

## Chronic disease care plans & Clinical templates

At the practice I also created 50 robust clinical templates that integrate best clinical management (NICE) to the daily consultation and clinical records. This helped reduced variations of care between clinicians and helped improve safety netting. We expanded the templates to include 7 chronic disease care plans that can be shared with patients electronically and with the hospital.

The East of Haringey have one of the highest AE admissions and attendances often attributed to poor understanding of their clinical conditions due to language barriers. Also research has shown that almost 30% of emergency admissions and readmissions are related to people aged over 75. They often suffer with chronic diseases; have multi-morbidity and polypharmacy that increases their risk of admission. We felt digital care plans that can be created instantly with the patient could help with this.

**Diabetes care plan**

**Your Diabetic Care Plan**

**Name:** MOUSE, Minnie (Miss)  
**Date of birth:** 01-Jan-1980  
**Named GP:** Dr M Aloujeh  
**Registered practice:** West Green Surgery (15923)  
**Last diabetic review:** 10-Feb-2015

**Your Summary**

**Your last HbA1c:** 64 mmol/mol  
**Your last BP:** 154/80 mmHg  
**Your last BMI:** 27.3 kg/m2  
**Your last Urine test:** 2

**Smoking status:** Cigarette smoker 10  
**Annual flu jab:** 10-Dec-2014

**Before your next Yearly Review**

- Please complete your blood and urine test prior to seeing the doctor or nurse
- Try and take your diabetic medication regularly and keep to your diet plan
- Have your annual flu jab in winter
- Attend the hospital for your yearly back of the eye (retinal) check-up
- Your goal for this year is: Diabetes: My goals are to try and bring my sugar levels down but doing more exercise

**What is Type 2 Diabetes?**  
 Diabetes is a condition that affects the body's ability to control sugar levels. Your sugar levels are controlled by a hormone or chemical messenger called insulin. Unfortunately, your body is not responding to the insulin as well as it used to. As a result the sugar levels in your blood are consistently high. This can cause symptoms such as thirst, weight loss and passing urine more often.

**Why is Diabetes so important?**  
 Over time poorly controlled sugar levels can damage the blood vessels in your body. It can damage the vessels at the back of your eye and affect your vision as well as causing feet problems from poor circulation. It can also block the arteries in your heart, putting you at risk of having chest pain, heart attacks or a stroke. Other problems include kidney damage, nerve damage and impotence. In Haringey, people with diabetes aged 20-79 are twice as likely to die compared to people of a similar age group without diabetes. In Haringey, if people did not have diabetes there would have been 14.1% fewer deaths between the ages of 20 and 79 years.

**What is HbA1c?**  
 HbA1c is a blood test that allows your clinician to get an overall impression of how well controlled your diabetes is. It informs us of your average blood sugar levels over the last 8-12 weeks.

Your last HbA1c was done on the 22-Oct-2014 and was 64 mmol/mol.  
 Your previous HbA1c are: 04-May-2012 : 90 mmol/mol, 04-May-2012 : 67 mmol/mol

For people with diabetes, this is important as the higher the HbA1c, the greater the risk of developing diabetes-related complications. Miss Mouse, your target HbA1c set by your healthcare professional is 62 mmol/mol.

Diabetic control	Excellent	Good	Poor
HbA1c score	20-33	34-47	48-130

Improving your HbA1c by 10mmol/mol can cut the risk of blood vessel damage affecting your eyes, feet and kidneys by 57%, deaths related to diabetes by 23% and the chance of a heart attack by 24%.

**Blood pressure**  
 Blood pressure is the pressure in your bloods or arteries. It is important that diabetics keep their blood pressure under control. This is because they are at increased risk of complications such as developing heart disease or having a stroke.

Your last BP reading was done on the 26-Mar-2015 and was 154/80 mmHg. Miss Mouse, your target blood pressure set by your clinician is 130 / 80.

**Treating your high blood pressure**  
 If we can control your blood pressure to your target level, this can reduce the risk of dying from complications such as heart attacks and strokes by up to 35%.

