The Chemotherapy Service Specification

....... are we meeting the Quality Standards

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Outline

• Where have we come from?
• What are the standards?
• How are we doing?
• Future challenges?
Where have we come from?

- 3000BC-Edwin Smith Papyrus
  - 8 cases, tumours of the breast
  - Removed by cauterisation with a tool called the ‘fire drill’
  - ‘There is no treatment’

- Cancer
  - 4 humors (body fluids)
    - Too much or too little caused disease
    - Excess of black bile caused cancer
History of treatment

- Surgery
  - 1719 Lorenz Heister - Mastectomy
  - 1890s William Halstead – radical mastectomy
  - 1970s less extensive surgery as effective

- Radiation
  - Erythema dose, Conformational Radiation Therapy CRT, IMRT, CPBRT, Stereotactic RT

- Chemotherapy
Figure 1. Key advances in the history of cancer chemotherapy

Advances in drug screening
Events with national impact
Advances in cancer therapeutics

- Arsenicals (1, 2), 1908
- Animal models (1-4), 1900
- Transplantable tumors (5-11), 1912
- Nitrogen mustard in lymphomas (15-18), 1935
- Model development (7), 1935
- Cancer Chemotherapy National Service Center, 1949
- L1210 as primary screen (27-30), 1949
- Thiopurines (24, 25), 1949
- Antifolates (22), 1948
- Antitumor antibiotics (23), 1950
- Methotrexate in choriocarcinoma, 1951
- 5-Fluorouracil (26), 1957
- Concept of cure, 1960s

AACR Centennial Series

DeVita V T, and Chu E Cancer Res 2008;68:8643-8653
Progress... Medicines
Progress...nursing
Definitions of Quality

“The standard of something as measured against other things of a similar kind; the degree of excellence of something”  Oxford English Dictionary

“Quality is about meeting the needs and expectations of customers”  What is quality, Business- Excellence.org

• In Health¹
  • Six basic concepts

¹Quality of Care-A process for making strategic choices in health systems, 2006
http://www.who.int/management/quality/assurance/QualityCare_B_Def.pdf
Quality in Health

- **Safe** - Minimise risk and harm to service users
- **Patient-centred**
  - taking account of preferences of patients & their cultures
- **Effective**
  - Evidence based, improving health outcomes, based on need
- **Efficient** - Maximise resource, minimise waste
- **Accessible** - timely & skills & resources appropriate to need
- **Equitable**
  - No variation for gender, race, ethnicity or socioeconomic status
Quality standards - NICE

- Set of specific, concise statements and associated measures for healthcare, social care and public health
  - >100 Antenatal care to varicose veins, incl. many cancers
  - Eg Children & young people with cancer
  - Quality statement 3: Electronic prescribing of chemotherapy
- Set out aspirational, but achievable, markers of high-quality, cost-effective patient care, covering the treatment & prevention of many diseases & conditions.
- Based on guidance and advice from NICE & other organisations using NICE-accredited processes.

http://www.nice.org.uk/standards-and-indicators
Safe & Patient centered
National standards

- Best practice guidance
- Hollistic Needs Assessment & Care planning
- Position statements
- BOPA 2004 - Position statement on safe practice with oral anti-cancer treatments.
- NPSA (RRR001, 2008; 2010)
  - Highlights a number of deaths and patient safety incidents in prescribing, dispensing and administration of oral anti-cancer drugs.
  - Deliver the same standard of care for oral and IV chemo
- Francis Report 2013
An alternative guide to the new NHS in England

www.kingsfund.org.uk/newnhs
The Products
...of Clinical Reference Groups

**Scope** — Defining the scope of a given specialised service & setting out how best the specialised element of a service could be defined and quantified.

**Service Specification** — Forms part of the contract with each provider. Determines the key requirements of the service to be commissioned from the provider.

**Commissioning Policy(s)** — describes the healthcare treatment that the NHS proposes routinely to commission for a defined patient group with a particular illness within a defined financial year.

**Quality Measures** — specific quality standards to be achieved for individual services. Forming a high level “dashboard” incorporating measures of clinical outcomes, patient experience and service effectiveness.
Service Specification for chemo
NHS Outcomes Framework Domains & Indicators

<table>
<thead>
<tr>
<th>Domain 1</th>
<th>Preventing people from dying prematurely</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 2</td>
<td>Enhancing quality of life for people with long-term conditions</td>
<td>X</td>
</tr>
<tr>
<td>Domain 3</td>
<td>Helping people to recover from episodes of ill-health or following injury</td>
<td>X</td>
</tr>
<tr>
<td>Domain 4</td>
<td>Ensuring people have a positive experience of care</td>
<td>X</td>
</tr>
<tr>
<td>Domain 5</td>
<td>Treating and caring for people in safe environment and protecting them from avoidable harm</td>
<td>X</td>
</tr>
</tbody>
</table>
Core Minimum requirements

