

# Electronic Long-term Conditions Integrated Review Template (GM-ELIRT)

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## The GM-ELIRT is designed to:

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- Provide a needs-based health and social review for use in primary care settings for patients with multimorbidity (two or more long-term conditions).
- Provide an integrated long-term condition (LTC) review in one template.
- Be used by all the primary care team for collecting and storing LTC review information.
- Reduce repetition of assessment and the number of reviews per patient for practices currently conducting single disease reviews.
- Save time during reviews by limiting the time spent clicking in and out of single disease templates for practices already conducting integrated reviews.
- Save time during the review by reducing the amount of free text required.
- Improve audit of practice and clinical outcomes due to increased Read Coded information.

## GM-ELIRT Versions

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- June 2013: original version, EMIS PCS built by CLAHRC GM (data analyst and research fellow with practice nurse input) presented to users for feedback.
- Sept-Dec 2013: EMIS PCS version refined and tested. EMIS Web and SystmOne versions developed and tested.
- Jan 2014: Post testing refinement to improve the flow by providing a more patient-centred, rather than disease focused format.
- July 2014-: Development of Vision version (collaborative working between CLAHRC GM and INPS).
- Oct 2014-: Release of GM-ELIRT.

## Template format pre-evaluation version: Front page

The review commences with generic assessments such as Clinical Assessment, Symptoms, Lifestyle and Risk Assessment to be completed for all patients.

More specific assessment then follows.

The screenshot shows the EMIS Web Health Care System Template Runner interface. At the top, the patient information is displayed: **MOUSE, Minnie (Mr)**, Born: 24-Jan-2012 (1y 8m), Gender: Male, NHS No.: Unknown, Usual GP: KHATRI, CP (Dr). The interface is titled "Template Runner" and features a "Pages" list on the left and a main content area on the right.

The "Pages" list includes the following items:

- LTC Review (highlighted in orange)
- Clinical Assessment
- Symptoms
- Bloods and Urine
- Lifestyle
- Risk Assessment
- Vaccinations
- Atrial Fibrillation
- Coronary Heart Disease
- Chronic Kidney Disease
- Diabetes
- Heart Failure
- Hypertension
- Peripheral Artery Disease
- Stroke/TIA
- Asthma
- COPD

The main content area is titled "Long-term conditions reviewed" and contains the following sections:

- LTC reviewed**: A dropdown menu with "No previous entry" next to it.
- Follow up**: A section with a checkbox for "LTC review" and a "Follow Up" date field set to "ct-2013" with a calendar icon. Below this is a "Text" input field.

The interface also includes a "Cancel" button at the bottom right and a taskbar at the bottom showing the Windows start button and various application icons.

# Template Format: Refined EMIS Web version Front page

The refined GM-ELIRT provides a more holistic needs-based review divided into sections as shown.

Diseases that require diagnosis type specifying for the QOF, are listed to ensure accurate Read Coding.

Multi-select drop down boxes allow all reviews being carried out at the same appointment to be selected.

JONES, Adam (Mr)      Born: 08-Apr-1967 (46y)    Gender: Male    NHS No.: 560 575 3588    Usual GP: BURNS, Robert (Dr)

**Template Runner**

Pages    «

- Long-term Conditions
- Symptoms
- Clinical Assessment
- Bloods and Urine
- Lifestyle
- Medication
- Comorbid Risk Assessment
- Investigations
- Education
- Social
- Vaccinations
- Under Care and Referral
- Follow up

**Long-term conditions reviewed**

LTC annual reviews    [dropdown]    No previous entry

24-Mar-2014    [calendar icon]

LTC 6 month reviews    [dropdown]    No previous entry

LTC interim follow ups    [dropdown]    No previous entry

**Long-term conditions type**

CKD stage    [dropdown]    No previous entry

Diabetes type    [dropdown]    No previous entry

Heart failure type    [dropdown]    No previous entry

**Exceptions reporting**

Exceptions reporting    [dropdown]    No previous entry

Designed and developed by NIHR CLAHRC GM

**Long-term conditions reviewed**

LTC annual reviews    [dropdown]    No previous entry

LTC 6 month reviews    [dropdown]    No previous entry

LTC interim follow ups    [dropdown]    No previous entry

**Long-term conditions type**

CKD stage    [dropdown]    No previous entry

Diabetes type    [dropdown]    No previous entry

Heart failure type    [dropdown]    No previous entry

**Exceptions reporting**

Exceptions reporting    [dropdown]    No previous entry

A Asthma annual review

B Atrial fibrillation annual review

C Chronic kidney disease annual review

D Chronic obstructive pulmonary disease annual review

E Coronary heart disease annual review

F Dementia annual review

G Depression annual review

H Diabetic annual review

I Heart failure annual review

J Hypertension annual review

# Comorbidity screening

A Symptoms page provides the opportunity to screen for co-morbid disease.

Multi-select boxes allow several symptoms to be selected. The need for free text is reduced.

More specific disease related symptoms can then be assessed.

