

What is a nurse's role for patients with bronchiectasis

By Hollie Smith

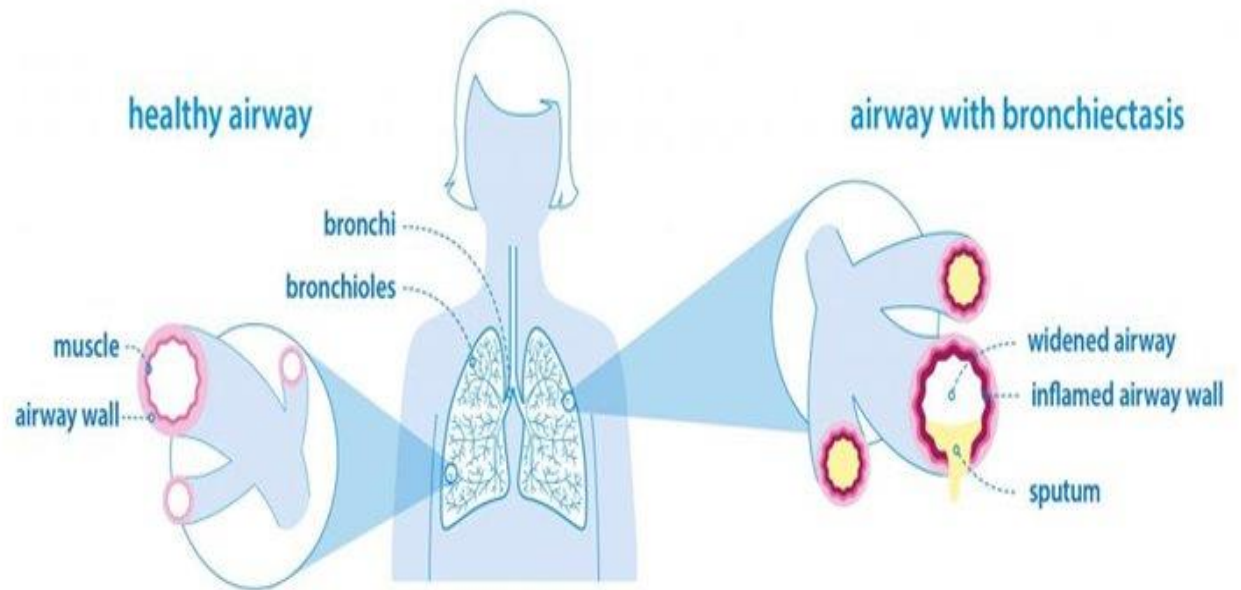
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What is bronchiectasis?

Bronchiectasis describes how airways become widened and inflamed with thick mucus, also called phlegm or sputum.

Within a bronchiectasis affected lung, the airways may not clear themselves properly. This means mucus builds up and airways can become infected by bacteria.

