NATIONAL COLLABORATING CENTRE FOR CANCER (NCC-C)

Haematological Cancers: Improving outcomes

Second Guideline Committee (GC) meeting

3rd & 4th September 2015

Board Room, NCC-C, Park House, Greyfriars Road, Cardiff

GROUP MEMBERSHIP & ACTION LIST

GC Members	
Dr Fergus Macbeth (FM) (Chair)	Professor John Snowden (JS)
Dr Clare Rowntree (CR)	Dr Christopher Dalley (CD)
Dr Deepak Mannari (DP)	Dr Andrew Jack (AJ)
Mrs Sarah Steele (SS)	Dr Christopher McNamara (CM) *(Day 1 only)*
Dr Bhuey Sharma (BS)	Dr Nia Angharad Evans (NE)
Ms Barbara Von Barsewisch (BVB)	John Reeve (JRe)
Ms Marie Waller (MW)	Dr Elizabeth Soilleux (ES)
Alan Chant (AC)	Jonathan Pearce (JP)
NCC-C Staff	
John Graham (JG)	Andrew Champion (AC)
Nathan Bromham (NB)	Matthew Prettyjohns (MP)
Susan O'Connell (SOC)	Lianne Gwillim (LG)
James Hawkins (JH)	
NICE Staff	
Katie Perryman Ford *(Day 2 only)*	
Apologies	
Dr Geoff Shenton (GS)	Dr Mike Scott (MS)
Dr Christopher McNamara (CM) *(Day 2)*	Katie Perryman Ford *(Day 1)*

	Action list	**Owner**	**By**
1.	LG to send web minutes to NICE	Lianne Gwillim	18.09.15
2.	LG to contact ES regarding possible declaration of interest regarding MRC grants.	Lianne Gwillim	25.09.15
3.	LG to change CD entry in declaration of interest on page 4 of the minutes from MBS to MDS.	Lianne Gwillim	18.09.15
4.	LG to amend page 17 line 11 of the minutes to 'discordance'.	Lianne Gwillim	18.09.15
5.	LG to update the action list from the last meeting and circulate any outstanding actions to the GC.	Lianne Gwillim	18.09.15
6.	SOC to contact David Barnett for more information on flow cytometry data for topic A.	Sue O'Connell	18.09.15
7.	SOC to amend statement in evidence review for Engel-Nitz et al, 2014 paper to show that this is a direct comparison.	Sue O'Connell	18.09.15
8.	Guideline committee to contact SOC with other data sources that may be relevant to topic A.	All guideline committee	18.09.15
9.	SOC to update LETR for circulate to the subgroup for approval	Sue O'Connell	18.09.15
10.	LG to check with Geoff Shenton that the	Lianne Gwillim	18.09.15

	recommendation for topic A adequately cover paediatrics.		
11.	NE to contact Richard Hill regarding MCR trial data.	Nia Evans	ASAP
12.	SOC to contact NE regarding the MCR trial data.	Sue O'Connell	11.09.15
13.	BVB and CR to send in patient satisfaction data, including infection rates, mortality and patient satisfaction.	Barbara Von Barewisch Clare Rowntree	18.09.15
14.	SOC to check the mode of ambulatory care in quality of life data to see if it is relevant to the UK setting.	Sue O'Connell	18.09.15
15.	SOC to update LETR for topic B and circulate to the subgroup for approval.	Sue O'Connell	18.09.15
16.	LG to send draft recommendations for topic A and topic B to James Hall, NICE Editor.	Lianne Gwillim	08.09.15
17.	LG to contact Verity Bellamy regarding the needs assessment work.	Lianne Gwillim	11.09.15
18.	Guideline committee to review chapters 3, 4 and part of 5 of the Improving Outcomes in Haematological Cancers guidance and suggest what recommendation should be kept in the update.	All guideline committee	18.09.15
19.	LG to include the age of the population in the recommendations for topic B.	Lianne Gwillim	ASAP.

	Agreed
1.	The GC agreed the draft recommendations and LETR for topic A.
2.	The GC agreed the draft recommendations and LETR for topic B.

NATIONAL COLLABORATING CENTRE FOR CANCER (NCC-C)

Haematological Cancers: Improving outcomes

Second Guideline Committee (GC) meeting

3rd & 4th September 2015

Board Room, NCC-C, Park House, Greyfriars Road, Cardiff

REPORT OF DISCUSSIONS AT THE MEETING

Thursday 3rd September 2015

2.1 Agenda item 1: Introductions and declarations of interest

FM welcomed everyone to the 2nd meeting of the Haematological cancers: Improving outcomes guideline committee (GC) meeting.