Template Runner

JONES, Adam (Mr) Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

Pages

- Long-term Conditions
- Symptoms**
- Clinical Assessment
- Bloods and Urine
- Lifestyle
- Medication
- Risk Assessment
- Investigations
- Education
- Social Needs
- Vaccinations
- Referrals and Under Care of
- Follow up

**Comorbidity screening**

Cardiovascular		No previous entry
Cognitive		No previous entry
Endocrine and metabolic		No previous entry
Gastro-intestinal		No previous entry
Musculoskeletal		No previous entry
Neurological		No previous entry
Psychological		No previous entry
Respiratory		No previous entry
Urological		No previous entry
General		No previous entry
Other symptoms		

**Further assessment**

☐ Refer to G.P. Text Reason for referral No previous entry

**Asthma (including RCP 3 questions)**

Night time symptoms		No previous entry
Daytime symptoms		No previous entry
Activities		No previous entry
Exercise		No previous entry
Asthma control test (ACT)		
Asthma Control Test score	125	No previous entry
Asthma control steps		No previous entry

**COPD**

Severity		No previous entry
Sputum		No previous entry
MRC Breathlessness		No previous entry
MRC Breathlessness scale		No previous entry
COPD assessment test (CAT)		
COPD assessment test	140	No previous entry

**Heart Failure**

NYHA classification

Cancel

# Comorbidity screening (2)

Comorbidity screening		
Cardiovascular		No previous entry
Cognitive	A No cardiovascular symptom	No previous entry
Endocrine and metabolic	B Chest pain not present	No previous entry
Gastro-intestinal	C Chest pain	No previous entry
Musculoskeletal	D Chest pain on exertion	No previous entry
Neurological	E Pleuritic pain	No previous entry
Psychological	F Palpitations	No previous entry
Respiratory	G No breathlessness	No previous entry
Urological	H Breathless - mild exertion	No previous entry
General	I Breathless - moderate exertion	No previous entry
Other symptoms/Comments	J Breathless - at rest	No previous entry

Comorbidity screening		
Cardiovascular		No previous entry
Cognitive		No previous entry
Endocrine and metabolic		No previous entry
Gastro-intestinal		No previous entry
Musculoskeletal		No previous entry
Neurological	A Pain in joint - arthralgia	No previous entry
Psychological	B O/E - joint stiffness	No previous entry
Respiratory	C O/E - joint swelling	No previous entry
Urological	D Weakness of joint	No previous entry
General	E [D]Gait abnormality	No previous entry
Other symptoms/Comments	F Worsening balance	No previous entry
	G Number of falls in last year	No previous entry
	H Mobility poor	No previous entry
	I Synovitis NOS	No previous entry
	J Synovitis and tenosynovitis	No previous entry

Example contents of multi-select boxes.

Comorbidity screening		
Cardiovascular		No previous entry
Cognitive		No previous entry
Endocrine and metabolic		No previous entry
Gastro-intestinal		No previous entry
Musculoskeletal		No previous entry
Neurological		No previous entry
Psychological	A No neurodisabling condition detected on examination	No previous entry
Respiratory	B Worsening balance	No previous entry
Urological	C [D]Gait abnormality	No previous entry
General	D Dizziness symptom	No previous entry
Other symptoms/Comments	E [D]Syncope and collapse	No previous entry
	F Number of falls in last year	No previous entry
	G Tremor symptom	No previous entry
	H Short-term memory loss	No previous entry
	I Confusion	No previous entry
	J Poor concentration	No previous entry

Comorbidity screening		
Cardiovascular		No previous entry
Cognitive		No previous entry
Endocrine and metabolic		No previous entry
Gastro-intestinal		No previous entry
Musculoskeletal		No previous entry
Neurological		No previous entry
Psychological		No previous entry
Respiratory		No previous entry
Urological		No previous entry
General	A Urgency	No previous entry
Other symptoms/Comments	B Nocturia	No previous entry
	C Hesitancy	No previous entry
	D Dysuria	No previous entry
	E Stress incontinence	No previous entry
	F Urge incontinence of urine	No previous entry
	G Urge to pass urine again shortly after finishing voiding	No previous entry
	H Terminal dribbling of urine	No previous entry
	I Dribbling of urine	No previous entry

## Comorbidity screening (3)

EMIS Web Health Care System - Manchester Practice 2 - 23459

Template Runner

JONES, Adam (Mr) Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

Pages: Long-term Conditions, Symptoms, Clinical Assessment, Bloods and Urine, Lifestyle, Medication, Risk Assessment, Investigations, Education, Social Needs, Vaccinations, Referrals and Under Care of, Follow up

**Comorbidity screening**

Cardiovascular		No previous entry
Cognitive		No previous entry
Endocrine and metabolic		No previous entry
Gastro-intestinal		No previous entry
Musculoskeletal		No previous entry
Neurological		No previous entry
Psychological		No previous entry
Respiratory		No previous entry
Urological		No previous entry
General		No previous entry
Other symptoms		

**Further assessment**

☐ Refer to G.P. Reason for referral: No previous entry

**Asthma (including RCP 3 questions)**

Night time symptoms		No previous entry
Daytime symptoms		No previous entry
Activities		No previous entry
Exercise		No previous entry
<a href="#">Asthma control test (ACT)</a>		No previous entry
Asthma Control Test score	/25	
Asthma control steps		No previous entry

**COPD**

Severity		No previous entry
Sputum		No previous entry
<a href="#">MRC Breathlessness</a>		No previous entry
MRC Breathlessness scale		No previous entry
<a href="#">COPD assessment test (CAT)</a>		No previous entry
COPD assessment test	/40	No previous entry

**Heart Failure**

[NYHA classification](#)

More specific disease related symptoms can then be assessed.

