



National Chemotherapy Database: A Pilot Study to Evaluate Requirement to Support The Collection and Central Management of Cancer Chemotherapy Data Across England

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Improving Outcomes: A Strategy for Cancer

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- to improve the collection and publication of data on chemotherapy activity, outcomes and costs, the chemotherapy dataset will be introduced in April 2012 and this should provide commissioners, providers and others with invaluable information; and
- to enhance the information available to patients on the benefits and toxicities of treatment

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Chemotherapy Dataset coverage

- Solid tumours
- Haematological malignancy
- Paediatric tumours
- Inpatient, daycase, outpatient and community settings
- Excludes non cancer chemotherapy

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Project Objectives

- Evaluate extracts from e-prescribing systems and cancer centres:
- Secure transfer of chemotherapy data;
- Technical specification for chemotherapy extracts;
- Technical specification for the automation of activity reports;
- Architectural design of the central repository;

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Challenges

- Data Extraction
- Submission via the NHS Secure file transfer system
- · Column headers\field names
- · Variance in recording format of data
- Missing mandatory fields
- · Other major issues



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Data Completeness

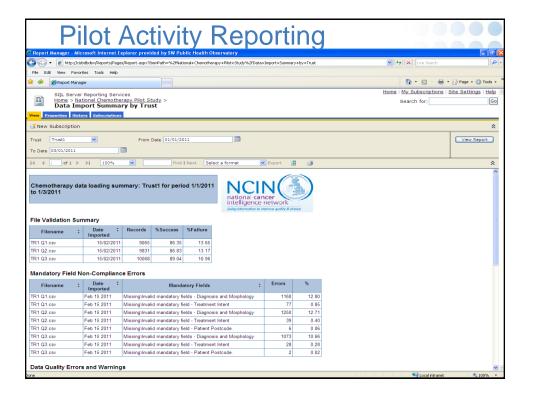
Field	Data %	Blanks %
Actual_dose_per_administration	91	9
Administration date	91	9
Administration route	44	56
Chemo radiation	46	54
Clinical_trial	15	85
Comorbidity_adjustment	8	92
Consultant_GMC_code	51	49
Consultant_speciality_code	42	58
Date_decision_to_treat	41	59
Date_of_birth	100	0
Date_of_death	12	88
Date_of_final_treatment	45	55
Drug_name	91	9
Ethnicity	45	55
Gender_current	88	12
Height_at_start_of_regimen	81	19
Intent_of_treatment	86	14
Morphology	37	63
NHS_number	100	0
Number_of_cycles_planned	46	54

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Field	Data %	Blanks %
OPCS_delivery_code	8	92
OPCS_procurement_code	8	92
Organisation_code_of_drug_provider	46	54
Organisation_code_of_provider	49	51
Patient_postcode	88	12
PCT_of_registration	47	53
Performance_status_at_start_of_cycle	7	93
Performance_status_at_start_of_regimen	7	93
Primary_diagnosis	82	18
Regimen	100	0
Regimen_modification_dose_reduction	8	92
Regimen_modification_stopped_early	8	92
Regimen_modification_time_delay	8	92
Regimen_outcome_summary	8	92
Stage_of_disease_at_start_of_programme	9	91
Start_date_of_cycle	100	0
Start_date_of_regimen	91	9
Weight_at_start_of_cycle	88	12
Weight_at_start_of_regimen	81	19



Pilot Activity Reporting (2)

Pilot Clinical Reporting

The pilot project has produced some sample clinical reports based upon the data received.

- Colorectal cases by Regimen
- Cycles Started by Patient Age Band
- Cycles Started by Tumour Site
- Ovarian Chemotherapy Regimens Delivered, by Regimen Group
- Treatment Intent of Cycles Started by Tumour Site



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Data Quality Business Rules

Centrally agreed and maintained business rules:

- Whether it is an error, warning, or informational
- Whether it is incoming data validation, cross reference validation, or internal validation
- How critical the rule is 1 low to 5 high
- What actions to take allow, reject, fix
- Status active or disabled
- Who to notify of a violation of this rule



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Recommendations

- Staging data add field 'stage type';
- 2. Dataset mandatory fields must include unique identifiers at each level of data
- Templates for CSV and XML files should be made available to system developers, technical partners and data suppliers
- 4. A data submission threshold to be agreed by NCIN;
- Business rules and QA rules should be codified into a single XML schema and an additional text document for distribution to technical partners and data suppliers.

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Recommendations (2)

- Units supplying data must be allocated a unique code to identify them. Files submitted should include this code in the filename along with a date range identifier for the data.
- 7. Units supplying data must have an N3 connection.
- 8. Estimates indicate the database could receive as many as 12,000,000 records each year. This will rapidly grow the database and therefore the hardware platform should be able to cope with five to ten years worth of data before being upgraded or replaced

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Proposed Implementation Plan

- Phased approach from 01/04/2011 31/03/2014
 - Year 1: develop web front-end; finalise database; continue to test data from increased pool of pilot sites; engage with software suppliers
 - Year 2: 01/04/2012 SACT dataset mandated, sites with eprescribing systems live; work with remaining sites; provide activity report to providers and commissioners
 - Year 3: 31/03/2014 all chemotherapy units supplying SACT compliant data monthly;



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