- Environment
- Staffing & Leadership
- Care pathway approach
- Data & Information Management
- Electronic prescribing of Chemo
- Acute Oncology Services
- R&D- Clinical trials
Care pathway approach
-to illustrate good practice
Domain 1
Key Outcome measures

Compliance with:

- Access to medicines
  - NICE approved drugs
  - Cancer Drugs Fund
- National Algorithms
  - Evidence based practice
  - Commissioning baseline
- SACT dataset
- Manual for Cancer Services
  - Chemotherapy measures
Chemotherapy algorithms

DRAFT

National Chemotherapy Algorithms
NON SMALL CELL LUNG CANCER

Diagnosis of NSCLC

Stage I, II or IIIA and IIIB for radical treatment

Stage IV or IIB with NSCLC

Sequencing: in NSCLC NON SMALL CELL LUNG CANCER

DISEASE FREE

DISEASE PROGRESSIVE

Key to revised chemotherapy section

Ver 0.6

DRAFT

Chemotherapy Algorithms
MESOTHELIOMA

NHS England

Surgical resection should be offered access to treatments as part of clinical trials.

Ver 0.4

DRAFT

Chemotherapy Algorithms
NON SMALL CELL LUNG CANCER: NSCLC

NHS England

Surgical resection should be offered access to treatments as part of clinical trials.

Ver 0.4

DRAFT
SACT dataset

- 147/147 Trusts submitted & approved data
- Sept 13 to Aug 14
  - > 156,000 patients receiving treatment
  - 256,712 regimens commenced
  - 694,530 cycles commenced
- Need to focus on:
  - Data quality, completeness & quantity

http://chemodataset.nhs.uk/
Coverage Map: A National Perspective

Key
Hospital trusts
- Submitting data

Total patients
- 1 to 5
- 5 to 25
- 25 to 40
- 40 to 150

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London detail

2nd September 2014
Number of Patients by Diagnostic Group
All submitting trusts aggregated
Data received for July 2013 - June 2014. Patients aged 16 and over

- **Breast**: 33,107
- **Lower GI**: 19,716
- **Lung**: 17,134
- **Urology**: 17,067
- **Lymphoma**: 13,900
- **Upper GI**: 12,374
- **Gynae**: 10,589
- **Myeloma**: 7,089
- **Leukaemia**: 5,934
- **Head and Neck**: 2,924
- **Brain/CNS**: 2,391
- **Skin**: 1,780
- **Sarcoma**: 1,709
- **Other**: 8,278

Number of patients

0, 5,000, 10,000, 15,000, 20,000, 25,000, 30,000, 35,000
The Challenge: Improving Data Quality

SACT Data Completeness report (August 2013 to July 2014)

<table>
<thead>
<tr>
<th>England</th>
<th>All Diagnostic Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>% NHS Number</td>
</tr>
<tr>
<td>154,879</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of tumour records</th>
<th>% GP Practice Code</th>
<th>% GMC Code</th>
<th>% Consultant Specialty</th>
<th>% Primary diagnosis</th>
<th>% Morphology</th>
<th>% Stage of disease at start of programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>166,071</td>
<td>84%</td>
<td>90%</td>
<td>91%</td>
<td>100%</td>
<td>50%</td>
<td>34%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of regimens</th>
<th>% Programme number</th>
<th>% Regimen number</th>
<th>% Treatment Intent</th>
<th>% Regimen name</th>
<th>% Height at start of regimen</th>
<th>% Weight at start of regimen</th>
<th>% Performance Status at start of regimen</th>
</tr>
</thead>
<tbody>
<tr>
<td>254,162</td>
<td>68%</td>
<td>61%</td>
<td>79%</td>
<td>100%</td>
<td>56%</td>
<td>58%</td>
<td>38%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of cycles</th>
<th>% Cycle number</th>
<th>% Start date of cycle</th>
<th>% Weight at start of cycle</th>
<th>% Performance Status at start of cycle</th>
<th>% OPCS procurement code</th>
<th>% of Cycles with Drug records</th>
</tr>
</thead>
<tbody>
<tr>
<td>681,073</td>
<td>100%</td>
<td>95%</td>
<td>55%</td>
<td>37%</td>
<td>55%</td>
<td>85%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of drug records</th>
<th>% Drug name</th>
<th>% Actual dose per administration</th>
<th>% Administration route</th>
<th>% Administration date</th>
<th>% OPCS Delivery code</th>
<th>% Organisation code of drug provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,777,357</td>
<td>100%</td>
<td>92%</td>
<td>93%</td>
<td>100%</td>
<td>62%</td>
<td>96%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of outcome records</th>
<th>% Date of Final Treatment</th>
<th>% Regimen modification (dose reduction)</th>
<th>% Regimen modification (time delay)</th>
<th>% Regimen modification (stopped early)</th>
<th>% Regimen outcome summary</th>
<th>% Date of death</th>
</tr>
</thead>
<tbody>
<tr>
<td>160,809</td>
<td>28%</td>
<td>46%</td>
<td>19%</td>
<td>39%</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Outcome data continues to be low and poses a big challenge.

