

**East Surrey CCG, Guildford & Waverley CCG, North West Surrey CCG, Surrey Downs CCG, Surrey Heath CCG, Crawley CCG, Horsham & Mid-Sussex CCG
Evidence review for Surrey & Sussex Area Prescribing Committee**

Medicine and proposed indication	Licensed Namuscla® 167mg capsules (mexiletine) for the off-label use in drug resistant ventricular arrhythmias (VA)
Requested by	Surrey & North West Sussex APC

SUMMARY

Clinical Effectiveness

The 2015 European Society of Cardiology (ESC) Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death states that: with the exception of beta-blockers, currently available antiarrhythmic drugs have not been shown in randomised clinical trials (RCTs) to be effective in the primary management of patients with life-threatening VAs or in the prevention of Sudden Cardiac Death (SCD). Studies with amiodarone have shown positive results, but this is not a consistent finding. As a general rule, anti-arrhythmic agents may be effective as adjunctive therapy in the management of arrhythmia prone patients under specific circumstances.

Anti-arrhythmic drugs have direct effects on cardiac ion channels. Flecainide, propafenone and quinidine have sodium channel blocking effects. In large clinical trials such as CAST and CASH, sodium channel-blocking drugs increased mortality among patients with previous myocardial infarction. Similar trends were seen in earlier trials of mexiletine and disopyramide. In patients treated for sustained ventricular tachycardia (VT), these agents may provoke more frequent, and often more difficult to cardiovert, episodes of sustained VT.

The following two trials were published in the American Journal of Cardiology and Lancet respectively

Mexiletine for control of drug-resistant ventricular tachycardia: clinical and electrophysiologic results in 44 patients.

[Waspe LE](#), [Waxman HL](#), [Buxton AE](#), [Josephson ME](#).

[Am J Cardiol](#). 1983 Apr;51(7):1175-81.

The antiarrhythmic efficacy of mexiletine was evaluated in 44 patients with drug-resistant ventricular tachyarrhythmias. In 33 of these patients, the efficacy of mexiletine was assessed on the basis of the results of programmed ventricular stimulation. Mexiletine did not alter the ventricular effective refractory period, the Q-Tc interval, or the methods of tachyarrhythmia induction and termination during programmed stimulation. The mean cycle length of ventricular tachycardia (VT) increased from 270 +/- 49 to 313 +/- 80 ms in 21 patients in whom VT remained inducible on mexiletine alone (p less than 0.002). Overall, VT remained inducible with methods similar to control (no drugs) inductions in 25 patients receiving mexiletine alone or in combination with a type I agent. VT induction was prevented in only 8 patients, 3 on mexiletine alone and 5 receiving mexiletine combined with another drug. Mexiletine alone (in 2 patients) or with another agent (in 3) suppressed clinical recurrence of VT in an additional 5 of 11 patients who did not undergo electrophysiologic study. These 13 patients were discharged on mexiletine alone (5 patients) or in combination with other drugs (8 patients), and remained arrhythmia-free over a mean follow-up period of 7.7 +/- 4.1 months. Adverse effects occurred in 27 of 44 patients (61%) and were gastrointestinal in 17 and/or neurologic in 22. The drug was discontinued because of adverse effects in 6 patients (14%). Thus, mexiletine has limited efficacy when used alone, but when combined with other drugs it may be useful in up to 30% of patients with drug-resistant ventricular arrhythmias.

Oral mexiletine in high-risk patients after myocardial infarction

DA Chamberlain, DG Julian, DMC Boyle, DE Jewitt - The Lancet, 1980 - Elsevier

In a double-blind trial the antiarrhythmic effect of oral mexiletine (200-250 mg every 8 h) was investigated in 344 patients judged to be at high risk after acute myocardial infarction. The numbers of patients with ventricular ectopic complexes were similar in the mexiletine and placebo groups at each point of analysis. At 1 month fewer patients in the mexiletine group had couplets and multiform ventricular ectopic beats, but at 3 months the difference was not significant. The hourly average number of ventricular ectopic complexes was significantly reduced by mexiletine at both 1 month and 3 months. Potential unwanted effects of therapy, particularly those related to the central nervous system and the gastrointestinal tract, were more common in patients treated with mexiletine than in those on placebo. Side-effects led to 30 withdrawals in the mexiletine group and 6 in the placebo group. There was no evidence that mexiletine caused any important cardiovascular side-effects. 24 patients (13%) in the mexiletine group and 19 (12%) in the placebo group died. Thus mexiletine reduced the prevalence of ventricular arrhythmias in a high-risk group of patients with recent myocardial infarction, but no favourable effect on mortality was observed.

