides tuition assistance, a housing allowance, a books and supplies stipend, and the option to transfer these benefits to family members under certain circumstances. For more information, visit the GI Bill website or call 1-888-GIBILL-1 (1-888-442-4551)." Below the text is a small photo of Tammy Duckworth, Assistant Secretary, Office of Public and Intergovernmental Affairs.
- Right Column (TOP INFO REQUESTS):**
  - A list of links: [Post-9/11 GI Bill](#), [Prescriptions](#), [Military Records](#), [Health Care Benefits / Eligibility](#), [Endoscopic Report](#), [Find a VA Form](#), [Jobs at VA](#), and [Benefits Booklet](#).
  - H1N1 Flu Info:** A green box containing the text "H1N1 Flu Info" and a list of links: "U.S. Info", "Things You Can Do", "Plan & Prepare", and "International Info". Below the box are the logos for "HHS.gov" and "CDC.gov", and a link "Add This To Your Web Site!".
  - Text at the bottom of the right column: "For more information call: Veterans & Families: 1-800-507-4571 VA Staff: 1-866-233-0152".



# Security Alert





# Widget Sub-text

The screenshot displays the homepage of the United States Department of Veterans Affairs. At the top left is the VA seal. The main header features the text "UNITED STATES DEPARTMENT OF VETERANS AFFAIRS" and a search bar with the text "Search All VA Web Pages" and a "Search" button. Below the header is a navigation menu with links for "VA Home", "About VA", "Organizations", "Apply Online", "Locations", and "Contact VA".

On the left side, there is a vertical menu with the following items: "Health Care", "Benefits", "Burial & Memorials", "VA Jobs", "Board of Veterans' Appeals", "Public Affairs", "Congressional Affairs", "Business Opportunities", "Partners", "Veteran Data", "Inspector General", "Budget and Performance", "Recovery Act", and "KIDS Page".

The main content area is divided into three sections:

- IN THE NEWS:** This section features two articles. The first is titled "FY 2010 BUDGET SUBMISSION" and includes a sub-image of a "Summary Volume Volume 1 of 4". The text describes the President's vision for VA and the 2010 budget request. The second article is titled "The Post-9/11 GI Bill" and includes a sub-image of a ribbon and the name "Tammy Duckworth, Assistant Secretary, Office of Public and Intergovernmental Affairs". The text discusses the acceptance of applications for the GI Bill benefit.
- TOP INFO REQUESTS:** This section contains a list of links: "Post-9/11 GI Bill", "Prescriptions", "Military Records", "Health Care Benefits / Eligibility", "Endoscopic Report", "Find a VA Form", "Jobs at VA", and "Benefits Booklet".
- H1N1 Flu Info:** A green box containing links for "U.S. Info", "Things You Can Do", "Plan & Prepare", and "International Info". It also includes "HHS.gov" and "CDC.gov" and a link to "Add This To Your Web Site!". A red arrow points to this link.

