MANCHESTER 1824
The University of Manchester

NHS
National Institute for Health Research

Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Greater Manchester

Electronic Long-term Conditions Integrated Assessment Tool (GM-ELIAT)

Trish Gray
Research Fellow, NIHR GM CLAHRC

The CLAHRC Greater Manchester is part of the National Institute for Health Research and is a partnership between providers and commissioners from the NHS, industry, the third sector and the University of Manchester

clahrc-gm.nihr.ac.uk clahrc@srft.nhs.uk @CLAHRC_GM

Tool Design

The GM-ELIAT provides an integrated, individualised, holistic assessment for patients referred to an integrated health and social care team.

Preparation for the design of the prototype tool involved:

- A literature review of evidence relating to the needs of patients with multi-morbidity and their management.
- Patient interviews to incorporate their views in the design.
- Discussions with health and social care professionals working with patients with long-term conditions (LTCs) to define the format.
- Discussions with specialist healthcare professionals (HCPs) to define the detail of the tool.
- A review of current assessment documentation in use locally and nationally.

Tool Format

The tool provides a needs-based assessment divided into the following sections:

- Demographic details
- Assessment details
- HCP correspondence
- Medical history
- Investigations
- Support services

→

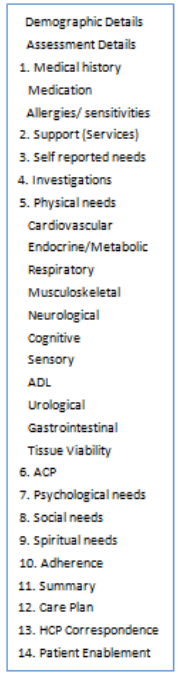
- Self-reported needs
- Physical needs
- Psychological needs
- Spiritual needs
- Social needs

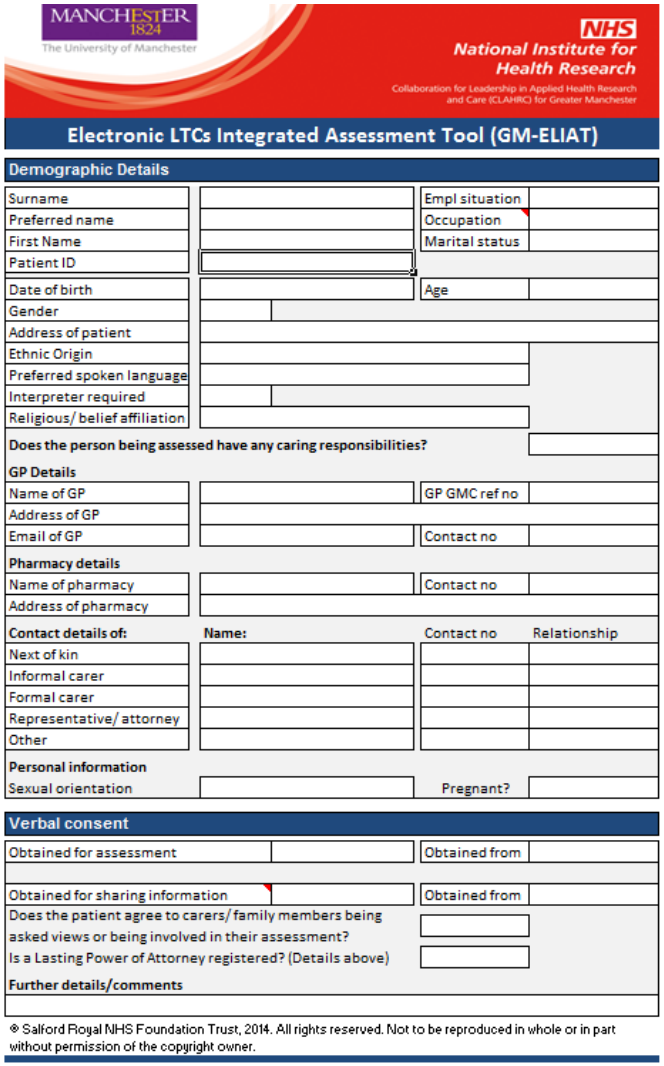
→

- Advance Care Planning (ACP)
- Adherence to therapy
- Patient enablement
- Assessment summary
- Care plan

Demographics

To the left of each page is a quick link box





MANCHESTER 1824 The University of Manchester

NHS National Institute for Health Research

Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Greater Manchester

Electronic LTCs Integrated Assessment Tool (GM-ELIAT)

Demographic Details

Surname		Empl situation	
Preferred name		Occupation	
First Name		Marital status	
Patient ID			
Date of birth		Age	
Gender			
Address of patient			
Ethnic Origin			
Preferred spoken language			
Interpreter required			
Religious/ belief affiliation			
Does the person being assessed have any caring responsibilities?			
GP Details			
Name of GP		GP GMC ref no	
Address of GP			
Email of GP		Contact no	
Pharmacy details			
Name of pharmacy		Contact no	
Address of pharmacy			

Contact details of:	**Name:**	Contact no	Relationship
Next of kin			
Informal carer			
Formal carer			
Representative/ attorney			
Other			

Personal information			
Sexual orientation		Pregnant?	

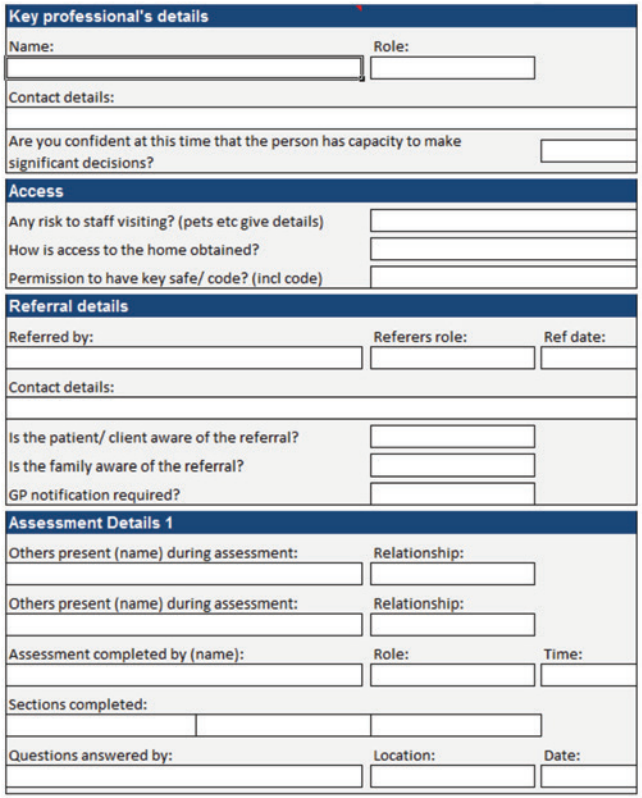
Verbal consent

Obtained for assessment		Obtained from	
Obtained for sharing information		Obtained from	
Does the patient agree to carers/ family members being asked views or being involved in their assessment?			
Is a Lasting Power of Attorney registered? (Details above)			
Further details/comments			

A further details/ comments box allows additional information to be added as free text.