Apologies for absence were received from Geoff Shenton (GS), Mike Scott (MS) and Katie Perryman-Ford (KPF) day 1 only and Chris McNamara (CM) Day 2 only.

2.1a Declarations of interest

NOTED:

.1 ES declared that she receives and MRC grant. LG to contact ES after the meeting for more details.

The GC were reminded that if they take on any new interests, these must be declared to the NCC-C as soon as they happen so that the necessary action can be taken.

ACTION:

.2 LG to contact ES for details of the MRC grant received.

.3 LG to change CD entry on page 4 of the minutes from MBS to MDS.

2.1b Minutes of the last meeting

The minutes of the last meeting were agreed as a true and accurate record, with the exception of:

NOTED:

.1 Page 17, bullet point 11 should read discordance not discord.

ACTION:

.2 LG to update minutes to reflect the changes.

.3 LG to send web minutes to NICE.

2.1c Progress on action points from last meeting

See summary tables on page 15.

NOTED:

.1 Action point 1 – this action is ongoing, and will be completed when the needs assessment team present their findings.

.2 Action point 2 – this action has not yet been completed – the needs assessment team are still to provide a summary of the area their work will focus on.

.3 Action point 3 – this action point has been completed and LG has circulated a copy of the current version of the Improving outcomes in Haematological cancers service guidance.

.4 Action point 4 – this action has been completed and GC members have emailed any suggested recommendations from the current service guidance they feel will be updated by the areas covered in this update.

.5 Action point 5 – this action is on-going and SOC will provide an update on any recommendations from the Improving outcomes in Children and young people with cancer guidance that can be cross referred to in the update at the October meeting.

.6 Action point 6 – this action point has been completed and SA has checked the search/sift for topic A to see if children were included.

.7 Action point 7 - this action point has been completed and SOC has checked the papers for topic A to see if children were included.

.8 Action point 8, 9 & 10– these action points have been completed and an update for topic A will be presented under agenda item.

.9 Action point 11 – this action has been completed, SOC has contacted the subgroup for topic A with any specific queries.

.10 Action point 12 - this action has been completed and a revised evidence review for topic A will be presented under agenda item 3.

.11 Action point 13 – this action has been completed and the GC have received an electronic version of the evidence review for topic A.

.12 Action point 14 – this action has been completed and the background for topic A has been updated.

.13 Action point 15 - this action has been completed and data has been received from David Barnett.

.14 Action point 16 – this action has been completed and the background for topic B has been updated.

.15 Action point 17 – this action has been completed and a toxicity table for topic B has been sent to SOC.

.16 Action point 18 – this action is on-going and SOC will present the results of the patient experience survey to the GC at the October meeting.

.17 Action point 19 – this action has been completed and the revised PICO for topic B has been circulated.

.18 Action point 20 - this action has been completed and the health economic plan has been submitted to NICE.

2.1d Matters arising

Genomic Centre/Configuration

Feedback was given to the group on NHS England plans for Genomics.

NOTED:

.1 NHS England are currently commissioning two processes:

- The first process is setting up of 11 designated Genomic Medicine Centres that will deliver the 100,000 Genomes project that will lead the way in transforming the diagnosis and treatment of patients with cancer or rare diseases.
- The second process is the reconfiguration of the genetic and genomics services in England.

.2 The process is the reconfiguration is development a systematic and comprehensive approach with a flexible laboratory service that is able to deliver

an increasing number of high quality and comprehensive diagnostic genomic tests with good access and turnaround times.

.3 This should bring earlier diagnosis, personalised monitoring of treatment response and changes, and equitable and timely access to functional genomic testing and reporting and safe and effective targeted treatment based on the genomic profile.

.4 The reconfiguration aims to, reduce the variation that arises from differences in access to approved genetic, genomic and molecular pathology, maximise the use of technology and expertise for bioinformatics, - maximise workforce expertise and enable the development of specialist training centres for genomics and reduce variation associated with differences in clinical practice and knowledge, and provide a comprehensive and co-ordinated service.

.5

2.2 Agenda item 2: Patient/Carer Issues

No patient or carer issues were raised.

2.3 Agenda item 3: Reviewing evidence and drafting recommendations for topic A.

SOC presented an overview of the clinical evidence identified for the topic that was presented at the 1st meeting.

