

NPÖ- National Patient Summary

Nationwide Health Information Network

- **Part of Swedish IT-strategy for Healthcare & Welfare**
- **National IT-system for improved patient safety**
- **Patient records are accessible throughout the country and not limited to the individual care provider (both private and public)**
- **Vision: *”Patient information can be exchanged between different care providers within the same region (regional perspective) and between care providers in different regions (national perspective)***

The Aims of the National Patient Summary

Improved clinical results

An overall view of the patient provides better decision data for diagnosis, treatment and follow-up

Increased patient safety

A better decision basis reduces risk for treatment errors

Increased efficiency

Tests and examinations do not have to be repeated by each care provider

Increased influence

The patient has increased insight and influence upon his/her care programme

National Strategy for e-Health 2006

Six action areas:

1. Bringing laws and regulations into line with increased use of data exchange (New Patient Data Act 2008)

2. Creating a common information structure

RIV Rules for information interoperability in Health Care
EN 13606 (decision 2008-02).

European standard similar to Health Level Seven (HL7 version 3)

3. Creating a common technical infrastructure

Communications networks for Health Care (Sjunet)

Electronic directory users and organizations in Health Care (HSA)

Identification (SITHS – electronic ID-card, certificate)

Security, Authentication, Access control, Handling consent from patient, Logging (BIF)

National Strategy for e-Health 2006

Six action areas:

4. Interoperable IT - systems

Electronic Health Record

Administrative support systems

Prescription support

5. Access to information across organisational boundaries

National Patient Summary (NPÖ)

6. Making information and services easily accessible to citizens

Portal for Patients (Web)

NPÖ requires Patient consent

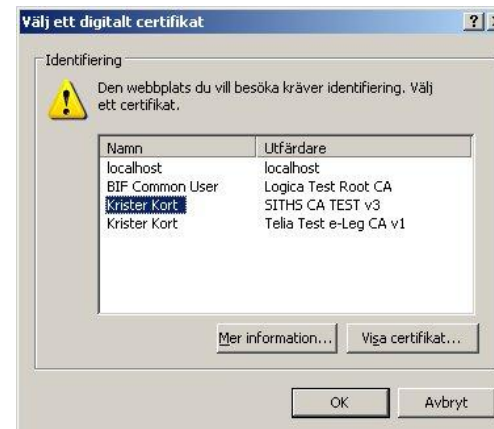
- **New Patient Data Act from 1 July 2008**
- **Provides the possibility for exchange of information between care providers**
 - **Requires consent from the patient before the patient case records can be accessed from another care provider. Emergency access is available**
- **The patient can block information to NPÖ from a specified care provider**
- **The patient has access to the NPÖ data-logs to see who has viewed their case records**
- **The patient can access his/her medical records via the internet (requires special ID)**