Each page is laid out in a standard format with drop down or free text boxes for answers as appropriate.

Assessment details / Correspondence



Key professional's details

Name: | Role:

Contact details:

Are you confident at this time that the person has capacity to make significant decisions?

Access

Any risk to staff visiting? (pets etc give details)

How is access to the home obtained?

Permission to have key safe/ code? (incl code)

Referral details

Referred by: | Referers role: | Ref date:

Contact details:

Is the patient/ client aware of the referral?

Is the family aware of the referral?

GP notification required?

Assessment Details 1

Others present (name) during assessment: | Relationship:

Others present (name) during assessment: | Relationship:

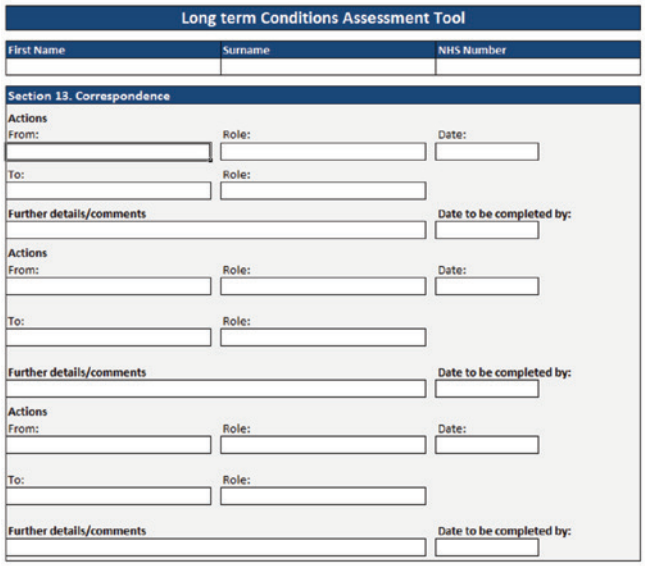
Assessment completed by (name): | Role: | Time:

Sections completed:

Questions answered by: | Location: | Date:

Select completed sections

The HCP responsible for coordinating care is recorded as well as any important information about gaining access to the patient's home, referral details, those present, the assessor and which sections were completed. Once a date is added, another section is revealed to allow another assessor to complete. This provides an audit trail of who has been involved in the assessment process, which sections were completed and the date for each assessment.



Long term Conditions Assessment Tool

First Name | Surname | NHS Number

Section 13. Correspondence

Actions

From: | Role: | Date:

To: | Role:

Further details/comments | Date to be completed by:

Actions

From: | Role: | Date:

To: | Role:

Further details/comments | Date to be completed by:

Actions

From: | Role: | Date:

To: | Role:

Further details/comments | Date to be completed by:

The correspondence page can be used by the assessor to refer the patient to other HCPs e.g. a social worker to complete the Social needs section or the assessor can request actions to be undertaken e.g. for the patient's GP to review medication or refer make a hospital referral.

Self-reported Needs

Electronic LTCs Integrated Assessment Tool (GM-ELIAT)

First Name	Surname	NHS Number

Section 3. Self reported health and social needs

Health or social needs

Perception of own health

Self monitoring readings (most recent)	Reading	Date	Reading	Date
BP				
BM				
Weight (kg)				

Important aspects of life/ hobbies

Physical activity (type)	Average duration	Freq/ week	Need identified

Personal strengths

Making decisions about health and social care

Health or Social goal 1:	Date to be achieved by:

Steps needed to achieve this goal:

How will this achievement be celebrated?

Further details/comments

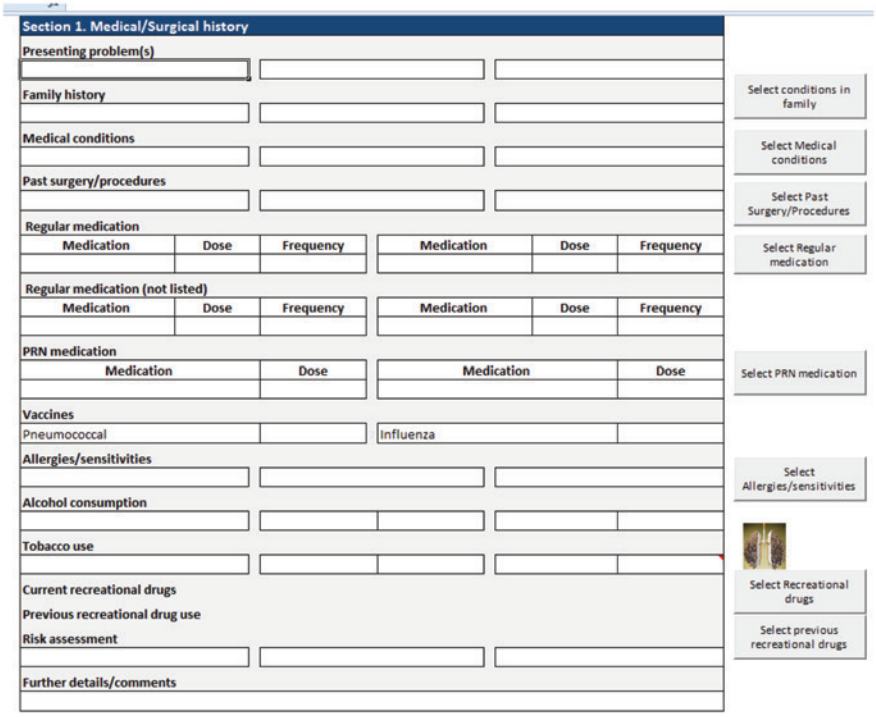
Patient's own health and social needs can be recorded as well as personal goals to ensure that priorities and wishes regarding the patient's health and wellbeing are taken into account during the assessment and care planning process.

