

Electronic Patient Records and Electronic Health Records

Centre for Health Informatics

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Runs: 3 hours
Tutor: Prof John Chelsom
Mode of attendance: Classroom

Learning Objectives

- This session introduces Electronic Patient Records (EPR) and Electronic Health Records (EHR) and shows typical features and functionality of these systems.
- Specific learning objectives are to:
 - 1 Define and differentiate EPR and EHR
 - 2 Analyse the components of EHR/EPR systems
 - 3 Assess the major features and functionality of an EHR system
 - 4 Show what a web-based EHR system looks like in practice

Electronic Patient Records and Electronic Health Records

- Definition and scope
- Walk through of (commercial) EHR system
- References and Further Reading

Information Sources

- Sources are listed in the references at the end of these slides



Some definitions and descriptions have been taken from quoted resources.

Retrieved October 2010.

Where consensus on definitions or descriptions required, these have been taken from Wikipedia.

Retrieved October 2010.

EPR, EHR Definition and Scope

Electronic Patient Record

In the UK we use the term Electronic Patient Record (EPR); in the US the most common term is Electronic Medical Record (EMR).

An electronic medical record (EMR) is a computerized medical record created in an organization that delivers care, such as a hospital and doctor's surgery¹.

Electronic medical records tend to be a part of a local stand-alone health information system that allows storage, retrieval and modification of records.

http://en.wikipedia.org/wiki/Electronic_medical_record

Patient record for a single care provider or organisation

GP, Hospital, Community Health, Mental Health, Dentist, etc

Electronic Health Record, EHR

- A health record, stored electronically
- The complete (longitudinal) cradle-to-grave record
- Accessed in any care organisation/setting (c.f. EPR)
- By any legitimate member of the care team
- And by the patient themselves
- Gathering data from many different sources
- With functionality for adding new data to the record
- Should be implemented using open standards, service-oriented, web technology (in my opinion)

Electronic Health Record

Still some confusion about terminology, especially between UK and US, as demonstrated by Wikipedia, October 2010.

An electronic health record (EHR) (also electronic patient record (EPR) or computerised patient record) is an evolving concept defined as a systematic collection of electronic health information about individual patients or population².

It is a record in digital format that is capable of being shared across different health care settings, by being embedded in network-connected enterprise-wide information systems.

Such records may include a whole range of data in comprehensive or summary form, including demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, and billing information.

http://en.wikipedia.org/wiki/Electronic_health_record

Proprietary EHR Products

- Top vendors of Electronic Medical Records (EMR) in the US

Company	Installations	Installation %
Meditech	1,185	26.6%
McKesson	630	14.1%
Cerner	560	12.6%
Siemens Medical	425	9.5%
CPSI	353	7.9%
Epic Systems	265	6.0%
Eclipsys	243	5.5%

- UK EPR vendors
 - Primary care – EMIS, InPractice, Isoft, TPP, HealthySoft
 - Secondary care – ISoft (Lorenzo), System C
 - Community – CSE (Rio)

Personal Health Record

Personal Health Record (PHR) or Personal Electronic Health Record (PeHR)

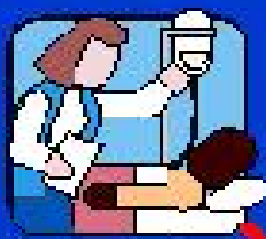
Also associated in the US with the concept of Health Record Banking.

A personal health record or PHR is typically a health record that is initiated and maintained by an individual.

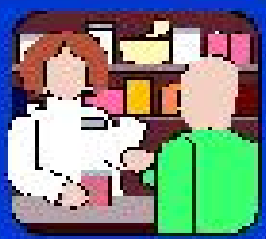
An ideal PHR would provide a complete and accurate summary of the health and medical history of an individual by gathering data from many sources and making this information accessible online to anyone who has the necessary electronic credentials to view the information.

http://en.wikipedia.org/wiki/Personal_health_record

A Health Service Designed Around the Patient



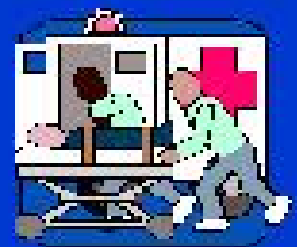
Attends as in-patient



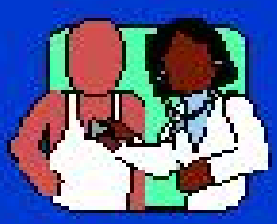
Goes to the pharmacy



Visits GP/practice nurse



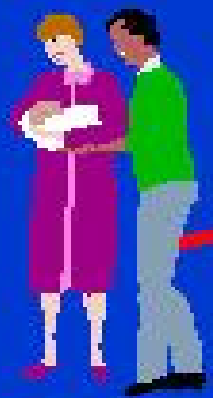
Attends A&E



Visits Out Patients



Visits the dentist



Is visited at home by GP, nurse, care worker, midwife etc



Visits a walk-in centre

NHSnet



Calls NHS Direct



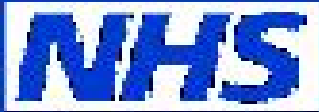
Uses NHS Direct online



Calls OOH service



Uses the Home Health Care Guide



Executive

Shared Care (R)Evolution

- Clinical services have developed and specialized
 - Multi-agency; home care; diagnostic monitoring
- Disease / problem based care management
 - rather than episode based
 - care focused on complete problem resolution and management rather than individual visits or encounters
- Team based approach, across discipline and agency
 - The patient journey involves many inter-working teams
- Collaborative working around a shared programme of care delivery

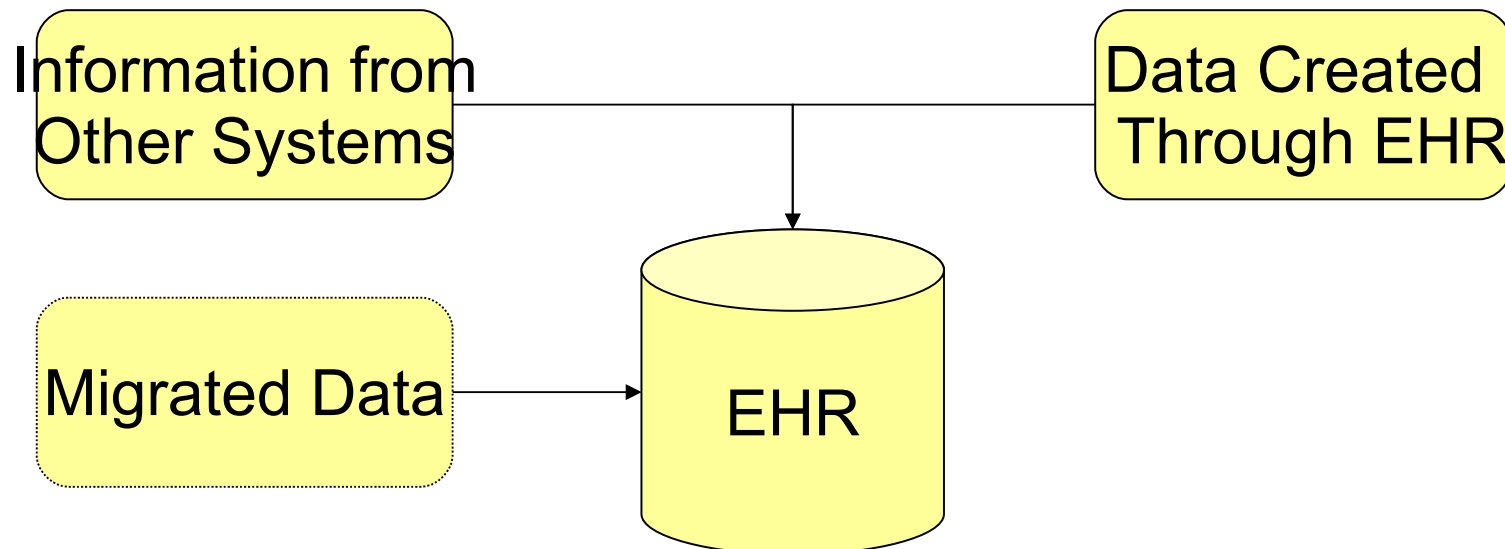
Patient-centred – Cross Agency – Driven by evidence and protocols for best clinical practice.

Problems Addressed by EHR

- Support for Cross-Agency, Shared Care
 - Modern healthcare is provided through a cross-agency care teams that centre their activities on the needs and preferences of patients, updating and sharing patient information around the clock.
- With access to a Patient-Centred Record
 - Existing health information systems do not match this requirement for cross-agency, patient centred shared care – they tend to be focused on single organisations, with the emphasis on administrative, rather than clinical data
- Using open interfaces and standards
 - Current EHR technology is difficult to deploy, locks-in to proprietary data formats, is hard to use and is not easy to adapt to the shared care, cross agency way of working
- Overlaying existing systems
 - Yet many existing systems will need to keep operating as they are for the foreseeable future – there is neither the budget, nor capacity for change, to transform health information systems overnight
- Following best practice, nationally
 - This operational environment is set against a backdrop of political drive for a move to national-scale systems, driven by patient choice, accessibility of information for care professionals, adherence to guideline for best practice and a high level of security and accountability.

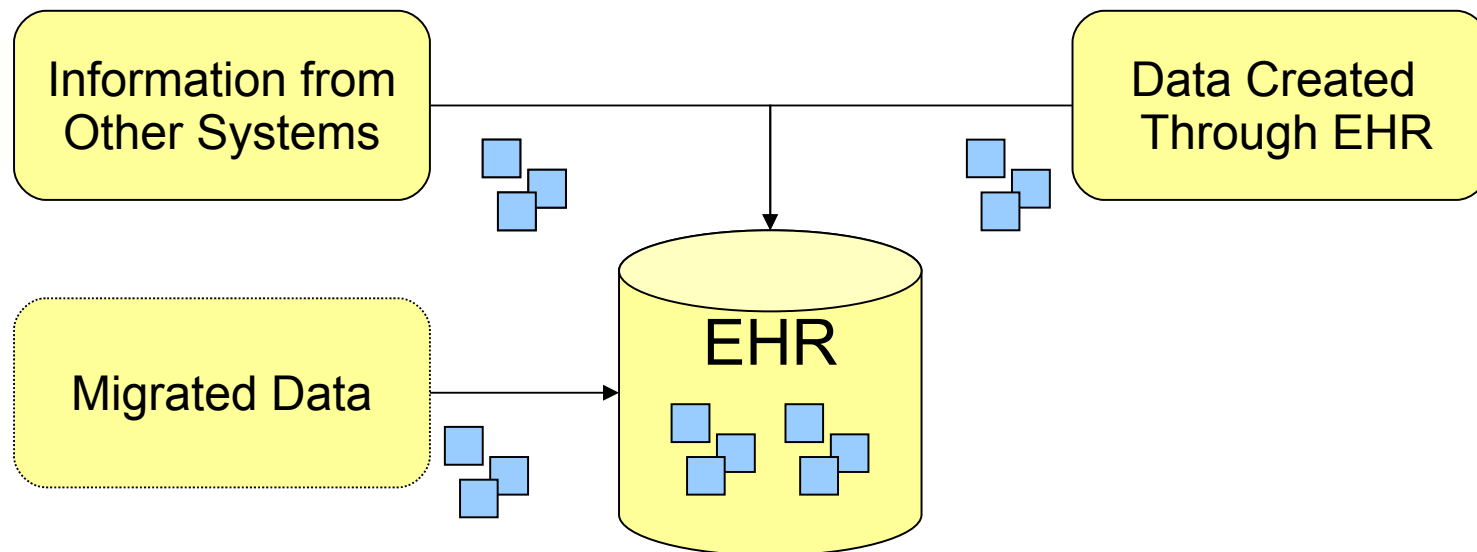
EHR Contents

- The Health Record in an EHR contains
 - Information gathered from other systems
 - Information created by functions in the EHR
 - (Data migrated from previous systems)



EHR Events

- The 'unit of storage' in an EHR system is often the health Event
 - HL7 CDA – Clinical Document
 - ISO-13696 – Composition
- Discrete package of information from a particular care setting, time, encounter
- Stored with its provenance (i.e. when, where, how it was created and by whom)
- May be subject of Access Control Rules



EHR Content and Functionality

Clinical Documents

GP Encounter

Referral Letter

Clinic Note

Discharge Summary

Assessment

Orders

Pathology

Radiology

Results

Prescriptions

Medications

Diagnostic Images (link to)