Safety

Mexiletine has a narrow therapeutic ratio; although many of its adverse effects are dose-related and will respond to dosage reduction they may be severe enough to force treatment to be stopped and symptomatic and supportive therapy to be given. Toxicity is common with oral or parenteral loading doses when plasma concentrations are high.

The most common adverse effects involve the gastrointestinal tract and CNS. Effects on the gastrointestinal tract include nausea, vomiting, constipation, and diarrhoea; oesophageal ulceration has also been reported. Effects on the nervous system include tremor, confusion, lightheadedness, dizziness, blurred vision and other visual disturbances, sleep disturbances, and speech difficulties. The most frequent cardiovascular effects are hypotension, sinus bradycardia, heart block and AV dissociation, and atrial fibrillation. As with other antiarrhythmics, mexiletine may exacerbate arrhythmias. Other adverse effects that have been reported include rashes, abnormal liver function tests, thrombocytopenia, positive antinuclear factor titres, and convulsions. The Stevens-Johnson syndrome has been reported rarely.

Patient factors

Manufacturer advises patients and carers should be informed about the presenting symptoms of arrhythmias (e.g. fainting, palpitation, chest pain, shortness of breath, light-headedness, lipothymia, and syncope) and advised to seek immediate medical attention if symptoms develop.

Manufacturer advises patients and carers should be counselled on the effects on driving and performance of skilled tasks—increased risk of fatigue, confusion, and blurred vision.

A patient alert card has been developed to provide advice on patient counselling, cardiac monitoring and reporting of adverse reactions; in order to help minimise the risks of cardiac arrhythmia and severity of adverse reactions in those with hepatic impairment:

<https://www.medicines.org.uk/emc/rmm/1361/Document> (this link needs to be copied and pasted in the browser or see appendix 1)

Cost implications

100 capsules of Namuscla®:

- Cost in Primary Care – Namuscla® is indicated in the July Drug Tariff that it will be a new addition to the August Drug Tariff but with no associated cost stated. Price obtained from Lupin (manufacturer of Namuscla®) - £5000
For a patient taking 1 capsule three times a day would cost around £60,000 annually
- Cost to secondary care – significantly discounted at for 100 capsules. Lupin Pharmaceuticals have advised of the discounted price via letter.

Example costs of mexiletine obtained from different Special manufacturers:
(not all specials manufacturers supply all strengths)

IDIS (Clinigen)

Mexiletine 200mg capsules x 100 £114.48 + VAT currently out of stock and requires a letter of clinical need to purchase due to there being a licensed version available (Namuscla®).

Mexiletine 100mg capsules x 100 £139.61p + VAT currently out of stock

Mexiletine 50mg capsules x 100 £93.79p + VAT in stock

Both of these strengths need a doctor's letter to purchase.

Mawdsleys Unlicensed

Mexiletine 100mg capsules x 100 £137.00p + VAT in stock

Mexiletine 200mg capsules x 100 £138.00p + VAT currently out of stock

Alium Medical Ltd

Mexiletine 50mg capsules x 100 £28.32p + VAT in stock

Mexiletine 100mg capsules x 100 £91.83p + VAT in stock

Both need a doctor's letter to purchase.

Relevant guidance / reviews

There are no guidelines from NICE, SMC or AWMSG on the drug treatment of ventricular arrhythmia. However the ESC published guideline in 2015 for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death:

<http://www.heartrhythmalliance.org/files/files/aa/for-clinicians/2015%20ESC%20Guidelines%20for%20the%20Management%20of%20Patients%20with%20Ventricula.pdf>

Likely place in therapy relative to current treatments

BNF indicates that mexiletine is available as a 'special order' treatment for life-threatening ventricular arrhythmias.