Log-in requirements

Valid SITHS-smart card with pincode



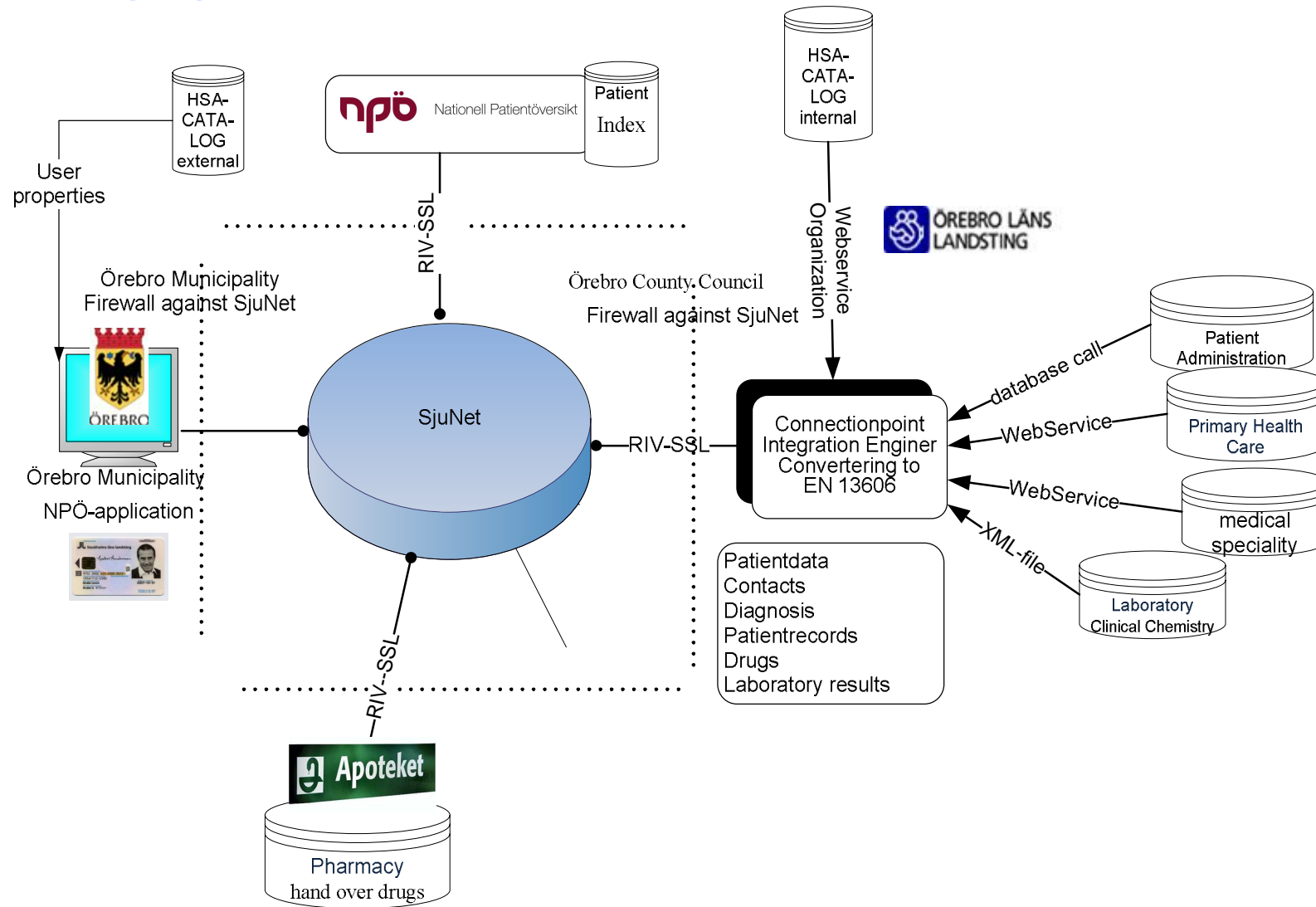
Choose correct authorised web portal



Role in HSA register

**Doctor, nurse,
occupational therapist
etc**

NPÖ Structure



National Patient Summary Goals

2009

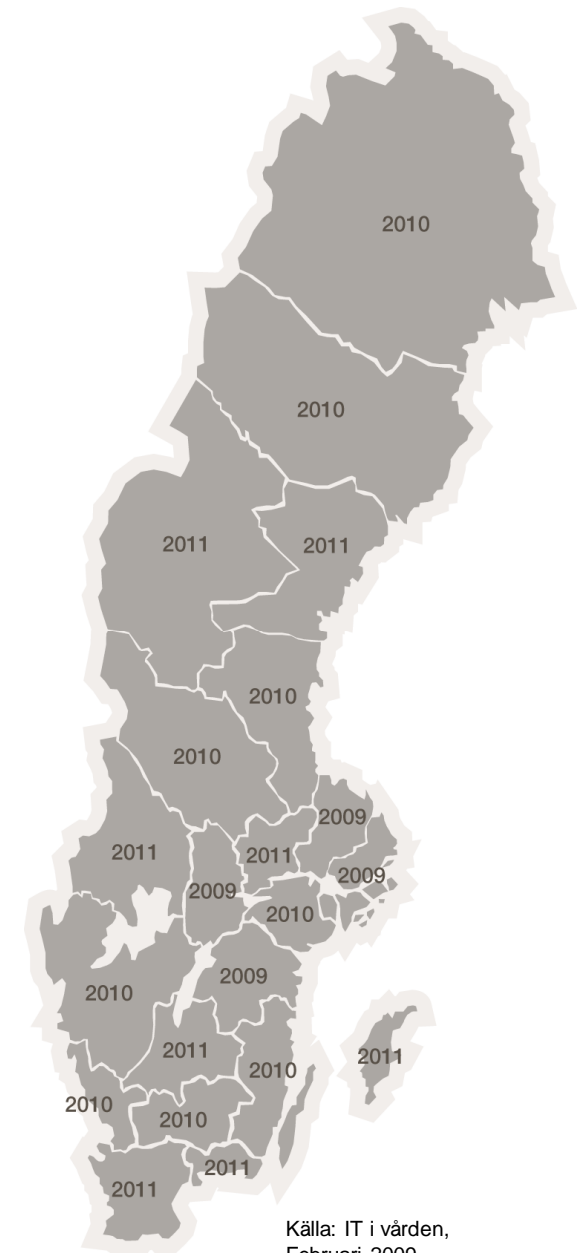
- 31/8: NPÖ local pilot successfully completed
- Autumn: Östergötland will join NPÖ and 3 more counties prepare for connection