A Self-reported needs/Managing your own health form could be sent to the patient prior to the assessment to allow time to complete it independently or with an informal carer.

Investigations / Medical History

Results can be entered into the investigations page or ideally, populated from the GP system. Abbreviations are explained in comment boxes and clinical advice is provided by pop-up boxes when certain cells are filled to provide information regarding diagnoses and recommended tests.

The patient's medical history includes family history, surgery, alcohol, tobacco and drug use. A lot of this information could be populated from GP records, if systems are compatible.



Section 1. Medical/Surgical history

Presenting problem(s)

Family history — Select conditions in family

Medical conditions — Select Medical conditions

Past surgery/procedures — Select Past Surgery/Procedures

Regular medication — Select Regular medication

Medication	Dose	Frequency	Medication	Dose	Frequency

Regular medication (not listed)

Medication	Dose	Frequency	Medication	Dose	Frequency

PRN medication — Select PRN medication

Medication	Dose	Medication	Dose

Vaccines

Pneumococcal		Influenza	

Allergies/sensitivities — Select Allergies/sensitivities

Alcohol consumption

Tobacco use

Current recreational drugs — Select Recreational drugs

Previous recreational drug use — Select previous recreational drugs

Risk assessment

Further details/comments

Section 4. Physical needs - Pathology and Other Investigations

Pathology	Result	Date		Result	Date		Result	Date
HB			HB			HB		
MCV			MCV			MCV		
WCC			WCC			WCC		
Sodium			Sodium			Sodium		
Potassium			Potassium			Potassium		
Urea			Urea			Urea		
Creatinine			Creatinine			Creatinine		
eGFR (1)			eGFR (2)			eGFR (3)		
ACR (mg/mmol)			ACR (mg/mmol)			ACR (mg/mmol)		
PCR (mg/mmol)			PCR (mg/mmol)			PCR (mg/mmol)		
HbA1c			HbA1c			HbA1c		
FPG			FPG			FPG		
OGTT			OGTT			OGTT		
Fasting HDL			Fasting HDL			Fasting HDL		
Fasting TG			Fasting TG			Fasting TG		
Fasting LDL			Fasting LDL			Fasting LDL		
Fasting TC			Fasting TC			Fasting TC		
LFTs			LFTs			LFTs		
TSH			TSH			TSH		
T3			T3			T3		
T4			T4			T4		
BNP			BNP			BNP		
NT-ProBNP			NT-ProBNP			NT-ProBNP		
Rheumatoid factor			Rheumatoid factor			Rheumatoid factor		
CCP			CCP			CCP		
CPK			CPK			CPK		
Serum B12 & Folate			Serum B12 & Folate			Serum B12 & Folate		
Calcium			Calcium			Calcium		
PSA			PSA			PSA		
MSU			MSU			MSU		
Other Investigations								
Proteinuria (dipstick)			Proteinuria (dipstick)			Proteinuria (dipstick)		
Nitrites (dipstick)			Nitrites (dipstick)			Nitrites (dipstick)		
Haematuria (dipstick)			Haematuria (dipstick)			Haematuria (dipstick)		
Glucose (dipstick)			Glucose (dipstick)			Glucose (dipstick)		
Leucocytes (dipstick)			Leucocytes (dipstick)			Leucocytes (dipstick)		
Ketones (dipstick)			Ketones (dipstick)			Ketones (dipstick)		
BM			BM			BM		
LVEF			LVEF			LVEF		
Stress Echo			Stress Echo			Stress Echo		
Echo (TTE)			Echo (TTE)			Echo (TTE)		
ECG			ECG			ECG		
Retinal Imaging			Retinal Imaging			Retinal Imaging		
FEV1			FEV1			FEV1		
FEV1%			FEV1%			FEV1%		
PEFR			PEFR			PEFR		

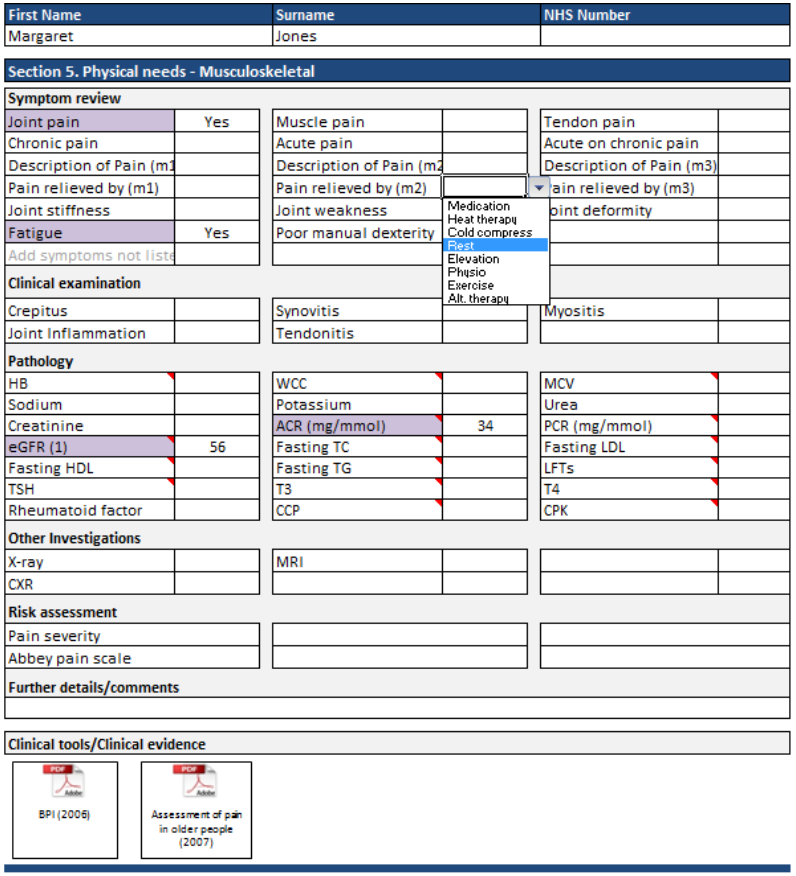
Physical Needs Assessment

Physical needs are divided into the following systems:

- Cardiovascular
- Endocrine/Metabolic
- Respiratory
- Musculoskeletal
- Neurological
- Cognitive
- Sensory
- Activities of Daily Living (ADL)
- Urological
- Gastrointestinal
- Tissue Viability

Physical Needs

The majority of pages within the Physical Needs section have a standard format comprising of a symptom review, clinical examination, pathology (populated from the investigations page), other investigations (populated from the investigations page), risk assessment, further details/comments and clinical tools/clinical evidence.