**How do we treat high blood pressure?**  
 Lifestyle: By doing some small changes to your lifestyle we can bring down your blood pressure. These include losing a few kilograms of weight if you are overweight. We suggest doing any physical activity, if possible, up to 30 minutes five times a week. This can simply be a brisk walk through the park, regular cycling to work or

**Callout boxes:**

- Detailed explanation of what diabetes is without medical jargon in language patient understands
- Autopopulates patient's previous results with explanation of how to interpret HbA1c levels, blood pressure measurements as well as urine results
- Agreed targets for BP and HbA1c are documented for the patient to reflect upon and aim for
- Lifestyle advice given in how to improve blood pressure and diabetes and reduce other risk factor to ischaemic heart disease given
- Clear colourful personalised diabetic care plan with a summary of the patient's health statistics and agreed goals
- Simple instructions offered for the patient to perform prior to their next review

The digital care-plans created improved patient understanding as they were written in simplified language for patients to understand. They were also translated into languages that were prevalent in the most deprived part of the borough (Turkish & Somali).

They aimed to improve concordance of medication and healthy lifestyle. They also explained potential complications of their long-term-condition and better informed the patient what to do in an emergency. All clinical information recorded can be easily shared electronically with other local community services as well as the patient themselves.

# Diabetes co-morbidities

**Your Diabetic Care Plan**

attending swimming classes. It is also important to have a low salt intake so be careful when adding salt to your cooking and also check the back of pre-packed meals for their salt content. We recommend a maximum of only 6 grams of salt per day.

**Alcohol:** Avoid drinking too much alcohol as this can also increase your blood pressure. Men should drink no more than 3 units per day whilst women, no more than 2 units a day. 1 unit of alcohol is about 1/2 a pint of beer or 2/3 of a glass of wine. Your alcohol status is: Alcohol consumption: 1 U/week

**Medication:** Some people may need more than one medication to bring their blood pressure down to their target level. Which medicine to use will depend on your age, ethnicity, possible side effects as well as other health problems you may have such as kidney disease.

**Cholesterol**

Cholesterol is the fat (lipid) that is found within your blood. Too much cholesterol is serious in diabetes as it is linked to an increased risk of having a stroke or heart attack.

There are different types of cholesterol such as Low Density Lipoprotein (LDL) and High Density Lipoprotein (HDL). LDL is often called 'bad cholesterol' as it is found to build up and narrow your arteries (Ar) causing heart disease. HDL, on the other hand, is often dubbed 'good cholesterol' because it helps remove bad cholesterol. The total cholesterol is calculated by combining the different types of fat into one number. In people with diabetes, bringing your cholesterol down is important as it can help reduce the risk of a heart attack or stroke.

Your last cholesterol check was done on the 12-Jun-2013 and showed:

Total cholesterol: 3.9 mmol/l  
LDL: 2.3 mmol/l  
HDL: 1.3 mmol/l

Control	Excellent	Stable	Less stable	Poor							
Total Cholesterol	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8

Your target cholesterol level

Kidis Mode, the target set by your healthcare professional for your total cholesterol is 4 mmol/L. Ideally, someone with diabetes should aim for a total cholesterol of <4 mmol/l and LDL levels of <2mmol/l.

**How do we treat high cholesterol?**

**Avoid saturated fats:** Aim to cut down in saturated fats which include meat pies, sausages and fatty cuts of meat, butter, ghee, lard, cream, hard cheese, cakes and biscuits.



**Eat healthy diet**

- You should eat lean meat such as poultry or chicken. Try microwaving, steaming, poaching, boiling or grilling instead of roasting or frying. If you do fry, consider using vegetable oil such as sunflower or olive oil

Detailed advice given in controlling diabetes as well as other co-morbidities such as raised BP and cholesterol

Explanation of comorbidities such as cholesterol with personalised patient data with clear gradient severity charts

Detailed advice in how to control their cholesterol levels with visual pictures to aid education and compliance

The care plans would auto-populated the patient's most up-to-date clinical records (medical problems, allergies, blood tests, BMI, smoking status) providing a live record. Since this is automated, this would significantly save health professional's time from writing out such information and reduce risk of errors.

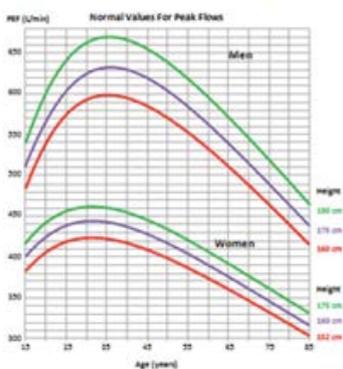
The care plans also included a section that allowed personalised goal setting. It was used to outline the patient's agreed goals for that year of care and establish how important it is for the patient to achieve them. The final element of the care plan included a summary of the agreed steps with the health clinician during their consultation.

