



Extracting Existing Usage-Data to Predict Future Requirements in Oncology and EMRs

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Charm Health, Brisbane, Queensland

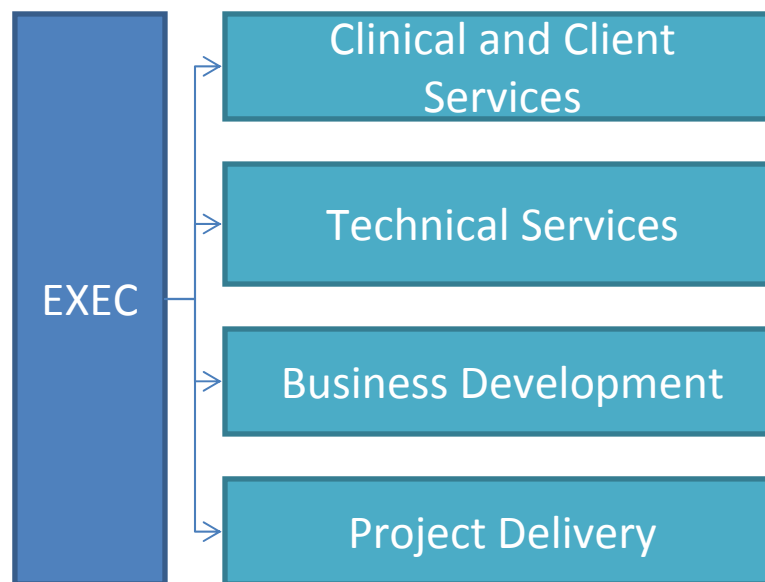
Overview

- Background
- CharmHealth
- Objectives
- Methods
- Results
- Future directions

Background – Charm Health

Queensland based - Founded in 2000

- 17 Facilities Live + 15 Facilities Implementing
- >700 Users
- ~20 Staff



Charm

- Originally in oncology
 - Additional functionality (eg scheduling)
- Medication management
- Expanded to radiation therapy
- Request for chronic disease management
 - Diabetes
 - Renal
 - Cardiac

Functionality

- Chronic Disease Management Using Clinical Pathways
 - Chemotherapy
 - Radiotherapy
 - Combined Chemo/RT
 - Palliative Care
- Electronic Medical Record
 - Pathology/Radiology Orders & Results
 - Medical/Surgical History
 - Medication Management/Allergies
 - Device Management
- Document Management
 - Letter/Discharge Summary Writer
 - Imports scanned documents/images
- PBS Script Management
- Pharmacy Management
 - Manufacturing
 - External Orders
 - Invoice Matching
 - Finance Extract
- Clinical Trials Management
- Day Unit/Outpatient – Scheduling
- Radiotherapy
 - Prescription
 - Treatment History
 - Scheduling
- Billing
- Clinical Practice Guidelines
 - Summaries
 - Treatment Algorithms
- Decision Support
 - Drug: Drug/Disease/Allergy
- Multidisciplinary Clinic Support
- Data Collection
 - Cancer Staging
 - Registry Interfaces
 - Research
- Dynamic Content Collection/Reporting
 - Customisable Questionnaires
 - Custom Report Generation Tool
- Interfaces with
 - PAS/Scheduling Systems/Finance
 - Pharmacy/Radiotherapy
 - Pathology/Radiology

Objectives

- Charm Health is in the process of developing Charm.Next
- To take learnings from usage of existing software functionality in development of a new generation of software for oncology medication management, CDM and EMR

Methods

- Extracted de-identified data
 - From routine reporting data repositories
 - Analysed using basic descriptive statistics
 - Functionality usage was then compared to functional specifications for:
 - oncology management
 - general disease management
 - EMR
 - medication management
- to assess future requirements

Results

- 48,000 patients
- Average age 66.1 ± 13.0
- 54.5% female
- 1,020,000 medications and blood products
- Average 20.9 medications per patient

Functionality Usage

- Over 95% of medications associated with chemotherapy treatment
 - 32% chemotherapy
 - 39% management of nausea and vomiting
 - 6% rescue and management of immune-suppression
 - 0.3% antibiotics
 - 0.9% blood products
 - 19% associated administration (e.g. fluids and electrolytes)

Key Points

- Target functionality is used most
- Functionality that reduces workload most commonly used
- Automation of complex (multistep) processes preferred
- Patient safety and errors of importance
- Communication paramount
- Use of additional functionality takes time

Clinical Trials

- >30 clinical trial medications
- >100 protocols in clinical trial
- >1000 of doses
- Tracking is complex
- Financial incentive

Daily

Facility

GERON

Patient

● GERO

● TEST

● TOT

Pathway Wizard - Step 4 of 7 - Select Pathway- Ms BUNNY, TEST

Pathway Wizard - Step 4 of 7 - Select Pathway

Select Pathway

Pathway Details

Modified Templates

Eligibility Criteria

Pathway	Description	Fit	Eligibility
Test	PW_N_Details//Description	100 %	<u>Eligible Fit</u> 2/2 1. Clinical Stage = IIIA 2
Methotrexate, Trial Drug	Methotrexate 10mg S/C weekly for 12 weeks; Trial drug 50mg IVNF every 4 weeks	50 %	<u>Eligible Fit</u> 2/4 1 **NOT MET: ECOG Performance Status Score > 2 2. ECOG Performance Status Score < 2 **NOT EVALUATED: Approx Years Post Menopausal< 1
Adjuvant Breast Cancer Trial 0001	Cyclophosphamide 600mg/m ² IVNF D1,15, 29, 43; Doxorubicin 60mg/m ² IVBOL D1,15, 29, 43;	50 %	<u>Eligible Fit</u> 2/4 **NOT EVALUATED: Tumour Marker 2= 1 [Progesterone Receptor Assay Positive or elevated] **NOT EVALUATED: Tumour Marker 1= 1 [Oestrogen
Charm Health Breast Cancer trial	New Breast Cancer drug.	0 %	
New Breast Cancer Drug	Screening pathway	0 %	
Lapatinib (Trial)	Lapatinib 750 mg ORAL BD D 1-28.	0 %	
Breastkill	Breastkill/Placebo 1500mg PO D1-90.	0 %	
Cyclophosphamide-Doxorubicin (AC)x4 + Paclitaxelx4	AC x 4+Taxel x 4; (Doxorubicin 60mg/m ² IVBOL D1; Cyclophosphamide 600mg/m ² IVNF D1, (AC)) x 4 +(Paclitaxel 175mg/m ² IVNF D1) x 4.	0 %	
5-Fluorouracil-Cyclophosphamide-Metho... (CMF (Oral))	5-Fluorouracil 600mg/m ² IVBOL D1,8; Cyclophosphamide 100mg/m ² IVNF D1-14; Methotrexate 40mg/m ² IVBOL D1,8.	0 %	
Gemcitabine-Paclitaxel	Gemcitabine 1000mg ² IVNF D1, 8; Paclitaxel 175mg/m ² IVNF D1	83 %	<u>Eligible Fit</u> 5/6 1 2 3. ECOG Performance Status Score < 2