Care Plans

Care Pathways

Appointments

Billing information

Patient Demographics

Integration / messaging

Access control

Audit / Notification

Secure communications

Clinical Data Entry

Summary views, reports

Order Entry

Results Reporting

E-Prescribing

Care Planning

Care Pathways

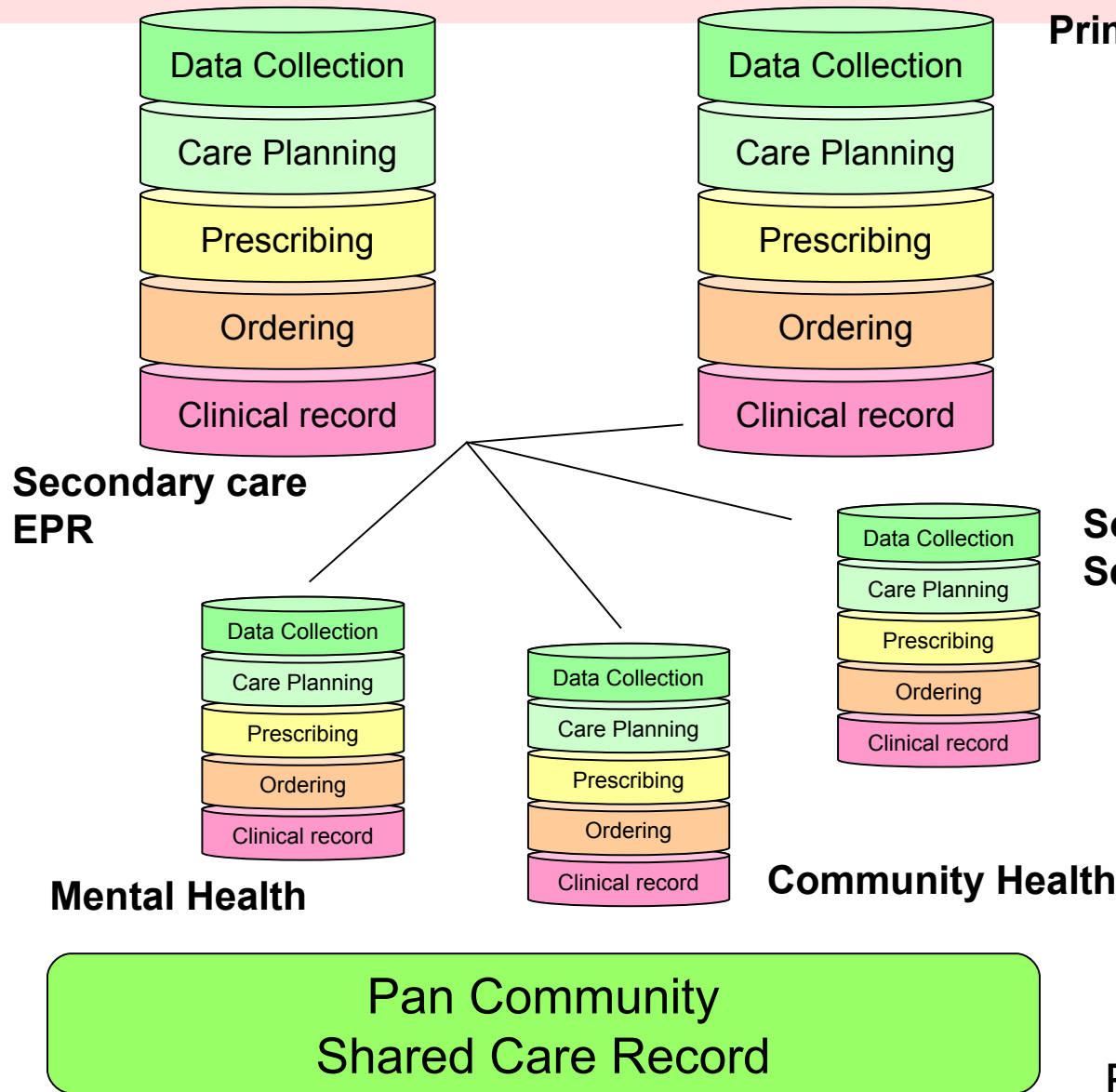
Booking, scheduling

Financials

Patient Administration

Records Management

First Generation EHR Products

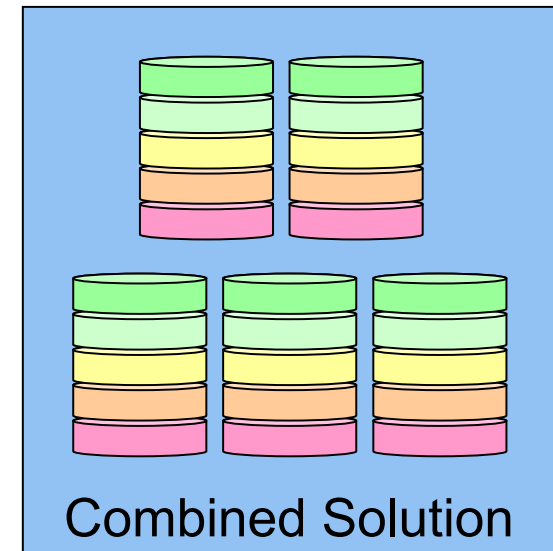


Primary care EPR

First generation products provide 'stovepipe' systems for each profession

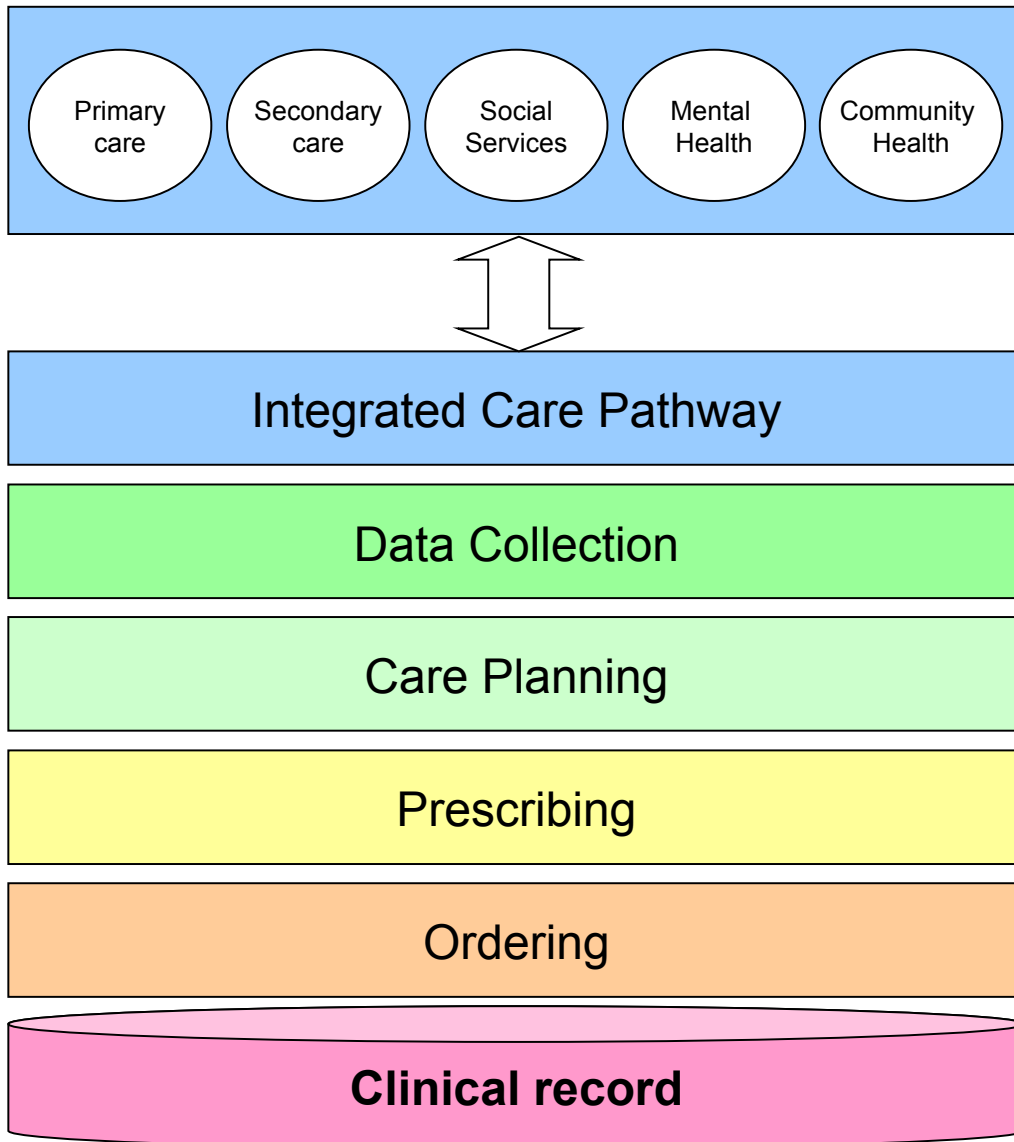
Shared Care requires access to each stovepipe

Social Services



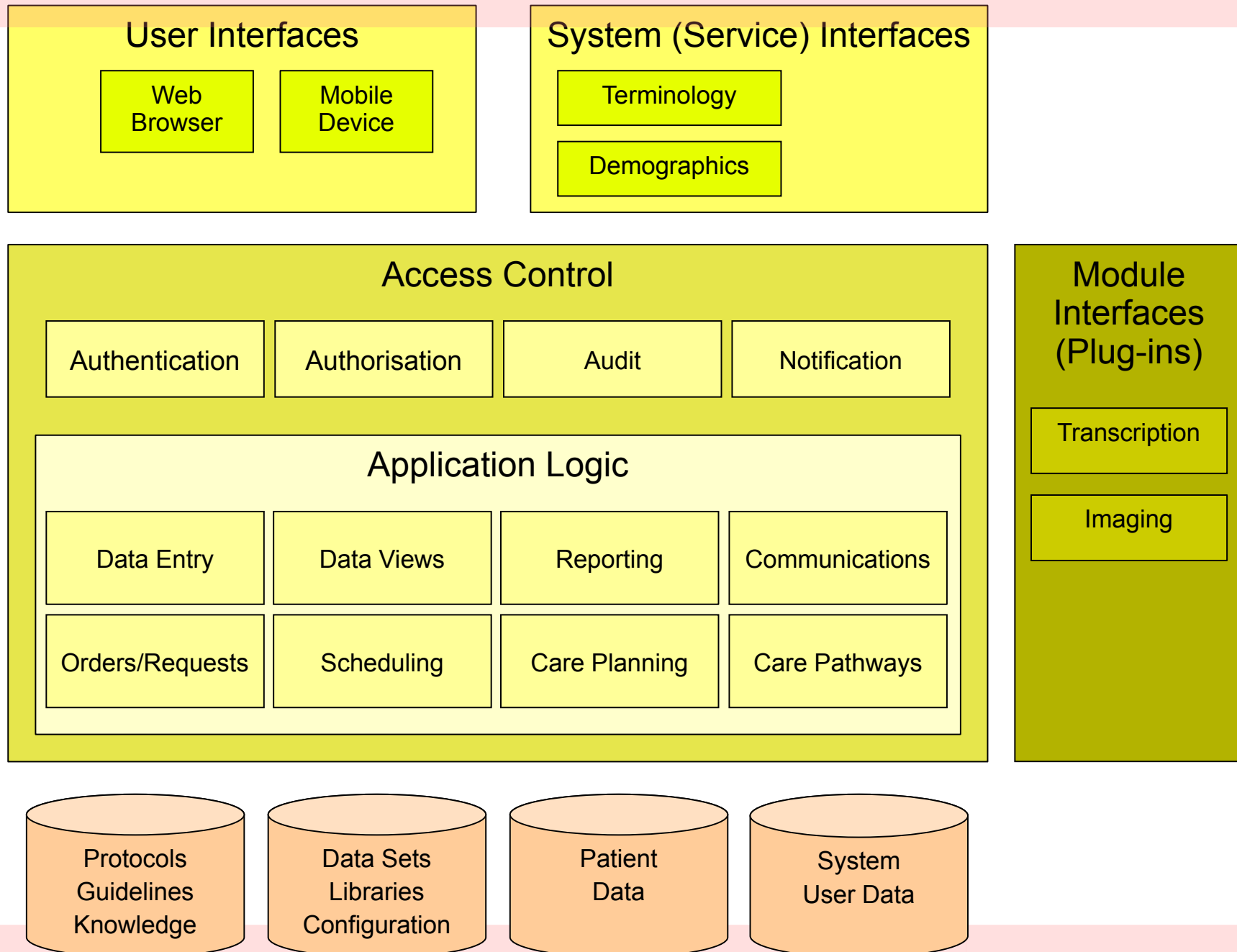
First generation boxes into one commercial offer, but keeps stovepipes separate

Next Generation EHR



- A patient-centred record
- An integrated care pathway
- Supporting all caring professions
- Using server-side web technology
- Covering the full 'patient journey'

Detailed Architecture of EHR



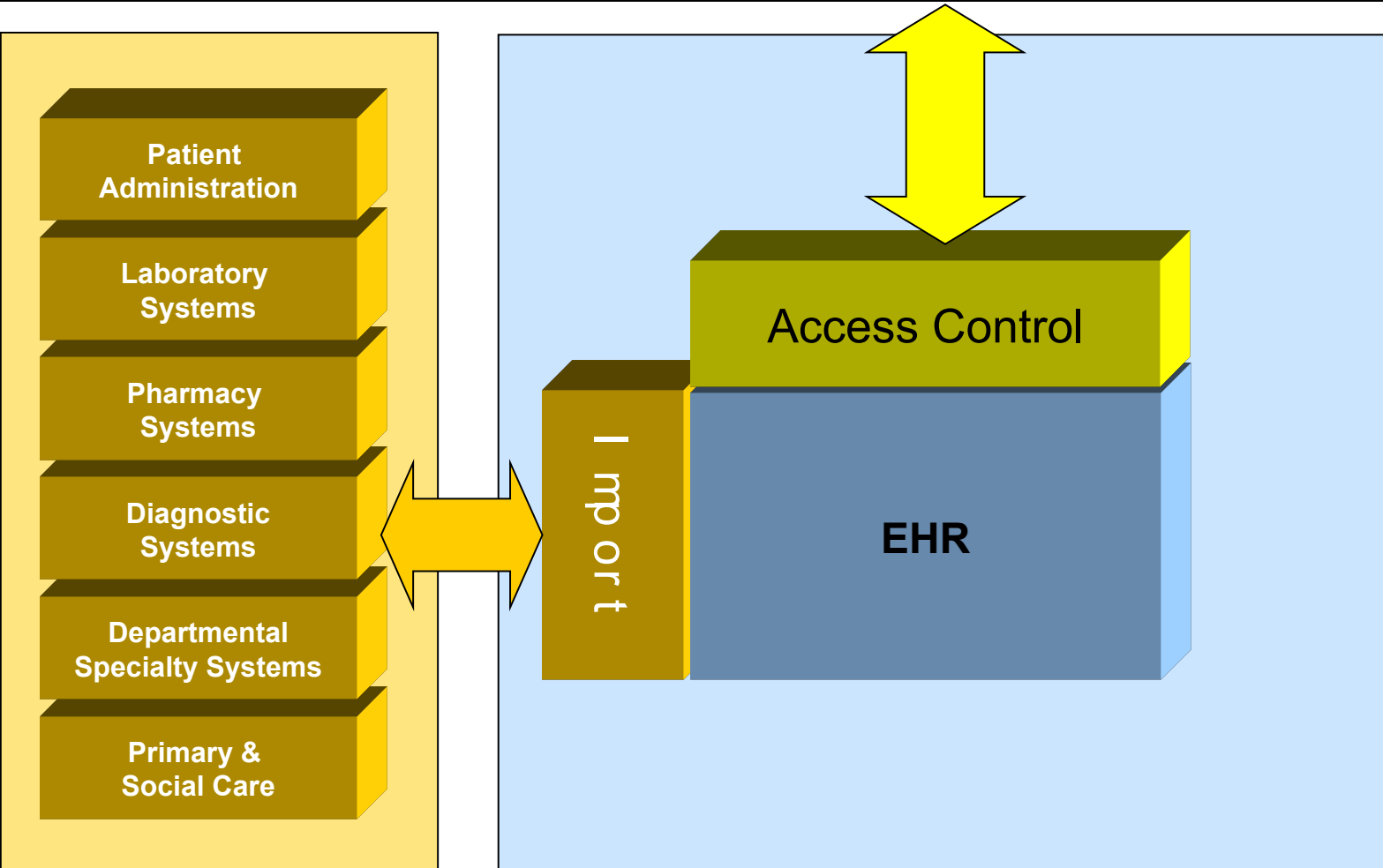
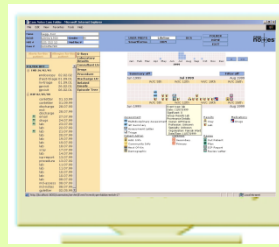
Technology Supporting Clinical Engagement

- Technology designed to support the move towards a patient-centred record, used across all caring professions
- Recognising that the existing clinical IT infrastructure must be changed, without interruption of the support for clinical services
- This is technology that supports the migration to new and improved systems, through a controlled migration programme, without 'rip and replace' or 'big bang' implementation



User Interface

Web Browser
Zero Footprint
Pure HTML with SSL security



This implements a Virtual Record system.

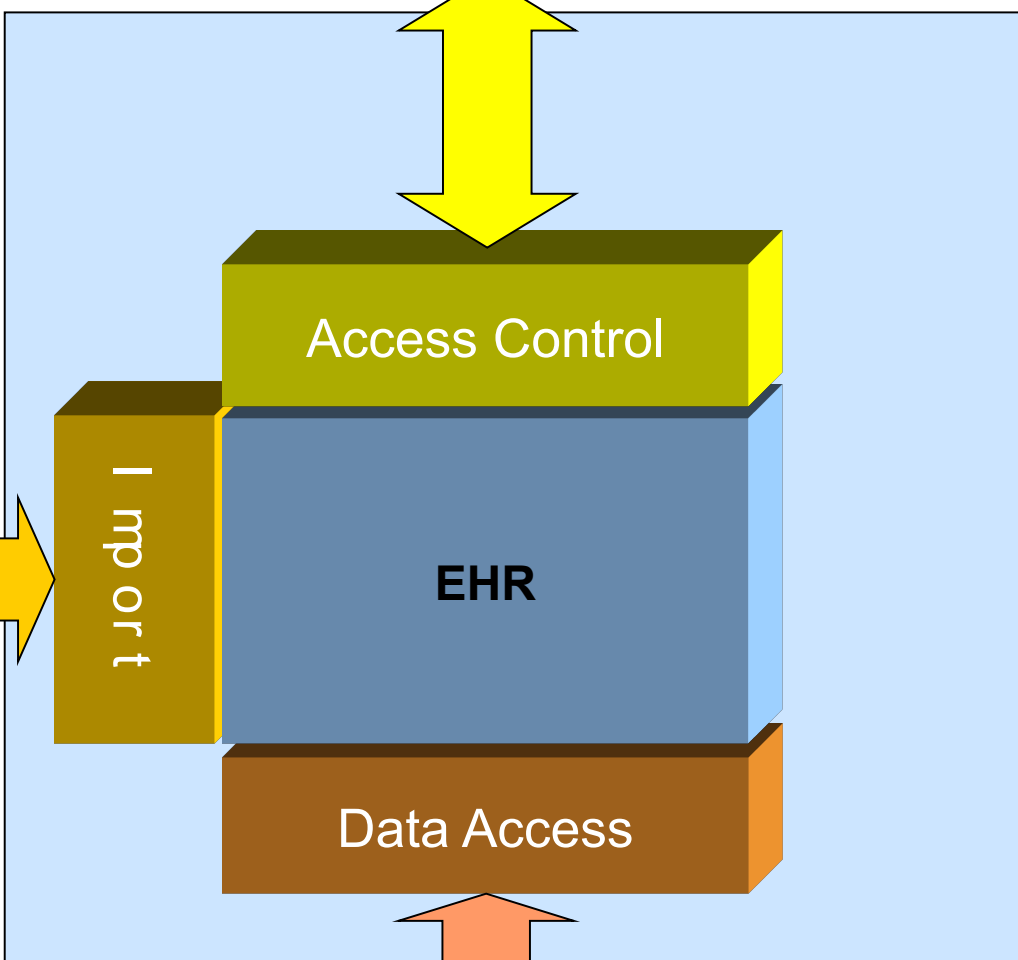
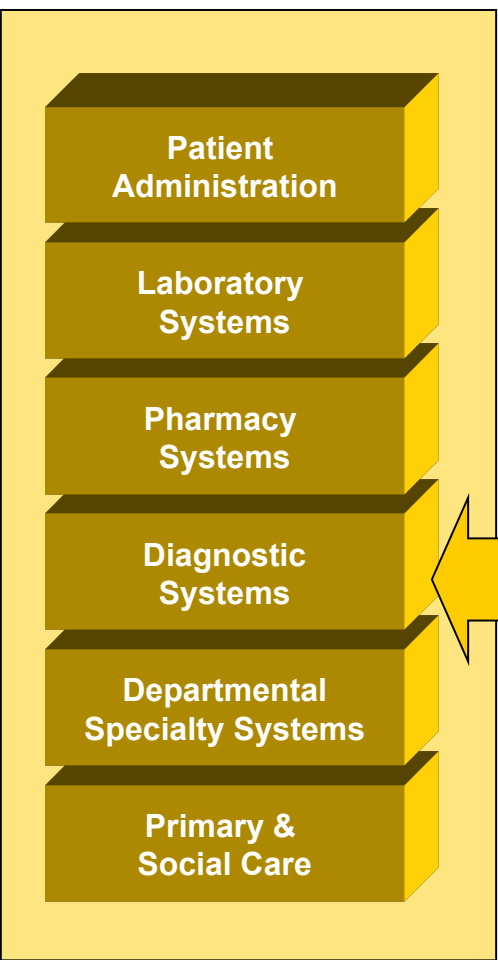
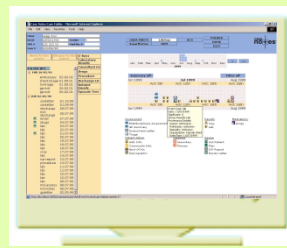
Not a good solution, in my opinion.