Questionnaires such as the RCP 3 questions and NYHA are listed to comply with QOF but the ACT and CAT have also been included. These could be completed by patients at home and the results added to the template.



## Clinical Assessment: Generic review indicators:

Additional items have been added such as target BP. Pulse rhythm can be recorded for all patients not only for patients diagnosed with AF.

Generic assessments that are carried out across LTCs are listed first.

Section	Field	Unit	Value	Previous Entry
Generic	BP (systolic/diastolic) reading	mmHg	15-Mar-2013 110/90 mmHg	
	Target systolic BP	mmHg		No previous entry
	Target diastolic BP	mmHg		No previous entry
	Pulse rate	beats		No previous entry
	Pulse oximetry			No previous entry
	Pulse rhythm			No previous entry
	Height	cm		No previous entry
	Weight	kg		No previous entry
	BMI			No previous entry
	BMI assessment			No previous entry
Asthma	Waist	cm		No previous entry
	Peak flow rate	L/min		No previous entry
	Best ever peak flow rate	L/min		No previous entry
	Predicted peak expiratory flow rate			No previous entry
	Exhaled nitric oxide test			No previous entry
	Inhaler technique			No previous entry
	Oral steroids used since last appointment			No previous entry
	Home nebuliser used since last appointment			No previous entry
COPD	Emergency asthma admission since last appointment			No previous entry
	Inhaler technique			No previous entry

# Clinical Assessment: Specific review indicators:

**template runner**

Pages <<

LTC Review

Symptoms

**Clinical Assessment**

Bloods and Urine

Lifestyle

Medication

Risk Assessment

Investigations

Procedures

Education

Vaccinations

Referrals and Under Care of

Follow up

**Generic**

BP (systolic/diastolic) reading  /  mmHg 15-Mar-2013 110/90 mmHg >>

Target systolic BP  mmHg No previous entry

Target diastolic BP  mmHg No previous entry

Pulse rate  beats No previous entry

Pulse oximetry  No previous entry

Pulse rhythm  No previous entry

Height  cm No previous entry

Weight  kg No previous entry

BMI  Calculate No previous entry

BMI assessment  No previous entry

Waist  cm No previous entry

**Asthma**

Peak flow rate  L/min No previous entry

Best ever peak flow rate  L/min No previous entry

Predicted peak expiratory flow rate  Calculate No previous entry

☐ Exhaled nitric oxide test No previous entry

Inhaler technique  No previous entry

Oral steroids used since last appointment  No previous entry

☐ Home nebuliser used since last appointment No previous entry

☐ Emergency asthma admission since last appointment No previous entry

**COPD**

Inhaler technique  No previous entry

☐ Spacer device in use

A more specific assessment of specific diseases then follows in alphabetic order.

Pages <<

Long-term Conditions

Symptoms

**Clinical Assessment**

Bloods and Urine

Lifestyle

Medication

Comorbid Risk Assessment

Investigations

Education

Social

Vaccinations

Under Care and Referral

Follow up

**Spirometry**

FEV1/FVC ratio

Forced vital capacity - FVC  litres

Number of COPD exacerbations in past year  /year

**Diabetes**

☐ Last hypo. attack 24-Mar-2014

Amputation

Observation of injection sites

**Eye Exam**

Current retinopathy screening status

Retinopathy

Cataracts

Partially sighted

**Foot Exam**

Current diabetic foot screening

Touch sensation

Vibration sense

Peripheral pulses

Diabetic foot risk assessment

**Hypertension**

Avg. home systolic  mmHg

Avg. home diastolic  mmHg

Ambulatory systolic  mmHg

Ambulatory diastolic  mmHg

**Peripheral Arterial Disease**

ABPI

**Rheumatoid Arthritis**

**DAS28**

DAS - Disease activity score  /10

DAS score at hospital 24-Mar-2014

Collapsing sections would allow pages to look less busy.

# Clinical Evidence

Last updated 07.10.13

BP Targets according to Patient Group	NICE	Target systolic range	QOF
Hypertension ≥ 80 yrs	<150/90 <sub>1</sub>		≤150/90 <sub>2</sub>
Hypertension ≥ 80 yrs	<140/90 <sub>1</sub>		≤140/90 <sub>2</sub>
CKD stage 3-5	<140/90 <sub>3</sub>	120-139 <sup>3</sup>	≤140/85 <sub>2</sub>
Diabetes Type 1	<135/85 <sub>4</sub>		≤140/80 <sub>2</sub>
Diabetes Type 2	<140/80 <sub>5</sub>		≤140/80 <sub>2</sub>
CKD with microalbuminuria or proteinuria	<130/80 <sub>3</sub>	120-129 <sup>3</sup>	
Diabetes Type 2 with CKD stage 3-5 or Stroke/TIA or Diabetic retinopathy	<130/80 <sub>5</sub>		≤150/80 <sub>2</sub>
Diabetes Type 1 and microalbuminuria or (hyperlipidaemia/hypercholesterolaemia and waist circumference > 94cm (M) >80cm (F))	<130/80 <sup>4</sup>		

Clinical evidence was provided for practice nurses during the pilot via laminated sheets. For SystmOne some were embedded. Ideally clinical guidelines should be embedded into the template to appear as required and updated as new evidence emerges.