Search Full List

Folder View

Eligibility View

Cancer Registry

Cancel

Back

Next

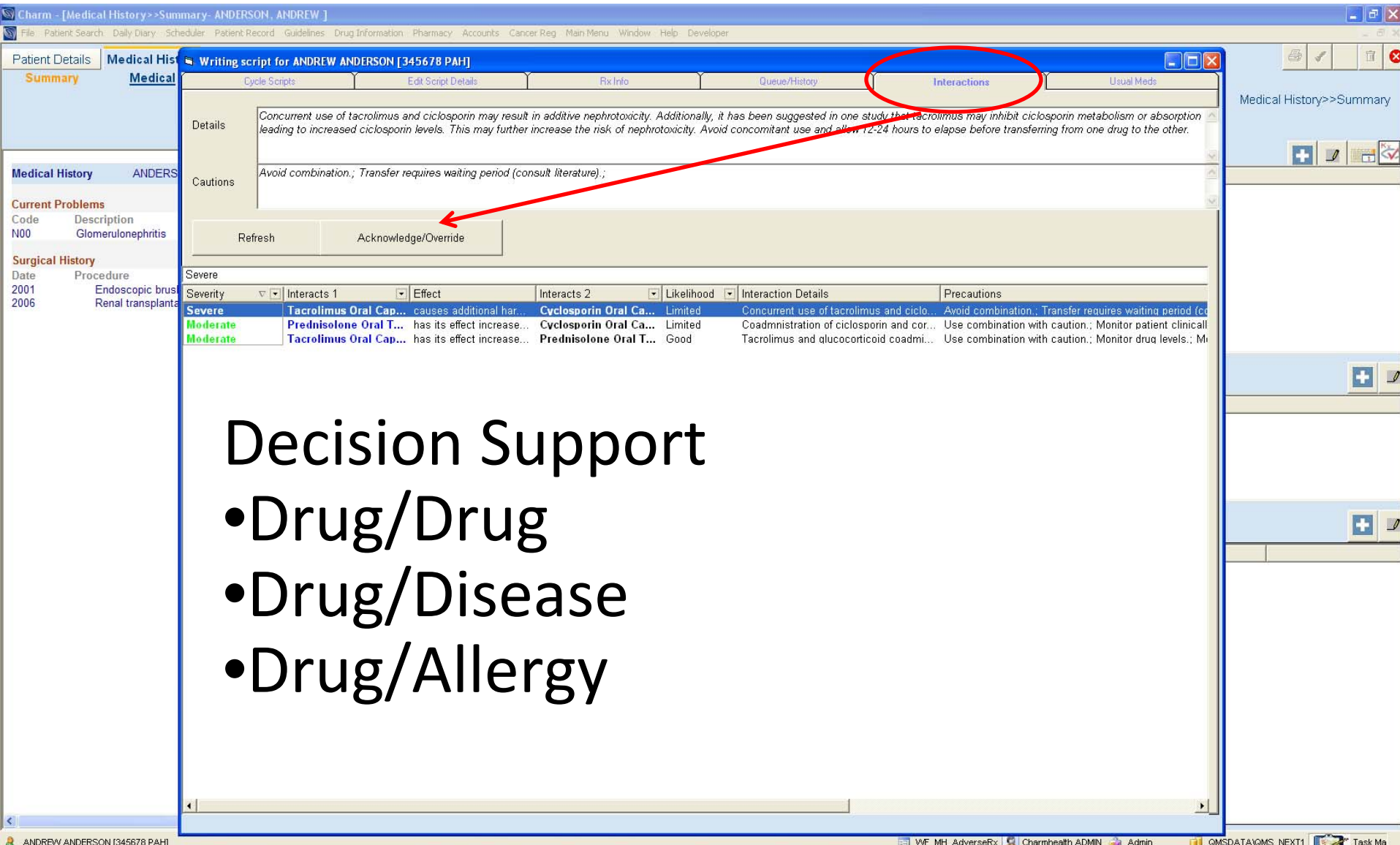
Finish

Assess Patient for Eligibility Into a Clinical Trial View

Patient Safety Functionality

- Decision support, drug, allergy and disease interaction checking, was used in all sites
- Calculate and adjust dosages for renal function and body surface area was routinely used by all sites

Interactions Checking



Charm - [Medical History>>Summary- ANDERSON, ANDREW]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details Medical History Summary Medical

Writing script for ANDREW ANDERSON [345678 PAH]

Cycle Scripts Edit Script Details Rx Info Queue/History **Interactions** Usual Meds

Details: Concurrent use of tacrolimus and ciclosporin may result in additive nephrotoxicity. Additionally, it has been suggested in one study that tacrolimus may inhibit ciclosporin metabolism or absorption leading to increased ciclosporin levels. This may further increase the risk of nephrotoxicity. Avoid concomitant use and allow 12-24 hours to elapse before transferring from one drug to the other.

Cautions: Avoid combination.; Transfer requires waiting period (consult literature).;

Refresh Acknowledge/Override

Severity	Interacts 1	Effect	Interacts 2	Likelihood	Interaction Details	Precautions
Severe	Tacrolimus Oral Cap...	causes additional har...	Cyclosporin Oral Ca...	Limited	Concurrent use of tacrolimus and ciclo...	Avoid combination.; Transfer requires waiting period (c...
Moderate	Prednisolone Oral T...	has its effect increase...	Cyclosporin Oral Ca...	Limited	Coadministration of ciclosporin and cor...	Use combination with caution.; Monitor patient clinical
Moderate	Tacrolimus Oral Cap...	has its effect increase...	Prednisolone Oral T...	Good	Tacrolimus and glucocorticoid coadmi...	Use combination with caution.; Monitor drug levels.; M...

Decision Support

- Drug/Drug
- Drug/Disease
- Drug/Allergy

Charm - [Medical History>>Summary- ANDERSON, ANDREW]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details **Medical History** Writing script for ANDREW ANDERSON [345678 PAH]

Summary Medical

Cycle Scripts Edit Script Details Rx Info Queue/History Interactions Usual Meds

Details Concurrent use of tacrolimus and ciclosporin may result in additive nephrotoxicity. Additionally, it has been suggested in one study that tacrolimus may inhibit ciclosporin metabolism or absorption leading to increased ciclosporin levels. This may further increase the risk of nephrotoxicity. Avoid concomitant use and allow 12-24 hours to elapse before transferring from one drug to the other.

Cautions Avoid combination.; Transfer requires waiting period (consult literature).;

Refresh Acknowledge/Override

Medical History ANDERSON

Current Problems

Code	Description
N00	Glomerulonephritis

Surgical History

Date	Procedure
2001	Endoscopic brush
2006	Renal transplant

Severe

Severity Moderate Interacts 1

Severe Tacrolimus Oral Cap...

Moderate Prednisolone Oral T...

Moderate Tacrolimus Oral Cap...