Integrate



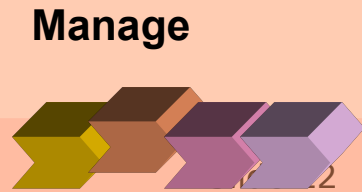
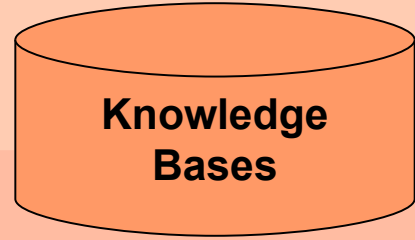
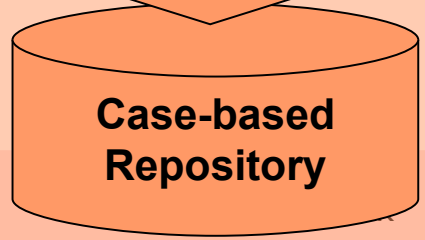
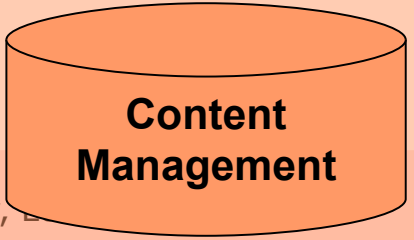
User Interface

Web Browser
Zero Footprint
Pure HTML with SSL security



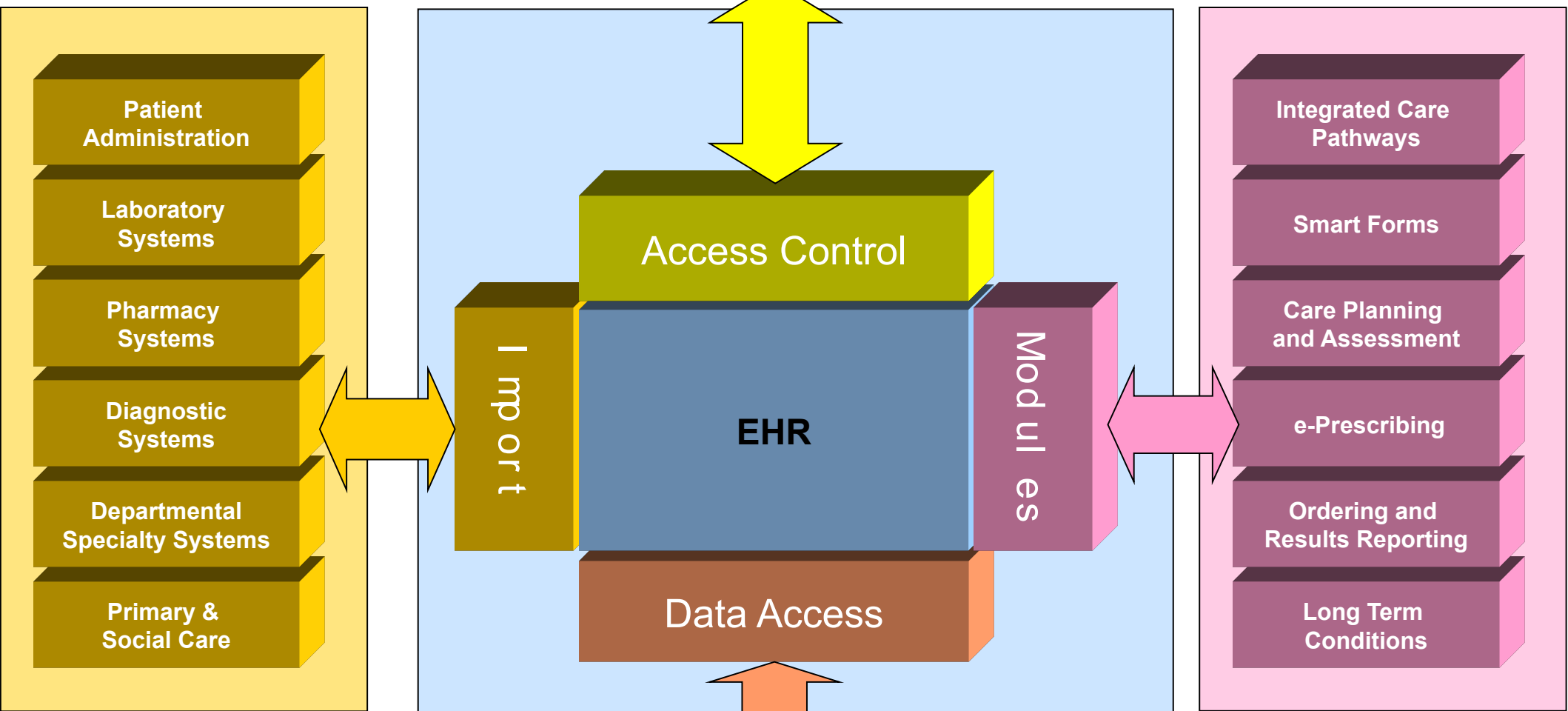
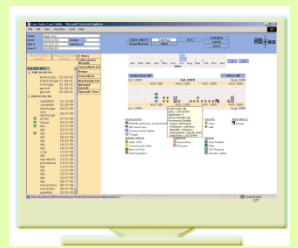
Most EHR systems have central storage of the full record.

Database
SQL Server
Oracle
Other SQL



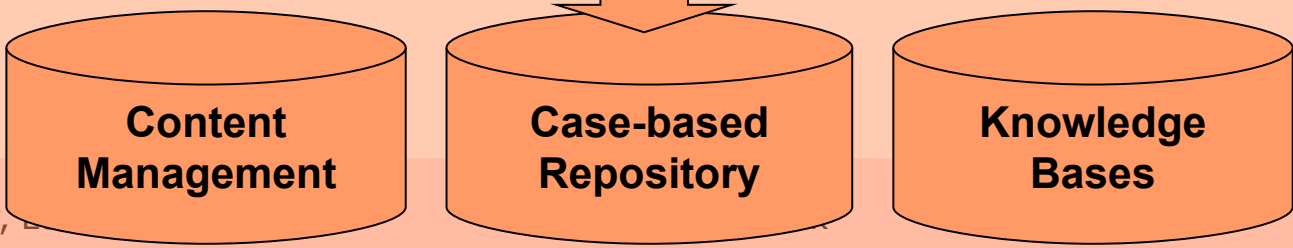
User Interface

Web Browser
Zero Footprint
Pure HTML with SSL security



Database

SQL Server
Oracle
Other SQL

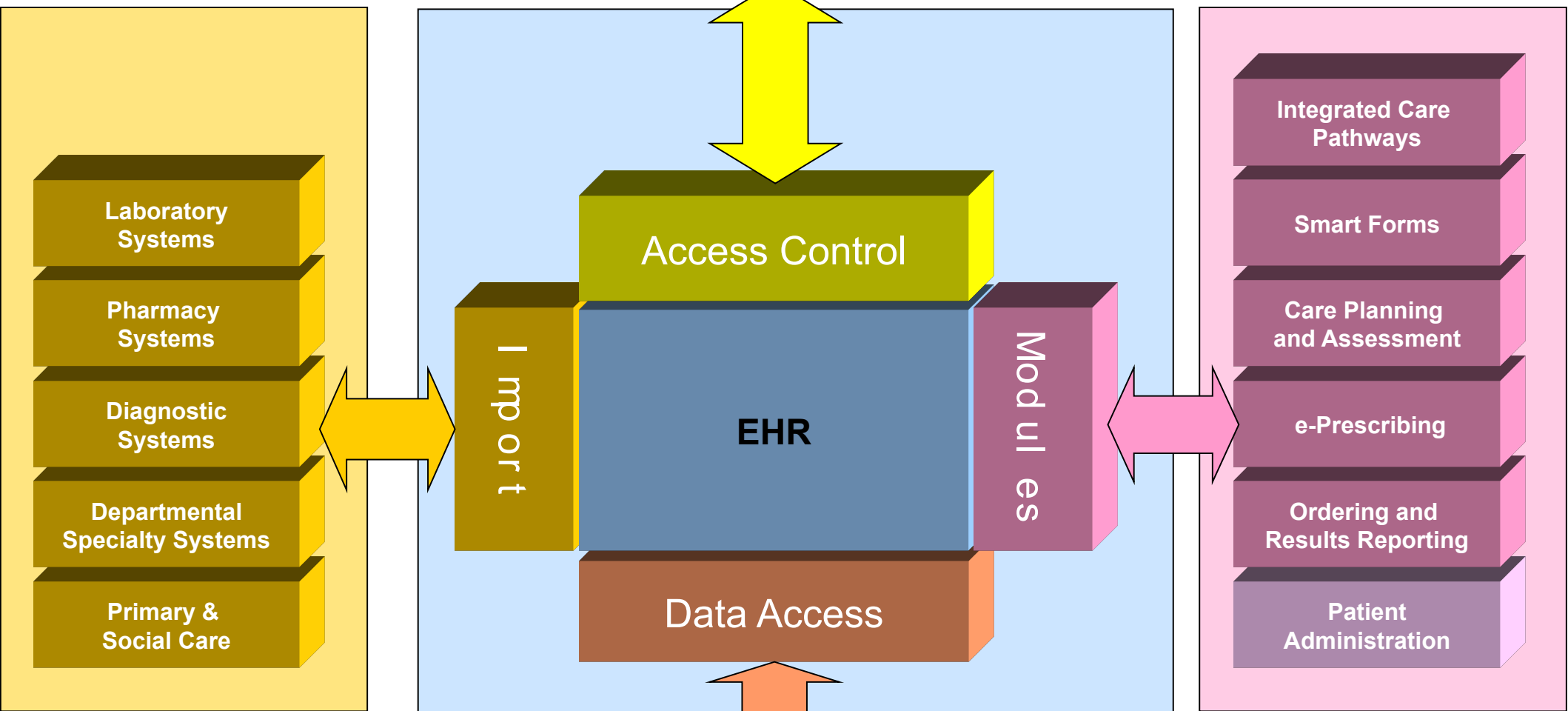
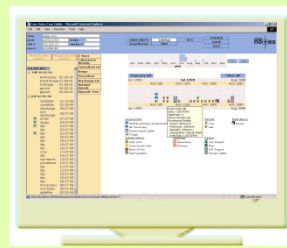


Extend



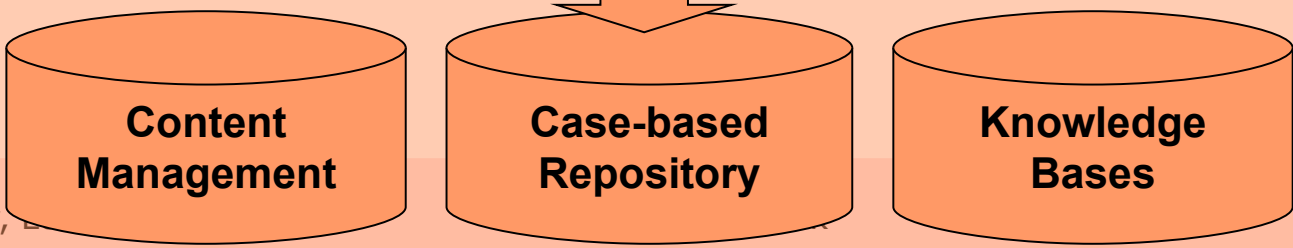
User Interface

Web Browser
Zero Footprint
Pure HTML with SSL security



Database

SQL Server
Oracle
Other SQL



Consolidate



Walk Through of (Commercial) EHR System



Shared Care
Clinical Data Collection
Care Planning
Integrated Care Pathway
Order Communications
Referral and Discharge

Regional
And National
Systems



Care Team



Patient Centred Record



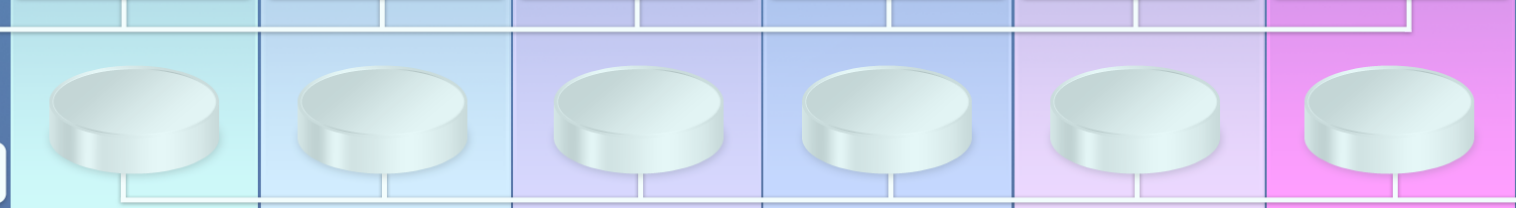
Hub



Patient Journey



Primary Care Acute Hospitals Community Care Social Services Mental Health Voluntary Sector



Existing Systems

Case Notes EHR System

An Electronic Health Records System based upon a single, patient-centred record, with functional modules that support patient care across all the caring professions and a technology platform that eases migration from existing systems.

The screenshot displays the Case Notes EHR System interface for patient CHARLENE C BERNARD. The top navigation bar includes 'Home', 'Patient Folder', 'Logout', and 'case notes V5'. The patient's demographic information is shown: DOB: 08/06/1965, Gender: Female, MRN#: 000253694, Zip: 11435, SSN#: 085887671. The interface is divided into several sections: 'Folder Content' on the left with a filter and a list of medical events; 'Demographics Details' in the center, including personal, address, and employment information; and 'Core Measures' on the right, showing a 'Final Diagnosis' section with a 'Copy Initial Diagnosis' button and a 'Disposition' section. The user name 'Sunta Morin' is visible at the bottom.

Section	Field	Value
Demographics	Patient name	Charlene C Bernard
	Age	41 Yrs
	MRN#	000253694
	Gender	Female
Personal Details	Last Name	BERNARD
	First Name	CHARLENE
	Middle Name	C
	Gender	FEMALE
Address Details	Address Line1	147-52 109TH AVE
	Address Line2	JAMAICA
	City	NY
	State	11435
Employment Information	Occupation	RETAIL
	Employer	TJ MAX
	Address Line1	136-05, 20T AVE
	Address Line2	COLLEGE POINT

Developed from 1998 onwards

Used in NHS ERDIP pilots 1999 - 2002

Based of the NHS PSIS aka Summary Care Record 2004 onwards

Login

case
no+es
V5

csw Case Notes helps professionals deliver patient-centred, cross-agency, shared care.

Enter login details below:

Username:

Password:

[Login](#)

[Forgotten your username/password?](#)

Need Help?
Any problems please contact the
helpline: 01234 567890
or e-mail: support@csw.co.uk

Local intranet

Home page - Administration

- Preference setting allows customisation of default views
- Clinical library management – access point for the Care Plan, Orders and Care Pathways libraries and builders
- Administration of reference data used in configuration and population of all Case Notes functions
- InTray provides a shared-care communication utility for clinical information
- Reference data

Home Page

The screenshot shows a web browser window displaying the CaseNotes V5 Home Page. The user is logged in as Peter Graves. The page features a navigation menu on the left with sections for Search and System Configuration. The main content area is titled 'Add New User - Basic Details' and contains a form for creating a new user. The form is divided into three sections: Account details, Personal details, and Organisation details. Each section contains several input fields, some of which are marked as compulsory with an asterisk. The Account details section includes fields for User name, Password hint, Account start date, Account end date, and Allow multiple login. The Personal details section includes fields for Title, Surname, Forename, Clinician code, Bleep number, and Email address. The Organisation details section includes fields for Organisation, Specialty, Primary role, Role, Consultant team, and Location. A small note below the Organisation details section states: 'For users with multiple specialties, locations and roles, further entries can be added for subsequent screens'. An 'Add User' button is located at the bottom right of the form. The browser's address bar shows 'Local intranet'.

Username: Peter Graves

Previous Login: 05 Oct 2006 12:55:38

Failed Logins: 0

In-Tray (0/0)

Home | Logout | Help | case notes V5

Add New User - Basic Details

Please fill in the following basic details. Compulsory fields are marked *.

Account details

* User name: * Account start date:

Password hint: * Account end date:

Allow multiple login:

Personal details

Title: Clinician code:

* Surname: Bleep number:

* Forename: Email address:

Organisation details

For users with multiple specialties, locations and roles, further entries can be added for subsequent screens

* Organisation:

Specialty:

* Primary role:

Role:

Consultant team: * Location:

User Name: Peter Graves

Local intranet

Security, Login, Access Control

- Overview

- System administrator controls an internal register or uses an external service to maintain a directory of users.
- Information includes roles, team membership and passwords.
- The system authenticates the user at login and provides access. (1st-level Authentication may be by SmartCard)
- The Access Control Framework, working with the Resource Permissions Manager, controls access to data, resources and modules.
- It controls and tracks user and system access
- Includes the access control of administrative and clinical user roles to organisational data, patient details, episodes and events within an individual health record
- Audit feature records all activity with user identified

Security, Login, Access Control

- Features
 - Role and Agent-based access manages users in care teams
 - Flexible configuration can match an organisation's exact requirements
 - Can model access such as 'Doctors can view Lab reports' or 'This assessment letter)
 - Works with Smart Card and Biometric recognition
 - Can link to other systems to provide single user login across systems
 - Security override permitted and recorded
 - Comprehensive audit data collection and report

Managing Users and Roles

The screenshot displays the 'case notes V5' web application interface. At the top, the user is logged in as 'Peter Graves'. The page title is 'Add/Modify Workgroup'. The left sidebar contains a 'Search' menu with options like 'Find Patient', 'Case Notes Patient Search', and 'Work Lists', and a 'System Configuration' menu with options like 'User Management Reports', 'Manage Roles', and 'Manage Work Groups'. The main content area has a heading 'Add/Modify Workgroup' and a note 'Compulsory fields are marked *'. It features two sections: 'Add Workgroup' with input fields for Name, Code, Mobile number, Telephone number, Email address, Workgroup Name, and Fax number; and 'Modify Workgroup' with a dropdown for Name. Action buttons include 'Add Workgroup', 'Add as Parent', 'Modify Workgroup', and 'Delete Workgroup'. A dropdown menu is set to 'None'. The bottom status bar shows 'User Name: Peter Graves' and 'Local intranet'.