2010

- Spring: NPÖ accepted by BIF (**secure info authority**)
- 31/12: 10 more counties to join NPÖ

2011

- All 21 counties in the NPÖ system



Källa: IT i vården,
Februari 2009

Changes to Flexlab

The customer must have a HSA-ID (Health Authority ID)

Kundkod	Kundnamn	<input type="checkbox"/> Temporär kund
OR	Örebro	<input type="checkbox"/> Aktiv
KE	Kem lab	
LA	Sällansvar + Kumsvar KKL USÖ	
Kortnamn	OKEMLAB	
Central kundkod		
Postadress	Testsvar för ändringar i konfig	
	Klin kem lab	
	USÖ	
	701 85 ÖREBRO	
Telefon	21195	Lagringstid 0
Fax	23785	
HSA-ID	SE2321000164-7381037591	

Changes to Flexlab

The test should have changes to Flexlab. Standardizert "Trivialnamn" and NPU-code, if not it maps to the test report name.

Analys - Identifikation	
Kortnamn	
<input type="text" value="Na"/>	
Namn	Rapportnamn
<input type="text" value="Natrium"/>	<input type="text" value="P-Natrium"/>
Trivialnamn	
<input type="text" value="S--Natrium"/>	
Kod i externt kodverk	
<input type="text" value="NPU03429"/>	

What is sent to NPÖ from Flexlab?

Tests (NPU-code), date, time, system (*Mtrl* in NPÖ), result (*Värde* in NPÖ), unit, reference range and comments are sent as a XML-file

REM- (request form) and *Analys*-comments are seen in NPÖ but not *LAB*-comment and not *Anamnes-* (Patient History) comment