Target Resting Pulse Rate Targets according to Patient Group		
	NICE	QOF
Atrial Fibrillation	<90bpm (110 bpm- recent onset) <sup>6</sup>	
Heart Failure (sinus rhythm)	< 70bpm <sup>7</sup>	

Cholesterol Targets according to Patient Group		
	NICE	QOF
CVD	TC<4mmol/l, LDL <2mmol/l <sup>8</sup>	TC ≤5mmol/l <sub>2</sub>
Diabetes	TC<4mmol/l, LDL <2mmol/l <sup>5</sup>	TC ≤5mmol/l <sub>2</sub>

Prescribing recommendations by patient group (Up titrate as appropriate until optimal dose reached)				
LTC	To maintain target BP as single therapy or in combination	To control heart rate as single therapy or in combination	To maintain target cholesterol	To reduce thromboembolic risk as single therapy or in combination
AF		BB , CCB , digoxin <sup>6</sup>		Anticoagulant (or aspirin) for Chads2 score ≥1 <sup>7</sup>
Asthma				Aspirin + or alternative antiplatelet Anticoagulant only if clinically indicated <sup>10</sup>
Coronary Artery Disease	ACEI or ARBs, BB <sup>10</sup>	BB <sup>10</sup> , ivabradine <sup>11</sup>	Statin <sup>10</sup>	
CKD			Statin <sup>3</sup>	
COPD				
Diabetes	ACEI or ARBs if 2 raised ACR readings (>2.5mg/mmol for men, >3.5mg/mmol for women) <sup>3</sup>	BB + ivabradine <sup>10</sup>	Statin <sup>4,5</sup>	
Heart Failure	ACEI or ARBs, BB, diuretic, digoxin For NYHA classifications II-IV add an Aldosterone Antagonist <sup>10</sup>			
Hypertension	ACEI or ARBs, CCB, diuretic, BB <sup>1</sup>			
Peripheral Arterial Disease			Statin <sup>12</sup>	Aspirin or other antiplatelet <sup>12</sup>
Stroke			Statin <sup>13</sup>	Aspirin or alternative anti-platelet. Anticoagulant if AF <sup>13</sup>

Early identification of Co-morbidity		
Comorbid risk	Risk factor	Screening technique
COPD	Smokers/ex smokers >35 without a COPD diagnosis	Consider spirometry <sup>14</sup>
Depression	Signs of depression on questioning or PHQ-9	Refer to GP for bio-psychological history <sup>15</sup>
Hyperthyroidism	New diagnosis of AF	TFTs <sup>7</sup>
Coronary Artery Disease	Diagnosis of HTN, HF, AF, diabetes, PAD, CKD, Stroke	Framingham (except for diabetes) QRISK <sup>2</sup>
Increasing Cardiovascular Risk	Proteinuria in patients with diabetes, CKD	Urine microalbumin, ACR <sup>3</sup>
Familial Hypercholesterolemia	TC >7.5 and LDL >4.9	TC (Total Cholesterol) LDL (Low-density Lipoprotein) <sup>8, 16</sup>

Monitoring exacerbation <sup>14</sup>		
LTC	Indication	Action
COPD	MRC ≥ 3	Closely monitor oxygen saturation
	CAT score, increased by > 5 units since previous assessment indicates a significant exacerbation	Close monitoring
	>2 exacerbations in last year	Refer to breathlessness service / GP review

Monitoring therapy		
LTC	Indication	Action
Atrial fibrillation	Therapeutic range below its 2.0-3.0 target <65% of the time <b>OR</b> INR value of >5.0 more than 2 times within 12 months	Consider NOAC therapy <sup>7</sup>

Nine Key tests that should be carried out for diabetes management <sup>4,5</sup>				
Clinical Assessment	Lifestyle	Bloods	Urine	Further Investigation
BP	Smoking status	HBA1c	Urine microalbumin	Retinal Imaging
Weight		Cholesterol	Serum creatinine	
Foot check				

## References

<sup>1, 3-6, 8, 12-16</sup> National Institute for Health and Care Excellence [1(2011, CG127), 3(2008, CG73), 4(2010, CG15), 5(2010, CG87), 6(2006, CG36), 8(2010, CG67, 12(2012,CG147), 13(2008, CG68), 14(2010,G101), 15(2009, CG90) and 16(2008, CG71)].

<sup>2</sup> Guidance for GMS contract 2013/14. General medical services (GMS) contract quality and outcomes framework (QOF).

<sup>7</sup> ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012: the Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology

<sup>9</sup> ESC Guidelines for the management of atrial fibrillation 2010: the Task Force for the Management of Atrial Fibrillation 2010 of the European Society of Cardiology.

<sup>10</sup> AHA / ACCF Secondary Prevention and Risk Reduction Therapy for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2011 Update: A Guideline From the American Heart Association and American College of Cardiology Foundation.