CIU will focus data quality efforts on fields highlighted.
How will data get better?

…..Compliance

Carrots
- Engage clinical community
- Feedback data to providers

Sticks
- In commissioning intentions
- In Service Specification
- In Contracts
Survival data

• More people are likely to:
  • get cancer,
    • 1992, those who died 32% had cancer in their lifetime
    • 2010, 44%
    • 2020, 47%?
  • survive cancer
    • 1992, 21% of those diagnosed with cancer ultimately died from another cause (45,000 people)
    • 2010, 35% (around 90,000)
    • 2020, 38%?

Cancer mortality trends: 1992-2020
Contribution of chemotherapy to survival rates

- Five year relative survival rate for cancer patients from 1992 to 1997 was 63.4%
- The contribution of curative and adjuvant cytotoxic chemotherapy to 5yr survival is 2.3% (Australia) and 2.1% (USA)

Has this improved in the last 10 years?
- Many new medicines
- CDF access?
National Cancer Peer Review 2001- Outcomes

- Improved quality & effectiveness of care
- Improved patient & carer experience
- Opportunities for development & learning
- Sharing good practice
- Measures
  - Mechanism for Cancer Services to meet Standards for better health
Peer review 2004-7

Overall Compliance with Patient Experience Measures

- Permanent Record of Consultation: 64%
- Patient Experience Survey: 62%
- Presentation & Discussion of Survey: 42%
- Implementation of action point: 35%
- Operational Policy for Key Worker: 92%
- Implementation of Key Worker Policy: 70%
- Patient & Carer access to MDT: 90%
- Written Information: 85%
# Progress from Peer review

<table>
<thead>
<tr>
<th></th>
<th>2004-7 (168 CCS)</th>
<th>2012-13 (159 CCS)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Chemotherapy</td>
<td>74%</td>
<td>81%</td>
<td></td>
</tr>
<tr>
<td>Oncology Pharmacy</td>
<td>81%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>100% compliance with Clinical Chemo measures</td>
<td>0%</td>
<td>59%</td>
<td>82% more than 80% compliant</td>
</tr>
<tr>
<td>Immediate Risks (1) in Clinical Chemo measures</td>
<td>28%</td>
<td>23%</td>
<td></td>
</tr>
</tbody>
</table>

1. Immediate Risk - Issue likely to result in harm to patients or staff or have direct impact on clinical outcomes, requires immediate action.
Peer review 2012-13

Chemotherapy Network Group Overall Compliance

Peer Review - Chemo Good Practice

- Continual development & expansion of chemo units
  - to better utilise space,
  - reduce waiting times
  - provide improved surroundings for patients.
- On-going development of outreach services
  - Chemotherapy closer to home.
- Telephone assessment clinics to avoid additional journeys.
- Establishment of pre-assessment sessions.
- Steady progress to implement full e-prescribing.
- Comprehensive information available for patients and carers.
Role of Audit for each Domain

1. Prevent people dying prematurely
   - Audit of treatment durations by disease, regimen & treatment intent (SACT)
   - 30 day mortality- Death within 30 days of chemo (SACT)

2. Enhancing the quality of life of people with long term conditions
   - Patient experience

3. Helping people to recover from episodes of ill-health or following injury
   - % admissions for complications of chemo
   - Febrile neutropenia, by disease, regimen and Tx intent
4. Ensuring people have a positive experience of care
   • Chemotherapy waiting times
   • Written patient information & treatment plans

5. Treating & Caring for people in a safe environment & protecting them from avoidable harm
   • Wrong route for admin of chemo- Never event
     • Recovery of costs by commissioner
Future challenges

• Do more with less!
• Extended hours working- 24/7?
• Changes in the commissioning landscape
  • NHS England/CCG
  • QIPP/CQUIN schemes
• Capacity, more new drugs…oral, IV to SC, biosimilars
  • Immunotherapies
The only safe weapons against cancer are surgery, x-rays, radium. Do not trust your life to other methods.
In summary- Are we meeting the Quality Standards?

“Quality is the only organising principle of the NHS”
Any questions???