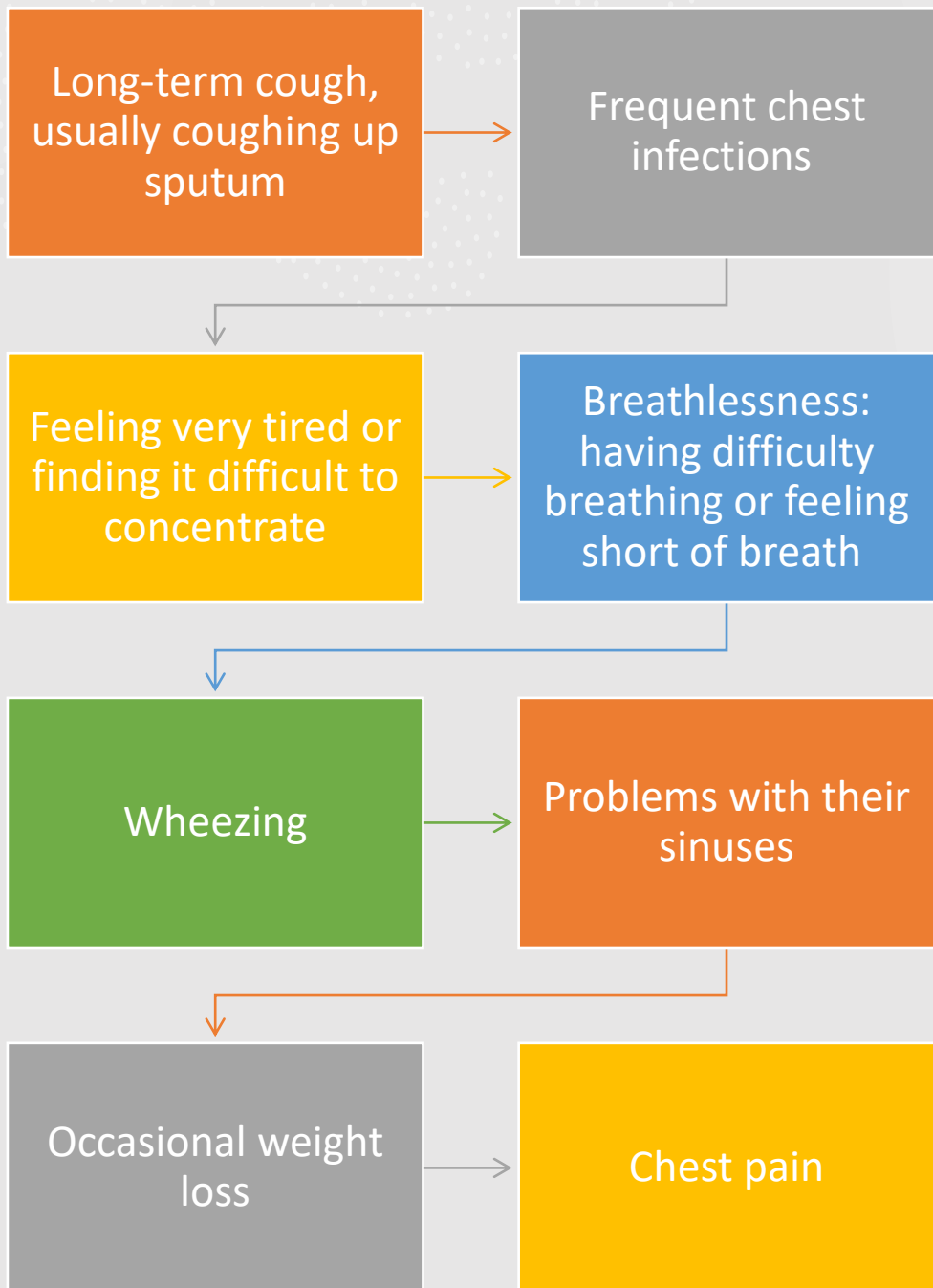


Rationale

- There is an importance with children and young people who have the diagnosis of Bronchiectasis, that this is the accurate diagnosis, and that management is focused on prevention, early diagnosis and optimal management.
- Bronchiectasis is reversible and correct management can limit disease progression and in some case be hope to reverse it (Chang et al 2018)



What are the symptoms of bronchiectasis?



What causes bronchiectasis?

- ***Some illnesses linked to bronchiectasis include:***
 - Having had severe lung infections such as pneumonia, whooping cough or tuberculosis (TB) in the past
 - Inflammatory bowel disease such as ulcerative colitis and Crohn's disease
 - Immune system deficiencies
 - A problem with the normal structure or function of your lungs, such as primary ciliary dyskinesia (PCD)
 - Asthma or COPD
- ***Other causes include:***
 - A severe allergic response to fungus or moulds such as Aspergillus
 - Gastric reflux – resulting in aspiration
 - Lung injuries such as inhalation of a foreign object – causing obstruction and then inflammation.



How is bronchiectasis diagnosed?



Bronchiectasis is formally diagnosed by using a high-resolution computerized tomography (HRCT) scan.



A chest X-ray



Tests on sputum for any bacteria in it



Blood tests



lung function tests



Genetic blood tests

What tests to do once bronchiectasis diagnosed?

CF screening – sweat test

PCD ciliary brushings

Immunology bloods – IGEs

Management Aims

MDT approach consisting of:

- > Respiratory Consultant
- > Physiotherapist
- > Nurse

BTS 2010



ERS task force clinical practice guidelines aims are:



Optimise lung growth



Preserve lung function



Enhance quality of life



Minimise exacerbations

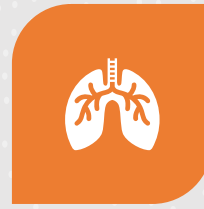


Prevent complications

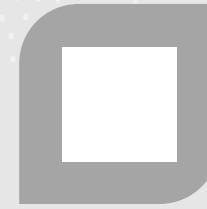


Possibly reverse radiographic airway dilation seen in CT scans

What is the treatment for bronchiectasis?