<sup>11</sup> ESC Guidelines for the management on the management of stable coronary artery disease 2013: the Task Force for the Management of stable coronary artery disease 2013 of the European Society of Cardiology.

# Blood/urine results

Blood and urine results are accessed easily and grouped by type as shown in the example.

The screenshot displays a clinical information system interface with a sidebar on the left and a main content area. The sidebar lists various clinical areas, with 'Bloods and Urine' highlighted. The main content area shows a list of test results, grouped by type. The results are organized into sections: 'Exception reporting', 'Urine', 'Full blood count profile', 'Glycaemic profile', 'Lipid profile', 'Renal profile', 'Liver profile', 'TFTs Thyroid Function Tests', 'Autoimmune Tests', and 'Folate Tests'. Each section contains a table of test results, including test names, values, units, and previous entries.

Test Name	Value	Unit	Previous Entry
Exception reporting			
Blood test declined			No previous entry
Urine dipstick test declined			No previous entry
Blood glucose test declined			No previous entry
Urine			
Urine leucocyte test			No previous entry
Urine nitrite test			No previous entry
Urine protein test			No previous entry
Urine blood test			No previous entry
Urine ketone test			No previous entry
Urine glucose test			No previous entry
Full blood count profile			
Total white cell count		10 <sup>9</sup> cells...	No previous entry
Haemoglobin estimation		g/L	No previous entry
Mean corpuscular volume (MCV)		fL	No previous entry
Platelet count		10 <sup>9</sup> cells...	No previous entry
Neutrophil count		10 <sup>9</sup> cells...	No previous entry
Lymphocyte count		10 <sup>9</sup> cells...	No previous entry
Glycaemic profile			
Self monitoring of blood glucose			No previous entry
Plasma glucose level		mmol/L	No previous entry
Plasma fasting glucose level		mmol/L	No previous entry
Random blood sugar		mmol/L	No previous entry
HbA1c level - DCCT aligned			No previous entry
HbA1c level - IFCC standardised		mmol/mol	No previous entry
Glucometer blood sugar		mmol/L	No previous entry
Lipid profile			
Serum Total Cholesterol		mmol/L	No previous entry
Serum HDL		mmol/L	No previous entry
Serum LDL		mmol/L	No previous entry
Total cholesterol:HDL ratio			No previous entry
Serum triglycerides		mmol/L	No previous entry
Renal profile			
Serum sodium		mmol/L	No previous entry
Serum potassium		mmol/L	No previous entry
Serum urea level		mmol/L	No previous entry
Serum creatinine		umol/L	No previous entry
eGFR abbreviated MDRD		ml/min	03-Dec-2013 10 ml/min
Albumin / creatinine ratio			No previous entry
Urine microalbumin		mmol/L	No previous entry
Liver profile			
Serum total protein		g/L	No previous entry
Serum albumin		g/L	No previous entry
Serum globulin		g/L	No previous entry
Serum total bilirubin level		umol/L	No previous entry
Serum alkaline phosphatase		IU/L	No previous entry
ALT/SGPT serum level		IU/L	No previous entry
Serum alanine aminotransferase level		IU/L	No previous entry
Serum gamma-glutamyl transferase level		IU/L	No previous entry
TFTs Thyroid Function Tests			
Serum creatinine		umol/L	No previous entry
eGFR abbreviated MDRD		ml/min	No previous entry
Albumin / creatinine ratio			No previous entry
Urine microalbumin		mmol/L	No previous entry
Liver profile			
Serum total protein		g/L	No previous entry
Serum albumin		g/L	No previous entry
Serum globulin		g/L	No previous entry
Serum total bilirubin level		umol/L	No previous entry
Serum alkaline phosphatase		IU/L	No previous entry
ALT/SGPT serum level		IU/L	No previous entry
Serum alanine aminotransferase level		IU/L	No previous entry
Serum gamma-glutamyl transferase level		IU/L	No previous entry
TFTs Thyroid Function Tests			
Serum T3 level		pmol/L	No previous entry
Serum T4 level		pmol/L	No previous entry
Serum TSH level		mU/L	No previous entry
Autoimmune Tests			
Erythrocyte sedimentation rate		mm/h	No previous entry
Plasma C reactive protein		mg/L	No previous entry
Rheumatoid factor		U/ml	No previous entry
Anti-cyclic citrullinated peptide antibody level		U/ml	No previous entry
Folate Tests			
Serum folate		ng/L	No previous entry
Serum vitamin B12		ng/L	No previous entry

## Generic and specific review indicators: Lifestyle

The screenshot displays the EMIS Web Health Care System Template Runner for a patient named Adam Jones (Mr), born 08-Apr-1967 (46y), male, with NHS No. 560 575 3588 and Usual GP: BURNS, Robert (Dr). The Template Runner shows various sections: Long-term Conditions, Symptoms, Clinical Assessment, Bloods and Urine, Lifestyle (highlighted), Medication, Risk Assessment, Investigations, Education, Social Needs, Vaccinations, Referrals and Under Care of, and Follow up.