First Name	Surname	NHS Number
Margaret	Jones	

Section 5. Physical needs - Musculoskeletal

Symptom review					
Joint pain	Yes	Muscle pain		Tendon pain	
Chronic pain		Acute pain		Acute on chronic pain	
Description of Pain (m1		Description of Pain (m2		Description of Pain (m3)	
Pain relieved by (m1)		Pain relieved by (m2)		ain relieved by (m3)	
Joint stiffness		Joint weakness		oint deformity	
Fatigue	Yes	Poor manual dexterity			
Add symptoms not liste					
Clinical examination					
Crepitus		Synovitis		Myositis	
Joint Inflammation		Tendonitis			
Pathology					
HB		WCC		MCV	
Sodium		Potassium		Urea	
Creatinine		ACR (mg/mmol)	34	PCR (mg/mmol)	
eGFR (1)	56	Fasting TC		Fasting LDL	
Fasting HDL		Fasting TG		LFTs	
TSH		T3		T4	
Rheumatoid factor		CCP		CPK	
Other Investigations					
X-ray		MRI			
CXR					
Risk assessment					
Pain severity					
Abbey pain scale					
Further details/comments					

Medication
Heat therapy
Cold compress
Rest
Elevation
Physio
Exercise
Alt. therapy

Click on Body Map to identify location of pain as reported by the patient

Body Map

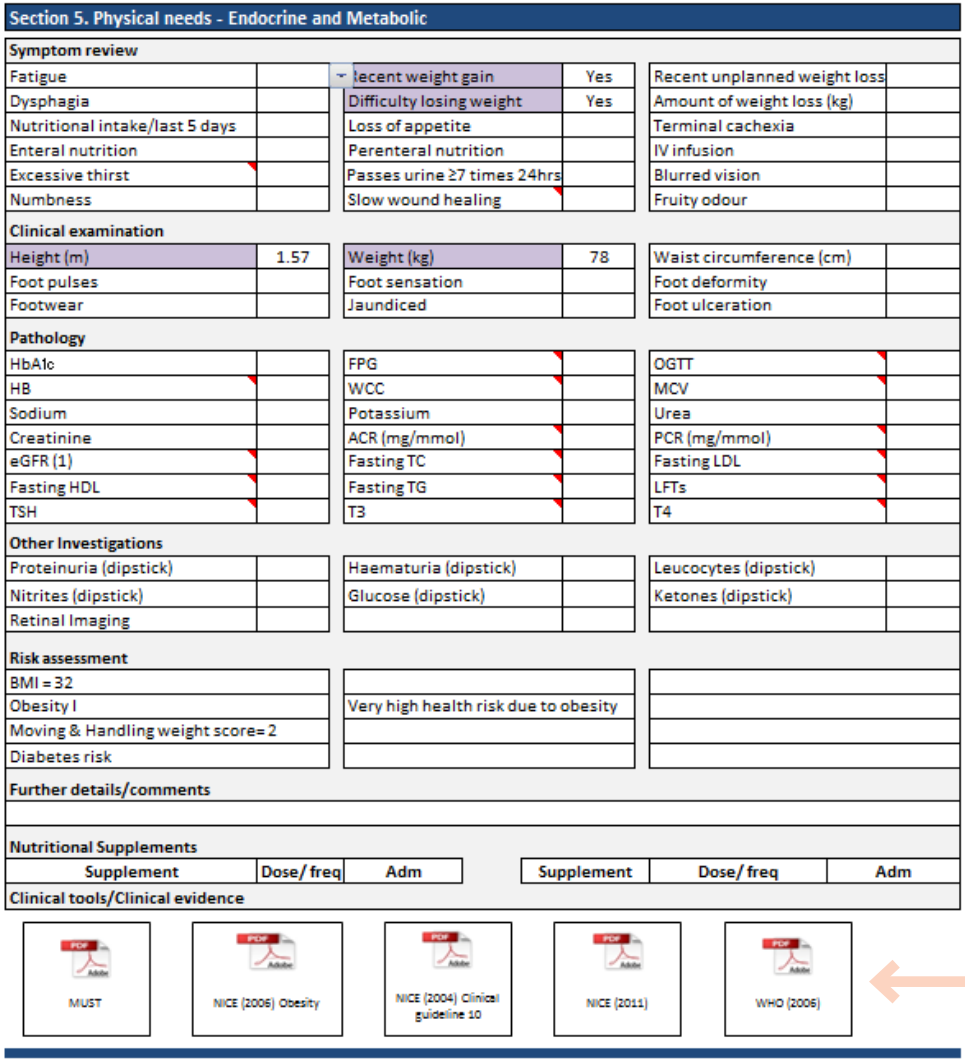
Clinical tools/Clinical evidence

BPI (2006)

Assessment of pain in older people (2007)

Most cells have dropdown boxes with simple yes/no responses. Cells are highlighted if yes is chosen. Some have different options where appropriate e.g. pain relieved by, as shown. Symptoms not listed can be added.