Prov- (test) comment was not tested in Örebro

Observe that all administration carried out in Flexlab, none in NPÖ

Flexlab settings

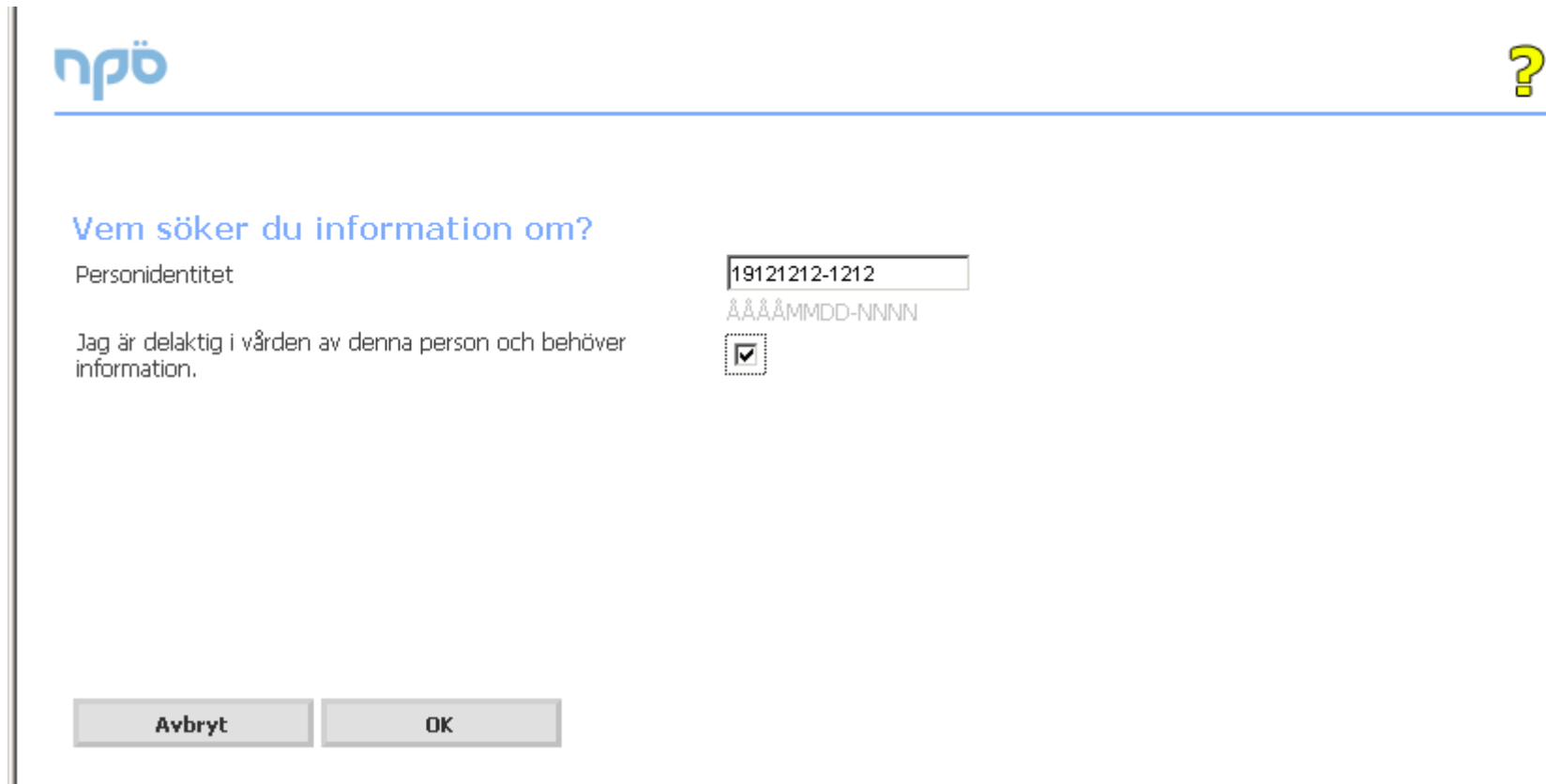
Only when all results on a request form have been analyzed are the results sent to NPÖ

Only complete personal numbers are sent

No requests can be made from NPÖ

XML-file sent every 5 minutes by separate form of distribution

The care provider requesting information must be involved in the particular patient's care



The screenshot shows the npö web interface. At the top left is the npö logo, and at the top right is a yellow question mark icon. Below the header is a horizontal line. The main content area has the heading "Vem söker du information om?" followed by the label "Personidentitet". To the right of this label is a text input field containing the number "19121212-1212". Below the input field is a date format mask "ÅÅÅÅMMDD-NNNN" and a checked checkbox. At the bottom of the form are two buttons: "Avbryt" and "OK".

npö ?

Vem söker du information om?

Personidentitet

ÅÅÅÅMMDD-NNNN

Jag är delaktig i vården av denna person och behöver information.

NPÖ demands patient consent



Tillåter personen att du tar del av informationen?

19160416-1172 Lisa Quincy

Samtycker till att jag tar del av information i sammanhållen journalföring:

Vid detta tillfälle

För tidsperioden 2009-04-17 -

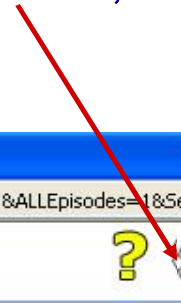
Akut nödsituation och personens samtycke kan inte inhämtas nu:

Avbryt

OK



Alerts: drug allergy, infectious disease, important current diagnosis etc



HealthShare - Microsoft Internet Explorer provided by Sjukvårdsrådgivningen
 https://npotest1.sjunet.org/csp/healthshare/hsaccess/web/csp/websys.csp?TMENU=90&TPAGID=11900753&ChartBookID=51&TPRINT=1&PatientID=41&EpisodeID=3241&ALLEpisodes=1&Select

npö Översikten **19290819-8589 Anne Ahlberg** **Kvinna 79** ?

