

Guide to Ambulatory Care Service Development

Document Governance

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<p>CCLG Ambulatory Care Network Special Interest Group.</p> <p>Also supported by:</p> <p>Yorkshire and Humber Children, Teenagers and Young Adult Cancer Clinical Network</p> <p>North West Children's Cancer Operational Delivery Network</p> <p>Children, Teenage and Young Adult Cancer Operational Delivery Network South West</p>	1.0	12 th December 2024	Review to be complete by 30 th November 2027

The document has been developed by colleagues within the CCLG Ambulatory Care (AC) Network Special Interest Group. The purpose of the document is to act as a guide for colleagues nationally, providing suggestions and acting as a checklist for teams considering service development of Ambulatory Care. Please note this is guidance only, and we advise that you refer to your internal governance process for business case writing in line with provider templates.

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Defining Ambulatory Care

Ambulatory Care provides the opportunity for allocated patients to receive a variety of treatments without having to stay in hospital overnight. Nationally, it is an embedded service within the adult population groups, evolving in Teenage & Young Adult (TYA) Oncology Services and currently being explored within Children's Cancer Services. UCLH and The Christie, are two providers leading the delivery of Ambulatory Care Services within TYA patients. There is an interest, via national working groups, to explore the feasibility and sustainability of Ambulatory Care in the paediatric population group. An increased focus on patient experience and the delivery of care closer to home promotes the need to explore options for delivering Ambulatory Care.

When reviewing the priorities for children's cancer, following the James Lind Alliance Priority setting exercise, one of the top ten priorities identified was care closer to home. Exploration and development of AC may increase the experience of care for patients through care delivery closer to, or at home.

Patients can choose to opt into AC or opt out if it is the standard mode of treatment. Depending on the service set-up, they can either stay at home, in a patient hotel, a charity-funded home-from-home or commercial hotel accommodation, so long as they are less than an hour's travel time from the treatment centre. Young people come to the AC unit once a day for a review or treatment and have 24-hour access to a senior cancer nurse.

The key components of AC are:

- a clinical safety net
- creating or identifying comfortable spaces inside and outside of hospital
- providing young people with support from staff, companions and the outside world
- providing patient choice

Reference: Introduction section of [establishing-an-evidence-base-about-experiences-of-young-peoples-ambulatory-cancer-care.pdf](#)

Defining Levels of Ambulatory Care

The Children's Cancer & Leukaemia Group (CCLG) and Young Lives vs Cancer (YLvsC) identified 3 levels of Ambulatory Care currently (2022-2024) seen in the UK which may support the management of inpatient demand and capacity. The table below shows the levels of Ambulatory Care.

Identified levels of AC	
<p>*Selected patient must be within 30-60** minutes of the hospital and return daily for assessment and infusion changes*</p> <p>** the time is locally determined by geography, ease of transport, and risk appetite.</p>	
Level	Definition of AC level
1	Also referred to as 'stepdown care' or daycare for post BMT or post CAR-T therapy where the patient can leave the hospital but needs to stay close by (within 30-60 minutes travel time) due to the risk of acute deterioration, and requires daily check on hospital site, for observations and/or blood and investigations and occasionally supportive care treatments.
2	Patients who are receiving post chemo hydration fluids via an ambulatory infusion pump. Required to return for daily assessment and infusion changes.
3A	Patient's receiving immunotherapy via an ambulatory infusion pump. Required to return medical assessment and infusion changes as defined locally.
3B	patient is receiving chemotherapy via an ambulatory infusion pump. Required to return for daily assessment and infusion changes.

Ref : CCLG Ambulatory Care SIG Meeting 17.10.2022

Potential Benefits

National Scale

- More patient-centred care approach/autonomy
- Improved patient experience for appropriate patients and families
 - AC enables young people to feel rooted in a sense of themselves and autonomous
 - Reduced adverse effects (nausea, vomiting, diarrhoea, weight loss, improved appetite) and improved symptom management
 - Increased physical activity
 - More convenient for patients and families
- Meeting NHS Long Term Plan goals
 - Improved patient choice
- Meeting James Lind Alliance top 10 Priority
 - Delivery of care closer to home

Provider Scale

- Reduces demand on inpatient capacity
- Financial efficiency of care (improved use of resources and service funding)
- Improved utilisation of technology and supportive care developments
- Improved efficiency of capacity

Reference: University College London (UCL) Re-defining cancer care with young people: Delivering Ambulatory Care to promote freedom, trust and agency. (2023) What we found pp.48-49 Available at: [establishing-an-evidence-base-about-experiences-of-young-peoples-ambulatory-cancer-care.pdf](#)

Checklist for Developing an Ambulatory Service

The checklist below can be used as a prompt as it highlights points for consideration.