NOTED:

Clinical evidence

.1 The review questions for this topic are:

- A1 - Should integrated diagnostic reporting (via Specialist Integrated Haematological Malignancy Diagnostic Services [SIHMDS]) replace local reporting in the diagnosis of haematological malignancies?
- A2 - What are the effective ways of delivering integrated diagnostic reports (for example, co-located or networked) in the diagnosis of haematological malignancies?

.2 The PICO for these topics are:

PICO Table A1			
Population	**Intervention**	**Comparator**	**Outcomes**
Adults and young people (16 years and older) and children (under 16 years) presenting with suspected haematological malignancies	Integrated diagnostic reporting via the specialist integrated haematological malignancy diagnostic services	Any other reporting	1. Time to diagnosis 2. Diagnostic accuracy 3. Staff satisfaction (e.g. De-skilling of pathologists)/ hematopathologists 4. Health related quality of life 5. Patient satisfaction
PICO Table A2			
Population	**Intervention**	**Comparator**	**Outcomes**
Adults and young people (16 years and older) and children (under 16 years) presenting with suspected haematological malignancies	Co-located integrated diagnostic reporting Networked integrated diagnostic reporting	Each Other	1. Time to diagnosis 2. Diagnostic accuracy 3. Staff satisfaction (e.g. De-skilling of pathologists)/ hematopathologists 4. Health related quality of life Patient satisfaction

.3 SOC confirmed that children under 16 years old were included in the review.

.4 The Cheng study that had the highest rate of discordance was removed from the reviews. The rates of discordance are now 6% to 27.4%, with an average of 16%.

.5 The GC discussed the additional data received from David Barnett and it was noted:

- Provides incorrect evidence that too many centres are doing AML via flow cytometry.
- The area of flow cytometry is an issue and SOC will contact David Barnett for possible further breakdown in this area.

Health Economics

.6 Overall costs have been identified for, local reporting, SIHMDS, co-located and networked and work has started with the subgroup on these costs.

.7 Outcomes from the evidence and converted into QALY's that can be used in the model development. Two outcomes were identified these are change in management and survival. The main focus has been on the outcome, change in management, and the 4 types of changes are:

- No change management
  - No difference
- Treatment to 'No Treatment'
  - Elimination side effects
  - Increased Survival
- 'No Treatment' to Treatment
  - Increase side effects
  - Reduction Symptoms
  - Increased Survival
- Change Oncological treatment
  - Change side effects
  - Reduction Symptoms
  - Increased Survival

.8 The next step in model development is knowing the differences in tests for local versus SIHMDS, the tariffs/costs of local reporting and survival incorrectly treated or untreated.

.9 Other issues that will need to be taken into consideration are, linking the population size to the model, the adequacy of samples, timeliness of reporting and medicolegal costs, together with the deskilling of staff and patient satisfaction.

.10 MP summarised the original thoughts on the modelling process and presented how they had changed based upon discussion.

Draft Recommendations

.11 The GC discussed the health economics and clinical evidence and also discussed their own clinical experiences. The issues around co-located and networked were also discussed in great depth, and the issue of potentially de-skilling and movement of treatments was also raised. However, the GC agreed that a set of recommendations could be made that will be reviewed once the results of the health economics model are presented together with any additional clinical evidence. The GC agreed the following draft recommendations:

- The component parts of SIHMDS for children, young people, and adults should be co-located and be managed by a single organisation with its own governance structure
- All SIHMDS for children, young people, and adults should be managed according to the criteria outlined in the NCAT document (cross refer DoH Additional best practice guidance)

Initial Diagnosis

- When haematological malignancy is suspected and is being actively investigated, send all diagnostic specimens, without local processing, directly to a specialist integrated haematological malignancy diagnostic service.
- Patients in whom haematological malignancy is first suspected within a local diagnostic laboratory should have all diagnostic specimens sent directly to a

specialist integrated haematological malignancy diagnostic service as soon as a haematological malignancy is suspected, without further workup.

Relapse/Disease progression

- When patients with an established or previous haematological malignancy are suspected of having relapse or disease progression, send all diagnostic specimens, without local processing, directly to a specialist integrated haematological malignancy diagnostic service

Disease Monitoring

- When disease monitoring by flow cytometry, molecular diagnostics or cytogenetics is required, send all relevant specimens directly to a specialist integrated haematological malignancy diagnostic service.