Apr 2006 2007 2008 2009 2010 Apr 2010

Kontakter Primärvård **Specialistvård** Hemtjänst Hemsjukvård Särskilt boende LSS Plan ADL Funktionsnedsättning

Diagnoser			Dokument	
2008-02-18	INFLAMMATORISK SYSTEMSJUKDOM OSPECIFICERAD	Huvuddiagnos	2008-04-22	Öppenvårdsanteckning
2008-01-15	INFLAMMATORISK SYSTEMSJUKDOM OSPECIFICERAD	Huvuddiagnos	2008-04-10	Öppenvårdsanteckning
2007-12-12	DIABETES MELLITUS TYP 1 MED ICKE SPECIFICERADE KOMPLIKATIONER	Huvuddiagnos	2008-04-09	Öppenvårdsanteckning
2007-12-04	INFLAMMATORISK SYSTEMSJUKDOM OSPECIFICERAD	Huvuddiagnos	2008-03-19	Öppenvårdsanteckning
2007-10-25	INFLAMMATORISK SYSTEMSJUKDOM OSPECIFICERAD	Huvuddiagnos	2008-02-28	Öppenvårdsanteckning

Läkemedel					
2009-01-07	Pronaxen		tablett	1x2	O
2008-04-10	SOBRIL				F
2008-04-10	SOBRIL		MG		O
2008-03-15	KÅVEPENIN		tablett	1x2	F
2008-03-15	KÅVEPENIN	250 MG		1 tabl morgon och kväll	U

Klinisk kemi	Mikrobiologi	EKG	Bilddiagnostik	Övr undersökning
2008-03-19	2008-03-15	2008-11-19	2008-11-19	2008-03-15
2008-02-13	2008-02-15	2008-01-29	2008-11-19	2008-03-15
2008-01-08	2008-02-10	2007-10-13	2008-11-16	2008-01-12
2007-11-26				2007-01-12
2007-10-15				

Overview of Clinical Chemistry

The 82 "Favourite" tests (locked on NPU-code) are shown first. Beneath these the other tests are in alphabetical order (NPU not compulsory)

Red colour and asterisk indicate that the result is abnormal

npö Översikten
19381221-7044 Ingrid Larsson
kvinnor 70
?

Markera allt sept 2006 2007 2008 2009 2010 aug 2010

Avmarkera allt

Klinisk kemi

	Δ Mtrl	Δ Analys	Δ Datum	Δ Värde	Δ *	Δ Enhet	Δ Ref.intervall.	Δ Kommentar
Personuppg.	K	B	Hemoglobin - B	2009-08-31	122		g/L	117 - 153
Kontakter	K	B	MCV - B	2009-08-31	99	*	fl	82 - 98
Tjänster	K	B	Trombocyter - B	2009-08-31	277		10*9/L	165 - 390
Plan	K	P	APT - P	2009-08-15	42		s	29 - 42
ADL	K	P	Calcium - P	2009-08-15	2,30		mmol/L	2,10 - 2,55
Funktionsneds.	K	P	Natrium - P	2009-08-15	141		mmol/L	137 - 145
Diagnoser	K	P	Kalium - P	2009-08-15	4,4		mmol/L	3,2 - 4,6
Dokument	K	P	Fosfat - P	2009-07-12	2,46	*	mmol/L	0,80 - 1,50
Läkemedel	K	P	Billirubin - P	2009-08-01	7,7		µmol/L	<25
Klinisk kemi	K	P	ALP - P	2009-08-31	Hemolys		µkat/L	0,6 - 1,8
Mikrobiologi	K	P	LD - P	2009-08-01	2,6		µkat/L	<4,0
EKG	K	S	T4, fritt - S	2009-08-15	17,1		pmol/L	9,0 - 19,0
Bilddiagnostik	K	P	Alaninaminotransferas (EC 2.6.1.2)	2009-02-06	2,00	*	µkat/L	<0,75
Övr. undersökn.	K	P	ALAT	2009-08-31	Hemolys		µkat/L	<0,75
	K	P	Albumin	2009-08-15	50	*	g/L	36 - 45
	K	P	Aspartataminotransferas (EC 2.6.1.1)	2009-08-31	Hemolys		µkat/L	0,20 - 0,60
	K	B	Basofila - B	2009-08-31	0,05		10*9/L	0,05 - 0,12
	K	P	Brain Natriuretic peptide	2009-08-01	182	*	ng/L	<155
	K	TU	Calcium, beräknat värde	2009-08-31	4,8		mmol/tid	Se Labbok
	K	P	Calcium, korriberat	2009-08-15	2,12		mmol/L	2,10 - 2,55
	K	P	C-Reaktivt protein	2009-08-15	2,7		mg/L	<4,0
	K	B	Eosinofila - B	2009-08-31	0,12		10*9/L	0,09 - 0,40
	K	U	InG/Krea index	2009-02-12	<0,8		nmol	<1,0