1. Logistics & Planning
2. Stakeholders
3. Dependencies
4. Potential Risks & Issues
5. Evaluation

Logistics & Planning	✓ or X
Include the background of AC, the national focus and favoured option for the provider (local scale).	
<p>Ambulatory Care Details:</p> <ul style="list-style-type: none"> - The level of AC and scope e.g. <i>pre or post chemo, immunotherapy or chemotherapy via infusion pump.</i> - Define the patient inclusion criteria and age range; <i>specifics re travel time, distance from hospital, diagnosis and treatment regimen, information leaflets, escalation alert cards, compliance, literacy and language barriers.</i> - Chemotherapy protocol templates to be reviewed with Lead Pharmacist and Clinicians regarding patient safety and management. - Consider collecting current data on patients and specific regimes e.g. <i>patient numbers, regimens, number of cycles, number of bed days, number of inpatient bed days potentially saved via AC pathways.</i> - This could be conducted and analysed as part of a before and after audit as part of the service development on the services selected for AC. - The anti-cancer therapies of blinatumomab and dinutuximab beta are known to be delivered using an ambulatory model already across the UK. Therefore they do not appear in the list below. 	

Proposed regimen targets for Ambulatory Care Patients

Protocol	Courses	Chemotherapy	Usual length of stay (days)	Cycles
EuroEwings	I/E	Ifosfamide	5	7
		Etoposide		
	VDC	Cyclophosphamide	1	7
Osteosarcoma	MAP	Methotrexate (M)	4-5	10
		Cisplatin		5
		Doxorubicin (+dexrazoxane) 'AP'	3	5
	I/E	Ifosfamide	5	2nd line therapy cycles TBD
Etoposide				
Medulloblastoma	Cisplatin	Cisplatin	3	4
Hepatoblastoma				8
Synovial Sarcoma	Dox / Ifos	Doxorubicin	3	Variable, 4-6 depending on risk
		Ifosfamide		
Rhabdomyosarcoma	IVADO	Ifosfamide	2	4 for very high risk (VHR) group
		Vincristine		
		Actinomycin		
		Doxorubicin		
	IVA	Ifosfamide	2	9 (if not VHR)
Vincristine				
Actinomycin	5 VHR			
Acute Lymphoblastic Leukaemia (ALL)	HDMTX	Methotrexate	3	3.2

Logistics & Planning (continued)	✓ or X
<ul style="list-style-type: none"> - It is possible that the first cycle of any chemotherapy will happen as an inpatient but can still use an AC protocol to enable patients and carers to build confidence. - Ratio of AC patients being treated with a subsequent requirement to hold a number of inpatient beds in case of re-admission. A range of views are held in the CCLG therefore no specific ratio can be provided. - Type of infusion pump required (<i>consider pumps, bags, battery plugs</i>) – need to ensure that 1-2 spare pumps are available to cover repairs/maintenance. Consider whether remote monitoring of pumps is appropriate. - Pathway for patient admission criteria – direct access, via A&E - What is your training and education plan for professionals for the AC pathway? - There will be a national training toolkit for AC in future from the group in the interim: - Are staff trained in SACT able to use these same skills in an AC pathway? Identify any local differences to focus additional training on the gaps identified. For example are all staff going to be trained, are all infusion devices used going to be the same? - Familiarise yourself with CCLG Career and Education Framework (CEF) and competencies for nursing staff, including the SACT passport - Liaise with other groups like CCLG's Children & Young People Paediatric Oncology Nurse Educator group (CYPONE) as needed. - What is your training and education plan for patients and families for the AC pathway? - Consider using patient information leaflets being produced by CCLG - Need to consider how to involve access to other HCPs e.g. physio and dieticians, play, and school to ensure equity of access with the ward inpatients. - Accommodation : Patient and family friendly accommodation for patients to stay, for families and carers who are unable to go home due to timing of treatment or distances involved. Consider whether facilities are accessible, have suitable bathrooms to meet patient's needs, include cooking facilities and are appropriate for families (if needed) of different sizes and ages. 	