Interaction Acknowledge

Severity Moderate Likelihood

Interaction Tacrolimus Oral Capsule has its effect increased by, and increases the effect of Prednisolone Oral Tablet

Details Tacrolimus and glucocorticoid coadministration may increase serum levels of both agents due to competitive hepatic metabolism. This theory is substantiated by in vitro studies. However, methylprednisolone therapy did not significantly affect tacrolimus pharmacokinetics in bone marrow transplant patients. While in renal transplant patients, higher tacrolimus doses were required with concurrent steroid use. Monitor tacrolimus levels closely with steroid coadministration. Adjust both drug doses as needed. Monitor patients for tacrolimus toxicity, especially during steroid

Precautions Use combination with caution.; Monitor drug levels.; Monitor patient clinically.;

References 1. Journal: British Journal of Clinical Pharmacology [1996 Vol 41 Page 187-90] Christians U, Schmidt G, Bader A et al. Identification of drugs inhibiting the in vitro metabolism of tacrolimus by human liver microsomes. 2. Journal: Transplantation [2002 Vol 74 Page 1419-24] Shimada T, Terada A, Yokogawa K et al. Lowered blood concentration of tacrolimus

Action

☐ No change in treatment required

☐ Change in treatment required

Future Prompting

☐ Always alert me to this interaction

☐ Show interaction for new patients only

☐ Never show me this interaction again

Next Cancel Close

ANDREW ANDERSON [345678 PAH]

WF_MH_AdverseRx Charmhealth ADMIN Admin QMSDATAQMS_NEXT1 Task Ma

Medication Management

- Basic prescribing workflow
 - Medication Review
 - PBS Script Management
 - Complex Scheduling
 - Chemotherapy and Dialysis prescriptions
 - Oncology and Transplant pathways

Treatment Algorithms

Clinical Practice Guidelines
Pathways
Treatment Algorithm

List of CPG List
Summary

Clinical Practice Guidelines>>

Decision Tree	Details
Click on check box to expand	
☐ Cinacalcet Management	
☒ Cinacalcet Starting Dose	IF 1. Parathyroid Hormone (PTH) >50pmol/L OR 2. PTH between 15-20pmol/L and Corrected Calcium >= 2.6mmol/L AND Patient On Dialysis THEN Initiate Cinacalcet 30mg with evening meal
☐ Check serum Corrected Calcium Within 5-7 Days on Initiation OR after dose increase	Target for Corrected Calcium 2.15-2.4mmol/L
☐ Check PTH ONE month after initiation of Cinacalcet	Target PTH 15-25pmol/L
☐ PD	NB QML/S&N use units of pg/mL therefore DIVIDE result by approx 10 to get pmol/L

Decision Tree	Details
Click on check box to expand	
☐ Cinacalcet Management	
☒ Cinacalcet Starting Dose	IF 1. Parathyroid Hormone (PTH) >50pmol/L OR 2. PTH between 15-20pmol/L and Corrected Calcium >= 2.6mmol/L AND Patient On Dialysis THEN Initiate Cinacalcet 30mg with evening meal
☒ Check serum Corrected Calcium Within 5-7 Days on Initiation OR after dose increase	Target for Corrected Calcium 2.15-2.4mmol/L
☒ ? Corrected Calcium normal	Continue therapy and recheck in ONE month
☐ Recheck Corrected Calcium in ONE month	
☒ ? Corrected calcium <2.2 mmol/L	Add CALCITRIOL, if not already prescribed, OR increase dose
☐ Recheck Corrected Calcium in 7 days	
☐ ? Fall in serum Calcium of >0.03mmol/L	Add CALCITRIOL, if not already prescribed, OR increase dose of calcitriol
☐ Recheck Calcium in SEVEN days	
☐ Check PTH ONE month after initiation of Cinacalcet	Target PTH 15-25pmol/L
☐ PD	NB QML/S&N use units of pg/mL therefore DIVIDE result by approx 10 to get pmol/L

Charm - [Patient Summary]>>Treatment Plan- ALLEN, ANNE

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details Medical History **Pathways** Encounters Appointments Documents NOK

Treatment Plan Days Prescriptions Chart Orders Results Radiation Therapy

Record number 2 of 43 selected Patient Summary>>Treatment Plan

+ -More HD PD + - MI ?More

D8

Cycle Date INVx Rx Status

Treatment Pathways for ANNE ALLEN [234567 PAH]

PD

☐ C1 In-progre

✗ D1 26/05/2009 ✗ * Sched

✗ D8 2/06/2009 ✗ Sched

✗ D15 9/06/2009 ✗ Sched

✗ D22 16/06/2009 ✗ Sched

☐ C2 25/06/2009

☐ C3 25/07/2009

☐ C4 24/08/2009

☐ C5 23/09/2009

☐ C6 23/10/2009

☐ C7 22/11/2009

☐ C8 22/12/2009

☐ C9 21/01/2010

☐ C10 20/02/2010

☐ C11 22/03/2010

☐ C12 21/04/2010

☐ C13 21/05/2010

Pathway Prescription Tasks

Select task from the list, then the Open Task button, or double-click the task

Task	Description
3 Add Dose	Add prescription to pathway
3 Edit Dose	Edit dose or change date or container
3 Percentage Dose Change	Change the dose by a percentage
3 Edit Treatment Administration	Edit details including rate, conditions, pharmacy instructions
3 Copy Dose	Make a copy of the selected order, copy can be created for current day or a future day in the cycle
3 Delete Dose	Delete
3 Update Height and Weight	Record new height and weight (for paediatrics) and recalculate doses if necessary
3 Adjust Dosing Rules	Change the dosing rules and then update the select dose
3 Refresh Future Cycles	This option deletes the orders of future cycles, and replicates to these cycles the current orders of the selected cycle
3 Review Cumulative Doses	Review the tracking of cumulative doses and make adjustments if needed
3 Dose History Audit	View all changes made to doses

Open Task Close

ANNE ALLEN [234567 PAH]

SY_TaskDrugs Charmhealth ADMIN Admin QMSDATA\QMS_NEXT1 Task Ma

start Windows Live Messen... Inbox - Microsoft Out... Microsoft PowerPoint... Charm - [Patient Sum... 9:26 AM

Daily Pathway Wizard - Step 6 of 7 - Adjust Dosing Rules - Mrs ABEL, APRIL

Pathway Wizard - Step 6 of 7 - Adjust Dosing Rules

Medication List Edit Dose Optional Administration Protocol Dose Limits

Code Cyclophosphamide-Doceta Desc Docetaxel 75mg/m² IVINF D1; Docetaxel 50mg/m² IVBOL D1; Cyclophosphamide 500mg/m² TotalCycles 8

Delete Substitute Selected Drug Insert Drug

DrugName Cycle Drug Selection

Cycles 1 to 1

Sodium Chloride Dexamethasone Ondansetron Doxorubicin Docetaxel Cyclophosphamide Dexamethasone Ondansetron Dexamethasone Metoclopramide

Cycles 2 to 5

Sodium Chloride Ondansetron Doxorubicin Docetaxel Cyclophosphamide Ondansetron Dexamethasone Metoclopramide