Clinical Evidence



Section 5. Physical needs - Endocrine and Metabolic

Symptom review					
Fatigue		Recent weight gain	Yes	Recent unplanned weight loss	
Dysphagia		Difficulty losing weight	Yes	Amount of weight loss (kg)	
Nutritional intake/last 5 days		Loss of appetite		Terminal cachexia	
Enteral nutrition		Perenteral nutrition		IV infusion	
Excessive thirst		Passes urine ≥7 times 24hrs		Blurred vision	
Numbness		Slow wound healing		Fruity odour	
Clinical examination					
Height (m)	1.57	Weight (kg)	78	Waist circumference (cm)	
Foot pulses		Foot sensation		Foot deformity	
Footwear		Jaundiced		Foot ulceration	
Pathology					
HbA1c		FPG		OGTT	
HB		WCC		MCV	
Sodium		Potassium		Urea	
Creatinine		ACR (mg/mmol)		PCR (mg/mmol)	
eGFR (1)		Fasting TC		Fasting LDL	
Fasting HDL		Fasting TG		LFTs	
TSH		T3		T4	
Other Investigations					
Proteinuria (dipstick)		Haematuria (dipstick)		Leucocytes (dipstick)	
Nitrites (dipstick)		Glucose (dipstick)		Ketones (dipstick)	
Retinal Imaging					
Risk assessment					
BMI = 32					
Obesity I		Very high health risk due to obesity			
Moving & Handling weight score= 2					
Diabetes risk					
Further details/comments					
Nutritional Supplements					
Supplement	Dose/ freq	Adm	Supplement	Dose/ freq	Adm
Clinical tools/Clinical evidence					

MUST | NICE (2006) Obesity | NICE (2004) Clinical guideline 10 | NICE (2011) | WHO (2006)

Diabetes risk due to obesity, check HbA1c, FPG or OGTT (NICE Guidelines Obesity (2006) and Type 2 diabetes (2011) see link below)

Nutritional Supplements

Comments appear as cells are highlighted to guide practice according to clinical evidence. References to clinical evidence are provided.

Links to national and international guidelines or clinical tools used within the assessment tool appear at the bottom of each page allowing the assessor to find clinical evidence quickly, when required.

Risk Assessment

Section 5. Physical needs - Cardiovascular					
Symptom review					
SOB	Yes	Chest tightness		Chest pain	
SOB triggered by (1)		SOB triggered by (2)		SOB triggered by (3)	
SOB relieved by (1)		SOB relieved by (2)		SOB relieved by (3)	
Orthopnoea	Yes	PND		Palpitations	
Dizziness		Syncope		Claudication	
Fatigue	Yes	Sexual dysfunction			
Add symptoms not listed					
Clinical examination					
Pulse: rate		Systolic BP	140	Foot pulses	
Pulse: rhythm		Diastolic BP	85	Peripheral oedema	
Heart sounds		Postural hypotension		Ankle oedema	Yes
JVP				10 year MI risk %	10
Pathology					
HB		WCC		MCV	
Sodium		Potassium		Urea	
Creatinine		ACR (mg/mmol)	34	PCR (mg/mmol)	
eGFR (1)	56	eGFR (2)	52	eGFR (3)	54
Fasting TC		Fasting LDL		Fasting HDL	
Fasting TG		LFTs			
TSH		T3		T4	
BNP		NT-ProBNP			
Other Investigations					
Proteinuria (dipstick)		Haematuria (dipstick)		Leucocytes (dipstick)	
Nitrites (dipstick)		Glucose (dipstick)		Ketones (dipstick)	
Echo (TTE)		LVEF		Stress Echo	
ECG		CXR		Angiography	
Risk assessment					
CHA_2DS_2-VASc score = 4		Adjusted stroke rate (%/yr) = 4		Moderate stroke risk	
HF: Risk of exacerbation				NYHA Classification III	
BP above Target					
CKD Stage 3A with proteinuria		Proteinuria			
10% risk of MI in the next 10 years					
Further details/comments					
Clinical tools/Clinical evidence					

Check symptoms for exacerbation of HF. Is BNP/Echo required? Review HF medication (add/substitute/uptitrate.)

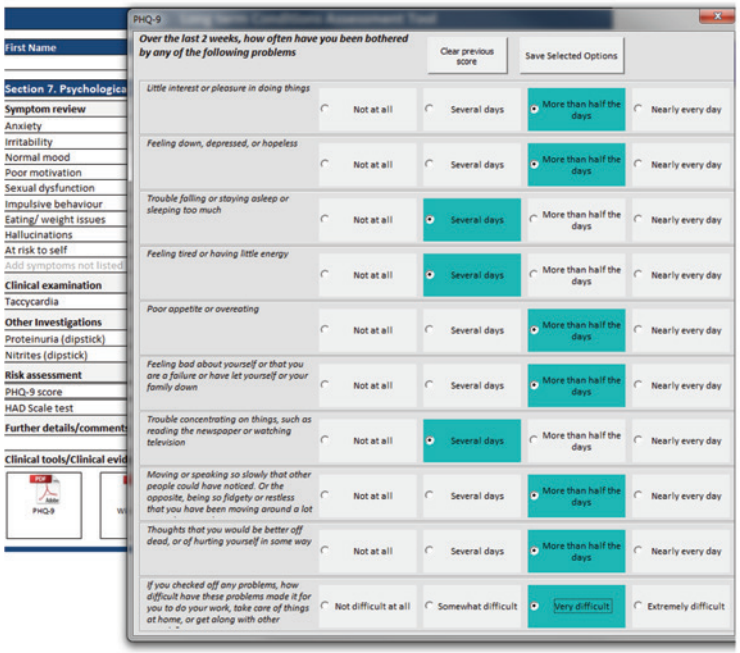
Diagnosis of AF: CHA_2DS_2-VASc score has been calculated as recommended by (NICE 2006,p7) and (ESC 2012) below.

Risk assessments assist in:

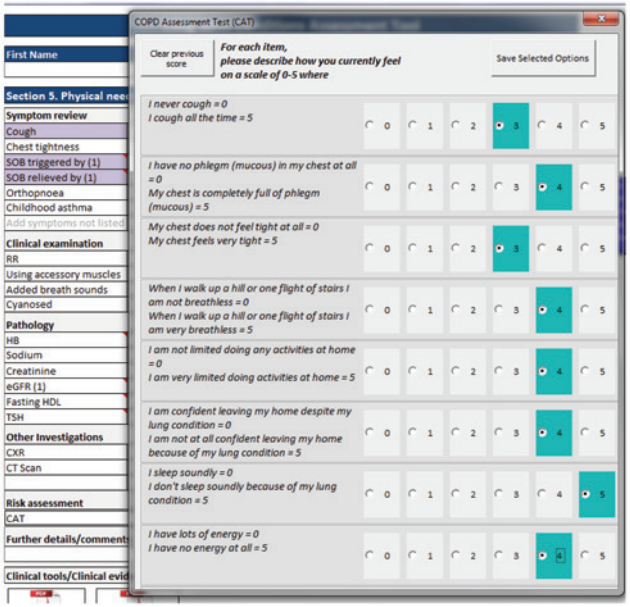
- identifying specific needs
- defining the level of care required to reduce risks
- defining the level of care required to manage patients effectively and avoid preventable deterioration of health and wellbeing.