LETR

.12 The guideline committee considered time to diagnosis and diagnostic accuracy to be the outcomes of most importance to the topic because these are key to improving patient outcomes, including reducing anxiety by improving the accuracy of diagnosis and treatment choice.

.13 The outcomes not reported in the evidence were, quality of life, patient satisfaction and staff satisfaction.

.14 The GC considered all the outcomes important once the evidence had been appraised.

.15 The risk of bias in the methodology was highlighted in the evidence review.

.16 The GC considered the potential benefits of the recommendations are increased efficiency in sample management, a reduction in time delays, improved specimen quality, reduction in patient anxiety and reducing the need to repeat sampling.

.17 The GC were aware of the potential difficulties in service reconfiguration in some areas but felt the benefits in centralising services outweighed the harms.

AGREED:

.18 The GC agreed the draft recommendations and LETR for topic A.

ACTION:

.19 SOC to contact David Barnett for more information on flow cytometry for topic A.

.20 SOC to amend statement in evidence review for Engel-Nitz et al, 2014 paper to show that this is a direct comparison.

.21 Guideline committee to contact SOC with other data sources that may be relevant to topic A.

.22 SOC to update LETR for circulate to the subgroup for approval.

.23 LG to check with Geoff Shenton that the recommendation for topic A adequately cover paediatrics.

2.4 Agenda item 4: Close of day1

FM thanked the committee for all their input closed day 1 of the meeting.

Friday 4th September 2015

2.5 Agenda item 5: Reviewing evidence and drafting recommendations for topic B.

SOC presented a summary of the clinical evidence identified for the topic.

NOTED:

.1 The review question for this topic is:

- How should level of care be defined and categorised for people with haematological cancers who are having intensive (non-transplant) chemotherapy, defined as

regimens that are anticipated to result in >7 days of neutropenia of $\underline{>0.5 \times 10^9/L}$ ….. considering:
  - Diagnosis
  - Comorbidities and frailty
  - Medicine Regimens Management of medicine administration and toxicities
- Does the level of care affect patient outcome for people with haematological cancers who are having intensive, non-transplant chemotherapy, considering;
  - Location
  - Staffing levels
  - Centre size/specialism
  - Level of in-patient isolation
  - Ambulatory care
  - Prophylactic anti-infective medications

.2 The PICO for this topic is:

Population	Intervention	Comparator	Outcomes
Adults and young people (16 years and older) with haematological malignancies and receiving intensive, non-transplant chemotherapy resulting in >7 days of neutropenia of $\underline{>0.5 \times 10^9/L}$	• Location of chemotherapy delivery (Local hospital, Specialist Centres/Units, Home setting, Community Clinics etc) • Level of in-patient isolation i.e. en-suite (NHS building specifications for isolation i.e. HBN4 or higher NHS/ international isolation specifications for immunocompromised patients, e.g HEPA filtration to protect against nosocomial infection. • Ability to effectively isolate other infectious patients to prevent nosocomial transmission of respiratory viral illnesses (e.g. influenza), Clostridium difficile and resistant organisms (VRE, MRSA, stenotrophomonas and others) • Ambulatory care ,permitting treatment from home or hospital apartments/hotels /Access to 24 hour helpline (part of peer review measure) • Staffing (levels, experience, chemo competency (trained) (medical/nursing/other HC Professionals)) • Centre size/specialism (number of patients treated, specialist expertise available (nutrition, psychological, physio-therapy), including on-site transplant expertise/facility in situations where subsequent transplant is routinely considered, etc) • Access to ICU	Each Other	• Patient Satisfaction • Quality of Life • Survival Outcomes • Treatment related mortality • Treatment delay • ITU admission rates/discharge • Length of stay • Readmission rates • Infection levels (need for prophylactic anti-fungals, antivirals and antibiotics)

.3 The search identified 557 records, from which 429 were excluded and 0 additional records were identified. 128 articles were assessed for eligibility, 118 were then also excluded and 10 articles were included in the evidence review.

.4 The studies that were included were,
- one systematic review and meta-analysis
- one randomised trial
- one randomised cross-over study
- one prospective study, and
- six retrospective studies

.5 SOC highlighted a number of factors that were identified that did impact on the quality of the evidence, the population was not exclusively standard risk haematology patients, some studies were retrospective and used non-randomised methodology. There was also some risk of bias, which includes selection bias and possible recall bias. The sample sizes in the studies were small.