Cycles 6 to 6

Sodium Chloride Ondansetron Doxorubicin Docetaxel

Select Substitute Drug Order From List

Description	ContainerSize	Type	Status
☐ Ondansetron INJIV 8mg per dose ONCE IVINF (x 1 doses)		Script	Activ
☐ Ondansetron TAB 4mg per dose BD ORAL (x 4 doses)		Script	Activ
☐ Ondansetron TAB 4mg per dose ONCE ORAL (x 1 doses)		Script	Activ
☐ Ondansetron TAB 8mg per dose BID ORAL (x 4 doses)		Script	Activ
☐ Ondansetron TAB 8mg per dose ONCE ORAL (x 1 doses)		Script	Activ
☐ Ondansetron WAFER 8mg per dose BD ORAL (x 4 doses)		Script	Activ
☐ Prochlorperazine INJ 12.5mg per dose ONCE IVBOL (x 1 doses)		Script	Activ
☐ Prochlorperazine INJ 12.5mg per dose TDS PRN IMUSC (x 3 doses)		Script	Activ
☐ Prochlorperazine SUP 25mg per dose TDS PRN RECTAL (x 5 doses)		Script	Activ
☐ Prochlorperazine SUP 5mg per dose TDS PRN RECTAL (x 5 doses)		Script	Activ
☐ Prochlorperazine TAB 5-10mg per dose ONCE ORAL (x 1 doses)		Script	Activ
☐ Prochlorperazine TAB 5-10mg per dose TDS ORAL (x 12 doses)		Script	Activ
☒ Tropisetron CAP 5mg per dose Daily ORAL (x 2 doses)		Script	Activ
☐ Tropisetron CAP 5mg per dose ONCE ORAL (x 1 doses)		Script	Activ
☐ Tropisetron INJ 5mg per dose Daily IVBOL (x 1 doses)		Script	Activ

☐ Apply changes to all instances in Pathway

Document Reason Lactose intolerant (zofran contains lactose filler)

Substitute Cancel

Charm - [Medical History]>>Summary- ANDERSON, ANDREW]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details Medical History Writing script for ANDREW ANDERSON [345678 PAH]

Summary Medical Cycle Scripts Edit Script Details Rx Info Queue/History Interactions Usual Meds

Search MIMS database Refresh Patients Usual Medications List

Prograf Capsules (Tacrolimus 5mg Oral Capsule) 5mg[1]

Drug	Dose	Strength	Qty	Rpts	Code	Details	PBS	Schedule
Usual Medications List								
☐ Tacrolimus 5mg Oral Capsule								
Prograf Capsules (Tacrolimus 5mg Oral Capsule) 5mg[1]	5 mg BD	5mg[1]	50	3	8694E	Maintenance therapy, following initiation and stabilisation of treatment with tacrolimus and while therapy remains under the supervision and direction of the transplant unit reviewing the patient, of patients with: (a) liver transplants. The name of the specialised transplant unit reviewing treatment and the date of the latest review at the specialised transplant unit must be included in the authority application; (b) renal transplants. The name of the specialised transplant unit reviewing treatment and the date of the latest review at the specialised transplant unit must be included in the authority application.	Authority - PBS/RPBS	S4.
☐ Prednisolone 5mg Oral Tablet								
Solone Tablets (Prednisolone 5mg Oral Tablet) 5mg[1]	10 mg M	5mg[1]	60	4	1917X		PBS/RPBS	S4.
☐ Cyclosporin 100mg Oral Capsule								
Cysporin Capsules (Cyclosporin 100mg Oral Capsule) 100m...	100 mg BD	100mg[1]	60	3	8660T	Maintenance therapy, following initiation and stabilisation of treatment with cyclosporin, of: (a) patients with organ or tissue transplants. Therapy must remain under the supervision and direction of the transplant unit reviewing the patient. The name of the specialised transplant unit reviewing treatment and the date of the latest review at the specialised transplant unit must be included in the authority application; (b) patients with severe atopic dermatitis for whom other systemic therapies are ineffective or inappropriate. Therapy must remain under the supervision and direction of a dermatologist, clinical immunologist or specialised unit reviewing the patient. The name of the dermatologist, clinical immunologist or specialised unit reviewing treatment and the date of the latest review must be included in the authority application; (c) patients with severe psoriasis for whom other systemic therapies are ineffective or inappropriate and in whom the disease has caused significant interference with quality of life. Therapy must remain under the supervision and direction of a dermatologist or specialised unit reviewing the patient. The name of the dermatologist or specialised unit reviewing treatment and the date of the latest review must be included in the authority application; (d) patients with nephrotic syndrome in whom steroids and cytostatic drugs have failed or are not tolerated or are considered inappropriate and in whom renal function is unimpaired. Therapy must remain under the supervision and direction of a nephrologist or	Authority - PBS/RPBS	S4.

Medical History ANDERSON

Current Problems

Code Description

N00 Glomerulonephritis

Surgical History

Date Procedure

2001 Endoscopic brus

2006 Renal transplanta

Medical History>>Summary

Status

Active

Active

Active

ANDREW ANDERSON [345678 PAH]

VVF_MH_Summary Charmhealth ADMIN Admin GMSDATA\GMS_NEXT1 Task Ma

start Windows Live Messen... Inbox - Microsoft Out... Microsoft PowerPoint ... Charm - [Medical Hist...

9:14 AM

Change view

Encounters by Date (double click to edit, delete key to delete)

Date	Chief Complaint	Treatment	With
26/05/2009	Transplant - Renal		ADMIN, Charmhealth

Clinical Allied Health ROS PE Vitals Cannulation ? Ad-Hoc

Encounter Summary

Patient Mr ANDERSON, ANDREW
Service Provider ADMIN, Charmhealth
Created 26/05/2009
Last Edited By ADMIN, Charmhealth on May 26 2009 5:19PM
Chief Complaint Transplant - Renal
Duration
Treatment
Diagnosis Recorded Selected Diagnosis
Diagnosis List
Review In
Followup

Notes

Date Medication History Taken :
 Who currently administers medications:
 Medication Device Aids:
 Medication administration issues:
 Compliance / Concordance Issues:
 Date of last medication supply:

AE Status Toxicity Grade Event Date Likelihood Pathway

Charm - [Patient Summary]>>Treatment Plan>> Mrs ABEL, APRIL - Cyclophosphamide-Docetaxel-Doxorubicin (TAC) Cycle 1]

FileDaily DiarySchedulerPatient SearchPatient RecordGuidelinesDrug InformationPharmacyAccountsCancer RegMain MenuWindowHelpDeveloper

Patient DetailsMedical HistoryPathwaysEncountersAppointmentsDocuments

Treatment PlanDaysPrescriptionsChartOrdersResultsRadiation Therapy

Patient Summary>>Treatment Plan

Order PageUndo PageOrder & Print Page

Display Day<<>>

Show Full Cycle

CycleDayPage

☐ Day 1 (Page 1)

Drug Interactions

View Messages

Print Copies: 1

Protocol Notes:

Charm

Private Hospital

Chemotherapy Medication Chart

Pathway: Cyclophosphamide-Docetaxel-Doxorubicin (TAC) (First Cycle) Cycle 1 of 6

Wk 1

BSA: 1.77m²Height: 172.00cm

Allergies :Sulfonamide antibiotics;

Please refer to 'Charm' software for the rationale for any dose adjustment or protocol variance.