Clicking the symbol "K" gives a cumulative list where results can be followed over time. If the analysis is not part of the list of "Favourites" it is shown as a stand-alone. In this example the method for ALAT (ALT) does not have the same NPU-code as the ALAT method defined in "Favourites".

The screenshot shows the npö patient overview interface for Ingrid Larsson (19381221-7044), a 70-year-old woman. The interface displays a cumulative list for 'Klinisk kemi' (Clinical Chemistry). The table below shows results for ALAT (ALT) over time, with a red asterisk indicating a value outside the reference range.

Analys	Mtrl	2009-08-31 08:00	2009-08-01 07:30	2009-06-20 07:30	2009-06-14 09:30	2009-05-30 08:50
ALAT	P	Hemolys	0,55	1,07*	0,47	0,21

Below the cumulative list, there is a section for 'Klar' (Clear) results, showing a list of other tests with their results and reference ranges:

K	P	Calcium, korigerat	2009-08-15	2,12	mmol/L	2,10 - 2,55
K	P	C-Reaktivt protein	2009-08-15	2,7	mg/L	<4,0
K	B	Eosinofila - E	2009-08-31	0,12	10 ⁹ /L	0,09 - 0,40
K	U	ToGKrea index	2009-02-12	<0,8	n/mol	<1,0

When the analysis is on the list of "Favourites" it is shown together with the other tests in the same group (NJUR = Kidney).

A central committee has decided which analyses belong to the "favourites" and how they are grouped. They have also chosen the NPU-codes for each "favourite" test. This cannot be changed by either the user or the administrator.

The screenshot shows the npö patient overview interface. The patient's name is Ingrid Larsson, ID 19381221-7044, a 70-year-old woman. The interface displays a cumulative list of clinical chemistry tests under the heading "Klinisk kemi - kumulativ lista".

Analys	Mtrl	2009-08-15 07:45	2009-08-10 15:00	2009-08-01 07:30	2009-07-12 14:00	2009-07-01 08:00	2009-06-20 07:30	2009-06-14 09:30
Natrium - P	P	141	142	137	142	142	136 *	141
Kalium - P	P	4,4	4,1	3,5	5,1 *	3,8	3,4	4,0
Calcium - P	P	2,30		2,26	2,21	2,38		2,54
Magnesium - P	P			0,64 *				
Fosfat - P	P				2,46 *			

The interface includes a sidebar with navigation options: Personuppg., Kontakter, Tjänster, Plan, ADL, Funktionsneds., Diagnoser, Dokument, Läkemedel, **Klinisk kemi**, and Mikrobiologi. The main content area shows the patient's name and ID, and the specific test results with some values marked as abnormal (indicated by an asterisk).

The Urine test-strip is a common analysis.

Here results from Near Patient testing and Hospital lab are shown in the same list because the tests have the same NPU-code. The sites of testing are not specified (unlike all other reporting).

At the same time there is no group defined for the urine test strip so the results cannot be seen together. Something to work on given that there is a NPU-code for Urine-test strip (NPU14924).

HealthShare - Windows Internet Explorer
 https://npotest1.sjunet.org/csp/healthshare/orebroaccess/web/csp/websys.csp?TEVENT=t2904iCumulative&TPAGID=61007&OrderID=99||5&PatientBanner=1&PatientID=19&mradm=149&Epi

npö Översikten 19450110-3297 Beatrice Andersson kvinna 64

Klinisk kemi - kumulativ lista

Analys	Mtrl	2009-08-31 07:00	2009-08-20 16:00	2009-07-31 07:30	2009-07-25 10:00
Erythrocyter (semikvant)	U	<10	<10	<10	<10

Personuppg. | Kontakter | Tjänster | Plan | ADL | Funktionsneds. | Diagnoser | Dokument | Läkemedel | **Klinisk kemi** | Mikrobiologi | EKG | Bilddiagnostik | Övr. undersökn.