# Asthma action plan peak flows

**Your Asthma Action Plan**

In symptomatic asthma, the peak flow may be worse than those who are of the same age, sex and weight without asthma. This is because the tightened airways in asthmatics will reduce the amount of air that can escape from the lungs. In order to monitor your asthma, your clinician will compare your peak flow to the previous ones or against the best result you have been able to perform in the past.

Your last PEFR (peak flow) was done on the 11-Mar-2015 and was 300 L/min  
Your best PEFR was done on the 23-Feb-2015 and was 500 L/min  
Your expected PEFR compared with others is 456 L/min (height: 175 cm)



**What may trigger your asthma?**

Asthma symptoms may worsen from time to time for no apparent reason. However, in some people certain things or situations may trigger an attack. Asthmatics may get worse when they catch a cold, flu or a chest infection. In some, doing simple exercises may cause you to cough. Stress and anger may also worsen asthma.

**What can be done to help Asthmatics?**

There are a number of things that you can do to help improve your asthma and there are medications and things that we can give that can help as well.

**Things you can do**

Computer generated patient specific data about their last, best and expected peak flow. Allows patient to be fully informed about their health

Charts to permit patients to calculate their own expected peak flow if necessary

# Asthma action plan red zone

Your Asthma Action Plan

**RED Zone**

**ALERT:**  
 Recognising an emergency asthma attack

- If you having significant difficulty in breathing
- You are struggling to complete sentences or walk from the shortness of breath
- Your symptoms are worsening quickly and you are feeling frightened
- Your reliever inhalers are not helping or improving your symptoms
- Your peak flow is less than 250 L/min

**Action:**

- Take your reliever (salbutamol) and use 1 puff via a spacer every 5 minutes until the symptoms improve
- If your symptoms are not improving or worsening go to hospital or call 999 for an ambulance
- Remain sitting upright and calm.

**After an emergency asthma attack**

- Make an appointment with your asthma nurse or your GP within 48 hours of your attack
- You may need a review in 1-2 weeks after starting your treatment

**Do not ignore worsening symptoms**

- Asthma attacks are the result of gradual worsening of symptoms over a few days that you may not have noticed

Clear colourful action plan indicating red zone

Clear instructions informing patient regarding red flags symptoms and personalised peak flow for 50% limit of patient's best

Clear instructions for each action plan i.e. when to escalate to the next action plan, or when to seek medical advice

They also helped educate appropriate health seeking behaviour and awareness of red flag symptoms as it included emergency care-plan and instructions of what to look out for. We feel this has led to reduced A&E attendances, secondary care admissions, medication wastage and improved patient satisfaction.

# Doctor's computer template BTS guidelines

Active V. MURIEL, Maura (Miss)      Date: 01 Jun 1988 (35y)      Gender: Female      CHI No: 14348      Local GP: AMURIEL, M N A (Dr)

**NICE Asthma action (core) plan**

Pages: **Severity of Asthma**

Asthma	Mild/intermittent	Normal speech	PEFR > 20%	RR < 25 /min	Pulse < 100 bpm
Smoking & time	Severe	Cannot complete sentences	PEFR 10-20%	RR > 25 /min	Pulse > 100 bpm
Asthma medication	Life threatening	Silent chest	PEFR < 10%	O2 sat < 92%	Cyanosis or feeble respiratory effort
Diagnosing Asthma		Bradycardia	dysrhythmias	hypotension	exhaustion      confusion or coma

**BTS Management**

**Management of adult asthma**

**Step up/down management of chronic asthma**

**Step 1: mild, intermittent asthma**  
 e.g. salbutamol 100mg PRN  
 Prescribe an inhaled short-acting beta2 agonist as a short-term reliever

Consider moving to next step if using >1 puff/4, using reliever or symptomatic 1x/week, waking > once a week (nocturnal asthma)

**Step 2: introduction of regular preventer therapy**  
 e.g. Ciclesonil 300mcg 1 puff bid  
 Add inhaled corticosteroids such as Beclomethasone 100-400mcg. Start at 400mcg a day