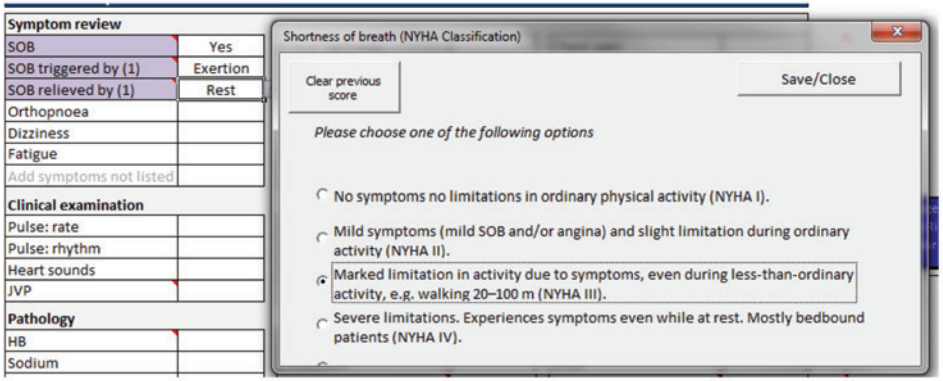
Risks are calculated within the tool by the data inputted and are based on national and international guidelines such as NICE. Risks may be generated automatically by data already inputted or by the results of a health questionnaire completed by the assessor and patient.

Health Assessment Questionnaires



Many pages contain health assessment questionnaires. These are validated tools already in use in clinical practice. Scores are automatically calculated and interpretations given. The scores and interpretations appear in the risk assessment section. Examples are the CAT, NYHA and the PHQ-9 as shown.



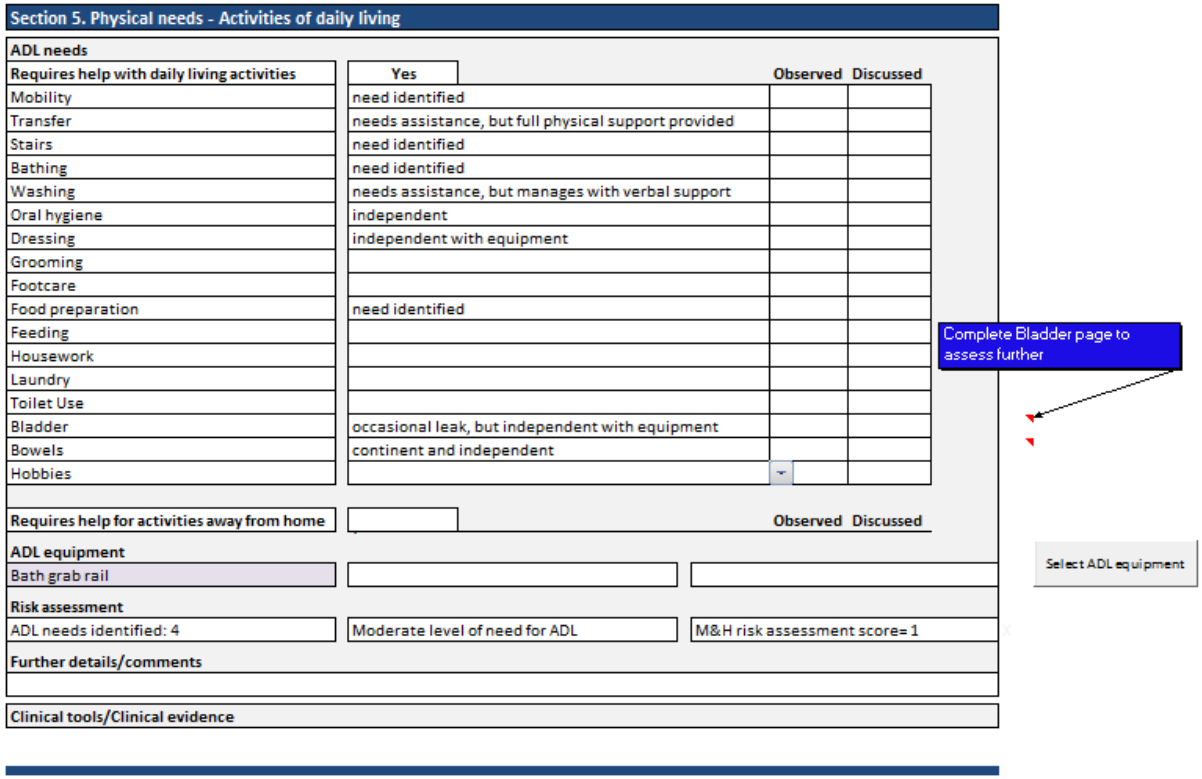


Activities of Daily Living

The ADL page has a different format to the other pages in the physical needs section. Many rows are hidden unless the patient requires help with ADL.

Each activity of daily living is assessed to identify needs either by discussion or observation and discussion.

The number of identified needs are calculated automatically and a classification is given according to the number of needs identified.



Section 5. Physical needs - Activities of daily living

ADL needs

Requires help with daily living activities	Yes	Observed	Discussed
Mobility	need identified		
Transfer	needs assistance, but full physical support provided		
Stairs	need identified		
Bathing	need identified		
Washing	needs assistance, but manages with verbal support		
Oral hygiene	independent		
Dressing	independent with equipment		
Grooming			
Footcare			
Food preparation	need identified		
Feeding			
Housework			
Laundry			
Toilet Use			
Bladder	occasional leak, but independent with equipment		
Bowels	continent and independent		
Hobbies			

Complete Bladder page to *assess* further

Requires help for activities away from home		Observed	Discussed

ADL equipment

Bath grab rail		

Select ADL equipment

Risk assessment

ADL needs identified: 4	Moderate level of need for ADL	M&H risk assessment score= 1