Managing Permissions

The screenshot shows the 'Resource Permission Manager' interface within the 'case notes V5' application. The user is logged in as Peter Graves. The interface is divided into several sections:

- Search:** A search bar with a 'Search' button and a 'Resources Taxonomy Builder' link.
- Browse all available Accessors:** A tree view showing a hierarchy of accessors. The 'Clinician' node is selected and highlighted in blue. The tree includes categories like '+ organisation', '- primary-role', '+ role', '+ specialty', and '+ workgroup'. Under '- primary-role', there are sub-nodes for 'Root primary role' (with 'ACF basic administration' and 'ACF full administration' as children) and 'Labuser', 'Phlebotomist', 'Radiologist', and 'SSB User'. A 'SYSTEM' section is also present.
- Selected Node:** A panel on the right showing details for the selected 'Clinician' node. It lists 'Name: Clinician' and 'Type code: Accessor'. Below this, there are three permission entries, each with a 'GO' button:
 - Module Resources - Specific Permissions: Edit specific permissions for module resources for this accessor
 - Resource Types - General Permissions: Edit general permissions for resource types for this accessor
 - Resource Types - Default Permissions: Edit default permissions for resource types for all accessors
- System Configuration:** A sidebar menu on the left with options like 'User Administration', 'Clinical Configuration', 'System Administration', and 'User Management Reports'.
- Search users:** A section at the bottom with a search box and a 'View the list of users for: Clinician' button.

The top of the interface shows the user's login information: Username: Peter Graves, Previous Login: 05 Oct 2006 12:55:38, Failed Logins: 0. The top right has 'Home', 'Logout', and 'Help' links. The bottom status bar shows 'User Name: Peter Graves' and 'Local intranet'.

Search, Merge/Unmerge, Registration

- Overview, Features, Benefits -
 - Home Page is the user's personal working environment.
 - Patient Search can be from external services, leading to better shared care and data quality
 - Depending on the system requirement, a patient can be registered on the local index, with or without an external service number
 - Soundex Search allows for similar-sounding names
 - Personal lists allow the user to rapidly search and manage their own list of patients
 - InTray provides a shared-care communication utility for clinical information

Search, Merge/Unmerge, Registration

The screenshot displays a web browser window with the following elements:

- Header:** Username: Peter Graves, Previous Login: 13 Sep 2006 13:15:14, Failed Logins: 0. Navigation links for Home and Logout. Logo for 'case notes V5'.
- Left Navigation Menu:**
 - Search**
 - Find Patient
 - Case Notes Patient Search
 - NHS Number Search
 - Basic Search
 - Advanced Search
 - Find Patient List
 - Personal Lists
 - Phlebotomy Search
 - System Configuration**
 - User Administration
 - My Setup
 - Patient Registration
 - Change Password
 - Return to Last Working Area
 - Clinical Configuration
 - Care Planning Library Manager
 - Audit
 - System Administration
 - Reporting
 - Workflow

- Main Content Area:**
- Case Notes Patient Search**
- Wildcards may be used in fields marked with the asterisk character (*).
- Hospital Number**
the PAS Number (also primary key to table)
- Standard**
- Surname***
- Forename***
- Date of birth**
- Gender**
- Footer:** User Name: Peter Graves, Done, Local intranet.

Search

- Patient
- Notes Patient Search
- Number Search
- Search
- ed Search
- Patient List
- sts

Configuration

- Administration
- Configuration
- Administration
- w

Basic Search

Please complete all fields marked with the dagger character (†).

Wildcards may be used in fields marked with the asterisk character (*).

Given Name*

Ivor

Family Name†

Legg

PostCode

Gender†

Male

Date of birth†

18 Jun 1930

Select

Date of Death

Select

Can also search using wild cards like Iv* to get all patients with first names starting with 'Iv'

Mandatory demographic information needed for search

- Search**
- Find Patient
 - Case Notes Patient Search
 - NHS Number Search
 - Basic Search
 - Advanced Search
- Find Patient List
- Work Lists

- System Configuration**
- User Administration
- Clinical Configuration
- System Administration
- Workflow

Patient Search Results

Case ID	Surname	Firstname	PAS Number	NHS Number	1st Address Line	Gender	Date of Birth
2000000000	Legg	Ivor		1234567890	The Clinic	Male	18 Jun 1930

[New Search](#) [Refine Search](#) [Print Results](#)

Patient identified demographic information

Patient Record and Views

- Overview

- Case Notes provides a repository for all the patient records held on the system. It is patient-centred and it collects and manages all information about that patient and their care.
- The Patient Folder view is the main point of access to the patient record and to clinical modules - Order-comms, Results, Care Pathways, Care Planning
- All clinical activity is collected as 'events', which may be a clinical note, an assessment, a lab result, the publication of a care plan or many others. Tabs lead to key clinical information and summary views. The working area shows the event or summary.
- The Patient Folder view shows as much clinical information as possible, in as simple and accessible form as possible, with minimal key-presses and without the need to access specific functions.

Patient record and Views

- Features -
 - Events are shown as a vertical chronological list with week/month/year views and selected for viewing by a single click.
 - Or as a graphical 'lifeline' view with events shown as icons on a fixed time-scale.
 - Event Tree Filters allow the user to select which events will be shown, and are set specific to the patient.
 - Tab summary views show, current or latest events and lead to combined summary views.
 - Events may be sent to In-Tray
 - The working area shows the detail of the default or selected event.

Folder Content Show Lifeline

Filter is off Edit Filter

Future (0)
Last 7 Days (0)
8 - 30 Days (1)
Older (31)
Referral 13 Feb 2008
Management 17 Jan 2008
Examination 11 Jun 2007
Problem 04 Jun 2007
Referral 09 May 2007
Referral 13 Mar 2007
Referral 13 Mar 2007
Referral 16 Feb 2007
Referral 31 Jan 2007
Problem 30 Jan 2007
Chem. Path. 28 Jul 2006
Microbiology 28 Jul 2006
Radiology 26 Jul 2006
Haematology 24 Jul 2006
Chem. Path. 22 Jul 2006
Microbiology 22 Jul 2006
Chem. Path. 20 Jul 2006
Haematology 20 Jul 2006
Haematology 18 Jul 2006
Chem. Path. 17 Jul 2006
Haematology 17 Jul 2006
Chem. Path. 16 Jul 2006
Haematology 16 Jul 2006
Microbiology 16 Jul 2006
X-Ray 16 Jul 2006
AE Discharge 16 Jul 2006
Medications 16 Jul 2006
Con. Letter 16 Feb 2006

Event tree listing patient events chronologically

Demographics

NHS Number 1234567890

Personal Details
Usual Name Ivor Legg
Gender Male
Date of Birth 18/06/1930

Address Details
Usual Address The Clinic
8 Hospital Road
Hospital Way
SO50 9UV

GP Details
Name Dr Hillier GP Code G9020385

Information tabs

Information view pane

To return to the patient folder default view

To switch between event tree and lifeline

Patient Folder

The screenshot shows a web-based patient folder interface. At the top, the patient's name is **Ivor Legg**. Below this, personal details are listed: DoB: 18 Jun 1930, Gender: Male, NHS No: 1234567890, Postcode: SO50 9UV, and Social Service No: Not available. The interface includes navigation links like Home, Patient Folder, Logout, and Help. A 'case notes V5' logo is also present. The main content area is titled 'Behavioural Assessment Form' and is divided into several sections: 'Person Details', 'HoNOS Assessment', 'Behavioural Problems', 'Impairment Problems', and 'Symptomatic Problems'. The 'Person Details' section shows Last name: Legg, First name: Ivor, Patient's NHS Number: 1234567890, and DOB: 18 Jun 1930. The 'HoNOS Assessment' section shows Assessed By: Peter Graves and Assessment Date: 22 Sep 2006. The 'Behavioural Problems' section shows scores for Overactive, Aggressive, Disruptive Behaviour (12), Non-Accidental Self Injury (12), Problems with Drinking or Drug Taking (12), and a Total score of 12. The 'Impairment Problems' section shows scores for Cognitive Problems (12), Physical Illness or Disability Problems (12), and a Total score of 12. The 'Symptomatic Problems' section is currently empty. A left-hand navigation pane shows 'Folder Content' with filters for Alerts (Yes) and Allergies (Yes), and a list of items including Future (0), Last 7 Days (0), 8 - 30 Days (1) with a sub-item 'Behavioural' dated 22 Sep 2006, and Older (25). The bottom of the interface shows the user name 'Peter Graves' and a 'Local intranet' icon.

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | case notes V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Folder Content [Show Lifeline](#)

Filter is off [Edit Filter](#) Alerts Yes Allergies Yes

Future (0)
Last 7 Days (0)
8 - 30 Days (1)
Behavioural 22 Sep 2006
Older (25)

Demographics
Results
InPats
OutPats
Problems

Behavioural Assessment Form

Person Details

Last name	Legg	First name	Ivor
Patient's NHS Number	1234567890	DOB	18 Jun 1930

HoNOS Assessment

Assessed By	Peter Graves	Assessment Date	22 Sep 2006
-------------	--------------	-----------------	-------------

Behavioural Problems

Overactive, Aggressive, Disruptive Behaviour	12	Non-Accidental Self Injury	12
Problems with Drinking or Drug Taking	12	Total	12

Impairment Problems

Cognitive Problems	12	Physical Illness or Disability Problems	12
Total	12		

Symptomatic Problems

User Name: Peter Graves Local intranet

Patient Folder

Ivor Legg

[Home](#) | [Patient Folder](#) | [Logout](#)

DoB: **18 Jun 1930** Gender: **Male**

NHS No: **1234567890** Postcode: **SO50 9UV**

Social Service No: **Not available**

Help

[Smart Forms](#) | [Care Pathways](#) | [Care Planning](#) | [Order Communications](#) | [E-Prescribe](#)

[Send to In-Tray](#) | [Mark as Significant](#) | [Add Comment](#)

Folder Content Show Lifeline

Filter is off [Edit Filter](#)

Alerts Yes

Allergies Yes

- Future (0)
- Last 7 Days (0)
- 8 - 30 Days (1)**
- Older (25)**

Chem. Path.	28 Jul 2006
Chem. Path.	28 Jul 2006
Chem. Path.	28 Jul 2006
Microbiology	28 Jul 2006
Chem. Path.	22 Jul 2006
Chem. Path.	22 Jul 2006
Microbiology	22 Jul 2006
Chem. Path.	22 Jul 2006
Chem. Path.	20 Jul 2006
Chem. Path.	20 Jul 2006
Chem. Path.	20 Jul 2006
Chem. Path.	20 Jul 2006
Chem. Path.	17 Jul 2006
Chem. Path.	17 Jul 2006
Chem. Path.	17 Jul 2006
Chem. Path.	16 Jul 2006
Chem. Path.	16 Jul 2006
Microbiology	16 Jul 2006
Chem. Path.	16 Jul 2006
X-Ray	16 Jul 2006
Medications	16 Jul 2006
AE Discharge	16 Jul 2006
Con. Letter	16 Feb 2006
Dental-Chart	14 May 2005
Demographics	01 Feb 2003
Endoscopy	04 Nov 2000

- Demographics
- Results
- InPats
- OutPats
- Problems

Endoscopy

Department Of Endoscopy

Tel: 023 8082 5802

Fax: 023 8079 2404

Southampton NHS

University Hospitals NHS Trust

Colonoscopy Report

<p>Registered GP Gp (Update Asap) Unknown Unknown Practice</p>	<p>Patient Name Dummy Two Patients</p> <p>Hospital no. 8888888</p> <p>NHS no. n/a</p> <p>Date of birth 01st Jan 1901</p> <p>Address This Is A Dummy Patient XXXXXXXXXX</p>
---	---

<p>Procedure Details</p> <p>Date 14th Nov 2000</p> <p>Purpose Initial Investigation</p> <p>Priority Emergency</p> <p>Patient origin Direct access</p> <p>Referrer A Hamilton</p> <p>Instrument C3 - 2000058</p>	<p>Hospital Southampton General</p> <p>GI Consultant Dr C L Smith</p> <p>Endoscopist G Constable</p> <p>Trainee Dr M Hariharan</p> <p>Site reached Terminal Ileum</p> <p>Intended site Terminal Ileum</p>
--	---

Risk Factors

Current Medication
Antacid and NSAIDS.

Past Surgery
Partial Gast-ectomy B1. Croledochoduodenostomy.
Colectomy - sigmoid.

Procedural Medication
Warfarin(5 mg).

Indications
Bowel habit changes.

Findings

User Name: Peter Graves

Local intranet

Patient Folder

Ivor Legg
DoB: 18 Jun 1930 Gender:
NHS No: 1234567890 Postcode:
Social Service No: Not available

Home | Patient Folder | Logout | Help | case notes V5

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Folder Content Show Event Tree

Send to In-Tray | Mark as Significant | Add Comment

Filter is off | Edit Filter

Month ↑ Year ↑

Sep/06
Aug/06
Jul/06
Jun/06
May/06
Apr/06
Mar/06
Feb/06
Jan/06
Dec/05
Nov/05
Oct/05

Month ↓ Year ↓

W/E 6 August
Nil
W/E 30 July
Su
Sa
Fr
Th
We
Tu
Mo
W/E 23 July
Su
Sa
Fr
Th
We
Tu
Mo
W/E 16 July
Su
Sa
Fr
Th
We
Tu
Mo

Show Key

User Name: Peter Graves

X-Ray


X-Ray

Pre and Post operative views pelvis and right hip.

There is gross displacement of the right head of femur with associated degenerative disease prior to the THR. Satisfactory post op appearance.

Clinical note; previous CDH.

Almost complete loss of joint space in the right hip with moderate associated OA changes.



Summary View

FLORENCE BEAL Gender: Female
Home | Folder | Logout

DOB: 01/04/1934 Postcode: SW8 4LB
Knowledge Bases | Help

ID: e87we87 NHS No: 191205103
Custom 1 | Custom 2

Care Planning | E-Prescribing | ICP | OCS | Smart Forms

Alerts: N **Allergies: Y**
Print Send Comment Mark

Events

Filter: off Lifeline

- Future Events (0)
- Last Weeks (4)
- Leg Ulcer Assessment
- Progress Notes
- Observations
- Personal Information
- Last Month (10)
- Last Year (145)
- Older (312)
- All (503)

Summary

Allergies 2/5 Display All

Condition	Date
+ Cat danger	20/03/2000
+ Pollen	02/05/1999

Problems 2/10 Display All

Condition	Date
+ Difficulty in breathing	20/04/1999
+ Unstable blood sugar levels	31/05/2000

Medications 2/15 Display All

Observation	Date
+ Salbutamol inhaler PRN	12/08/2004
+ Metformin 500mg BD 2004	10/09/2004

Diagnosis 2/100 Display All

Observation	Date
+ Appendicitis	19/08/2003
+ Asthma	11/01/2002

Investigations 2/39 Display All

Observation	Date
+ HbA1c9.8	12/08/2004
+ WBC 14.6	10/09/2004

User Name: Mrs. Jane Smith
Patient Folder » Summary

Smart Forms

- Overview -
 - Provide a flexible and powerful way for the user to create, manage and share form-based information associated with individual patients – such as contact information, assessments and referrals.
 - Instantly familiar, as they can be made to look like traditional paper forms.
 - Based on a common Information Model, which is applied to all forms across care settings and through working frameworks such as Long-Term Conditions.
 - May be shared with other team members
 - Documents may be attached from external sources

Smart Forms

- Features -
 - Flexible presentation using a managed data model, from the Case Notes Information Modelling Toolkit
 - Forms can be completed or continuously updated
 - Configurable file attachment
 - Validation, Save, Publish, Print and 'advanced' icons for multiple actions and large print option
 - Send by clinical In-Tray
 - Integrate naturally with workflow – Care Pathways or simple team communications
 - User Access Control to forms or blocks – provenance to block level
 - Smart Forms module is factored and used as an engine for in other modules

Smart Forms – Control panel

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout case no+es V5

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Start New Smart Form

Frequently Used Forms

- Administrative Assessment Form
- Referral Form
- Update Demographics Form

All Forms

- Sample Forms
 - Update Demographics Form
 - Behavioural Assessment Form
 - Referral Form
 - Referral with Nested Consent
- Ambulatory Care Forms
 - Problem Form
 - Examination Form
- SAP Forms
 - Administrative Assessment Form
 - Alerts And Allergies Form
 - Basic Letter Template Form
 - Carers Assessment Form
 - Lay Carers Form
 - Specialist Assessment Form