UR NO : A43256 (CCH)

Mrs APRIL ABEL

Unit 12

150 Flinders Road

Woden ACT 2606

Medicare 42530119321

DOB: 15/05/1963 Sex: F

Diagnosis: Malignant neoplasm of central portion of breast

Consultant: Prof Aldo Hort

Weight Dosing: 63.00KgsActual: 63.00 KgsIdeal: 63.25 Kgs

WCC (x10⁹/L)Plat (x10⁹/L)

Hb (g/L)Creat(se) (mmol/L)

Neut(x10⁹/L)Other

DateSignature

T=	Due	Order	Dose	Adj.Dose	Route	Time	Given	Checked
Administration Date : 11/03/2008(Day 1, Week 1)								
-15 min		Sodium Chloride 0.9% (1000mL) <i>in Sodium Chloride 0.9% 1L for IV infusion</i> <i>Fast rate for the duration of chemotherapy administration.</i>	1000 mL ONCE	100%	IVINF			Proposed Order Only
-15 min		Dexamethasone (8mg) <i>as directed</i>	8 mg ONCE	100%	IVBOL			Proposed Order Only
-15 min		Ondansetron (8mg) <i>Syringe for IV Push over 5 - 10 minutes</i>	8 mg ONCE	100%	IVBOL			Proposed Order Only
0		Doxorubicin (50mg/m ²) <i>Syringe for IV Push over 5 - 10 minutes</i> <i>via a fast running infusion of Sodium Chloride 0.9%</i> <i>Cumulative Dose for Pathway 88mg</i> <i>Do not exceed 973.5mg</i>	88 mg ONCE	99%	IVBOL			Proposed Order Only
15 min		Docetaxel (75mg/m ²) <i>in Dextrose 5% 500mLs (GLASS) for IV Infusion over 1 hours</i>	115 mg ONCE	86%	IVINF			Proposed Order Only
1 hr 20 min		Cyclophosphamide (500mg/m ²) <i>in Sodium Chloride 0.9% 500mLs for IV Infusion over 30 - 60 minutes</i>	880 mg ONCE	99%	IVINF			Proposed Order Only

HOME SUPPLY

T=	Order	Dose	Adj.Dose	Route	Qty	Patient Instructions	Dispensed by
>=12 hrs	Dexamethasone (TAB)	8 mg BD X 1day (s)	100%	ORAL D/C	X 3 doses	Take TWO tablets TWICE a day with food for THREE doses starting the night of the first dose of chemotherapy.	
>=12 hrs	Ondansetron (TAB)	8 mg BD X 1day (s)	100%	ORAL D/C	X 4 doses	Take ONE tablet TWICE a day for TWO days to prevent and relieve vomiting from the chemotherapy	

Charm Drug Chart

•Orders initially proposed,

• Clinicians can order and print by clicking the hyperlink

APRIL ABEL]

WF_PVW_DrugChartCraig MOOREMedicalTITANJOHNTask Ma

Electronic Medical Record

Work flow –

- Review patient information (History – Medical, Surgical etc)
- Current condition
 - Current diagnoses
 - Current problems
 - Review of symptoms
 - Physical examination
 - Test results - Pathology/Radiology Orders & Results
- Determine (and document) treatment plan
- Encounters and encounter management (multidisciplinary)
- Medication Management/Allergies
 - Update medication lists, orders, prescribe
- Order tests
- Device Management

Update treatment plan (PRN)

Complete Episode of Care – transfer

Suite 13, 65 Macgregor Tce, Bardon Qld 4065

Phone 3512 5300 Fax 3512 5359 Help Desk 1300 736 520 www.charmhealth.com.au

Charm - [Medical History]>Summary- ABEL , APRIL]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details

Medical History

Pathways

Encounters

Appointments

Documents

NOK

Summary

Medical

Surgical

Family

Social

Drugs

Medical History>>Quick Medical History

Medical History>>Quick Medical History

SaveQuick SaveClose

Category	Yes	No	Description
Click to drill down before checking history items			
Cardiovascular			
Dermatological			
Ears/Nose/Throat			
Endocrine/Metabolic			
Eyes			
Gastrointestinal			
Haematological			
Immunological			
Muscles/Bones/Joints			
Nervous System			
F41	☐	☐	Anxiety
F03	☐	☐	Dementia
F33	☐	☐	Depression
G40	☐	☐	Epilepsy or seizures
G43	☐	☐	Migraine headaches
G35	☐	☐	Multiple Sclerosis
G20	☐	☐	Parkinson's disease
G62.9	☐	☐	Peripheral neuropathy
F20	☐	☐	Schizophrenia
I64	☐	☐	Stroke or TIA
	☐	☐	Other.....
Renal			
Reproductive			
Respiratory			

General Details

Patient Name

Date of Birth

Sex

Current Problems

1.Nonallergic asthma

1.Malignant neoplasm of breast

2.Essential (primary) hypertension

Medical History

Hypertension

No History of

No history of aneurysm

No history of angina pectoris

Family History

Mother

Sister

Father

Adverse Events

Diarrhea

Social History

Recorded by Dr ADMI, C

Lives at home

Has 2 adult children

Works as a professional

Problem Details

Status

Active

Active

Active

Active

Status

Active

APRIL ABEL

WF_MH_Summary

Chas ADMI

Admin

TITANJOHN

Task Ma

Medication History

Charm - [Medical History>>Summary- ANDERSON, ANDREW]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Patient Details

Medical History

Pathways

Encounters

Appointments

Documents

NOK

Summary

Medical

Surgical

Family

Social

Drugs

Quick Medical History

Problem List

Medical History ANDERSON, ANDREW (Mr) 02/02/1954 M

Current Problems

Code	Description	From
N00	Glomerulonephritis	26/C

Surgical History

Date	Procedure	Surgeon
2001	Endoscopic brush biopsy of renal pelvis	
2006	Renal transplantation	John Smith

Usual Medications:

Medication	Status
Tacrolimus 5mg Oral Capsule (Tacrolimus 5mg Oral Capsule) 5...	Active
Solone Tablets (Prednisolone 5mg Oral Tablet) 10 mg M	Active
Cysporin Capsules (Cyclosporin 100mg Oral Capsule) 100 mg...	Active

Alternate Medications:

Substance	Status
☐ No records	

Adverse Reactions (inactive records in red):

Substance	Severity	Reaction	Reaction Type	Status
Penicillins	Moderate	rash	Drug Allergy	A
enalapril maleate	Mild	rash	Drug Allergy	A

Pharmacist

1

2

3

Prescribe

EMR Findings

- Sites gained confidence and increased usage of EMR functionality the longer they had used the product
- Information on diagnosis was recorded for 39.6% of patients (N=19,351)
- Two facilities, contributed over 90% of completion rates for these data
 - strong clinical champions
 - over four year's experience
- Co-morbid medical conditions were only recorded for 2.9% of patients

Pathology Order Sets

Charm - [Order Details]

File Patient Search Daily Diary Scheduler Patient Record Guidelines Drug Information Pharmacy Accounts Cancer Reg Main Menu Window Help Developer

Order Sets Quick Lists

Order Sets Detail

Record number 2 of 2 selected

Order Details

Add Codes Delete Codes

Order Set Details

Category* Pathology

Service Provider* Auslab QH Pathology

Code* PD

FullDescription* Routine Peritoneal Dialysis

Source

Components

OrderType service \$Cost

MedicareNumber

MinRepeatInterval

Frequency

Code	Name
UE	Urinalysis and Electrolytes
CP	Calcium and Phosphate
FBC	Full Blood Count
MSU	Mid Stream Urine
UP	Urine Protein and Albumin Levels

PD

Code	Order	Source	Category	Status
BM	Bone Management		Pathology	Active
PD	Routine Peritoneal Dialysis		Pathology	Active

ANDREW ANDERSON [345678 PAH]

UD_OrderSet_L Charmhealth ADMIN Admin GMSDATA\QMS_NEXT1 Task Ma

start Windows Live Messen... Calendar - Microsoft ... PAH Renal Presentati... Draft PAH presentati... http://mail.live.com/d... Microsoft Excel - 200... Process for new case... Charm - [Order Details] 5:33 PM

Change view

Checked Results

Date	Test	Doctor
15/11/06	General Che...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	General Che...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
18/10/06	General Che...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
04/10/06	General Che...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
02/10/06	PROTEIN,URI...	Dr Thomas ...
28/09/06	Tumour Mar...	Dr Thomas ...
28/09/06	General Che...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...