AIRWAY CLEARANCE
TECHNIQUES (BREATHING
EXERCISES) TO CLEAR
THEIR SPUTUM.



A PERSONALISED SELF-
MANAGEMENT PLAN TO
HELP CONTROL
THEIR SYMPTOMS



TREATMENT WITH
ANTIBIOTICS FOR
EXACERBATIONS OR CHEST
INFECTIONS



ANNUAL FLU
VACCINATIONS



TREATMENT FOR OTHER
CONDITIONS CAUSING
THEIR BRONCHIECTASIS

Where do you start?

Scoring

Paediatric Bronchiectasis Severity Index

Clinical Status	Scoring:							
Current Age	>12 yrs	0	8-12 yrs	0	3-8 yrs	1	Below 3	2
FEV1 (% predicted)	>80%	0	50-80%	1	30-49%	2	<30% or unable to complete	3
Hospital Admissions for chest exacerbations in last 12 months	0	0	1	1	2	2	>2	3
Radiology severity of lobes (CT Chest)	Mild (Unilateral/Bilateral)	0	1lobe severe/ Moderate bilateral	1	>2lobes severe	2		
Number of chest exacerbations in last 12 months	0-1	0	2 to 3	1	>3	2		
Adherence to advise	Yes	0	Variable	1	No	2		
Nutrition *BMI >2yrs / Centile <2years review every clinic	Healthy BMI /stable	0	Declining/ Low BMI/ Low centile	1	Enteral Fed/sharp decline	2		
Chronic colonisation (<i>P.Aeruginosa</i> , <i>NTM</i>)	No	0	Yes	3				
Social issues: Parental anxiety, Depression, Parental smoking, Parental understanding, Socioeconomic concerns	No	0	Yes	1				