Smart Forms

3 In Progress Smart Forms

Name	Date/Time Saved	Saved by	View	Edit	Delete
Administrative Assessment Form	14 Sep 2006 07:43:28	Peter Graves			
Behavioural Assessment Form	13 Sep 2006 13:20:31	qtp1 user			
Update Demographics Form	13 Sep 2006 13:14:52	Peter Graves			

0 Ongoing Smart Forms

Name	Date/Time Published	Published by	Update	Close
------	---------------------	--------------	--------	-------

User Name: Peter Graves

Local intranet

Smart Forms – Publish/Print

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | case notes V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Print | Send to In-Tray | Publish

Behavioural Assessment Form

Person Details

Last name	Legg	First name	Ivor
Patient's NHS Number	1234567890	DOB	18 Jun 1930

HoNOS Assessment

Assessed By	David Mills	Assessment Date	27 Sep 2006
-------------	-------------	-----------------	-------------

Behavioural Problems

Overactive, Aggressive, Disruptive Behaviour	2	Non-Accidental Self Injury	3
Problems with Drinking or Drug Taking	1	Total	1

Impairment Problems

Cognitive Problems	4	Physical Illness or Disability Problems	3
Total	4		

Symptomatic Problems

User Name: David Mills

Done Local intranet

In-Tray

- Overview -
 - In-Tray is a secure clinical version of standard e-mail, allowing users to share information within and across care settings and agencies
 - When a form is published or a result received, it can be automatically sent to the clinician or to the whole team
 - Supports processes such as referral and discharge
 - Supports shared care frameworks such as NSF's for Long-term conditions
 - Particular strengths in team communications, with business logic for confirmation
 - Full retention in the repository, full audit and communication history

In-Tray

- Features
 - Clinical In-Tray, with Familiar 'e-mail' operation, Instant communication
 - Search for specific items, Filter views
 - Priority
 - Covering notes and memos (non patient related communication)
 - Reply and forward
 - Communication History
 - Direct access to patient folder
 - Workgroup Communication management: copy to groups, business rules, representative responses, user In-Tray

In-Tray example

- Referral
 - Single selection of recipients – auto send on publish
 - Only 'published' forms will prompt the referral responses
 - 'Action required' flag within In-Tray
 - Ability to 'forward' inappropriate referrals
 - Responses captured within the Referral Form
 - Responses accessed via 'In-Tray' or 'Smart Forms' module
 - Auto-archiving no longer required. ('Action required' flag and 'Edit Response' ability will be removed once response received)
 - Application of business rules to prevent inappropriate actions (can't archive until someone responded etc)

In-Tray

Username: **Peter Graves** Home Logout **case no+es V5**
 Previous Login: **27 Sep 2006 09:08:13** Help
 Failed Logins: **0**

In-Tray (5/1)

5 Messages (1 New) Read Reply Forward Archive

Send Memo
 All Current Messages
 Show

Message	Patient	Sent
Chemical Pathology	Ivor Legg	27 Sep 2006
Behavioural Assessment Form	Ivor Legg	27 Sep 2006
X-Ray	Ivor Legg	26 Sep 2006
Radiology	Ivor Legg	26 Sep 2006
Chemical Pathology	Ivor Legg	26 Sep 2006

Chemical Pathology

From: David Mills
 Sent: 27 Sep 2006 09:13:32
 To: Peter Graves

Patient Ivor Legg
Address The Clinic SO50 9UV
DoB 18 Jun 1930 **NHS No** 1234567890
[Go to Patient Folder](#)

Chemical Pathology

Lab Report Details

Lab Service Provider: NORTH HOUSE, CROOK Lab Discipline: Chemical Pathology
 Requested by: GAYER MA Patient location: NORTH HOUSE, CROOK
 Date/Time of report: 28/07/2006 Report status: Unknown
 Report comments:
 LIPID: Primary prevention, No drug Rx.

Fasting Specimen

Organiser Details

Request: Serum lipids Specimen Type: VENOUS BLOOD
 Collection Date: 28/07/2006 Received Date: 28/07/2006
 Specimen ID: 94254848E
 Supporting Info

Test	Result	Units	Ref Range	Comments
T.Cholesterol.HDL Ratio	5.6	1/1	0.0 - 4.5	⚠ Above high reference limit
Serum LDL Cholesterol	2.6	mmol/L		
Serum HDL Cholesterol	0.58	mmol/L		

User Name: **Peter Graves** Local intranet

Order Communications

Overview -

- A fast, efficient and secure way to make Requests for pathology, radiology, and health professional services.
- Flexible and localised definition of Requests
- Rapid entry with 'request basket' functionality
- Interfaces to Laboratory and Radiology systems
- Integrated with 'In-Tray' functionality
- Suited for use across multiple organisations

Order Communications

- Features
 - Order selection
 - Search and hierarchical 'tree' order selection
 - Haematology, Biochemistry, Microbiology, Histopathology
 - Roles-based access control by investigation
 - 'Order Sets' - select individually or 'All items'
 - Repeat requests
 - Frequently-used and Favourites
 - 'Quick Links' - easy access to specific areas, orders in progress
 - Order basket
 - One-click addition to basket
 - View current basket while adding services
 - Having entered your order form – can select, add or delete items.
 - Repeat Request as part of collection details
 - View in-progress orders alongside basket

Order Communications

- Features, continued
 - Order form
 - Single order form
 - Prepopulation of fields, Patient clinical history written once
 - Multiple services on one order
 - Request Validation
 - Order processing
 - View, Collect, Print, Cancel, multiple selection
 - Phlebotomy lists with location grouping
 - Types & Rules
 - Radiology Service types, AHP service types, Physio, Podiatry
 - Data collection, validation, rules for grouping, duplicates
 - Integration
 - Internal: order from Care Pathways, link to results, In-Tray
 - External: HL7 with LIMS and RIS, Terminology (5.1+)

Ordering – Request Basket and In-Progress

Home | Patient Folder | Logout | **case notes** V5
 Help

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Add to Request Basket

- ▼ Radiology
 - ▼ X-Ray
 - Radiology Exam
 - ▶ Abdomen
 - ▼ Chest
 - pa/ap
 - Insp & exp
 - R Lat only
 - L Lat only
 - Thoracic
 - Ribs (L)
 - Ribs R
 - Sternum
 - Over pen
 - Apical
 - ▼ Skull
 - Sk pa & lat
 - Sk pa l & t
 - Facial bones
 - Mandible
 - Orbits
 - Optic f
 - P fossa
 - Om views
 - Zygoma
 - Nasal bones
 - OPG
 - TMJ's
 - Sinuses r
 - Sinuses e
 - Post Nasal
 - Sub-mand
 - Parotid
 - Sialogram L
 - Sialogram R
 - Teeth OPG
 - Vertex occ
 - Cephal.
 - ▶ Spine
 - ▶ MRI
 - ▶ CT
 - ▶ Ultrasound
 - ▶ Cell. Path.

User Name: qtp1 user

Local intranet

Order Communications

[Historic Requests](#)

Request Basket Summary

Name	Destination	Remove
Urea	Internal-Biochemistry	<input type="checkbox"/>
Bicarbonate	Internal-Biochemistry	<input type="checkbox"/>
Albumin	Internal-Biochemistry	<input type="checkbox"/>
Serum Iron	Internal-Haematology	<input type="checkbox"/>
Facial bones	Internal-Radiology	<input type="checkbox"/>

[Edit Details](#)

In-progress Requests

ID	Provider	Requested By	Date/Time Requested	Status	Status detail	Select
1000001735	Item(s) requested Internal-Radiology	David Smithson	28 Sep 2006 16:13	Requested		<input type="checkbox"/>
	Thoracic					
1000001721	Internal-Biochemistry	David Smithson	28 Sep 2006 16:12	Awaiting Collection	Routine collection	<input type="checkbox"/>
	Bilirubin, ALT, Alkaline Phosphatase					
1000001710	Internal-Haematology	David Smithson	28 Sep 2006 16:12	Awaiting Collection	Routine collection	<input type="checkbox"/>
	FBC					
1000001653	Internal-Biochemistry	David Smithson	28 Sep 2006 16:10	Awaiting Collection	Routine collection	<input type="checkbox"/>
	Sodium, Potassium, Creatinine					

[Print](#)
[Collect](#)
[Cancel](#)
[Receive](#)

OCS Request

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | Help

case notes V5

Smart Forms | Care Pathways | Care Planning | Order Communications

Back Submit Request Cancel

- Person Details
- Alerts
- Allergies
- Drug Allergies
- Other Allergies
- Requester Details
- Specimen Collection Details
- Radiology Details
- Sodium
- Potassium
- Creatinine
- Total Bilirubin
- Alanine Transaminase (ALT)
- Alkaline Phosphatase
- Urea
- Bicarbonate
- Serum Iron
- Triglyceride
- Uric Acid
- Magnesium
- Thoracic spine
- Chest Inspiration & Expiration

Remove item

Magnesium

Destination Internal-Biochemistry
Discipline Biochemistry
Container type PST
Specimen collection details Default collection details
Override Collection
Remove item

Thoracic spine

Destination Internal-Radiology
Modality X-Ray
Description
Priority Routine
Remove item

Chest Inspiration & Expiration

IRMER regulations state that this X-ray should not routinely be repeated within 24 hours

Destination Internal-Radiology
Modality X-Ray
Description
Priority Routine
Remove item

User Name: qtp1 user

Done Local intranet

OCS Request

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | Help | case notes V5

Smart Forms | Care Pathways | Care Planning | Order Communications

Back | Print Selected

Submitted Requests

The following requests have been submitted:

ID	Destination	Items Requested	Priority	Date/Time Submitted	Status	Select
1000001525	Internal-Biochemistry	Sodium, Potassium, Creatinine, Bilirubin, ALT	Routine	26 Sep 2006 16:45	Awaiting Collection	<input type="checkbox"/>
1000001536	Internal-Biochemistry	Alkaline Phosphatase, Urea, Bicarbonate, Triglyceride, Urate	Routine	26 Sep 2006 16:45	Awaiting Collection	<input type="checkbox"/>
1000001547	Internal-Biochemistry	Magnesium	Routine	26 Sep 2006 16:45	Awaiting Collection	<input type="checkbox"/>
1000001558	Internal-Haematology	Iron	Routine	26 Sep 2006 16:45	Awaiting Collection	<input type="checkbox"/>
1000001569	Internal-Radiology	Thoracic, Insp & exp	Routine	26 Sep 2006 16:45	Requested	<input type="checkbox"/>

User Name: qtp1 user

Done Local intranet

Results Reporting

- Overview

- Results are reported automatically to the Patient Folder, with out-of-range results automatically triggered to the user's In-Tray (available in standard Case Notes).
- Results may be entered manually or from interfaced departmental systems.
- All historical results reported to Case Notes for that patient are available through the Results Reporting Module.
- Results can be filtered and selected for display in tabular and graphical format.
- Case Notes' Results Reporting is proven in deployment across multiple organisations – acute Trusts, Community and GP settings.
- Results Reporting uses Case Notes' Graphing Service, which includes the capability for generation of graphs on data entered from forms, such as blood pressure or assessment scores.

Results Reporting

- Features
 - Results are available as events presented in history or lifeline views (available in standard Case Notes)
 - 2-stage filtering of case results history – time and result type
 - Tabular display of results, including free text reports
 - Graphical display of numerical data
 - Multiple curves, out of range indication
 - Logarithmic scale
 - HL7 interfaces to Lab and Radiology systems

Results Reporting

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home | Patient Folder | Logout | Help

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Folder Content: Alerts Yes, Allergies Yes

Chemical Pathology

Lab Report Details

Lab Service Provider: CARMEL SURGERY Lab Discipline: Chemical Pathology
 Requested by: FUAT A Patient location: CARMEL SURGERY
 Date/Time of report: 28/07/2006 Report status: Unknown
 Report comments:
 LIPID: Secondary prevention, On drug Rx.

TYPE II DIABETIC

Organiser Details

Request: Urea and electrolytes Specimen Type: VENOUS BLOOD
 Collection Date 28/07/2006 Received Date: 28/07/2006
 Specimen ID: 54113588A
 Supporting Info
 Urea and electrolytes

Test	Result	Units	Ref Range	Comments
E UREA & ELECTROLYTES				
Sodium	139	mmol/L	134 - 147	
Potassium	4.6	mmol/L	3.5 - 5.0	
Chloride	104	mmol/L	97 - 107	
Urea	5.4	mmol/L	2.5 - 7.0	
Creatinine	81	umol/L	55 - 110	

Request: Liver function test Specimen Type: VENOUS BLOOD
 Collection Date 28/07/2006 Received Date: 28/07/2006
 Specimen ID: 54113588A
 Supporting Info
 Liver function test

User Name: Peter Graves

Results Reporting

The screenshot displays a web-based medical application interface. At the top, the patient's name is 'Ivor Legg'. Below this, key demographic information is provided: Date of Birth (18 Jun 1930), Gender (Male), NHS Number (1234567890), and Postcode (SO50 9UV). The interface includes navigation links such as 'Home', 'Patient Folder', 'Logout', and 'Help'. A 'case notes V5' logo is visible in the top right corner. The main content area is titled 'X-Ray' and contains the following text: 'Pre and Post operative views pelvis and right hip. There is gross displacement of the right head of femur with associated degenerative disease prior to the THR. Satisfactory post op appearance. Clinical note; previous CDH. Almost complete loss of joint space in the right hip with moderate associated OA changes.' Below the text is an X-ray image of a pelvis. On the left side of the interface, there is a 'Folder Content' sidebar with a filter set to '8 - 30 Days (1)' and a list of various medical records including 'Chem. Path.', 'Microbiology', 'X-Ray', and 'Medications' with their respective dates. The bottom of the interface shows the user's name 'Peter Graves' and the system name 'Local intranet'.

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | case notes V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications | E-Prescribe

Folder Content Show Lifetime

Filter is off Edit Filter Alerts Yes Allergies Yes

Future (0)
Last 7 Days (0)
▶ 8 - 30 Days (1)
▼ Older (25)

Chem. Path. 28 Jul 2006
Chem. Path. 28 Jul 2006
Chem. Path. 28 Jul 2006
Microbiology 28 Jul 2006
Chem. Path. 22 Jul 2006
Chem. Path. 22 Jul 2006
Microbiology 22 Jul 2006
Chem. Path. 22 Jul 2006
Chem. Path. 20 Jul 2006
Chem. Path. 20 Jul 2006
Chem. Path. 20 Jul 2006
Chem. Path. 17 Jul 2006
Chem. Path. 17 Jul 2006
Chem. Path. 17 Jul 2006
Chem. Path. 16 Jul 2006
Chem. Path. 16 Jul 2006
Microbiology 16 Jul 2006
Chem. Path. 16 Jul 2006
X-Ray 16 Jul 2006
Medications 16 Jul 2006
AE Discharge 16 Jul 2006
Con. Letter 16 Feb 2006
Dental-Chart 14 May 2005
Demographics 01 Feb 2003
Endoscopy 04 Nov 2000

Demographics
Results
InPats
OutPats
Problems

X-Ray

Pre and Post operative views pelvis and right hip.

There is gross displacement of the right head of femur with associated degenerative disease prior to the THR. Satisfactory post op appearance.

Clinical note; previous CDH.

Almost complete loss of joint space in the right hip with moderate associated OA changes.