.6 The evidence reported:

Isolation Factors

- For survival, there was very low to moderate quality evidence that protective isolation with any combination of methods that included air quality control reduced the risk of death at 30 days RR=0.6, 100 days RR=0.79.
- For Infection related mortality, risk of Infection and antibiotic use there was very low to moderate quality evidence that protective isolation reduced the occurrence of clinically and/or microbiologically documented infections. Very low to moderate quality evidence showed there was no significant benefit of protective isolation in relation to mould infections or was the need for systemic antifungal treatment reduced. Very low to moderate quality evidence showed that gram positive and gram negative infections were significantly reduced, though barrier isolation was needed to show a reduction in gram negative infections.
- For antibiotic Use, there was very low to moderate quality evidence that showed that the need for systemic antibiotics did not differ when assessed on a per patient basis, but the number of antibiotic days was significantly lower with protective isolation.
- For room facilities, there was very low quality evidence comparing outcomes before and after ward renovation in 63 patients (Hutter et al, 2009). This study reported that patients treated before renovation (2 patients per room, 6 patients sharing a toilet placed outside the room, washing basin inside the room, shower across the hospital corridor, no ventilation system, air filtration or room pressurisation, no false ceilings) stayed 3 days longer compared with those patients treated on the newly renovated ward, (2 patients per room, separate rest room in each room equipped with toilet, wash basin and shower, no ventilation system, air filtration or room pressurisation, no false ceilings. 39% of pre-renovation patients and 34% of post-renovation patients developed an invasive pulmonary aspergillis (p=0.79) with diagnosis usually determined on CT scan.

Ambulatory Care

- For survival, there was very low quality evidence that showed febrile patients were discharged for further antibiotic treatment at home if stable. All cause mortality was significantly lower in the outpatient setting (RR=0.72, 95% CI 0.53-0.97) at longest follow-up (median follow-up 12 months; range 1-36). There was moderate quality evidence that showed 429 patients achieved complete remission after initial treatment were randomised to either outpatient chemotherapy or inpatient chemotherapy. Intent to treat analysis showed a significant improvement in overall survival in the ambulatory care arm compared with the intensive treatment arm. Disease free survival was significantly better in the ambulatory consolidation arm compared with the intensive consolidation arm.
- For hospital Admissions and length of stay, there was very low quality evidence which showed that 429 patients who achieved complete remission after initial treatment were randomised to either outpatient chemotherapy or inpatient chemotherapy. Ambulatory care was associated with significantly shorter rehospitalisation stay. There was very low quality evidence from one UK audit of a hotel based, ambulatory care unit that showed there were 1443 admissions to the Ambulatory Care Unit (9126 patient days) during the study period with 688 patients from 18-79 years of age, whose length of stay ranged from 1 to 42 days (median 5). 82% of admissions were in haematology oncology patients with lymphoma being the largest single group of patients by days of use. Patients receiving less myelosuppressive regimens tended to be discharged home on treatment completion

while patients receiving more intensive treatment almost always required readmission to the ward at some point. 813/1443 (56%) patients were discharged directly home; 53/630 (9%) patients admitted to the ward were scheduled in advance.