Green = 0-4

Amber = 5-8

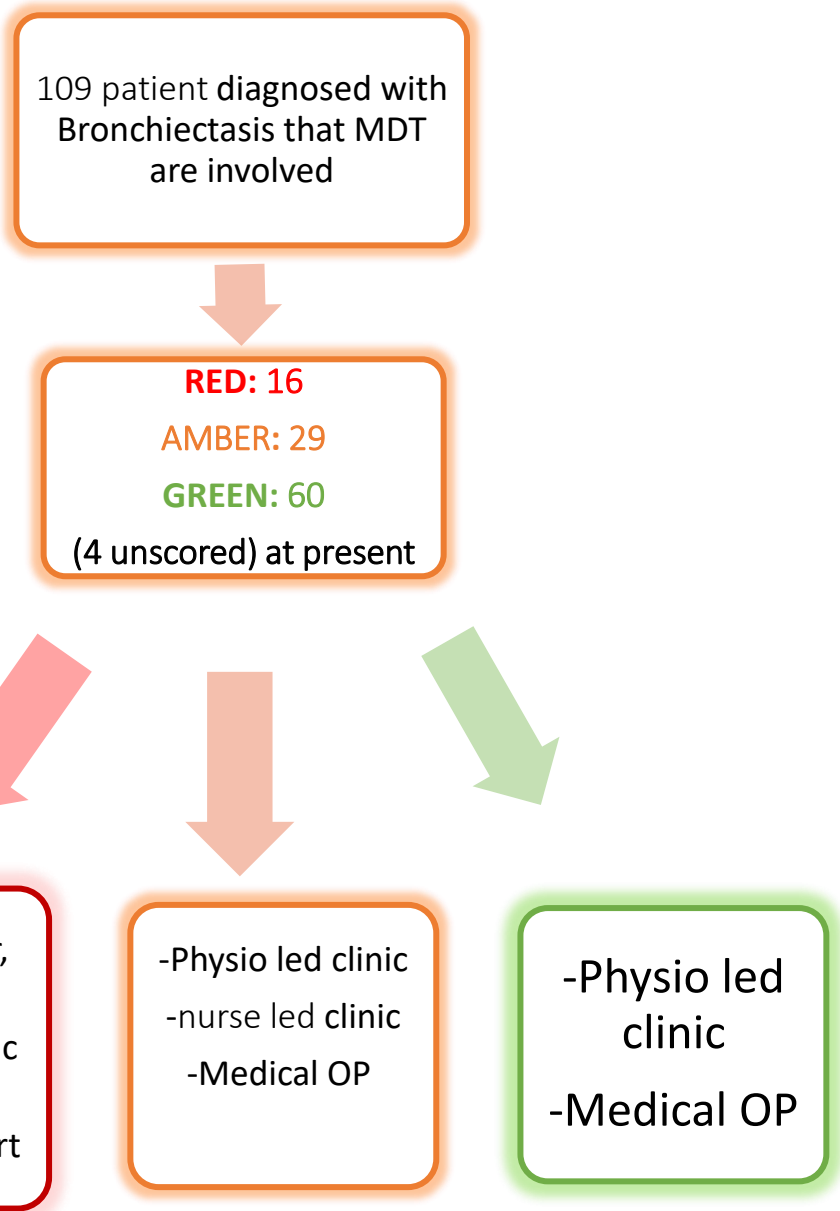
Red = >9

Total score range: 0-20



Our caseload :

Right treatment at the right time!



Management Plans

The two highest clinical needs expressed by parents/patients in global web-based surveys was having an action management plan for exacerbations and access to physiotherapists, Chang et al (2021)

Action management plans can reduce non-scheduled doctor consultations compared with not having one, Marchant et al (2021)


Name: _____

Hospital Number: _____

Paediatric Respiratory Consultant •
Dr Kenia

Birmingham Children's Hospital
0121 333 9999 (Consultant out of hours)

Date plan made— _____



Contact Details for Respiratory Management Service:

Respiratory Specialist Nurse; M-F 8.00 -16.00
Hollie Smith (Wed-Fri) named nurse 0121 333 8014

Physiotherapy Team; M-F 8.30 -16.30
Naomi Parsons (0121) 333 9480

Continue my regular medications

Keep active including completing normal PE

Eat a healthy diet


Drink plenty

Wash hands regularly

Take your prophylactic antibiotics

Morning:

When I'm feeling Good



Symptoms to look out for:

- Coughing (wet) more than usual & occasionally throughout the night
- Change in amount, colour & consistency of mucus
- Slight temperature (above 38C) which responds to paracetamol
- A bit less energy & feeling more tired
- Feeling miserable
- Feeling less hungry

Management Plan:

Continue with usual medication & activities and going to school.

Eat & drink regularly throughout the day

Management Plan:

Commence:
by contacting your GP


Contact your Resp Nurse in 2-3 days if not improved

Increase chest physiotherapy to:

Morning: _____

Lunchtime: _____

I do not feel good



Symptoms to look out for:

- Coughing alot more than usual & frequently throughout the night disturbing your sleep
- Change in amount, colour & consistency of mucus
- Breathless or wheezy at rest
- Feeling hot & shivery or both
- No energy & sleepy
- Feeling miserable
- No appetite
- Any signs of diarrhoea or vomiting

Increase chest physiotherapy to:

Morning: _____

Lunchtime: _____

Evening : _____

Management plan:

Continue as with previous plan

Avoid school


Collect a sputum sample (if able) and give to Hospital if haven't already done one


Eat & drink little & often throughout the day

Medication: Start a treatment course of oral antibiotics

If you have a persistent (over 48hrs) cough and temperature despite treatment given from amber management plan contact your GP within working hours first, and if unable to get through call resp nurses within working hours. If out of hours you will need to attend the Emergency Department.