User Name: Peter Graves Local intranet

Results Reporting

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home | Patient Folder | Logout

Smart Forms | Care Pathways | Care Planning | Order Communications

Help

Folder Content Show Lifeline

Filter is off [Edit Filter](#)

Alerts Yes
Allergies Yes

Future (0)
Last 7 Days (0)
8 - 30 Days (0)

Older (30)

- Microbiology 28 Jul 2006
- Chem. Path. 28 Jul 2006
- Chem. Path. 28 Jul 2006
- Chem. Path. 28 Jul 2006
- Radiology 26 Jul 2006
- Haematology 24 Jul 2006
- Chem. Path. 22 Jul 2006
- Chem. Path. 22 Jul 2006
- Radiology 22 Jul 2006
- Chem. Path. 22 Jul 2006
- Microbiology 22 Jul 2006
- Chem. Path. 20 Jul 2006
- Chem. Path. 20 Jul 2006
- Chem. Path. 20 Jul 2006
- Haematology 20 Jul 2006
- Radiology 19 Jul 2006
- Haematology 18 Jul 2006
- Haematology 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Radiology 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Chem. Path. 16 Jul 2006
- Radiology 16 Jul 2006
- Chem. Path. 16 Jul 2006
- Microbiology 16 Jul 2006
- Chem. Path. 16 Jul 2006
- Haematology 16 Jul 2006
- Con. Letter 16 Feb 2006
- Demographics 01 Feb 2003

Result Reporting

Tabular Results

Result Details

Test Name	Comments	Date Reported	
X-Ray - Pelvis	Pre and Post operative views pelvis and right hip. There is gross displacement of the right head of femur with associated degenerative disease prior to the THR. Satisfactory post op appearance. Clinical note; previous CDH. Almost complete loss of joint space in the right hip with moderate associated OA changes.	Mon Jul 17 13:12	View Report

Tests

Test Name	<input checked="" type="checkbox"/>	16/07/06	17/07/06	18/07/06	19/07/06	20/07/06	22/07/06	24/07/06	26/07/06	28/07/06
X-Ray - Pelvis	<input checked="" type="checkbox"/>	SEE COMMENTS	SEE COMMENTS		SEE COMMENTS		SEE COMMENTS		SEE COMMENTS	
Creatinine	<input type="checkbox"/>	71 (umol/L)	80 (umol/L)			84 (umol/L)	83 (umol/L)			81 (umol/L)
Red Cell Count	<input type="checkbox"/>	3.7 (10 ¹² /L)	3.8 (10 ¹² /L)	3.9 (10 ¹² /L)		3.95 (10 ¹² /L)		3.98 (10 ¹² /L)		
Total Bilirubin	<input type="checkbox"/>	9 (umol/L)	10 (umol/L)			10 (umol/L)	9.5 (umol/L)			9 (umol/L)
Albumin	<input type="checkbox"/>	44 (g/L)	43 (g/L)			45 (g/L)	44 (g/L)			43 (g/L)
Lymphocytes Absolute	<input type="checkbox"/>	1.9 (10 ⁹ /L)	2 (10 ⁹ /L)	2.5 (10 ⁹ /L)		2.8 (10 ⁹ /L)		3 (10 ⁹ /L)		
HAEMOGLOBIN	<input type="checkbox"/>	11.2 (g/dL)	11.4 (g/dL)	11.6 (g/dL)		11.6 (g/dL)		11.7 (g/dL)		

Out of range results are marked with the following icon

Graph Size

Medium Graph

Logarithmic Scale

[Show Graph](#)

User Name: qtp1 user Local intranet

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Slide 64

Results Reporting

Case Notes - Microsoft Internet Explorer provided by CSW Group Ltd

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Links Google BBC NEWS Jira Home - Orange Team CC Localhost CN Int Orange QA OCS UI SF API Reader RUP e-mail AS sharepoint Timesheet Router FW Ant

Address http://localhost:8080/casenotes/ Go

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home Patient Folder Logout case notes V5 Help

Smart Forms Care Pathways Care Planning Order Communications

Folder Content Show Lifeline

Filter is off Edit Filter Alerts Yes Allergies Yes

Future (0)
 Last 7 Days (0) Demographics
 8 - 30 Days (0) Results
 Older (30)

- Chem. Path. 28 Jul 2006
- Chem. Path. 28 Jul 2006
- Microbiology 28 Jul 2006
- Chem. Path. 28 Jul 2006
- Radiology 26 Jul 2006
- Haematology 24 Jul 2006
- Chem. Path. 22 Jul 2006
- Chem. Path. 22 Jul 2006
- Radiology 22 Jul 2006
- Chem. Path. 22 Jul 2006
- Microbiology 22 Jul 2006
- Chem. Path. 20 Jul 2006
- Chem. Path. 20 Jul 2006
- Chem. Path. 20 Jul 2006
- Chem. Path. 20 Jul 2006
- Haematology 20 Jul 2006
- Radiology 19 Jul 2006
- Haematology 18 Jul 2006
- Haematology 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Radiology 17 Jul 2006
- Chem. Path. 17 Jul 2006
- Chem. Path. 16 Jul 2006
- Radiology 16 Jul 2006
- Chem. Path. 16 Jul 2006
- Microbiology 16 Jul 2006
- Chem. Path. 16 Jul 2006
- Haematology 16 Jul 2006
- Con. Letter 16 Feb 2006
- Demographics 01 Feb 2003

Result Reporting

Graphical view of results

Lab Results for Ivor Legg (1234567890)

Date	Potassium (mmol/L)	Creatinine (umol/L)	Red Cell Count (10 ¹² /L)	Albumin (g/L)
17-Jul	5.1	71	3.8	44.75
18-Jul	4.8	80	3.9	44.5
19-Jul	4.7	84	3.95	44.25
20-Jul	4.6	83	3.98	44.0
21-Jul	4.6	81	3.98	43.75
22-Jul	4.6	81	3.98	43.5
23-Jul	4.6	81	3.98	43.25
24-Jul	4.6	81	3.98	43.0
25-Jul	4.6	81	3.98	42.75
26-Jul	4.6	81	3.98	42.5
27-Jul	4.6	81	3.98	42.25
28-Jul	4.6	81	3.98	42.0

Tabular Results

Tests

Test Name	16/07/06	17/07/06	18/07/06	19/07/06	20/07/06	22/07/06	24/07/06	26/07/06	28/07/06
Potassium	5.1 (mmol/L)	4.8 (mmol/L)			4.7 (mmol/L)	4.6 (mmol/L)			4.6 (mmol/L)
Creatinine	71 (umol/L)	80 (umol/L)			84 (umol/L)	83 (umol/L)			81 (umol/L)
Red Cell	3.8 (10 ¹² /L)	3.9 (10 ¹² /L)			3.95 (10 ¹² /L)		3.98 (10 ¹² /L)		

User Name: qtp1 user

http://localhost:8080/stxx/labs/ObtainTestsAction.open?series=08&item=4 Local intranet

Results Reporting

Case Notes - Microsoft Internet Explorer provided by CSW Group Ltd

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Links Google BBC NEWS Jira Home - Orange Team CC Localhost CN Int Orange QA OCS UI SF API Reader RUP e-mail AS sharepoint Timesheet Router FW Ant

Address http://localhost:8080/casenotes/ Go

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home Patient Folder Logout case notes V5 Help

Smart Forms Care Pathways Care Planning Order Communications

Folder Content Show Lifeline

Filter is off Edit Filter Alerts Yes Allergies Yes

Future (0)
 Last 7 Days (0)
 8 - 30 Days (0)
 Older (30)

Chem. Path. 28 Jul 2006
 Chem. Path. 28 Jul 2006
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 Chem. Path. 22 Jul 2006
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 Chem. Path. 20 Jul 2006
 Chem. Path. 20 Jul 2006
 Chem. Path. 20 Jul 2006
 Haematology 20 Jul 2006
 Radiology 19 Jul 2006
 Haematology 18 Jul 2006
 Haematology 17 Jul 2006
 Chem. Path. 17 Jul 2006
 Chem. Path. 17 Jul 2006
 Radiology 17 Jul 2006
 Chem. Path. 17 Jul 2006
 Chem. Path. 16 Jul 2006
 Radiology 16 Jul 2006
 Chem. Path. 16 Jul 2006
 Microbiology 16 Jul 2006
 Chem. Path. 16 Jul 2006
 Haematology 16 Jul 2006
 Con. Letter 16 Feb 2006
 Demographics 01 Feb 2003

Demographics Results

Result Reporting

Graphical view of results

Lab Results for Ivor Legg (1234567890)

Date	Potassium (mmol/L)	Creatinine (umol/L)	Red Cell Count (10 ¹² /L)	Albumin (g/L)
17-Jul	5.1	71	3.8	4.85
18-Jul	4.8	80	3.9	4.7
21-Jul	4.7	84	3.95	4.85
24-Jul	4.6	83	3.98	4.7
28-Jul	4.6	81	3.9	4.6

Tabular Results

Tests

Test Name	16/07/06	17/07/06	18/07/06	19/07/06	20/07/06	22/07/06	24/07/06	26/07/06	28/07/06
Potassium	5.1 (mmol/L)	4.8 (mmol/L)			4.7 (mmol/L)	4.6 (mmol/L)			4.6 (mmol/L)
Creatinine	71 (umol/L)	80 (umol/L)			84 (umol/L)	83 (umol/L)			81 (umol/L)
Red Cell		3.8 (10 ¹² /L)	3.9 (10 ¹² /L)		3.95 (10 ¹² /L)		3.98 (10 ¹² /L)		

User Name: qtp1 user

http://localhost:8080/stxx/labs/ObtainTestsAction.open?series=08&item=4 Local intranet

Care Planning

- Overview
 - The Care Planning Module helps the Carer to define and organise a set of Problems, Goals and Actions for a patient's care.
 - It is quick to learn and simple to use, for Healthcare and Social Care workers.
 - Care Plans are created in a library builder tool and form an extendable and linkable library of options
 - Active plans are accessed, monitored and updated using on-screen forms

Care Planning

- Features

- Care plan Library Builder provides a working environment to enter Problems, Goals and Actions and link them to form Care Plans based around each Problem
- The library can provide standard or locally tailored Care Plans
- Access by care co-ordinators, nurses and social carers is controlled by Access Control
- Plans are selected for the patient and may be modified to suit individual needs
- The plan is started and available to the care team
- Team members view the plan and enter actions into a working chart
- Completed plans are retained in the patient record

Care Plan Builder

The screenshot shows a web browser window titled "Case Notes - Microsoft Internet Explorer provided by CSW Group Ltd". The browser's address bar and menu bar are visible. The page header includes a navigation bar with "Home", "Logout", and "Help" links, and the "case notes V5" logo. The user is logged in as "Jane Smith", with a previous login of "04 Oct 2006 16:28:14" and zero failed logins. The main content area is titled "Care Planning Builder" and features a sidebar on the left for "Browse All Available Care Plans" with a search box and a list of actions. The main area contains buttons for "Problems", "Goals", "Actions", "Publish Care Plan", and "Create New Action". The "Actions" button is selected, displaying "Action : Asthma management actions" and "Action Information" form fields.

Case Notes - Microsoft Internet Explorer provided by CSW Group Ltd

File Edit View Favorites Tools Help

Username: **Jane Smith** Home Logout **case notes V5** Help

Previous Login: **04 Oct 2006 16:28:14**

Failed Logins: **0**

In-Tray (0/0)

Browse All Available Care Plans:

Search

Select Action or Group to Edit or Move

- ▼ Actions
 - ▼ Asthma control actions
 - Review concordance
 - Review inhaler techniques
 - Review lung function
 - Review treatment
 - ▼ Asthma management actions
 - Allergen avoidance
 - Dietary manipulation
 - Self-management education
 - Smoking cessation

Care Planning Builder

Problems Goals Actions Publish Care Plan

Create New Action

Action : Asthma management actions

Action Information

Parent Action Group:

Short Name:

Code:

Description (100 chrs) ::

Update Action

User Name: **Jane Smith**

Care Plan - Modify

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

[Home](#) | [Patient Folder](#) | [Logout](#) **case notes** V5
[Help](#)

[Smart Forms](#) | [Care Pathways](#) | [Care Planning](#) | [Order Communications](#)

Communication ability impaired :

Unmet
 Date
 20 Sep 2006

Comment

Actions

Name:	Description (100 chrs) :	Updated By	Date	Time
<input checked="" type="checkbox"/> Create Non-antagonistic Environment	Create a non-antagonistic environment	Jane Smith	20 Sep 2006	12:26:30
<input type="checkbox"/> Aggressive Incident Management	Deal with any aggressive incidents in an efficient and non-judgement manner			
<input checked="" type="checkbox"/> Behaviour Medication	Administer prescribed medication and monitor effects	Jane Smith	20 Sep 2006	12:26:30
<input type="checkbox"/> Defuse situation	Defuse situation by removing the patient to an area free from unnecessary stimuli			
<input checked="" type="checkbox"/> Incident Reporting	Complete incident forms and process as per local protocol	Jane Smith	20 Sep 2006	12:26:30
<input checked="" type="checkbox"/> Medical Liaison	Liaise with medical staff as necessary	Jane Smith	20 Sep 2006	12:26:30
<input type="checkbox"/> Behaviour Observance	Appropriate use of observation policy and/or Mental Health Act			
<input type="checkbox"/> Precipitating Factors	Observe and record any factors which precipitate the aggressive incident and advise family			
<input checked="" type="checkbox"/> Passive Body Language	Portray passive body language when delivering care	Jane Smith	20 Sep 2006	12:26:30

Additional Free Text Actions

User Name: Jane Smith

Care Plan - view

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: S050 9UV
Social Service No: Not available

Home | Patient Folder | Logout case notes V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications

OK

Communication ability impaired :

Problem

Problem Name:
Communication ability impaired

Code:

Description:
Communication ability impaired

Status:
Current

Goal

Short Name:
Manage Aggression

Description (100 chrs) :
Reduce episodes of aggression, whilst maintaining safety

Status:
Unmet

Actions

Name:	Description (100 chrs) :	Updated By	Date	Time
Create Non-antagonistic Environment	Create a non-antagonistic environment	Jane Smith	20 Sep 2006	12:26:30
Behaviour Medication	Administer prescribed medication and monitor effects	Jane Smith	20 Sep 2006	12:26:30
Incident Reporting	Complete incident forms and process as per local protocol	Jane Smith	20 Sep 2006	12:26:30

User Name: Jane Smith

Done My Computer

Care Plan – Current view

Ivor Legg
DoB: **18 Jun 1930** Gender: **Male**
NHS No: **1234567890** Postcode: **S050 9UV**
Social Service No: **Not available**

Home | Patient Folder | Logout | case no+es V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications

Browse All Available Care Plans:
 Search

▼ **Problems**
Clinical Problems
▶ Functional Problems
▶ Patient Management Problems

All Problems for this Patient

Problem Name:	Date Submitted	Submitted By	Status:	Time Status Changed	View	Modify	Delete	Send To In-Tray
Vulnerable to skin damage	20/09/2006 13:44	Jane Smith	Potential	20/09/2006 13:45				
Impeded mobility - surgical	20/09/2006 13:44	Jane Smith	Current	20/09/2006 13:44				
Communication ability impaired	20/09/2006 12:28	Jane Smith	Current	20/09/2006 12:28				

User Name: **Jane Smith**

My Computer

Care Pathways

- Overview
 - Care Pathways help the carer to define and organise recommended sequences of care for individual patients
 - The Care Pathway is built using a graphical tool and held in a library
 - It is quick to learn and simple to use, centred around a chart view and linked with Case Notes' care modules to order and record care
 - The pathway can cross multiple care settings and organisations
 - Case Notes' workflow engine links and manages the task relationships and user interactions in real time)

Care Pathways

- Features
 - Care pathway library builder – template in Visio tool.
 - Pathway includes
 - Task type, Expected date and time,
 - Notify late or missed activity,
 - Mandatory task, task may start early
 - Branches, joins, decisions
 - Pathway selection -
 - Search and hierarchical 'Tree' format
 - Customised for specific patient
 - Variance
 - Alter start-date and start times of activities, early/late
 - Skip non-mandatory items
 - Reason for skipping
 - Reassign to different staff roles

Care Pathways

- Continued...
 - Pathway Start and Activity Table
 - Which pathways are active for the patient
 - Charting available when the pathway is 'Ready'
 - Three 'States' (Ready / Waiting / Completed)
 - Activities linked to OCS and Smart Forms – return to Care Pathways module.
 - Activity History View
 - Completed
 - Completed early or late
 - Deleted or skipped
 - Completed by which roles
 - Outstanding
 - Variance
 - Graphical Display, Task lists across the patient

Care Pathways – Select New Pathway

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: S050 9UV
Social Service No: Not available

Home | Patient Folder | Logout case notes V5
Help

Smart Forms | Care Pathways | Care Planning | Order Communications


New Care Pathway

- All Care Pathways
 - Generic Admission
 - Simple Sequence
 - Simple Decision Workflow
 - Smart Form Sequence
 - ICP with a compulsory task
 - OCS Sequence
 - Start Early Sequence
 - Smart Form Start Early Sequence
 - Variance example pathway
 - Care Planning Sequence Test

In Progress Completed

In Progress Care Pathways

In Progress Care Pathways (1)

Name	Progress Chart
Generic Admission	

User Name: Jane Smith

My Computer

Care Pathways – Start New Pathway

Ivor Legg

DoB: 18 Jun 1930 Gender: Male

NHS No: 1234567890 Postcode: SO50 9UV

Social Service No: Not available

Home | Patient Folder | Logout case notes V5 Help

Smart Forms | Care Pathways | Care Planning | Order Communications

Next Cancel

Start New Generic Admission

Start On

19 Sep 2006 13:42

Activity	Follows	Performer	Delete
Complete patient registration		Staff Nurse	<input type="checkbox"/>
Initial nursing assessment	Complete patient registration	Staff Nurse	<input type="checkbox"/>
Nutrition Risk Assessment	Initial nursing assessment	Healthcare Assistant	<input type="checkbox"/>
Does patient require a dietician referral?	Nutrition Risk Assessment	Staff Nurse	<input type="checkbox"/>
Refer to dietician	Does patient require a dietician referral?	Charge Nurse	<input type="checkbox"/>
Complete Waterlow Assessment	Does patient require a dietician referral? Does patient require an OT referral?	Staff Nurse	<input type="checkbox"/>
Complete ADL assessment	Initial nursing assessment	Staff Nurse	<input type="checkbox"/>
Does patient require an OT referral?	Complete ADL assessment	Charge Nurse	<input type="checkbox"/>
Refer to OT	Does patient require an OT referral?	Charge Nurse	<input type="checkbox"/>
Refer to Physio	Initial nursing assessment	Charge Nurse	<input type="checkbox"/>
Commence discharge plan	Registrar Review	Consultant	<input type="checkbox"/>
Medical clerk-in		Senior House Officer	<input type="checkbox"/>