- There was very low quality evidence from one UK audit of a hotel based, ambulatory care unit 456/576 (79%) of unscheduled ward admissions were within ACU working hours, 66 (11%) were out of hours and 54 (9%) had no time recorded. The most common reason for unscheduled admission included infection or fever, nausea and vomiting and poor oral intake or dehydration.
- There was very low quality evidence in which patients who were fit for home care were given a choice between home care and inpatient care, 17/41 patients required ambulatory management only while 24 patients required re-hospitalisation, primarily due to febrile neutropenia. In 36 febrile episodes a microbiologically documented infection was the most common cause of fever (61%) with the remaining episodes being of unknown origin.
- Patients re-hospitalised were admitted for a mean 10.9 days (6-35 days) versus a mean hospitalisation time of 30 days for inpatients (17-38). Mean duration of hospitalisation for inpatients from the time they became febrile to discharge was 14.3 days (7-22 days).
- There was very low quality evidence that showed consolidation cycles resulted in hospital admission and all were associated with febrile neutropenia episodes or documented infections. Hospital stay was significantly shorter in outpatient cycles compared with inpatient cycles ($p<0.001$) leading to a saving of 269 patient-days for the entire study group.
- For infections, there was very low quality evidence that showed febrile patients were discharged for further antibiotic treatment at home if stable and febrile neutropenia or documented infections occurred less often in the outpatient group. Rates of bacteraemia were lower in the outpatient group but the difference was not significant. Very low quality evidence showed, significantly fewer outpatients required second line antibiotics compared with inpatients ($p=0.03$) and mean duration of antibiotic administration was significantly lower in the outpatient group ($p=0.04$).
- For transfusions, moderate quality evidence showed patients who achieved complete remission after initial treatment were randomised to either outpatient chemotherapy or inpatient chemotherapy. Ambulatory care was associated with a requirement for fewer red blood cell units and platelet transfusions. Very low quality evidence showed, a median of 1 (0-4) unit of packed red blood cells was transfused per consolidation cycle in the outpatient setting and 2 (0-5) in the inpatient setting and a median of 1 (0-13) platelet transfusions were administered at the outpatient clinic and 2 (0-12) in the inpatient setting.
- For quality of Life, there was very low quality evidence where the quality of life for 29 paediatric patients treated at home or in hospital (standard care) was assessed, children in the home group experienced a decrease in factor 1 (sensitivity to restrictions in physical functioning and ability of maintain a normal physical routine) of the POQOLS measures when they switched from home based treatment to hospital based treatment with an average change of 5.2 while standard care patients experienced an improvement in QoL when they switched to home based treatment with an average score of -10.5 ($p=0.023$). Patients in the home based group had significantly higher scores for factor 2 (emotional distress) measures compared with the hospital treatment group (pair wise comparison at the end of each 6 months phase $p=0.043$). Very low quality showed 33 health practitioners (hospital and community based) reported a positive impact on daily life and psychological well-being of children and families particularly in relation to disruption and psychological stress, reporting a reduction in disruption due to reduced travelling, reduced hospital clinic waiting time and reduced time missed from school and work.

- For patient Satisfaction, there was very low quality evidence in which 17 patients were treated at home for 46 cycles. Patients reported that they were 'very satisfied' with home care and one case reported being 'satisfied'. None of the patients showed a preference for inpatient care for the next chemotherapy cycles. 38% of patients stated a preference for home care and others had no declared preference. Patient reported benefits of home care included a higher comfort level (100%), freedom and possibility to organise their own time (94%) and the reassurances and comfort of having a relative present (88%). 78% of patients were not concerned about the absence of a nurse and87% did not record any anxiety during home care treatment. Very low quality evidence in which 17 patients were treated at home for 46 cycles reported the main disadvantages were feelings of dependency on a relative (19%) and or being a burden (6%) however, relatives who returned questionnaires (63%) and all were in favour of home care and 97% were in favour of home care for next treatment.
- Primary concerns about home care included the presence of strangers (nurse, physician) at home (16%), request for continuous presence as patients were not allowed to be alone for more than one hour (14%), anxiety and fatigue (14%) and lack of freedom for leisure and holidays (14%).
- For burden of Care, there was very low quality evidence which included 29 paediatric patients treated at home or in hospital (standard care) reported no evidence of an effect of the location of chemotherapy administration was observed on the parental burden of care (assessed using the care giving burden scale).
- For impact on practitioners, there was very low quality evidence that suggested community health practitioners should have specific education in relation to home care, administration of chemotherapy to children and meeting psychological needs of children with cancer and their families. Very low quality evidence showed health practitioners agreed that the major benefit of hospital treatment was that the resources and treatments were all centralised and orchestrated. Very low quality evidence showed some hospital physicians reported feeling less confident about prescribing chemotherapy agents for children due to the inability to assess the child directly and be in charge of the healthcare process in the community. They also reported feeling unclear about issues relating to liability and responsibility. Very low quality evidence showed that 2 clinic nurses and 3 paediatric oncologists reported no change in their workload; 5 clinic nurses and 1 physician reported an increase due to the increased volume of paperwork and 3 clinic nurses reported a decrease. Very low quality evidence showed the home chemotherapy programme was associated with less interaction with children and families which was considered to be both a positive (fewer patients in outpatient clinics, health practitioners less busy, more time for children in attendance) and negative (distressing because they were not sure how the children were coping with treatment) thing.
- For feasibility, there was very low quality evidence which 17 patients were treated at home for 46 cycles. Home treatment required 1 physician visit and 2 nurse visits per day accounted for 621 visits during 46 treatment cycles (207 days of home treatment). 32 additional home visits were required as a result of technical problems with the pump and most visits were needed at the start of treatment.