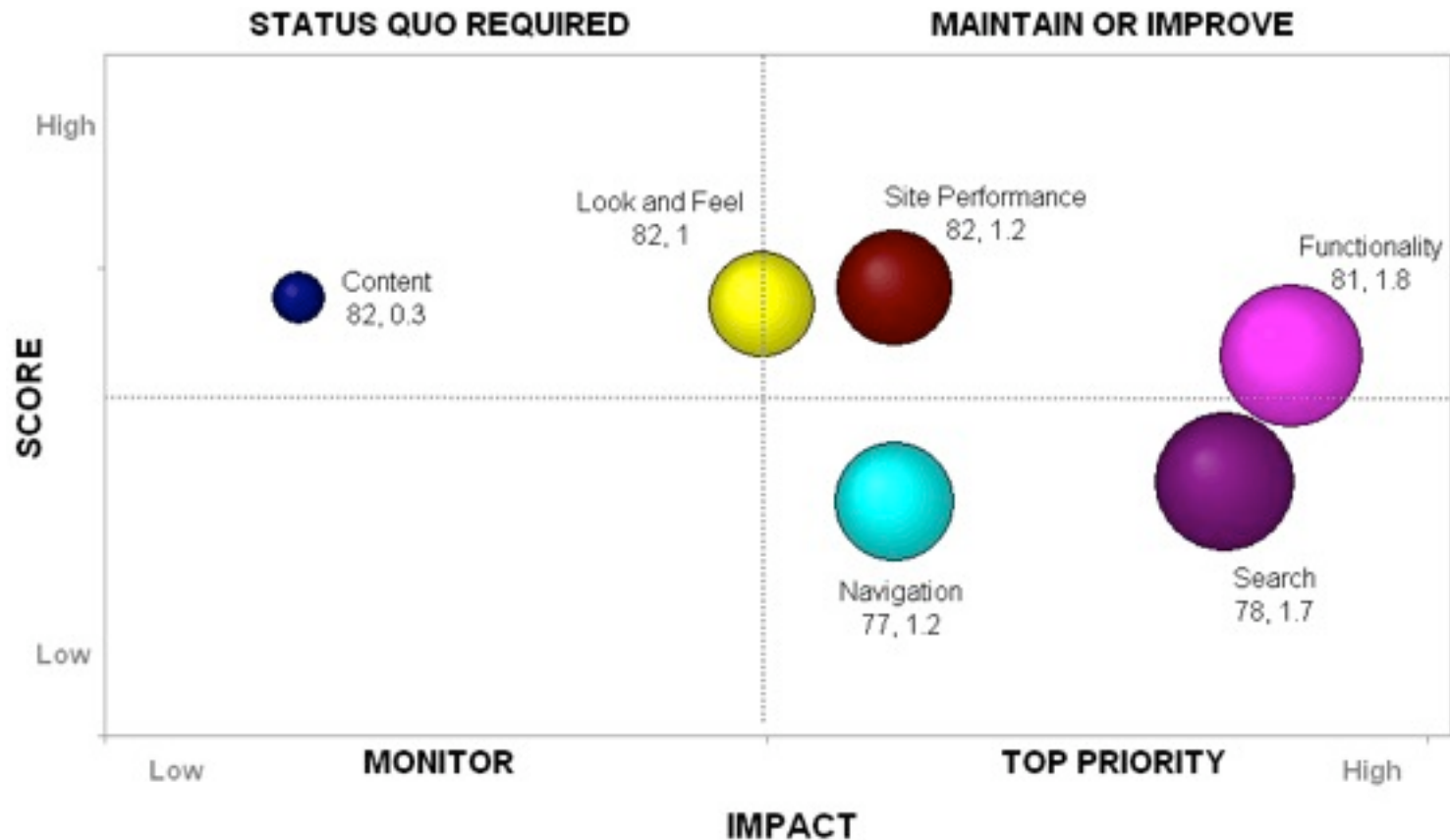
# American Customer Satisfaction Survey

- Quarterly Satisfaction Insight Reviews (SIRs)
- Cycling Custom Questions
  - Maximize data collection
  - Minimize survey length
- Response Rate 17%
  - ForeSee average is 6.5%
- Data Segmentation
  - Sub-groups of interest
- Priority Map
  - Top priorities for improvement
- My Health**e**Vet Implemented October 2007



# Priority Map

Where are the best opportunities for My HealthVet to increase customer satisfaction?



**Key:** Position of each bubble indicates its score and impact.  
Size of each bubble also indicates the relative size of impact



# Application of Principles

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- Discuss
  - Data quality issues & mitigation strategies
  - Data standardization vs. natural language
  - Stakeholder management & requirements



# Sites & Demo Account

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- My HealthVet National Site  
[www.myhealth.va.gov](http://www.myhealth.va.gov)
- My HealthVet National Demo Account  
[www.myhealth.va.gov](http://www.myhealth.va.gov)
  - **Username: mhvuser**
  - **Password: mhvdemo#1**



# Questions?

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Questions?

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