User Name: qtp1 user

Done My Computer

Care Pathways - Confirm

Ivor Legg

DoB: 18 Jun 1930 Gender: Male

NHS No: 1234567890 Postcode: SO50 9UV

Social Service No: Not available

Home | Patient Folder | Logout

case no+es V5

Help

Smart Forms | Care Pathways | Care Planning | Order Communications

Back Start Start and Chart Cancel

Start Generic Admission

Start On 19 Sep 2006 13:42

Activity	Follows	Performer
Complete patient registration		Staff Nurse
Initial nursing assessment	Complete patient registration	Staff Nurse
Nutrition Risk Assessment	Initial nursing assessment	Healthcare Assistant
Does patient require a dietician referral?	Nutrition Risk Assessment	Staff Nurse
Refer to dietician	Does patient require a dietician referral?	Charge Nurse
Complete Waterlow Assessment	Does patient require a dietician referral? Does patient require an OT referral?	Staff Nurse
Complete ADL assessment	Initial nursing assessment	Staff Nurse
Does patient require an OT referral?	Complete ADL assessment	Charge Nurse
Refer to OT	Does patient require an OT referral?	Charge Nurse
Refer to Physio	Initial nursing assessment	Charge Nurse
Commence discharge plan	Registrar Review	Consultant
Medical clerk-in		Senior House Officer
Medical Examination	Medical clerk-in	Senior House Officer
Registrar Review	Medical Examination	Senior Registrar
Full Blood Count	Medical Examination	Senior House Officer

User Name: Jane Smith

Done My Computer

Care Pathways – Progress Chart

Ivor Legg

DoB: 18 Jun 1930 Gender: Male

NHS No: 1234567890 Postcode: SO50 9UV

Social Service No: Not available

Home | Patient Folder | Logout Help

case no+es V5

Smart Forms | Care Pathways | Care Planning | Order Communications

Back View Completed

Generic Admission

Start On 19 Sep 2006 11:21

#	Activity	Action	State	Follows	Expected Date	Expected Performer
1	Complete patient registration		Completed		20 Sep 2006 11:21	Staff Nurse
2	Initial nursing assessment		Ready	1	20 Sep 2006 12:31	Staff Nurse
3	Nutrition Risk Assessment		Waiting	2	21 Sep 2006 12:31	Healthcare Assistant
4	Does patient require a dietician referral?		Waiting	3	22 Sep 2006 12:31	Staff Nurse
5	Refer to dietician		Waiting	4	23 Sep 2006 12:31	Charge Nurse
6	Complete Waterlow Assessment		Waiting	4, 8	20 Sep 2006 11:21	Staff Nurse
7	Complete ADL assessment		Completed	2	21 Sep 2006 12:31	Staff Nurse
8	Does patient require an OT referral?		Completed	7	20 Sep 2006 11:21	Charge Nurse
9	Refer to OT		Skipped	8	20 Sep 2006 11:21	Charge Nurse
10	Refer to Physio		Waiting	2	21 Sep 2006 12:31	Charge Nurse
11	Commence discharge plan		Waiting	14	23 Sep 2006 11:21	Consultant
12	Medical clerk-in		Ready		20 Sep 2006 11:21	Senior House Officer
13	Medical Examination		Waiting	12	21 Sep 2006 11:21	Senior House Officer
14	Registrar Review		Waiting	13	22 Sep 2006 11:21	Senior Registrar
15	Full Blood Count		Waiting	13	28 Sep 2006 11:21	Senior House Officer

User Name: Jane Smith

My Computer

Care Pathways - History

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home | Patient Folder | Logout case notes V5
 Help

Smart Forms | Care Pathways | Care Planning | Order Communications

Back

Generic Admission - All Activities

All | Completed | Completed Late | Completed Early | Deleted or Skipped | Completed by Different Role

Activity	State	User	Expected Start	Expected End	Actual Start	Actual End	Expected Performer	Actual Performer	Variance
Refer to dietician	skipped	Jane Smith	19 Sep 2006 13:16	20 Sep 2006 13:16	19 Sep 2006 13:16	19 Sep 2006 13:16	Charge Nurse	ACF full administration	-
Does patient require a dietician referral?	completed	Jane Smith	19 Sep 2006 13:12	20 Sep 2006 13:12	19 Sep 2006 13:12	19 Sep 2006 13:16	Staff Nurse	ACF full administration	-
Complete Waterlow Assessment	completed	Jane Smith	19 Sep 2006 11:21	20 Sep 2006 11:21	19 Sep 2006 13:16	19 Sep 2006 13:16	Staff Nurse	ACF full administration	-
Full Blood Count	completed	Jane Smith	19 Sep 2006 13:14	26 Sep 2006 13:14	19 Sep 2006 13:14	19 Sep 2006 13:16	Senior House Officer	ACF full administration	-
Commence discharge plan	completed	Jane Smith	19 Sep 2006 13:15	20 Sep 2006 13:15	19 Sep 2006 13:15	19 Sep 2006 13:16	Consultant	ACF full administration	-
Registrar Review	completed	Jane Smith	19 Sep 2006 13:14	20 Sep 2006 13:14	19 Sep 2006 13:14	19 Sep 2006 13:15	Senior Registrar	ACF full administration	-
Medical Examination	completed	Jane Smith	19 Sep 2006 13:14	20 Sep 2006 13:14	19 Sep 2006 13:14	19 Sep 2006 13:14	Senior House Officer	ACF full administration	-
Medical clerk-in	completed	Jane Smith	19 Sep 2006 11:21	20 Sep 2006 11:21	19 Sep 2006 11:21	19 Sep 2006 13:14	Senior House Officer	ACF full administration	-
Refer to Physio	completed	Jane Smith	19 Sep 2006 13:12	20 Sep 2006 13:12	19 Sep 2006 13:12	19 Sep 2006 13:14	Charge Nurse	ACF full administration	-
Nutrition Risk Assessment	completed	Jane Smith	19 Sep 2006 13:12	20 Sep 2006 13:12	19 Sep 2006 13:12	19 Sep 2006 13:12	Healthcare Assistant	ACF full administration	-
Initial nursing assessment	completed	Jane Smith	19 Sep 2006 12:31	20 Sep 2006 12:31	19 Sep 2006 12:31	19 Sep 2006 13:12	Staff Nurse	ACF full administration	-
Complete patient	completed	Jane Smith	19 Sep 2006 11:21	20 Sep 2006 11:21	19 Sep 2006 11:21	19 Sep 2006 12:31	Staff Nurse	ACF full administration	-

User Name: Jane Smith

Done My Computer

Care Pathways – link to Care Plan

Ivor Legg
DoB: 18 Jun 1930 Gender: Male
NHS No: 1234567890 Postcode: SO50 9UV
Social Service No: Not available

Home | Patient Folder | Logout | Help | case no+es V5

Smart Forms | Care Pathways | Care Planning | Order Communications

Browse All Available Care Plans:

Search

▼ Problems
▼ Functional problems
Bathing

All Problems for this Patient

Problem Name:	Date Submitted	Submitted By	Status:	Time Status Changed	View	Modify	Delete	Send To In-Tray
Bathing	19/09/2006 13:15	Jane Smith	Current	19/09/2006 13:15				

Activity Completed - Return to Care Pathway

User Name: Jane Smith

My Computer

Care Pathways – Variance Report

Case Notes - Patient Folder - Microsoft Internet Explorer provided by CSW Group Ltd

File Edit View Favorites Tools Help

Ivor Legg
 DoB: 18 Jun 1930 Gender: Male
 NHS No: 1234567890 Postcode: SO50 9UV
 Social Service No: Not available

Home | Patient Folder | Logout case notes V5
 Help

Smart Forms | Care Pathways | Care Planning | Order Communications

Folder Content Show Lifeline

Filter is off Edit Filter

Alerts Yes
 Allergies Yes

Future (0)
 Last 7 Days (0)
 8 - 30 Days (0)
 Older (2)

Demographics
 CP Variance
 Results

Care Pathway Variance

General Acute Admission - completed

Task	Variance category	Variance details
Medical clerk-in	Completed by different role	Expected to be completed by Senior House Officer but was completed by House Officer
Complete Waterlow Assessment	Started early	Expected task to start on Sat Sep 23 10:36:01 BST 2006 but was started early on Tue Sep 19 10:36:20 BST 2006. The task was completed by Jane Smith
Nutrition Risk Assessment	Deleted	Expected task deleted by user Jane Smith on Tue Sep 19 10:28:10 BST 2006
Does patient require a dietician referral?	Completed by different role	Expected to be completed by Staff Nurse but was completed by Charge Nurse
Commence discharge plan	Completed late	Expected task to start on Sat Sep 23 10:36:01 BST 2006 but was started late on Mon Sep 25 10:36:20 BST 2006. The task was completed by Jane Smith
Refer to dietician	Completed by different role	Expected to be completed by Charge Nurse but was completed by Staff Nurse
Refer to Physio	Completed by different role	Expected to be completed by Charge Nurse but was completed by Staff Nurse
Medical Examination	Completed by different role	Expected to be completed by Senior House Officer but was completed by Administrator
Registrar Review	Completed by different role	Expected to be completed by Senior Registrar but was completed by Administrator
Refer to OT	Completed by different role	Expected to be completed by Charge Nurse but was completed by Administrator
Does patient require an OT referral?	Completed by different role	Expected to be completed by Charge Nurse but was completed by Physiotherapist
Complete ADL	Completed by	Expected to be completed by Staff Nurse but was

User Name: Jane Smith

Care Pathway Builder

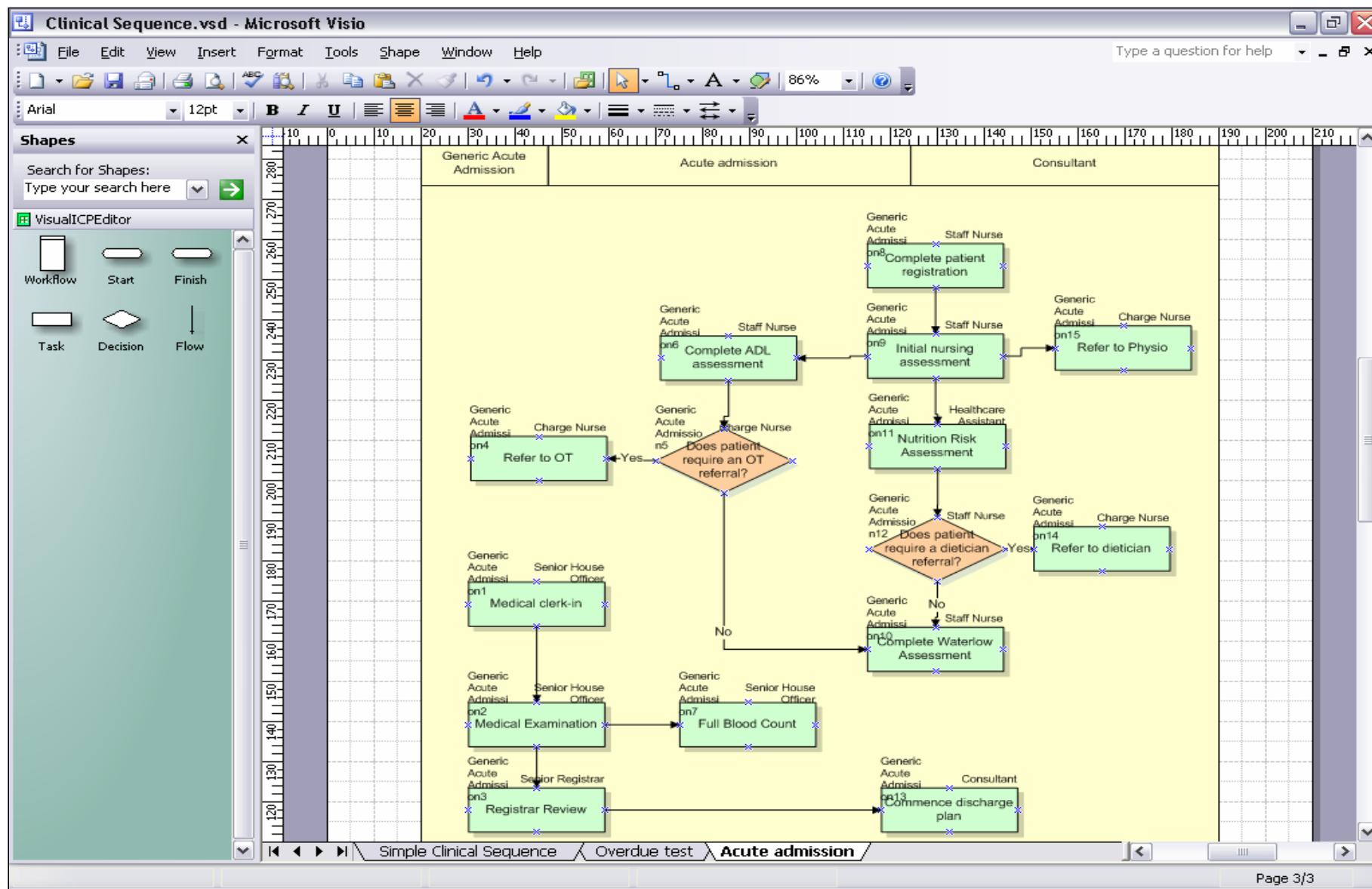
- Features

- Pathways are entered and imported as library items, available immediately in Case Notes
- VISIO tool is quick to use and contains a full set of objects for use in building pathways
- Tasks are viewed and edited on a panel, including start-conditions and links to other tasks
- Process is viewed as a VISIO flowchart or process chart
- Suitable for simple, framework or complex and detailed pathway definition
- Supports tasks which will occur through integrated modules within Case Notes or across interfaces to Case Notes

Care Pathway Builder

- Benefits
 - Standard care pathways or local definition
 - Simplicity of use allows leads within directorates, specialities or team-leads to add and modify plans
 - Versatile and able to manage many types of clinical event: manual actions, forms-based assessments, laboratory orders, care plans
 - Defines elements of shared care across communities

Care Pathway Builder



Electronic Prescribing

Name	Legg, Ivor		
D.O.B	18/06/1930	Gender	M
NHS #	121 212 12	Med Rec #	
Case #	123456789		

E-Prescribe
Smartforms

Lifeline
ICP

OCS
Care Planning

FOLDER
HOME
EXIT

E-Prescribing Control Panel

Diagnostic Prescription:

[Shopping Basket](#)

[Completed Drug Courses](#)

WeBNF

Drug Search:

1.Type Drug Name

2.Choose Route

3.Patient Weight
 kg

Index:

- [Gastro-Intestinal](#)
- [Cardiovascular](#)
- [Respiratory](#)
- [Central Nervous](#)
- [Infections](#)
- [Endocrine](#)
- [Bulk Fluids](#)

Favourites:

- [THYROXINE TAB - 50mcg](#)
- [CO-DYDRAMOL TAB -](#)
- [MORPHINE SULPHATE INJ - \(10mg/ml\)](#)
- [MORPHINE SULPHATE ANALGESIA](#)

FDBE (Multilex)

Current Prescriptions:

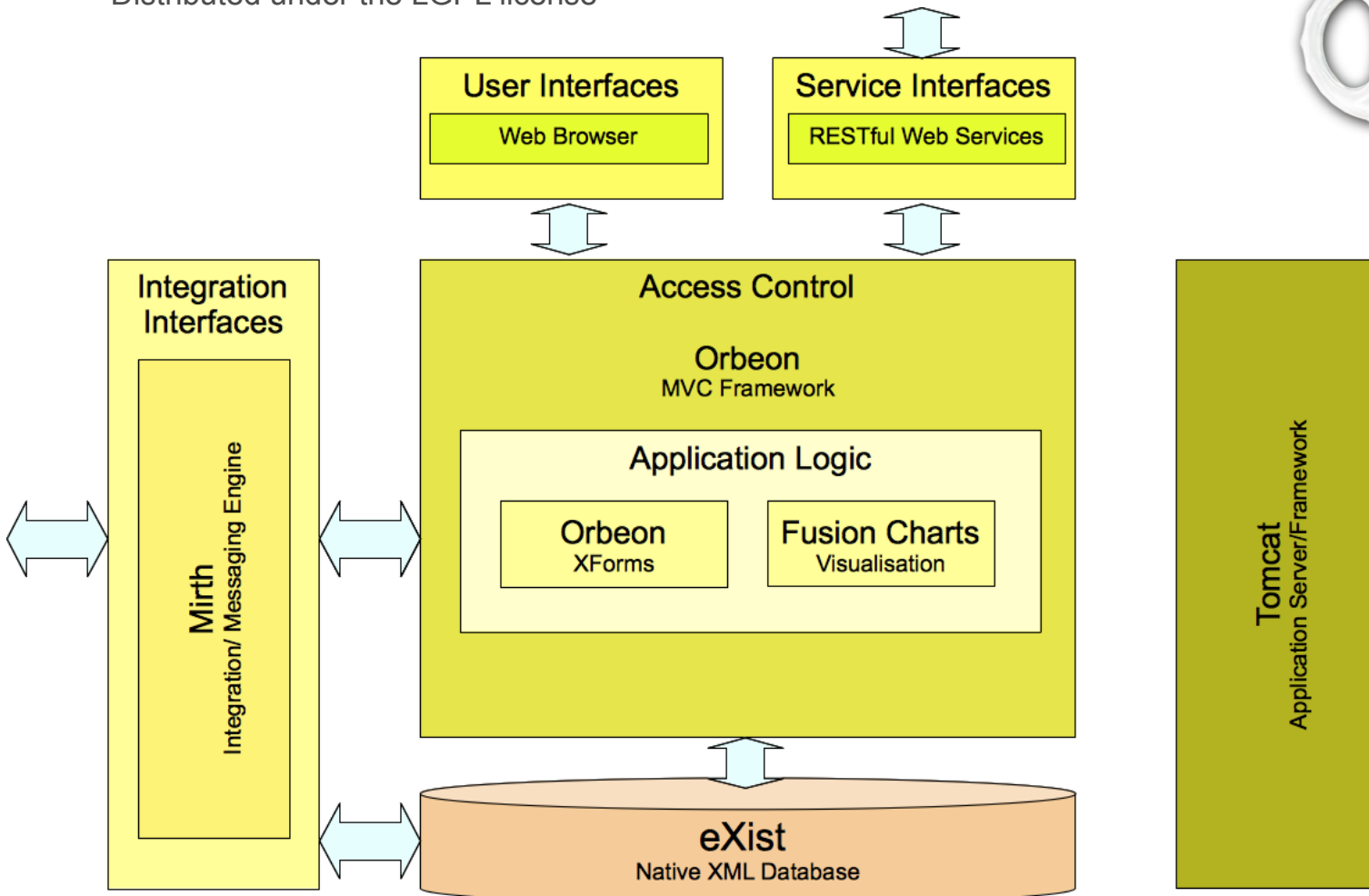
Prescribed On:	Prescription	Prescriber	Modify	Renew	Delete
17/01/2003	Temazepam tab 10mg 2 daily PO ON PRN start on:17/01/2003 dispensed as TTO	Dr A. Power	<input type="button" value="▶"/>	<input type="button" value="▶"/>	<input type="button" value="▶"/>
21/01/2003	Thyroxine Tab 50mcg 3 daily PO OM start on:21/01/2003	Dr D. Nurse	<input type="button" value="▶"/>	<input type="button" value="▶"/>	<input type="button" value="▶"/>