Patient: John SMITH ID: 1075647 DOB: 16/02/1970 Ph(H): 3222 2222
Address: 27 ALBERT STREET, , SUNNY CITY, 4000
Ref By: Dr Prince Charming cc:
Lab: Mater Pathology - Private Lab no.: 06P259458-5467377

Requested: 15/11/06 00:00 hrs
Collected: 15/11/06 08:30
Reported: 15/11/06 08:52

Order Pathology

New Record Entry

Order Pathology

AU Auslab QH Pathology

Quick List Order Sets Show All

☒ PD-Routine Peritoneal Dialysis

- ☒ Full Blood Count
- ☒ Calcium and Phosphate
- ☒ Urinalysis and Electrolytes
- ☒ Mid Stream Urine
- ☒ Urine Protein and Albumin Levels

☐ BM-Bone Management

- ☐ Calcium and Phosphate
- ☐ Full Blood Count

Requested Tests:
Full Blood Count, Calcium and Phosphate, Urinalysis and Electrolytes, Mid Stream Urine, Urine Protein and Albumin Levels

Clinical Notes:

Ordering Practitioner Campbell, Scott (Dr)

Practitioner Location Renal Unit, Woolloongabba

CC To (Doctors Not in the List)

Urgency Routine No later than 20:42:46

Phone Fax

Date 27/05/2009 Billing Public

Facility PAH Location

Close

☒ Show Patient Providers Only

Send Copies To Address

☐ Campbell, Scott (Dr) Renal Unit, Princess Alexand...

Req No: P237397 P240892 P241283 P241499 P259458
Date: 28/09/06 04/10/06 18/10/06 01/11/06 15/11/06
Time: 15:20 11:10 08:45 09:00 08:30 Units Ref Range
BLOOD COUNT

Change view

Checked Results

Date	Test	Doctor
15/11/06	General Che...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
15/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	General Che...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
01/11/06	Full Blood C...	Dr Thomas ...
18/10/06	General Che...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
18/10/06	Full Blood C...	Dr Thomas ...
04/10/06	General Che...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
04/10/06	Full Blood C...	Dr Thomas ...
02/10/06	PROTEIN,URI...	Dr Thomas ...
28/09/06	Tumour Mar...	Dr Thomas ...
28/09/06	General Che...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Coagulation ...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...
28/09/06	Full Blood C...	Dr Thomas ...

Patient: John SMITH ID: 1075647 DOB: 16/02/1970 Ph(H): 3222 2222
Address: 27 ALBERT STREET, , SUNNY CITY, 4000
Ref By: Dr Prince Charming cc:
Lab: Mater Pathology - Private Lab no.: 06P259458-5467377

Requested: 15/11/06 00:00 hrs
Collected: 15/11/06 08:30
Reported: 15/11/06 08:52

Order Pathology- Mrs ABEL, APRIL

New Record Entry

Order Pathology

CPL Charm Pathology

Quick List

Order Sets

Show All

PanelName	PanelCode
DOWN'S RISK SCREENING	Down's Risk
DPD (RANDOM URINE)	DPD (Rand
DPD 24H URINE	U-DPD
E/LFT	E/LFT
ELECTROLYTES	Electrolytes
ENA	ENA
ENTEROVIRAL SEROLOGY	Enterovirus
EPILIM	Epilim
EPSTEIN-BARR	EBV
ESR	ESR
EUC	EUC
FACTOR V LEIDEN	Factor V Lei
FAECES 1 RED SUBS	Faeces 1 R
FAECES ADENOVIRUS 1	Faeces 1 Ac
FAECES MCS/OCP 1	Faeces 1 M
FAECES ROTAVIRUS 1	Faeces 1 R

Request Tests:

FULL BLOOD COUNT, E/LFT, ELECTROLYTES

Clinical Notes:

Metastatic breast cancer workup

Ordering Practitioner

Moore, Craig (Dr)

Practitioner Location

CC To (Doctors Not in the List)

Send Copies To

Address

☒ Hort, Aldo (Prof)	Cancer Services The Canbe...
☒ Smith, York (Dr)	Calvary Family Practice 16 ...