The Lifestyle section is expanded, showing the following indicators:

- Smoking:** Smoking status (dropdown), Smoking cessation advice (dropdown), Pack years calculator (link), Pack years (text field), Nicotine replacement therapy (checkbox), Blood carbon monoxide level (checkbox).
- Alcohol consumption:** Alcohol consumption (text field), Patient advised about alcohol (checkbox), Link to AUDIT-C (link), AUDIT-C questionnaire (text field).
- Exercise:** Brief intervention for physical activity (dropdown), GPPAQ questionnaire (dropdown), GPPAQ (text field).
- Diet:** Diet (dropdown).

Links to questionnaires or clinical calculators (that are not embedded in the system) are easily accessed, such as the Pack years calculator.

Lifestyle indicators that would appear on all single disease templates are situated on one page.

Multi-select drop down box for diet options.

The diet options are listed as follows:

- A Weight reducing diet
- B Low cholesterol diet
- C [V]Dietary surveillance and counselling
- D Patient advised re diet
- E Pt advised re wt reducing diet
- F Patient advised re low cholesterol diet
- G Pt advised re low salt diet
- H Advice about fluid intake
- I Weight monitoring
- J Patient advised re exercise

# Medication

JONES, Adam (Mr) Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

**Template Runner**

Pages: Long-term Conditions, Symptoms, Clinical Assessment, Bloods and Urine, Lifestyle, **Medication**, Risk Assessment, Investigations, Education, Social Needs, Vaccinations, Referrals and Under Care of, Follow up

**Generic**

☐ Medication review Text No previous entry

Adherence No previous entry

**Asthma**

☐ Asthma medication review No previous entry

Medication No previous entry

☐ Spacer device in use No previous entry

☐ Home nebuliser No previous entry

**Atrial Fibrillation**

Beta-blockers No previous entry

Calcium-channel blockers No previous entry

☐ Digoxin prophylaxis No previous entry

Anticoagulant No previous entry

Aspirin No previous entry

INR No previous entry

INR % TTR % No previous entry

**Chronic Kidney Disease**

ACEI or ARBs No previous entry

Statin No previous entry

**COPD**

☐ COPD medication review No previous entry

Medication No previous entry

☐ Home nebuliser No previous entry

☐ Oxygenator therapy No previous entry

**Coronary Artery Disease**

☐ CAD medication review No previous entry

ACEI or ARBs No previous entry

Beta-blockers No previous entry

Medications are listed by disease according to evidence based guidelines such as NICE and as recommended in the QOF. Ideally these should be streamlined by organising according to drug classification with associated embedded clinical guidance.

**Diabetes**

Insulin passport No previous entry

☐ Medication review No previous entry

ACEI or ARBs No previous entry

Statin No previous entry

**Heart Failure**

ACEI or ARBs No previous entry

Beta-blockers No previous entry

Diuretic No previous entry

☐ Digoxin prophylaxis No previous entry

Aldosterone antagonist No previous entry

Ivabradine No previous entry

**Hypertension**

☐ Hypertension medication review No previous entry

ACEI or ARBs No previous entry

Beta-blockers No previous entry

Calcium-channel blocker No previous entry

Diuretic No previous entry

**Osteoporosis**

☐ Bone sparing drug treatment offered for osteoporosis - ESA No previous entry

**Peripheral Arterial Disease**

Statin No previous entry

Antiplatelet No previous entry

☐ Long term dual antiplatelet drug therapy indicated No previous entry

**Rheumatoid Arthritis**

☐ Disease modifying antirheumatic drug therapy initiated No previous entry

DMARDs No previous entry

**Stroke/TIA**

Statin No previous entry

Multi-select drop down box showing prescribing and exception reporting options.

**Atrial Fibrillation**

Beta-blockers

Calcium-channel blockers

☐ Digoxin prophylaxis

Anticoagulant

Aspirin

INR

INR % TTR %

A Beta blocker prophylaxis  
B Patient on maximal tolerated beta blocker therapy  
C Beta blocker indicated  
D Beta blocker not indicated  
E Beta blocker contraindicated  
F Beta blocker not tolerated  
G Beta blocker therapy refused

# Risk Assessment

**JONES, Adam (Mr)** Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

**Template Runner**

Pages «

- Long-term Conditions
- Symptoms
- Clinical Assessment
- Bloods and Urine
- Lifestyle
- Medication
- Comorbid Risk Assessment**
- Investigations
- Education
- Social
- Vaccinations
- Referrals and Under Care of
- Follow up

**Cognitive function screening**

[GPCOG](#)

GPCOG  /15 No previous entry

[6CIT](#)

Six item cognitive impairment test  /28 No previous entry

**Coronary Artery Disease screening**

[Framingham risk score](#)

Framingham Score  % over 10 years  No previous entry

[QRISK](#)

QRISK 10 y CVD Risk  % over 10 years  [View](#) No previous entry

QRISK2 exceptions reporting  No previous entry

**Depression and anxiety screening**

[PHQ-9 questionnaire](#)

PHQ-9 score  /27 No previous entry

[Generalised anxiety disorder assessment \(GAD-7\)](#)

GAD-7 score  /21 No previous entry

Biopsychosocial assessment  No previous entry

**Diabetes screening**

[QDiabetes risk score](#)

QDiabetes risk score  % No previous entry

☐ High risk of diabetes mellitus No previous entry

**Falls risk screening**

[FRAT assessment](#)

☐ Falls risk assessment tool (FRAT) No previous entry

Number of falls in last year  /year No previous entry

**Fracture risk screening**

[FRAX assessment](#)

WHO FRAX 10 yr osteoporotic fracture probability score with BMD  % No previous entry

Text

**Stroke (Complete for patients with a diagnosis of AF)**

[CHADS2 risk score](#)

CHADS2 Risk Score   No previous entry

[CHA2DS2 - VASc risk score](#)

CHA2DS2-VASc Risk Score   No previous entry

The Risk Assessment page provides another opportunity to screen for comorbid risk using evidence based screening tools.