I feel awful





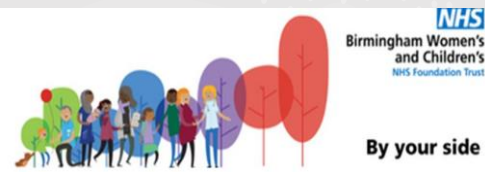
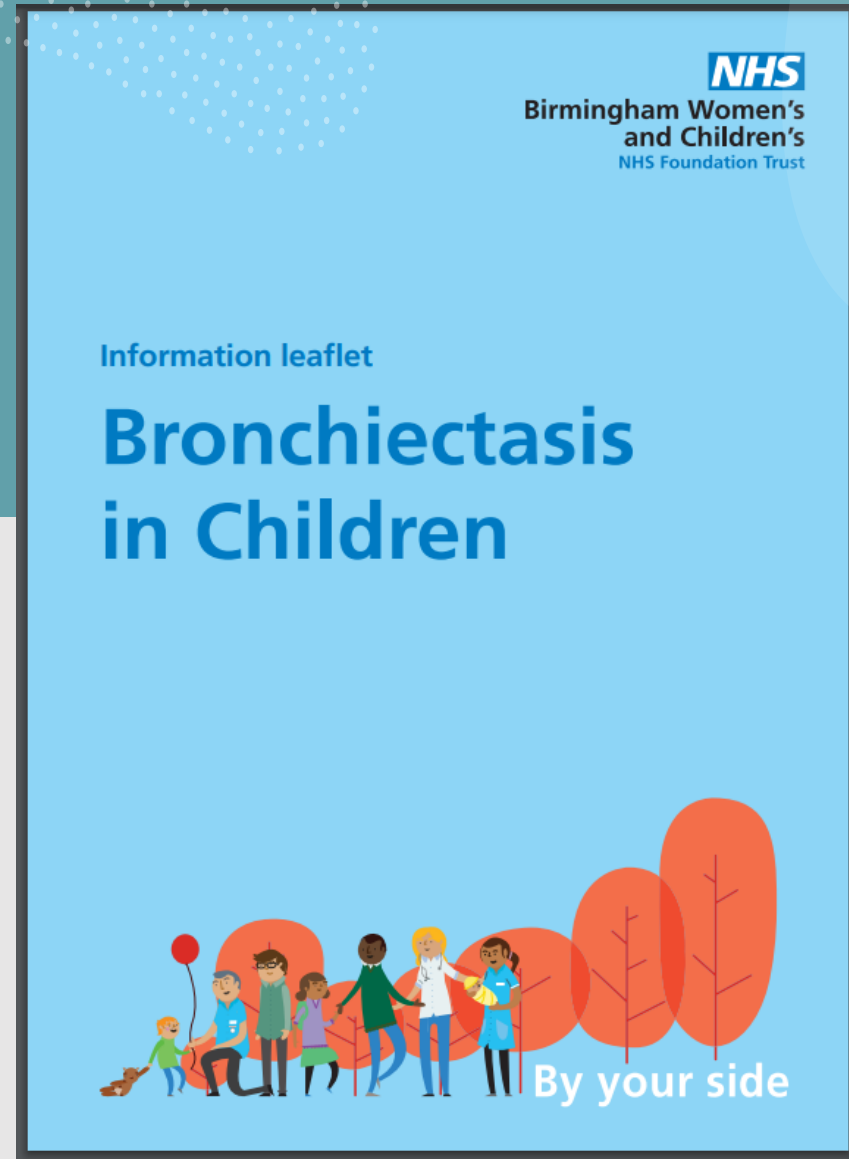
By your side

Education

Better education leads to:

- Better adherence
- Reduces exacerbations
- Increased quality of life

Chang et al 2021



Quality of life

Exacerbations are associated with increase psychological stress, impaired QoL and lung function decline , Chang et al (2018).

Impact of disease
on child/ young
person and their
families

School

Financially

Additional needs



Quality of Life Assessment

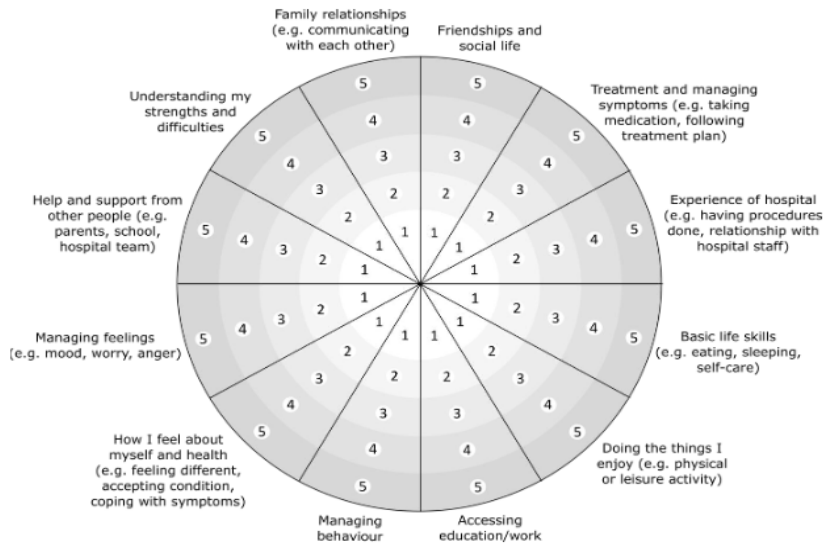
YP's name: _____ Completed by: Young Person Parent/Carer Clinician

Date: _____ Completed about: Young Person Parent/Carer

How is it going?