Urgency

Routine

No later than

14:40:49

Phone

02 62548745

Fax

Date

20/02/2008

Billing

Private

Facility

CCH

Location

Outpatients Unit

Close

Pathology and Radiology

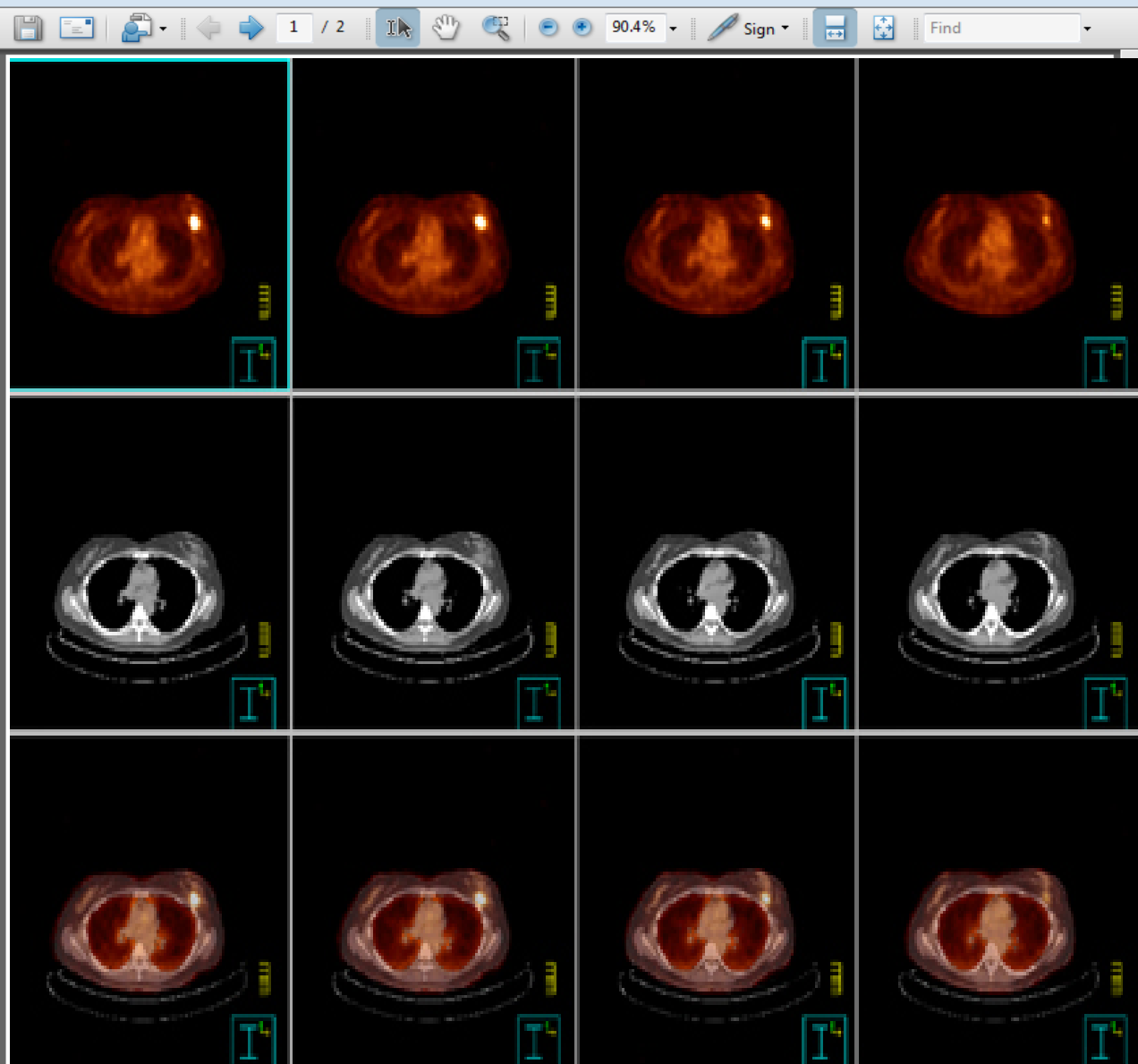
- Results
- Graphing
- Orders

[Import Document](#)

Documents by Date

Command	Assigned To	Assign Type	Date	Co
---------	-------------	-------------	------	----

Document & File Management



Other Notes (eg current services) :

Review and Triage Referral

Task - Clinicians
Recent Referrals [View Referral](#)

Record number 4 of 4 selected

Triage Level Location 

Patient	Source	Triage Level	Date	Expires	Period	Status	Reason	Details
COLLIE, RENA	Dr Smith, York			27/5/10	12 Months	Active	Renal failure - diabetes	
Mrs APRIL20, M...	Dr Geiger, Hannelore			27/5/10	12 Months	Active	?Renal impairment	
 TEST, MALE	Dr Test, Peter		25/2/08	24/2/09	12 Months	Active	?renal failure	
 TEST, MALE	Dr Test, Peter		25/2/08	24/2/09	12 Months	Active	?renal failure	

Task Manager

Sunday June 29, 2008

New Referrals

Task	#
 Unchecked Results	0
 Owing Scripts	0
 Recent Pathway Ammendments	
 New Referrals	
 Documents for Review	2
 Quick Note Templates	
 Reports	34
 Document Preferences	
 Pharmacy Review	n/a
 Results Admin	0
 My Favourite Service Codes	

Record saved successfully

Scheduler - Day View

Change view

CCH Charm County General Hospital

Location

Day Oncology

[All Resources]

Day Onc Beds

Day Onc Chairs

Registars

RCH Royal Charm Hospital

CKH Charm Kids Hospital

CBH Charm Base Hospital

Appointments By Patient

Patient	T	Re...	Time	Du...	vWa...
ANT, ADAM		DA	09:...	18...	
ANT, ADAM	1	AC	10:...	14...	
CAT, ANNA	1	SC	08:...	20 M	
CAT, ANNA	3	AC	13:...	14...	
CAT, ANNA	3	DA	13:...	18...	
CAT, BASIL	1	AC	09:...	39...	
CAT, MOLLY	1	AC	12:...	29...	
CATTLE, BOOF	1	BP	09:...	39...	
CHARM, MILO	3	AC	11:...	15...	
COLLIE, REX	4	AC	08:...	14...	
COLLIE, REX	2	DA	11:...	15...	
FROG, KERMIT	1	AC	13:...	24...	
GIM, JESSIE	3	PR	10:...	30 M	
GLEN, PAUL	3	DA	07:...	18...	
GREY, ALISON	4	BP	15:...	60 M	
JAMES, NICOL F	3	DA	09:...	60 M	

Relocate

Wait List

ADT

Billing

Active Re

Tuesday February 26, 2008

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
6 :00	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable
AM :30										
7 :00										
:30										
8 :00		BP Notes: Blood Transfusio 1 Unit			DA [TL3] Notes: IV infusion 1-6 hrs			SAI AC [TL4]		
:30	AC [TL1]								COL AC [TL4]	
9 :00			BP [TL1] Notes: Blood Transfusio 3 Units	MO AC Waited: 15 M [TL1]		CA AC [TL1]	JAM DA [TL3]			ANT DA Notes: IV infusion 1-6 hrs --- IV Magnesium
:30		RO AC [TL1]					AN AC [TL1]			
10 :00					DO AC Waited: 283 M [TL1]					
:30	CHA AC Waited: 1 M [TL3]							SAI BP [TL1] Notes: Blood Transfusio 3 Units	COL DA [TL2]	CA AC [TL1]
11 :00										
:30										
12 :00										
PM :30										
1 :00	CA DA [TL3] Notes: IV infusion 1-6 hrs - Needs Potassium replaceme	MO AC [TL3]			FRO AC [TL1]		LEV PR			
:30							POC AC [TL3]		CA AC [TL3]	
2 :00										
:30										
3 :00										
:30			GR BP [TL4]	MO DA [TL1] Notes: Bisphosph Infusion						
4 :00										
:30										
5 :00	Unavailable	Unavailable	Unavailable			Unavailable	Unavailable		Unavailable	Unavailable
:30										

Information, Knowledge and Intelligence

- Data collection
 - Customisable Questionnaires
 - Disease Staging
 - Performance Status
 - Registry Interfaces
 - ANZdata
 - Research
 - Clinical Trials
- Interfaces with
 - PAS/Scheduling Systems/Finance
 - Pharmacy/Radiotherapy
 - Pathology/Radiology
- Data reporting
 - Dynamic Content Collection/Reporting
 - Custom Report Generation Tool
 - Customised data extraction routines
- Knowledge management and development
 - Clinical Practice Guidelines
 - Treatment Summaries / Pathways
 - Treatment Algorithms
 - Decision Support
 - Drug: Drug/Disease/Allergy
- “Intelligent” clinical services

Prognostic Indicators

New Record Entry

Steps

Stage

Histopathology

Tumour Markers

Spread

Performance Status/Review

Prognostic Indicators

Chemotherapy Given

Hormone Treatment

Immunotherapy

Biologic Treatment

Radiation Therapy

Surgery

Prognostic Score

Prognostic Markers

Record Prognostic Score

Date

24/02/2008

Prognostic Indicator

FLIPI Follicular Lymphoma International Prognositc Index Scor

Prognostic Score

1

Low

Save Prognostic Score

24/02/2008

Date	Indicator	Score	Description
20/02/2008	FLIPI	3	High
24/02/2008	FLIPI	1	Low

Delete Selected Prognostic Score

Cancel

Back

Skip

Next

Finish

Comprehensive cancer data collection:
-Cancer Registry Notification
-Research / organisation reporting