# Investigations

Investigations listed are based on QOF requirements with a few additions such as ejection fraction for heart failure but this can be expanded for a more detailed record.

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**Template Runner**

Pages

- Long-term Conditions
- Symptoms
- Clinical Assessment
- Bloods and Urine
- Lifestyle
- Medication
- Investigations**
- Education
- Social
- Vaccinations
- Under Care and Referral
- Follow up

**Generic**

☐ ECG 24-Mar-2014 No previous entry

☐ Standard chest X-ray 24-Mar-2014 No previous entry

**Coronary Artery Disease**

☐ Cardiovascular angiography 24-Mar-2014 No previous entry

**Diabetes**

Diabetic retinopathy screening No previous entry

**Heart Failure**

BNP ng/L No previous entry

Echo No previous entry

Ejection fraction % No previous entry

**Osteoporosis**

DXA scan No previous entry

A Dual energy X-ray photon absorptiometry  
B DXA scan declined  
C DXA scan contraindicated  
D DXA scan not indicated

# Education

**Template Runner**

Pages « **Education**

Long-term Conditions  
Symptoms  
Clinical Assessment  
Bloods and Urine  
Lifestyle  
Medication  
Comorbid Risk Assessment  
Investigations  
**Education**  
Social  
Vaccinations  
Under Care and Referral  
Follow up

**Education**

Asthma  
☐ Asthma rescue pack given *Text* Asthma rescue pack given  
☐ Asthma rescue pack not suitable *Text* Asthma rescue pack not suitable  
 Atrial Fibrillation  
 COPD  
 Diabetes  
 Heart Failure

No previous entry  
No previous entry  
No previous entry  
No previous entry  
No previous entry  
No previous entry

**Education**

Asthma  
☐ Asthma rescue pack given *Text* Asthma rescue pack given  
☐ Asthma rescue pack not suitable *Text* Asthma rescue pack not suitable  
 Atrial Fibrillation  
 COPD  
 Diabetes  
 Heart Failure

A Issue of chronic obstructive pulmonary disease rescue pack  
 B Chronic obstructive pulmonary disease rescue pack not indicated  
 C Education for self-management of respiratory health

**Education**

Asthma  
☐ Asthma rescue pack given *Text* Asthma rescue pack given  
☐ Asthma rescue pack not suitable *Text* Asthma rescue pack not suitable  
 Atrial Fibrillation  
 COPD  
 Diabetes  
 Heart Failure

A Patient offered diabetes structured education programme  
 B Diabetes structured education programme declined  
 C Diabetes structured education programme not available  
 D Pt advised re diabetic diet

Education items listed are also based on QOF requirements but this can be expanded for a more detailed record. This could include self care initiatives.

# Social

**Social needs**

Needs assessed: [Dropdown]

Needs identified: [Dropdown]

Comments: [Text Area]

Options for Needs identified:

- A. Has social needs
- B. Has no social needs
- C. [RFC] Social needs assessment
- D. Carer needs assessed
- E. [RFC] Carer needs assessment

**Template Runner**

Patient: JONES, Adam (Mr) Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

Pages: Long-term Conditions, Summary, Clinical Assessment, Bloods and Urine, Lifestyle, Medication, Comorbid Risk Assessment, Investigations, Education, **Social**, Vaccinations, Under Care and Referral, Follow up

**Social needs**

Needs assessed: [Dropdown]

Needs identified: [Dropdown]

Comments: [Text Area]

Options for Needs identified:

- A. Needs walking aid in home
- B. Needs help on stairs
- C. Difficulty with bathing
- D. Needs help with dressing
- E. Needs help in toilet
- F. Needs help with feeding
- G. Needs help with cooking
- H. Needs help with housework
- I. Needs assistance with shopping
- J. Needs help managing own financial affairs

Social needs can be identified, and appropriate referrals made. The assessment of social needs is not a feature of the currently used single disease templates. Options are limited due to available Read Codes but further work could be carried out to expand this section.

# Vaccinations

The screenshot shows the 'Template Runner' application. On the left is a sidebar with a list of categories: Long-term Conditions, Symptoms, Clinical Assessment, Bloods and Urine, Lifestyle, Medication, Comorbid Risk Assessment, Investigations, Education, Social, Vaccinations (highlighted in orange), Under Care and Referral, and Follow up. The main area is titled 'Vaccinations' and contains three rows of data:

Vaccine Type	Consent	Status
Shingles	<input type="checkbox"/> Consent given for seasonal influenza vaccination	No previous entry
Seasonal influenza	<input type="checkbox"/> Consent given for pneumococcal vaccine	No previous entry
Pneumococcal		No previous entry

An orange arrow points from a callout box to the dropdown menus for each vaccine type.