Logistics & Planning	✓ or X
<p>Wider details to be considered; resource, equipment, workforce, estate & facilities, service user impact, drivers and barriers, stakeholder involvement and wider engagement.</p>	
<p>Explain the impact of the change that this model will have on other departments, providers or external agencies and charity accommodation providers. Consider the involvement of a representative from the potentially impacted departments in the stakeholder group. Consider positive impact on non-cancer wards who currently take oncology outliers. AC development may free up beds that are then filled by patients who would have been outliers. Thus the benefit is to the wider hospital rather than the cancer service.</p>	
<p>Useful to discuss impact on workforce (Medics, nurses, AHPs, pharmacists, administration, managers) – <i>inpatient/outpatient workload, in hours/out of hours patient oversight, time to educate families, administration and management of patient flow and data, coordination of care.</i></p>	
<p>Describe the physical infrastructure requirements for AC, including examination rooms, waiting areas, and administrative spaces.</p> <p>Consider where the AC unit could be physically located <i>e.g. as a satellite service, within inpatient, as part of a day care unit or a standalone AC unit.</i></p>	

Stakeholders	✓ or X
Review your stakeholders (recommended: <i>Clinical, nursing, pharmacy leads, service users, management and project support, transformation/quality team support, wider network teams, external agencies</i>).	
Consider how you are involving service users in the AC service development.	
Clarify the drivers for your service to deliver AC (with stakeholders).	
Clarity of perceived benefits of an AC service (with stakeholders).	
Have you thought about what infrastructure you have in place to deliver AC? <i>E.g. overnight accommodation arrangement, allocated AC project time, pharmacy support.</i>	

Dependencies	✓ or X
Identify any other dependencies that may impact upon the delivery of the model that are outside the managerial control of the department e.g. <i>pharmacy support, Emergency Department</i>	
Recruiting suitable staff to post.	
Willingness of patients to participate in programme – engagement considerations.	
Funding options for sustainability (Commissioners, Quality Improvement grants, Internal Charity, Charities external to trust, Capital Programme, Cancer Alliances, Funding Bids).	

Risks & Issues	✓ or X
Identify any issues which could impact upon this business case (e.g. <i>sustainability, health care inequalities</i>).	
Identify any risks which may affect the proposal's successful outcome. (e.g. <i>unaffordable initial investment, lack of suitable infrastructure, lack of suitable workforce, risk of doing nothing</i>).	
Development of ambulatory chemotherapy services is a current area of national interest , with the development of the CCLG Ambulatory Care Network and special interest groups. Potential reputational impact if AC model not adopted.	
If ambulatory chemotherapy service not developed, there will potentially be a resultant impact on equity of care nationally if other providers are delivering AC.	

Evaluation of service introduction	✓ or X
Consider how to collect patient and staff feedback	
Consider how to review data and evaluate AC model <ul style="list-style-type: none"> - Safety (e.g. <i>Datix reporting, sharing learning, unplanned admissions pathway, escalation</i>) - Efficacy (e.g. <i>timing of chemo delivery, patient pathways</i>) - Service User (e.g. <i>workforce, staff admin time, bed usage, planned appointments, unplanned admissions</i>) - Experience of Care (e.g. <i>feedback from professionals, patients, parents/carers – ways of collecting feedback</i>) - Resource (e.g. <i>activity levels, financial and workforce impact, current vs. required resources to ensure sustainability of AC model</i>) 	

Additional Documents

1. Finch, A. (2023) *Re-defining cancer care with young people: delivering ambulatory cancer care to promote freedom, trust and agency*. Available at www.arc-nt.nihr.ac.uk
2. *Children's Cancer | James Lind Alliance (nihr.ac.uk)*
3. Ranney L, Hooke MC, Robbins K. *Letting Kids Be Kids: A Quality Improvement Project to Deliver Supportive Care at Home After High-Dose Methotrexate in Pediatric Patients With Acute Lymphoblastic Leukemia*. *J Pediatr Oncol Nurs*. 2020 Feb 26;37(3):212–20.
4. Bartholomew JL, Dai H, August KJ, Ryan RE, Stegenga KA. *Feasibility of Outpatient High-Dose Methotrexate Infusions in Pediatric Patients With B-Lineage Acute Lymphoblastic Leukemia*. *J Adv Pract Oncol*. 2018;9(4):381–6.
5. Holdsworth MT, Raisch DW, Chavez CM, Duncan MH, Parasuraman TV, Cox FM. *Economic impact with home delivery of chemotherapy to pediatric oncology patients*. *Ann Pharmacother*. 1997 Feb;31(2):140–8.
6. Lashlee M, O'Hanlon Curry J. *Pediatric home chemotherapy: infusing 'quality of life'*. *J Pediatr Oncol Nurs Off J Assoc Pediatr Oncol Nurses*. 2007;24(5):294–8.
7. Aldiss S, Hollis R, Phillips B, Ball-Gamble A, Brownsdon A, Chisholm J, et al. *Research priorities for children's cancer: a James Lind Alliance Priority Setting Partnership in the UK*. *BMJ Open*. 2023 Dec 1;13(12):e077387.
8. Finch A, Cooper S, Raine R, Taylor RM, Gibson F. *The Development of Ambulatory Cancer Care in the UK: A Scoping Review of the Literature*. *Eur J Cancer Care (Engl)*. 2023 Jun 20:e4589362.