.7 The guideline committee discussed the clinical evidence and the following was noted:

- The term risk is used in multiple ways, standard risk is generally used for AML treatment. It was suggested that risk should not be used, and non-transplant should be used. SOC commented that the evidence is presented in the same way it is reported in the studies.
- It was suggested that SOC re-review the papers and include any additional papers that were for non-transplant. SOC informed the group that there are no major or large studies in the evidence and any additional papers will not change the evidence.

.8 The GC also discussed their own centres protocols for caring for patients in the ambulatory care setting. It was agreed that SOC would contact the authors of the paper used in the evidence to try and obtain more information and will update the GC at the next meeting.

.9 The draft recommendations agreed by GC for this topic are:

- These recommendations apply to people with haematological malignancies being treated with intensive (non-transplant) therapy for induction of remission, re-induction or consolidation who are at risk of >7 days of neutropenia of <0.5 $x10^9$/L. This includes people being treated for:
  - AML
  - ALL/LBL
  - High risk/hypo plastic MDS
  - Burkitt lymphoma
  - Bone marrow failure due to other haematological diseases such as plasma cell leukaemia.
- These recommendations do not apply to people with relapsed refractory lymphoma receiving salvage chemotherapy.

<u>Isolation facilities</u>

- Deliver in-patient care for people with haematological malignancies at risk of >7 days of neutropenia of <0.5 $x10^9$/L using isolation facilities, which consist of a single occupancy room with en-suite facilities.
- Consider the use of clean air systems as part of isolation facilities for people with haematological malignancies at risk of >7 days of neutropenia of <0.5 $x10^9$/L.

<u>Ambulatory care</u>

- Consider ambulatory care for people with haematological malignancies at risk of >7 days of neutropenia of <0.5 $x10^9$/L and have achieved remission.
- When Ambulatory care programme is being provided, the following should be included:
  - Local protocols for patient eligibility and selection for ambulatory care
  - Standard operating procedures for patient monitoring and care during ambulatory phase
  - Access to a dedicated 24 hour advice line staffed by trained haematology practitioners
  - Clear pathways for rapid hospital assessment or re-admission at the treating specialist haematology centre
  - Provision of written and oral information for patient/carer
  - Audit and evaluation of outcomes
- When a patient is being assessed for ambulatory care, the following should be considered:
  - Assessment of patient understanding
  - Distance and travel times back to the specialist haematology centre
  - Accommodation suitability
  - Communication facilities
  - Access to and type of immediate transport
  - Carer support

Centre Size

- Specialist haematology centres should be treating a minimum of 10 patients per year with new or relapsed haematological malignancies with intensive (non-transplant) therapy for induction of remission or re-induction who are at risk of >7 days of neutropenia of <0.5 $x10^9$/L.

- The GC also agreed to use the staffing recommendations in table 4b from the 2003 IOG.

LETR

.10 The outcomes from the PICO that were considered the most important were, Patient satisfaction and quality of life, survival outcomes, readmission rates, infection rates (ambulatory care), as there were lower infection rates in patients treated in the ambulatory care setting.

.11 The issues raised with the evidence did influence the GC's choice of recommendations as no strong recommendations were made on the clean air system – and due to the poor quality of the evidence mostly consensus recommendations were made.

.12 The GC felt that the potential benefits of the recommendations for isolation were, reduce infections rates and mortality. For ambulatory care, the felt it was improved patient experience, a reduction in infection rates, reduction in cost and a reduction in length of stay.

.13 The GC felt that the harms associated with the recommendations are for isolation, a reduced quality of life for patients and difficulty in visually monitoring these patients. For ambulatory care, it was felt the potential harms are the safety risks in being away from the hospital/ward, a potential delayed access to specialist care, patients not being able to recognise symptoms and not returning to hospital and a potential increase in patient anxiety.

.14 The GC agreed that the benefit of isolation in reducing infection and mortality outweighed the associated harms. The quality of life benefits of ambulatory care were felt to be more important that the harms.

.15 The GC felt that the costs and savings associated with these recommendations are, the provision of appropriate isolation facilities, could reduced treatment related infections, reduced hospital stay which would lead to a cost saving. There would be initial set up costs for ambulatory care, but the saving would be made on reduced hospital bed days and reduced antibiotic usage.

.16 The GC discussed any changes in practice and noted that as the previous IOG recommendations were not widely implemented, the current update would reinforce those recommendations with the intention of driving the change in clinical practice. The GC were aware that ambulatory care was increasingly being implemented, but the standards were variable and these recommendations may lead to changes in practice in some areas.