Vaccinations required for patients with LTCs are listed and can be checked at the review.

# Under Care / Referral

**Template Runner**

Pages << **Under care of**

Long-term Conditions  
Symptoms  
Clinical Assessment  
Bloods and Urine  
Lifestyle  
Medication  
Comorbid Risk Assessment  
Investigations  
Education  
Social  
Vaccinations  
**Under Care and Referral**  
Follow up

**Under care of**

Cardiovascular		No previous entry
Diabetes		No previous entry
Rehabilitation		No previous entry
Respiratory		No previous entry
Rheumatoid Arthritis	A Under care of respiratory physician B Under care of community respiratory team C Pulmonary rehabilitation programme commenced	No previous entry
Social		No previous entry

**Referrals**

Cardiovascular		No previous entry
Diabetes		No previous entry
Rehabilitation		No previous entry
Respiratory		No previous entry
Rheumatoid Arthritis		No previous entry
Social		No previous entry

**Lifestyle**

Smoking cessation		No previous entry
Alcohol advice		No previous entry
Health trainer		No previous entry
Weight management		No previous entry
Dietician		No previous entry

**Referrals**

Cardiovascular		
Diabetes		
Rehabilitation	Referral to cardiac rehabilitation programme Referral to cardiac rehabilitation nurse Referral to cardiothoracic surgeon Referred for peripheral artery disease assessment Referred to vascular surgeon Referral to stroke clinic Referral to health trainer Referred for exercise programme Home exercise programme J Refer to weight management programme	
Respiratory		
Rheumatoid Arthritis		
Social		

**Lifestyle**

Smoking cessation		
Alcohol advice		
Health trainer		
Weight management		
Dietician		

**Referrals**

Cardiovascular		
Diabetes		
Rehabilitation	A Referral to diabetologist B Referral to diabetes nurse C Refer to podiatry D Referral to diabetes structured education programme E Diabetes structured education programme declined F Refer to dietician G Under care of retinal screener	
Respiratory		
Rheumatoid Arthritis		
Social		

**Lifestyle**

Smoking cessation		
Alcohol advice		
Health trainer		
Weight management		
Dietician		

Other health and social care professionals involved in the patient's care can be identified prior to making appropriate referrals. Having all referral information on one screen rather than within individual disease templates helps to clarify overall need.

# Follow-up

EMIS Web Health Care System - Manchester Practice 2 - 23459

Template Runner

JONES, Adam (Mr) Born: 08-Apr-1967 (46y) Gender: Male NHS No.: 560 575 3588 Usual GP: BURNS, Robert (Dr)

Template Runner

Pages

- Long-term Conditions
- Symptoms
- Clinical Assessment
- Bloods and Urine
- Lifestyle
- Medication
- Comorbid Risk Assessment
- Investigations
- Education
- Social
- Vaccinations
- Referrals and Under Care of
- Follow up**

**LTC annual review**

<input type="checkbox"/> Asthma annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Atrial fibrillation annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Chronic kidney disease annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Coronary artery disease annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> COPD annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Dementia annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Depression annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Diabetic annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Heart failure annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Hypertension annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Hypothyroidism annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Peripheral arterial disease annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Rheumatoid arthritis annual review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Stroke/CVA annual review	Follow Up	17-Mar-2014	No previous entry

**LTC 6 month review**

<input type="checkbox"/> COPD 6 monthly review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Diabetic 6 month review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Heart failure 6 month review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Hypertension six month review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Stroke 6 month review	Follow Up	17-Mar-2014	No previous entry

**LTC interim follow-ups**

<input type="checkbox"/> Asthma follow-up	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Date of next anticoagulant clinic appointment	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Depression interim review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Diabetic dietary review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Diabetic dietary review declined			No previous entry
<input type="checkbox"/> Diabetic erectile dysfunction review	Follow Up	17-Mar-2014	No previous entry
<input type="checkbox"/> Disability assessment - mental	Follow Up	17-Mar-2014	No previous entry

Cancel

All follow-up and future review appointments are listed on one page which may assist in simplifying recall processes.

## Potential CCG/Practice/Patient Benefits

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- Assists in standardising the review process across a Clinical Commissioning Group (CCG).
- Can be used for monitoring of the review process and clinical outcomes.
- Provides a more efficient review process for GP practices by reducing the number of review appointments for patients with multimorbidity and the number of unscheduled appointments if all needs are addressed at one appointment.
- Reduces the repetition of questions, advice and clinical assessment if LTCs are reviewed at one appointment.
- Comorbid risks may be identified early to allow for early intervention.
- Existing comorbidity that could be missed at single disease reviews may be identified through an integrated review.
- Reviewing the needs of patients with multimorbidity holistically may reduce the risk of unplanned urgent care and hospital admission.
- Evidence based guidelines may assist less experienced practice nurses to expand their clinical skills.
- Less review appointments for patients with multimorbidity.
- Less need for unscheduled visits for patients if comorbidity is addressed at review appointments.
- Patients are provided with an integrated review and management plan for all of their LTCs at the same time.

For further information regarding clinical content and design contact:

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