The wheel below is split into 12 areas, each about a different part of life. These are some of the things that are important to young people with health conditions and to their families. For each area, circle the number that best fits with how you feel things are going for you, using this scale:

1: This is a big problem 2: This is a problem 3: This is ok 4: This is going well 5: This is going really well



Are there any other areas that you think are important that aren't covered in this wheel?

Development of Quality life assessment and understanding the impact the disease has on CYP and their family.

The development of parent/patient support group – from evidence from WHEELS.

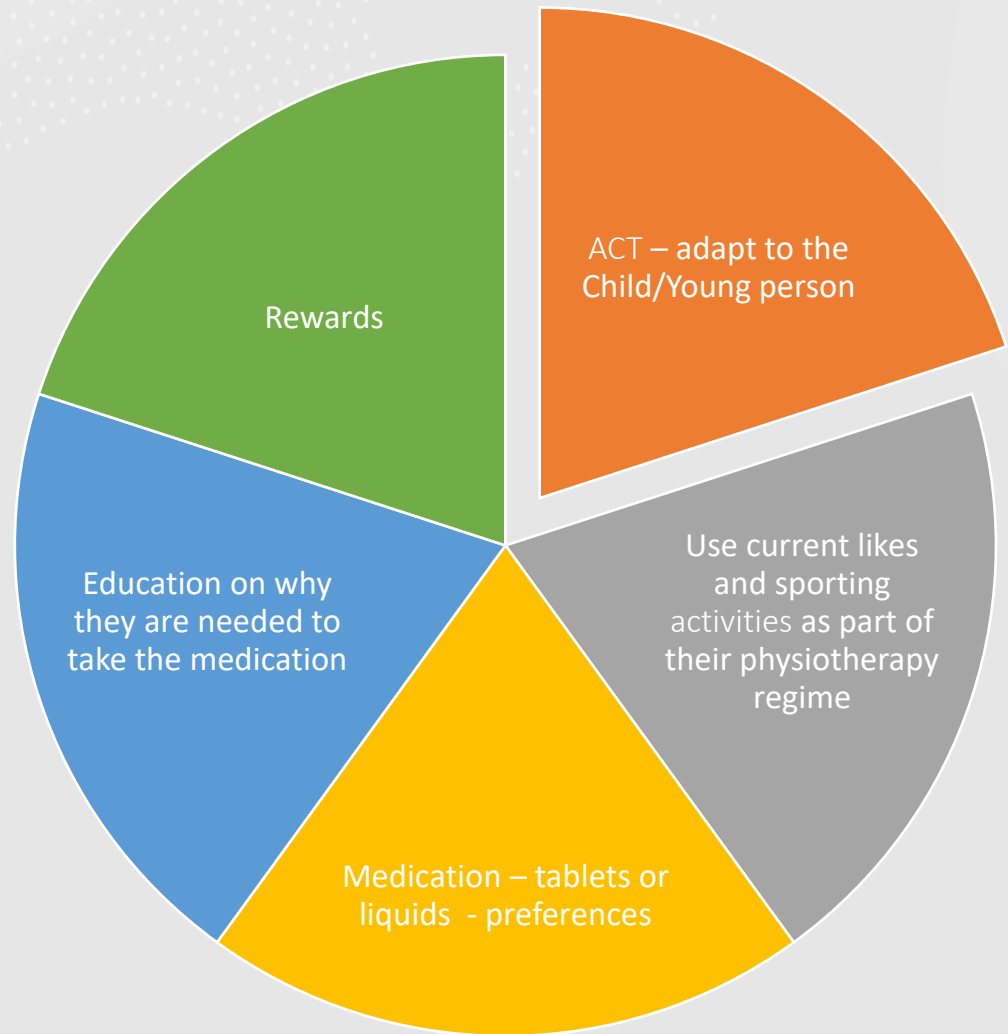


Bronchiectasis family support group 2023



Adherence

'Patient centered care and active involvement with patients in decisions making progress is key in management of chronic disease to ensure optimal treatment and outcome, both in quality of life and clinical '
Marchant et al (2021).