AGREED:

.17 The GC agreed the draft recommendations and LETR for topic B.

ACTION:

.18 NE to contact Richard Hill regarding MCR trial data.

.19 SOC to contact NE regarding the MCR trial data.

.20 BVB and CR to send in patient satisfaction data, including infection rates, mortality and patient satisfaction.

.21 SOC to check the mode of ambulatory care in quality of life data to see if it is relevant to the UK setting.

.22 SOC to update LETR for topic B and circulate to the subgroup for approval.

.23 LG to send draft recommendations for topic A and topic B to James Hall, NICE Editor.

2.6 Agenda item 6: Improving outcomes in haematological cancers (2003).

NOTED:

.1 The GC were asked to identify any additional recommendations from chapters 3, 4 and part of chapter 5 from the 2003 IOG that are still relevant and need to be included in this update.

ACTION:

.2 Guideline committee to review chapters 3, 4 and part of 5 of the Improving Outcomes in Haematological Cancers guidance and suggest what recommendation should be kept in the update.

2.7 Agenda item 7: Children and young people with cancer guidance.

NOTED:

.1 Any recommendations from this cancer service guidance will be cross referred to with topic A of the update.

2.8 Agenda item 8: Discussion area for next meeting.

NOTED:

.1 The discussion area for the next meeting will be:

- Review of any updated evidence for topic A and B.
- Review the results of the health economic analysis for topic A.
- Review the updated draft guideline ready for consultation.

ACTION:

.2 LG to contact Verity Bellamy regarding the needs assessment work.

2.9 Agenda item 9: Close of meeting

FM thanked the GC for their input to the meeting. The GC were informed that the next meeting would be on **5th & 6th September 2015,** starting at 10.45 at the board room, NCCC offices, 2nd Floor Park House, Greyfriars Road, Cardiff, CF10 3AF.

Progress on action points from 1st meeting 8th & 9th July 2015

	Action list	Owner	By
1.	Needs assessment team to consider including 'what barriers exist for not implementing the IOG' within a needs assessment questionnaire.	Verity Bellamy Steven Oliver	On-going
2.	Needs assessment team to provide a summary of the area the needs assessment work will focus on for this update.	Verity Bellamy Steven Oliver	Completed
3.	LG to circulate the current version of Improving Outcomes in Haematological Cancers service guidance to the GC.	Lianne Gwillim	Completed
4.	Guideline Committee to review the original guidance to ensure that there are no recommendations within the chapters that are to be removed/kept that relate to the recommendations being updated by the group.	Guideline Committee	Completed
5.	SOC to identify any recommendations from Improving outcomes in Children and Young people with Cancer guidance can be referred to within the updated Haematological cancer IOG.	Susan O'Connell	Completed
6.	SA to re-check search and sift and check papers for topic A to ensure that children were included.	Stephanie Arnold	Completed
7.	SOC to re-check sift for topic A to ensure papers relating to children are included in review.	Susan O'Connell	Completed
8.	GS to send SOC a list of names and papers that may need to be included in the evidence review for topic A.	Geoff Shenton	Completed
9.	SOC to review the average for discordance rates with the papers identified for topic A and present to the GC at the next meeting.	Susan O'Connell	Completed
10.	SOC to remove the paper with the highest rate of discordance from the evidence review for topic A.	Susan O'Connell	Completed
11.	SOC to contact subgroup for topic A with any further queries.	Susan O'Connell	Completed
12.	SOC to update evidence review for topic A and present results at the next meeting	Susan O'Connell	Completed
13.	LG to circulate electronic version of the evidence for topic A. (This is for information only).	Lianne Gwillim	Completed
14.	AJ to review and update the background for topic A.	Andrew Jack	Completed
15.	JS to contact David Barnett regarding using UKNEQAS data source for topic A.	John Snowden	Completed
16.	CR to draft the background for topic B.	Clare Rowntree	Completed
17.	CR and subgroup to create a table of toxicity for topic B and send to SOC.	Clare Rowntree (lead) Nia Evans John Snowden Christopher Dalley	Completed

		Deepak Mannari	
18.	SOC to pull information from the Patient Experience Survey and present the results with the evidence for topic B.	Susan O'Connell	Completed
19.	SOC to circulate the revised PICO for topic B.	Susan O'Connell	Completed
20.	MP to submit the HE plan for Haematological cancers, improving outcomes to NICE.	Matthew Prettyjohns	Completed