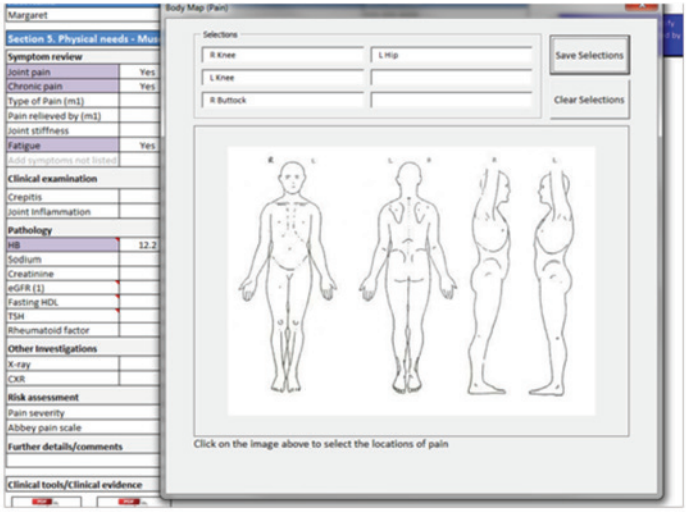
Further details/comments

Clinical tools/Clinical evidence

If bladder or bowel needs are identified, the assessor is advised to complete the Urological and Gastrointestinal pages to assess bladder and bowel needs further.

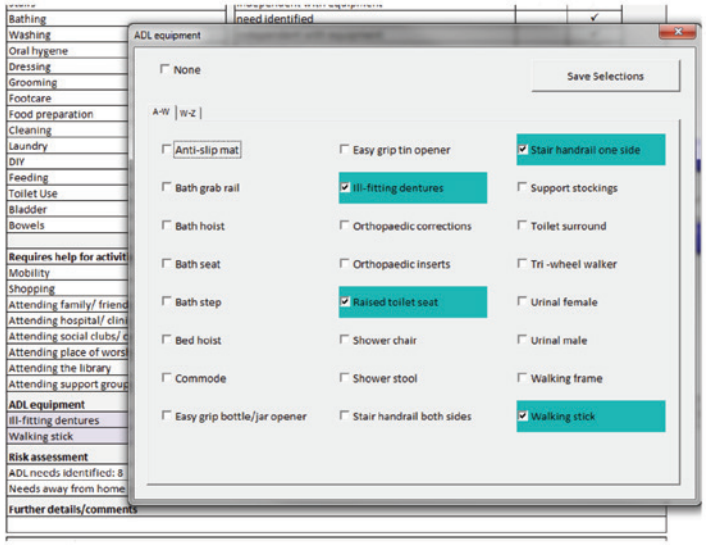
ADL equipment already in use is also recorded so that an assessment of equipment needed can be made.

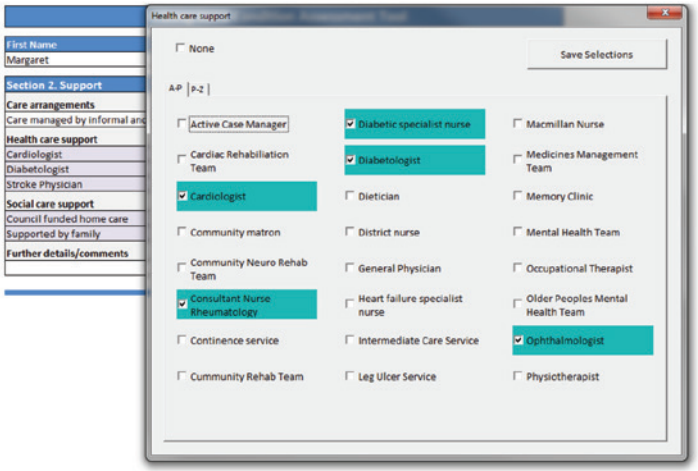
Multiple Option Responses



Body map allows multiple areas of pain to be identified.

ADL equipment in use is highlighted when selected and appears in the ADL equipment section.





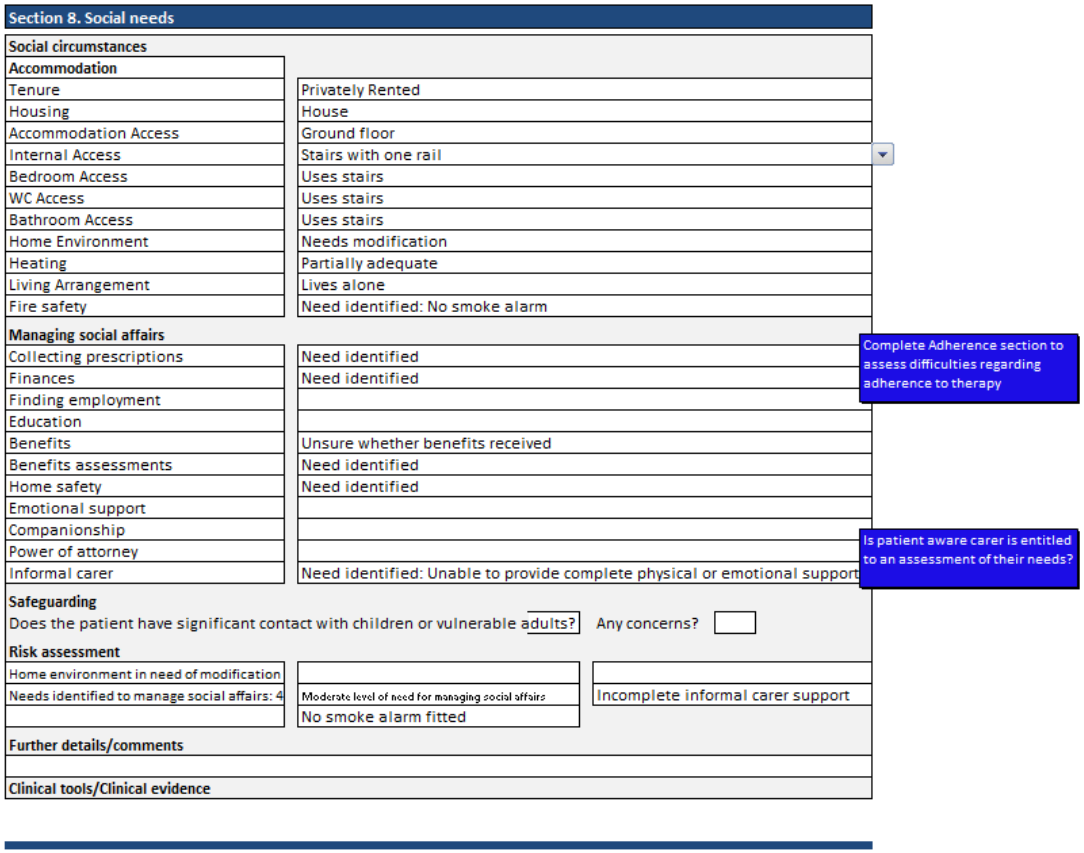
Health and Social care support services currently providing support are selected to assist in identifying the gaps in support according to need.