Nurse's role as an Advocate



School



Social support

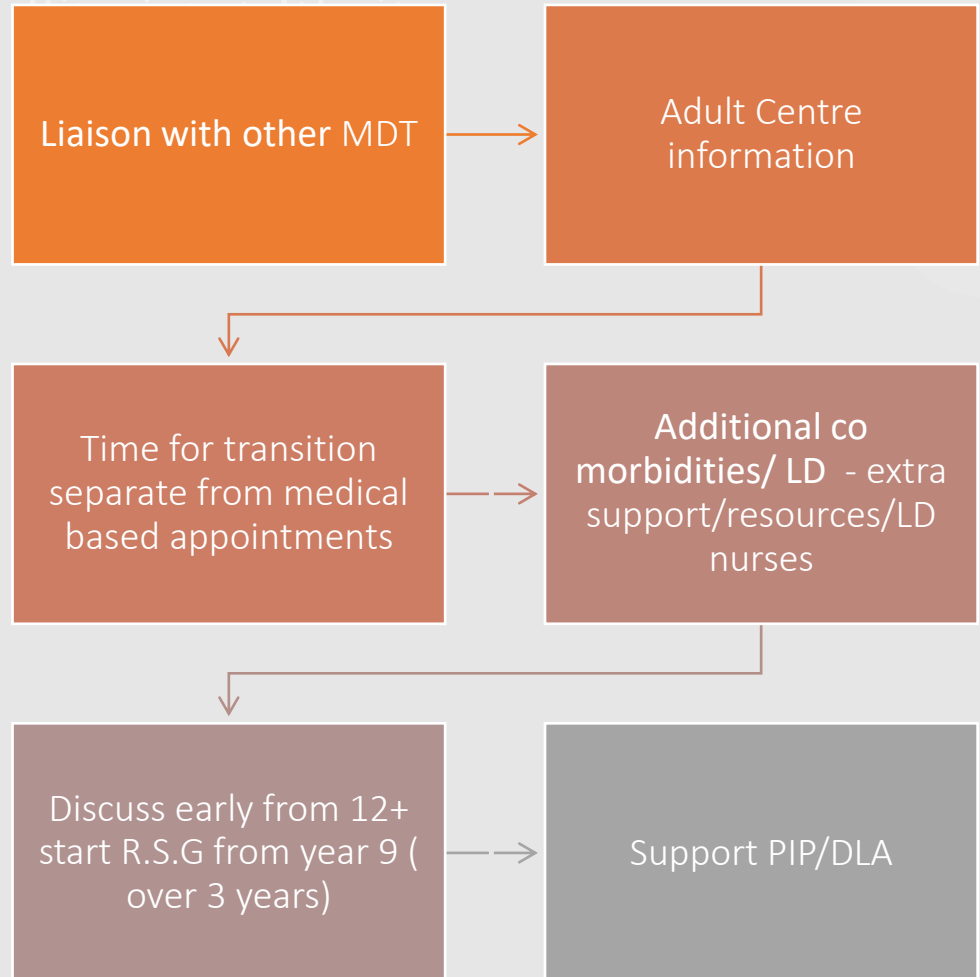


CCN or Secondary
care nurse
involvement

Transition

“A purposeful, planned process that addresses the medical, psychosocial and education/vocational needs of adolescents and young adults with chronic physical and medical conditions as they move from child-centred

to adult-orientated health care systems”



Key message

Diagnose correctly

Treat early

Right treatment

Pro active treatment

END GOAL – If disease is mild and we do the above - the disease can be halted and has potential to be reversed

Information and support for bronchiectasis



ASTHMAANDLUNG.ORG.UK



NHS CHOICES WEBSITE – WWW.NHS.UK



BRITISH THORACIC SOCIETY
BRIT-THRACIC.ORG.UK



CHILDRENS BRONCHIECTASIS EDUCATION
ADVOCACY AND RESEARCH NETWORK
(CHILD-BEAR-NET) - WWW.IMPROVEBE.ORG

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A collection of colorful speech bubbles arranged in a cluster. The bubbles are in various colors: yellow, blue, pink, orange, green, and red. Each bubble contains a word in white, bold, uppercase letters. The words are 'WHERE', 'WHAT', 'WHEN', 'WHY', 'HOW', and 'WHO'. The background is a blurred pattern of colorful question marks.

WHERE

WHAT

WHEN

WHY

HOW

WHO

Any Questions?