Done
My Computer

Open Source cityEHR System

cityEHR Open Source EHR

- The cityEHR system is built using open source software
- cityEHR is an enterprise-scale health records system
- Developed at City University, London
- Distributed under the LGPL license

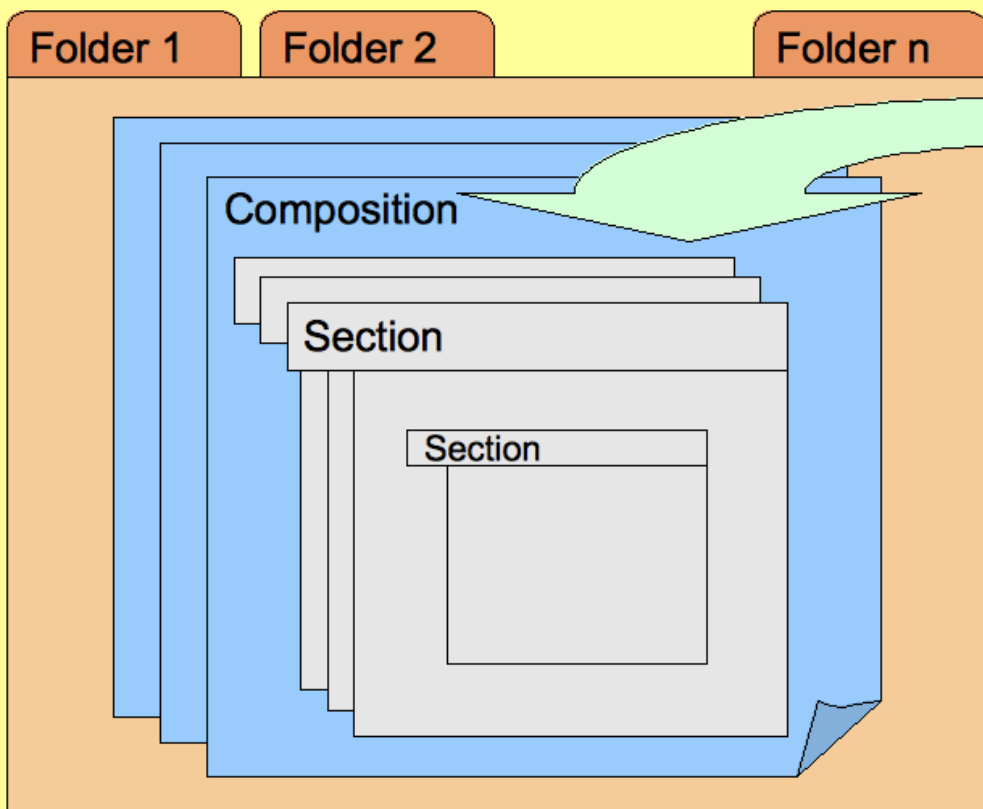


cityEHR Open Standards

cityEHR is based entirely on open standards

- Structure is based on ISO 13606
- All clinical data are stored in HL7 CDA
- All information is stored and manipulated as XML

EHR_EXTRACT



Clinical Document

Header

Body

Non-XML Body

Structured Body

Entry

Element

Cluster

Element

Cluster

cityEHR Modelling Tools

- Models are developed using standard tools
 - spreadsheet, graphing tool
- Any tooling could be used (in theory)
- Saved as XML and transformed to an ontology

The image displays two software interfaces used in the cityEHR modelling process. The top window is a graphing tool titled 'Inflammatory arthritis and CTD.graphml - yEd', showing a network graph with nodes and edges. The bottom window is an OpenOffice.org Calc spreadsheet titled '2012-01-17 v1 Orchid - Specialty - Rheumatology.ods'. The spreadsheet contains a table with columns A through J, detailing various medical conditions and their associated data points.

A	B	C	D	E	F	G	H	I	J
SectionId	DisplayName	Layout	PreConditions	Conditions	Contents				
1	Demographics	Patient Demographics	- Ranked			Entry:KNumber	Section:PatientIdentifiers	Section:BasicDemographics	Section:OtherPatientData
2	PatientIdentifiers		- Unranked			Entry:NHSNumber	Entry:NorthNumber	Entry:SouthNumber	
3	BasicDemographics		- Unranked			Entry:Title	Entry:Forename	Entry:Surname	
4	OtherPatientData		- Unranked			Entry:DateOfBirth	Entry:Gender	Entry:EthnicOrigin	
5	BasicPatientData		- Ranked			Section:OsteoporosisScreen			
6	OsteoporosisPatientDetails	Patient Details	- Ranked			Entry:ORCHIDPrimaryDiagnos	Entry:Diagnosis	Entry:ORCHIDComorbidities	Section:BMIData
7	OsteoporosisFractureHistory	Fracture History	- Ranked			Entry:PersonalFractureHistory	Entry:FamilyFractureHistory		
8	OsteoporosisLifestyle	Lifestyle	- Ranked			Entry:LevelOfMobility	Entry:LevelOfPhysicalActivity	Section:RegularActivity	Entry:Falls12Months
9	OsteoporosisMedicalConditions	Medical Conditions	- Unranked			Section:CurrentMedicalConditio	Section:HistoricMedicalConditions		
10	OsteoporosisRiskFactors	Risk Factors	- Unranked			Section:RiskFactors1	Section:RiskFactors2		
11	OsteoporosisDrugs	Drugs	- Unranked			Entry:CurrentMedication	Entry:PreviousMedication		
12	OsteoporosisBMDData	BMD Data	- Ranked			Entry:BMDData	Entry:BMIData		
13	OsteoporosisLabResults	Lab Results	- Ranked			Entry:OsteoporosisBoneChem	Entry:OsteoporosisLabTest	Section:OsteoporosisScreen	
14	TendernessAndSwelling	Tenderness and Swelling	- Ranked			Entry:TendernessAndSwelling			
15	TestosteroneHistory	Testosterone History	- Unranked		Testosterone	Entry:TestosteronePrep	Entry:TestosteroneStartAge	Entry:TestosteroneOngoing	Entry:TestosteroneStopAge
16	BMIData		- Ranked			Entry:BaselineWeight	Entry:BaselineBMI		
17	RegularActivity	Regular activities	- Unranked			Entry:ActivityLocalWalking	Entry:ActivitySport	Entry:ActivityHousework	
18	SmokingHabits		- Unranked			Entry:CurrentSmoker	Entry:CurrentSmokingLevel	Entry:HistoricSmoker	
19	SizeHistory		- Unranked			Entry:HeightAge20	Entry:WeightAge20	Entry:HeightLoss	
20	CurrentMedicalConditions	Current medical conditions	- Ranked			Entry:McNoRiskFactor	Entry:McMalOrCoeliac	Entry:McIBD	Entry:McRA
21	HistoricMedicalConditions	Past relevant medical history	- Ranked			Entry:PmhNoRiskFactor	Entry:PmhHypertension	Entry:PmhCarcinomaBreastOr	Entry:PmhDVTOrPulEmbolism
22	HRTHistory	HRT History	- Ranked		HRTHistory	Entry:HRTPreparation	Entry:HRTAge	Entry:HRTOngoing	Entry:HRTStopAge
23	Menopause	Menopause	- Unranked		Gender:Gen	Entry:Menarche	Entry:StillMenstruating	Entry:AgeAtMenopause	Entry:Amenorrhoea
24	EQ5Dall	EQ5D	- Ranked			Entry:EQ5Ddate	Entry:EQ5Dmobility	Entry:EQ5Dselfcare	Entry:EQ5Dusualactivities
25	SF36summary	SF-36 summary	- Unranked			Entry:SF36date	Entry:SF36scores		
26	SF36a	General health	- Ranked			Entry:SF3601	Entry:SF3602		
27	SF36b	Does your health limit you in the	- Ranked			Entry:SF3603	Entry:SF3604		
28	SF36c	During the past 4 weeks, have y	- Ranked			Entry:SF3613	Entry:SF3614	Entry:SF3615	Entry:SF3616
29	SF36d	During the past 4 weeks, have y	- Ranked			Entry:SF3617	Entry:SF3618	Entry:SF3619	
30	SF36e	During the last 4 weeks...	- Ranked			Entry:SF3620	Entry:SF3621	Entry:SF3622	
31	SF36f	For each of the following questio	- Ranked			Entry:SF3623	Entry:SF3624		Entry:SF3626
32	SF36g	During the last 4 weeks...	- Ranked			Entry:SF3632			
33	SF36h	How TRUE or FALSE is each of	- Ranked			Entry:SF3633			
34	HADSsummary	Hospital Anxiety and Depression	- Ranked			Entry:HADSdate	Entry:HADSAnxiety	Entry:HADSdepression	
35	HADSq		- Ranked			Entry:HADS1	Entry:HADS2	Entry:HADS3	Entry:HADS4
36	HAQsummary	Health Assessment Questionain	- Ranked			Entry:HAQdate	Entry:HAQscore		
37	HAQdressing	Dressing and Grooming	- Ranked			Entry:HAQ1	Entry:HAQ2		
38	HAQrising	Rising	- Ranked			Entry:HAQ3	Entry:HAQ4		
39	HAQeating	Eating	- Ranked			Entry:HAQ5	Entry:HAQ6	Entry:HAQ7	
40	HAQwalking	Walking	- Ranked			Entry:HAQ8	Entry:HAQ9		
41	HAQaids1	Aids and devices	- Ranked			Entry:HAQ10	Entry:HAQ11	Entry:HAQ12	Entry:HAQ13
42	HAQcategory1	Help from another person	- Ranked			Entry:HAQ17	Entry:HAQ18	Entry:HAQ19	Entry:HAQ20
43	HAQhygiene	Hygiene	- Ranked			Entry:HAQ21	Entry:HAQ22	Entry:HAQ23	

cityEHR Ontology-Driven EHR

- The ontology is stored in standard OWL/XML
- Which is transformed to the runtime configuration
 - loaded to the cityEHR system using its Administration tools

The screenshot displays two panels from the cityEHR Administration tools. The left panel, titled 'Class hierarchy: ORCHID:Class:Diagnosis:Level-2', shows a tree view of classes. The right panel, titled 'Members list:', shows a list of specific diagnosis classes.

Class hierarchy: ORCHID:Class:Diagnosis:Level-2

- Thing
 - CityEHR:DataType
 - CityEHR:ElementProperty
 - CityEHR:EntryProperty
 - CityEHR:Error
 - CityEHR:Term
 - CityEHR:Unit
 - CityEHR:Value
 - CityEHR:Warning
 - ISO-13606:Cluster
 - ISO-13606:Composition
 - CityEHR:Form
 - CityEHR:Letter
 - CityEHR:Message
 - CityEHR:Order
 - CityEHR:Pathway
 - CityEHR:View
 - ISO-13606:EHR_Extract
 - ISO-13606:Element
 - ISO-13606:Entry
 - HL7-CDA:Act
 - HL7-CDA:Encounter
 - HL7-CDA:Observation
 - HL7-CDA:Procedure
 - HL7-CDA:RegionOfInterest
 - HL7-CDA:SubstanceAdministration
 - HL7-CDA:Supply
 - ISO-13606:Folder
 - ISO-13606:Section
 - ORCHID:Class
 - ORCHID:Class:Diagnosis
 - ORCHID:Class:Diagnosis:Level-1
 - ORCHID:Class:Diagnosis:Level-2**
 - ORCHID:Class:Diagnosis:Level-3

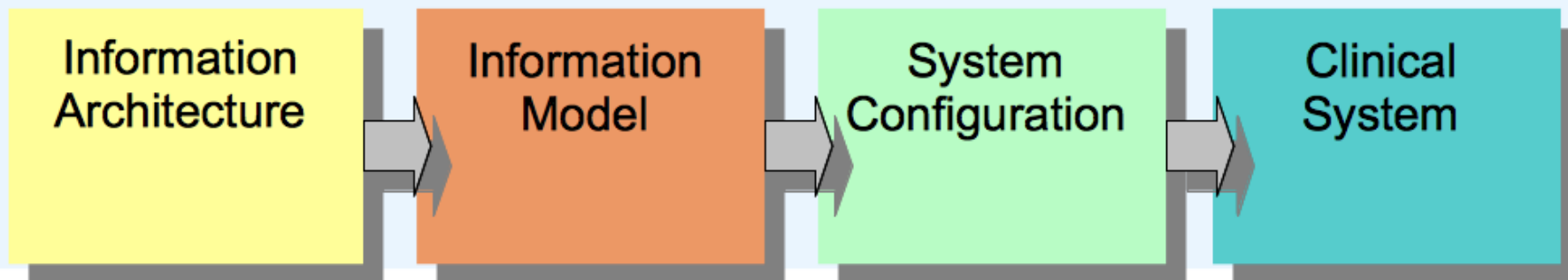
Members list:

- ORCHID:Class:Diagnosis:Basiccalciumphosphatecrystaldepositiondisease
- ORCHID:Class:Diagnosis:Calciumpyrophosphatecrystalrelatedarthropathy
- ORCHID:Class:Diagnosis:ConnectiveTissueDisease
- ORCHID:Class:Diagnosis:Crystalarthritis
- ORCHID:Class:Diagnosis:Myositis
- ORCHID:Class:Diagnosis:Overlapsyndromes
- ORCHID:Class:Diagnosis:Panniculitis
- ORCHID:Class:Diagnosis:Postviralarthritis
- ORCHID:Class:Diagnosis:Psoriaticarthritis
- ORCHID:Class:Diagnosis:Raynaudsphenomenon
- ORCHID:Class:Diagnosis:Reactivearthritis
- ORCHID:Class:Diagnosis:Reactivearthritispostdysenteric
- ORCHID:Class:Diagnosis:Reactivearthritispostgenitourinaryinfection
- ORCHID:Class:Diagnosis:Rheumatoidarthritis
- ORCHID:Class:Diagnosis:Scleroderma
- ORCHID:Class:Diagnosis:Sjogrenssyndrome
- ORCHID:Class:Diagnosis:Spondyloarthropathy
- ORCHID:Class:Diagnosis:Spondyloarthropathyinflammatoryboweldisease
- ORCHID:Class:Diagnosis:Systemiclupuserythematosis
- ORCHID:Class:Diagnosis:Systemicsclerosis
- ORCHID:Class:Diagnosis:antiphospholipidsyndrome
- ORCHID:Class:Diagnosis:focalmyositis
- ORCHID:Class:Diagnosis:generalisedmyositis
- ORCHID:Class:Diagnosis:localisedscleroderma

cityEHR Clinician Driven EHR

- Clinicians create clinical models for their EHR system
- Using the cityEHR architectural model
- The runtime EHR system is generated from the information models
 - views of the patient record
 - search criteria
 - data collection forms
 - clinical messages
 - (pathways, orders, prescriptions)

Artefact



cityEHR Open Source EHR

- The resulting EHR system is an enterprise-scale application
- Server-based, accessed through a web browser



The screenshot displays the cityEHR web interface. At the top, a blue header bar contains the text "Welcome cityEHR User." and "Quit" on the right. Below this, a white bar shows "You are authorised to use more than one application." and "Please select from the following list." followed by a dropdown menu with "Ponseti" selected and "Log On" on the right. The main content area features a large banner image of a smiling doctor in a white coat holding a tablet, with a globe and a hand holding a pen in the background. To the right of the banner is the text "Choose Chelsea and Westminster". At the bottom, a footer bar displays "Ponseti V0.50 User: cityEHR User Logged on: 10:26:32 on Sunday, 21st October 2012 Last logged on: 08:57:53 on Sunday, 21st October 2012".

References and Further Reading

References and Further Reading

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