For particular sections, multiple selections may be required. A number of pages contain boxes on the right of the screen which open to reveal multiple options.

Social Needs

The Social Needs section has a similar layout to ADL, social risks are identified, the number of identified needs are calculated automatically and a classification is given accordingly.

A need to reassess informal care is also identified.



Section 8. Social needs

Social circumstances		
Accommodation		
Tenure	Privately Rented	
Housing	House	
Accommodation Access	Ground floor	
Internal Access	Stairs with one rail	
Bedroom Access	Uses stairs	
WC Access	Uses stairs	
Bathroom Access	Uses stairs	
Home Environment	Needs modification	
Heating	Partially adequate	
Living Arrangement	Lives alone	
Fire safety	Need identified: No smoke alarm	
Managing social affairs		
Collecting prescriptions	Need identified	Complete Adherence section to assess difficulties regarding adherence to therapy
Finances	Need identified	
Finding employment		
Education		
Benefits	Unsure whether benefits received	
Benefits assessments	Need identified	
Home safety	Need identified	
Emotional support		
Companionship		
Power of attorney		
Informal carer	Need identified: Unable to provide complete physical or emotional support	Is patient aware carer is entitled to an assessment of their needs?

Safeguarding

Does the patient have significant contact with children or vulnerable adults? | Any concerns?

Risk assessment

Home environment in need of modification		
Needs identified to manage social affairs: 4	Moderate level of need for managing social affairs	Incomplete informal carer support
	No smoke alarm fitted	

Further details/comments

Clinical tools/Clinical evidence

If patient has difficulties collecting prescriptions an issue with adherence to therapy is highlighted and the assessor is signposted to complete the adherence to therapy section.

Summary

Data inputted culminates in a summary page. Findings from individual sections are brought together to provide an overall picture of the patient's symptoms, clinical examination findings, pathology/ other investigations, needs and risks to health and social wellbeing to allow a care plan to be formulated.

Section 11. Summary		
Medical History		
Medical conditions	Atrial Fibrilation	Diabetes Type 2
	Hypertension	Left Ventricular Systolic Dysfunction (LVSD)
	Rheumatoid Arthritis	
Symptom review	SOB	SOB triggered by: Exertion
	SOB relieved by: Rest, Medication	Balance problems
	Fall in last 12 months	Poor memory
	Leak on coughing/laughing/sneezing	
Clinical examination	Systolic BP = 145	Diastolic BP = 89
	Ankle oedema	Difficulty rising from sitting
Pathology	eGFR (1) = 45	ACR (mg/mmol) = 47
Risk assessment	HF: Risk of exacerbation	CKD Risk
	Proteinuria	22% risk of MI in the next 10 years
	Diabetes 9 key test not complete	Significant cognitive impairment (6CIT)
	Optometry examination date unknown	ADL needs identified: 5
	Moderate level of need for ADL	Pelvic floor weakness risk
	Moderate level of need for managing social affairs	Incomplete informal carer support
	Several barriers to adherence	Not using adherence aids
Requires help with daily living activities	Mobility need identified (observed/ discussed)	Transfer needs assistance, but full physical support provided (observed/ discussed)
	Stairs need identified (observed/ discussed)	Bathing need identified (discussed)
	Footcare need identified (observed/ discussed)	Feeding need identified (discussed)
Social		
Social circumstances	Home Environment: Needs modification	
Managing social affairs	Collecting prescriptions: Need identified	Finances: Need identified
	Benefits assessments: Need identified	Home safety: Need identified
	Power of attorney: Has a registered Lasting Power of Attorney	Informal carer: Need identified: Unable to provide complete physical support

Care Plan

A care plan is formulated from the summary page. This will contain pre-formatted entries but will also allow free text to be added. The cells expand to accommodate the required number of needs. Standardised referral forms could be generated from the data inputted then emailed, printed or deposited in a referral section.

Electronic LTCs Integrated Assessment Tool (GM-ELIAT)

First Name	Surname	NHS Number

Section 12. Care Plan

Physical Needs	Action Required	Expected Outcome	Review date	Refer to	Ref date
Psychological Needs	Action Required	Expected Outcome	Review date	Refer to	Ref date
Social Needs	Action Required	Expected Outcome	Review date	Refer to	Ref date
Spiritual Needs	Action Required	Expected Outcome	Review date	Refer to	Ref date

Spell check

Perceived benefits of the GM-ELIAT for providing a shared assessment and care planning process

- Potential reduction in unplanned hospital admissions if health and social care needs are identified and met.
- Standardisation of practice across an integrated team and across a community service through delivery of a structured assessment process.
- Reduced repetition of assessment by different members of an integrated team through the use of a shared assessment process.
- Improved referral practices to specialist services due to more intense assessment to provide more detailed referral information.
- Enhancement of patient/client experience by providing a more joined-up service by the use of a shared care planning process.
- Identification of educational needs for health and social care professionals by raising awareness of the current evidence based clinical guidelines.

MANCHESTER 1824
The University of Manchester

NHS
National Institute for Health Research

Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Greater Manchester

For further information regarding clinical content and design contact:

Dr Trish Gray Research Fellow
Trish.Gray@manchester.ac.uk

For further information regarding the GM-ELIAT's functions or if you have difficulties using the tool, contact:

Caroline O'Donnell Information Analyst
Caroline.O'Donnell@srft.nhs.uk

The CLAHRC Greater Manchester is part of the National Institute for Health Research and is a partnership between providers and commissioners from the NHS, industry, the third sector and the University of Manchester

clahrc-gm.nihr.ac.uk clahrc@srft.nhs.uk @CLAHRC_GM