[K]	B	Erythrocyter, mikroskopi	2009-02-12	Se komm,			Det här är en analyskommentar ...
[K]	U	Erythrocyter/Hemoglobin	2009-07-01	<10	ery/µL	<10	
[K]	U	Erythrocyter (semikvant)	2009-08-31	<10	ery/µL	<10	
[K]	U	Etylglukuronid	2009-02-12	Saknas	ug/mL		



Clicking on the Test name opens the detailed view for results with comments. The lab which has performed the test (Utförare) and the doctor who has ordered the test (Beställare) are shown.

The screenshot shows the npö patient overview interface. The browser address bar displays the URL: <https://npotest1.sjunet.org/csp/healthshare/orebroaccess/web/csp/websys.csp?TEVENT=t2904iTestItem&TPAGID=60282&PatientBanner=1&EpisodeID=109&ResultID=!Generated:SE232100016>. The patient information is displayed as **19381221-7044 Ingrid Larsson**, a **kvinn** aged **70**. The test name **P Fosfat - P** is highlighted. The test result table shows a value of **2,46** mmol/L, which is marked with an asterisk (*). The reference interval is 0,80 - 1,50. The test was performed on 2009-08-31. The lab name is **Klinisk kemi USÖ** and the doctor who ordered the test is **SE2321000164-7381037591444**. The interface includes a sidebar with navigation options such as Personuppg., Kontakter, Tjänster, Plan, ADL, Funktionsneds., Diagnoser, Dokument, Läkemedel, **Klinisk kemi**, Mikrobiologi, EKG, Bilddiagnostik, and Övr. undersökn. The year 2010 is visible in the top right corner.

Datum	Värde	*	Enhet	Referensintervall	Referenspopulation
2009-08-31	2,46	*	mmol/L	0,80 - 1,50	

Utförare: Klinisk kemi USÖ
Beställare: SE2321000164-7381037591444

Pilot test run of NPÖ in Örebro

- **Used by staff from different care providers: Örebro Municipality, Private Care Homes and a selection of doctors in the county council.**
- **Information from the county council's hospitals and primary health care centres accessed via NPÖ**
- **400 users**
- **Started May 2009**
- **Pilot successfully completed 31-Aug**
- **More care providers within Örebro to join NPÖ during autumn**





Nationell Patientöversikt

På den här webbplatsen kan du löpande följa programmet Nationell Patientöversikt och läsa senaste nytt. Du kan även anmäla dig till att prenumerera på vårt nyhetsbrev. Uppdraget utförs av Sjukvårds- rådgivningen SVR AB på uppdrag av Sveriges Kommuner och Landsting. Välkommen att ta del av arbetet med Nationell Patientöversikt.

- Hem
- Nyheter
- Seminarier
- Dokument
- Länkar
- Kontakt



Just nu

- 2008-11-03
Leverans i fokus när Nationell Patientöversikt konkretiseras
- 2008-10-06
SITHS-kort ger bevis för behörighet
- 2008-10-06
Bättre koll på läkemedel gör behandlingen tryggare
- 2008-09-04
BIF gör Nationell Patientöversikt trygg och säker

Rätt information vid rätt tillfälle för rätt åtgärd

Sverige är redo att förverkliga visionen om att göra kritisk patientinformation tillgänglig för behörig vård- och omsorgsgivare, oavsett tid och geografisk tillhörighet. På sikt ska informationen även kunna nås av patienten själv.

I oktober 2006 inleddes upphandlingen av tjänster för Nationell Patientöversikt. I mars 2008 tecknades avtal med TietoEnator och första spadtaget är taget för att etablera lösningen. Först ut att ansluta sig till Nationell Patientöversikt är Örebro läns landsting och Örebro kommun som under etableringsfasen kommer att testa lösningen.

Nationell Patientöversikt är en mycket viktig del i leverans i det nationella handlingsprogrammet för förverkligandet av den Nationella IT-strategin för vård och omsorg.

Prenumerera på nyhetsbrevet

Fyll i namn och e-postadress för att påbörja eller avsluta prenumeration via e-post.

Namn:

E-postadress:

- Prenumerera
- Avsluta prenumeration

Prenumerera via RSS



Read about the Swedish National Patient Summary

www.npö.nu

www.orebroll.se

www.carelink.se



Örebro University Hospital
ÖREBRO COUNTY COUNCIL