**Step 3: add-on therapy**  
 e.g. Fexofenadine 120mg 1 puff bid  
 Add inhaled Long Acting B2 Agonist (LABA) - Salmeterol  
 GOOD if GOOD response corti LABA  
 PARTIAL if PARTIAL response increase steroid to 800mcg e.g. Ciclesonil 300mcg 2 puff bid  
 NO if NO response stop and increase steroid to 800mcg/d  
 STILL NOT if control still inadequate - trial other drug - Leukotriene Receptor antagonist or theophylline M/R  
 e.g. Montelukast 10mg od / Uniphyllin Continus 200mcg bid (up to 800mg bid) + 3 inhalers

**Step 4: poor control on moderate dose of inhaled steroid plus add-on therapy**  
 e.g. Ciclesonil 200mcg 2puff bid  
 Increase Steroid inhaled dose up to 2000 mcg/d. Consider adding 4th drug, i.e. Leukotriene receptor antagonist or theophylline, b2 agonist tablet

**Step 5: continuous or frequent use of oral steroids**  
 e.g. Prednisolone tablets and Ciclesonil 200mcg 2puff bid  
 Daily steroid tablet in lowest dose for adequate control. Maintain high dose of inhaled steroid at 2000mcg/d. Refer to speciality

Consider offering spacer/chamber if using LABA + ICS to improve administration of meds into lungs

Latest Contacts  
 Clinical Practitioner | AMURIEL, Maura (Dr) | West Green Surgery

Easily accessible tabs for doctors to access the latest NICE and BTS guidance on how to diagnose Asthma and manage the condition

Guidance simplified to be in line with local CCG pharmacy guidelines.

We also developed corresponding EMIS web templates that incorporated local management pathways for gold standard diagnoses and management as well as contact details for services that

might be useful such as social services numbers, community matrons as well as district nurse phone numbers. This helped to collate all the relevant information available in one neat place for all health professionals working at the surgery to access.

Each Clinical template included information around; how to make the clinical diagnosis according to national guidance [NICE, BTS, SIGN], evidence based management strategies according to local and national guidance, treatment recommendations based upon local CCG pharmacy formularies and relevant local referral pathways and contact details. This permitted standardisation of care between clinicians with management, diagnosing and referring of patients, resulting in better outcomes for patients

We carried out early analysis at our surgery of the diabetic care-plan that showed that when 31 patients had a detailed consultation with the care plans identifying personal goals and agreements of shared outcomes, there was a reduction of their Hba1c by 1.563mmol/mol post intervention (from 57.375 to 55.812).

There was no cost involved in making the templates in English and minimal costs in translating them into additional languages. Due to the low costs associated with the project, the care plans can easily be distributed into other practices, federations or at scale across CCGs as well as community based specialist clinics using similar computer systems EMIS (most widely used GP system) or Vision.

The care plans have already been shared with 20 practices in the more deprived region of Haringey where English was not the first language and where the highest AE attendances and admissions from LTC was noted. GPs and health professionals who have been using it have expressed great positivity and now there is plan to share with the rest of Haringey (40+ practices) benefiting 267,000 patients.

It received support from Haringey CCG diabetic lead as well as the Assistant Director of Primary Care Haringey CCG

*'The Diabetes Over 74 Care Plans is a visual template that is easy for both GPs/nurses and patients to understand. It clearly states ideal targets, although these can be changed depending on how tightly their diabetes should be managed. Targets can also change when they have their review or if new medications have been initiated. There is a short section on contact details for secondary/intermediate care which is useful for both the clinician and the patient. Having used the template, I feel that patients get a more personalised management of their diabetes. With clear targets, it may help to motivate patients to understand what their targets are, and to improve their diabetic control.'*

*Dr Daijun Tan, GP, Clinical Lead for Diabetes Haringey CCG*

Supported by Haringey CCG

*'We were very impressed with this innovation and believe that it is a simple and powerful tool for improving patient care in relation to diabetes. It enables people to have a clear and personalised care plan for managing their condition in full colour and is fully integrated into the patient's electronic record. The care plan has been rolled out across practices in the east of the borough and is now therefore being used with patients of 23 practices which means that the impact has been broad. ...'*

*Cassie Williams, Assistant Director of Primary Care, Haringey Clinical Commissioning Group (CCG)*