Charm - [Current Encounter>>Notes]

FileDaily DiarySchedulerPatient SearchPatient RecordGuidelinesDrug InformationPharmacyAccountsCancer RegMain MenuWindowHelpDeveloper

Calibri3BILU

+

✓

✕

Current Encounter>>Notes

Date22/02/2008

Reason**Multidisciplinary Meeting

Chief Complaint*Multidisciplinary Team Meeting: APRIL ABEL]

Duration1

DiagnosisS

TreatmentP

Review in1

FollowupC

Quick NotesM

ROS

PE

V

Consultant: Prof Al

Diagnosis: Hormone

(as recorded in EMP

Histology: see full results

(also recorded in results)

Summary - Grade 3 Invasive Ductal Carcinoma NOS

Oestrogen Receptor : negative nuclear staining

Progesterone Receptor: negative nuclear staining

Investigations awaited: CT brain, isotope bone scan Date planned: 28/02/2008

(eg staging CT, MRI)

Pathway

Date

Attribution

Probable

Save Selected Toxicities

Multidisciplinary Clinic Support

erse Ev...12345

?

Questionnaire

Please complete the following questions :

Presenting ClinicianProf Hort

GP present

Pathology Slides Presented

Explained by Pathologist

Scans presented

Explained by Radiologist

Discussion Input: GP

Discussion Input: Surgeon

Discussion Input: Med Onc

Discussion Input: Rad Onc

Discussion Input: Pathologist

Discussion Input: Radiologist

Research Discussed:

Multimodal Discussion:

Other Detail:Full histopathology attached

Patients Psychosocial situation

Discussion Summarised:

Comments:For chemotherapy followed by radiotherapy

OK

Cancel

APRIL ABEL]

ER_EncDiagListChas ADMIAAdminTITANJOHNTask Ma

Implementing Findings

- Oncology migration
- Renal
- Medication management
- Chronic disease management
- Charm.Next

Charm Renal

GFR

>90

60-89

30-59

15-29

<15

- Referral Management
 - Import referrals
 - Triage
 - Waitlist
- EMR – Documenting and managing renal disease
 - Patient History
 - Medication Management**
 - Order Entry and Results
 - Anaemia, proteinuria and albuminuria
 - Serum Creatinine
 - Calcium, phosphate and PTH
 - Access Device Management
- GFR, BSA, IBW calculation and monitoring
- Planning for end-stage disease
 - Scheduling/Prescriptions
 - Dialysis – peritoneal/haemodialysis
 - Transplant
- Treatment Algorithms
- Data collection (ANZData)

2. Patient record
View and explore Brian Johnson's clinical record
Next
3. Medications List View
Show Guide

Doctor: COX, Oliver (Dr)
Inbox (12)
Patients Today (96)

JOHNSON, Brian (Mr)
Born 24-Jul-1945 (63y)
Gender Male
NHS No. 012 345 6789

Address 25 Rochester Road, Linthorpe, Northshire, NS6 9QP
Phone and email (0116) 123 4567
Known allergies

2008

02-Mar-2009 Essential Hypertension
25-Oct-2008 Bilateral Cataracts - Awaiting Surgery
20-Oct-2008 Essential Hypertension
20-Oct-2008 Moderate Depressive Episode
01-Sep-2008 Essential Hypertension
01-Sep-2008 Moderate Depressive Episode
20-Jul-2008 Moderate Depressive Episode
10-Jul-2008 Acute Gastritis - for permanent PPI
28-May-2008 Essential Hypertension
22-Apr-2008 Moderate Depressive Episode
16-Apr-2008 Moderate Depressive Illness - on SSRI

2007

Group by: None
Detail: - +

02-Mar-2009 Essential Hypertension Doctor: BARNETT, Dave (Dr) Woodgrove Surgery
25-Oct-2008 Bilateral Cataracts - Awaiting Surgery Doctor: FITZGERALD, Charles (Mr) Ashridge Eye Clinic
20-Oct-2008 Essential Hypertension Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
20-Oct-2008 Moderate Depressive Episode Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
01-Sep-2008 Essential Hypertension Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
01-Sep-2008 Moderate Depressive Episode Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
20-Jul-2008 Moderate Depressive Episode Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
10-Jul-2008 Acute Gastritis - for permanent PPI Doctor: CAMERON, Maria (Mrs) Woodgrove Surgery
28-May-2008 Essential Hypertension Doctor: CAMERON, Maria (Mrs) Woodgrove Surgery
22-Apr-2008 Moderate Depressive Episode Doctor: RICHARDSON, Wendy (Dr) Woodgrove Surgery
16-Apr-2008 Moderate Depressive Illness - on SSRI Doctor: NELSON, Jeremy (Dr) GP Surgery

Medications
Current Past Group by: None Detail: - +

Start Date	Drug Details	Reason	Status	Review Date
16-Apr-2008	fluoxetine	Moderate Depressive Illness	Started	22-Apr-2010
26-Sep-2007	aMLODipine	Essential Hypertension	Started	22-Oct-2009
08-Sep-2007	lisinopril	Essential Hypertension	Started	22-Oct-2009
14-Jul-2007	simvastatin	Hypercholesterolaemia	Started	22-Oct-2009
21-Jan-2007	co-codamol	Chronic Low Back Pain	Started	22-Apr-2010
20-Oct-2005	fluticasone + salmeterol	Mild Chronic Obstructive Pulmonary Disease	Started	22-Oct-2009

Patient Charts
22-Apr-2005 - 22-Apr-2009

Risks

Drug / substance	Past reactions
penicillin	rash and breathless
lisinopril	renal function deteriorated with higher

Lifestyle
Lifestyle (Cardiovascular Disease)

Current Risk	Target Risk	Projected Risk
24%	10%	24%

Cholesterol Level Target < 5mmol 6.8

BMI Target 20 32

Blood Pressure Target 100 - 140 147

Smoker ☐ Yes ☒ No

Current Care

Registered Doctor
LEE, Christina (Dr)
Woodgrove Surgery, Chest Pain Clinic
22-Apr-2009 Referral to Cardiologist
DUNTON, Paul (Mr)

Active Care Pathways (2)

Essential Hypertension
NICE Guidelines - Step 2

Moderate Depression
Stage 4 / 6 - Maintenance Treatment...

Search Care Pathway Library

Patient chart v2.avi

Suite 13, 65 Macgregor Tce, Bardon Qld 4065

Phone 3512 5300 Fax 3512 5399 Help Desk 1300 736 620 www.charmhealth.com.au

Conclusions

Key Findings

- Users favoured functionality for which they achieve greatest workflow efficiencies
- Success factors
 - Sites with a dedicated resource (such as a Charm Project Officer)
 - Longest exposure to the software used more of the functionality
 - Experience is a factor in the adoption of new work practices
- Patient safety and business benefits
 - Sites using more extensive functionality in disease and medication management
- Analysis of requirements
 - Management of oncology requires functionality in excess of that required for most other disease management,
 - Requirements for electronic medication management, electronic medical records and chronic disease management are
 - easily met within existing functionality
- Many sites are now requesting and undertaking broader application of existing functionality

Thank you