The European Society of Cardiology published the following guideline in 2015 which outline, in Table 5 on p2808, the anti-arrhythmic drugs available for the treatment of ventricular arrhythmias in most European countries:

<http://www.heartrhythmalliance.org/files/files/aa/for-clinicians/2015%20ESC%20Guidelines%20for%20the%20Management%20of%20Patients%20with%20Ventricular.pdf>

Table 5 Anti-arrhythmic drugs available for the treatment of ventricular arrhythmias in most European countries

Anti-arrhythmic drugs (Vaughan Williams class)	Oral dose# (mg/day) ^a	Common or important adverse effects	Indications	Cardiac contra-indications and warnings
Amiodarone (III)	200–400	Pulmonary fibrosis, hypothyroidism and hyperthyroidism, neuropathies, corneal deposits, photosensitivity, skin discolouration, hepatotoxicity, sinus bradycardia, QT prolongation, and occasional TdP.	VT, VF	Conditions and concomitant treatments associated with QT interval prolongation; inherited LQTS; sinus bradycardia (except in cardiac arrest); sinus node disease (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); decompensated HF or cardiomyopathy.
Beta-blocker (II)	Various	Bronchospasm, hypotension, sinus bradycardia, AV block, fatigue, depression, sexual disturbances.	PVC, VT, LQTS, CPVT	Severe sinus bradycardia and sinus node disease (unless a pacemaker is present); AV conduction disturbances (unless a pacemaker is present); acute phase of myocardial infarction (avoid if bradycardia, hypotension, LV failure); decompensated HF; Prinzmetal's angina.
Disopyramide (IA)	250–750	Negative inotrope, QRS prolongation, AV block, pro-arrhythmia (atrial flutter, monomorphic VT, occasional TdP), anticholinergic effects.	VT, PVC	Severe sinus node disease (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); severe intraventricular conduction disturbances; previous myocardial infarction; CAD; HF; reduced LVEF; hypotension.
Flecainide (IC)	200–400	Negative inotrope, QRS widening, AV block, sinus bradycardia, pro-arrhythmia (atrial flutter, monomorphic VT, occasional TdP), increased incidence of death after myocardial infarction.	PVC, VT	Sinus node dysfunction (unless a pacemaker is present); AF/flutter (without the concomitant use of AV-blocking agents); severe AV conduction disturbances (unless a pacemaker is present); severe intraventricular conduction disturbances; previous myocardial infarction; CAD; HF; reduced LVEF; haemodynamically significant valvular heart disease; Brugada syndrome; inherited LQTS (other than LQTS3); concomitant treatments associated with QT-interval prolongation.
Mexiletine (IB)	450–900	Tremor, dysarthria, dizziness, gastrointestinal disturbance, hypotension, sinus bradycardia.	VT, LQTS3	Sinus node dysfunction (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); severe HF; reduced LVEF; inherited LQTS (other than LQTS3); concomitant treatments associated with QT-interval prolongation.
Procainamide (IA)	1000–4000	Rash, myalgia, vasculitis, hypotension, lupus, agranulocytosis, bradycardia, QT prolongation, TdP.	VT	Severe sinus node disease (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); severe intraventricular conduction disturbances; previous myocardial infarction; CAD; HF; reduced LVEF; hypotension; reduced LVEF, Brugada syndrome.
Propafenone (IC)	450–900	Negative inotrope, gastrointestinal disturbance, QRS prolongation, AV block, sinus bradycardia, pro-arrhythmia (atrial flutter, monomorphic VT, occasional TdP).	PVC, VT	Severe sinus bradycardia and sinus node dysfunction (unless a pacemaker is present); AF/flutter (without the concomitant use of AV-blocking agents); severe AV-conduction disturbances (unless a pacemaker is present); severe intraventricular conduction disturbances; previous myocardial infarction; CAD; HF; reduced LVEF; haemodynamically significant valvular heart disease; Brugada syndrome; inherited LQTS (other than LQTS3); concomitant treatments associated with QT interval prolongation.
Quinidine	600–1600	Nausea, diarrhoea, auditory and visual disturbance, confusion, hypotension, thrombocytopenia, haemolytic anaemia, anaphylaxis, QRS and QT prolongation, TdP.	VT, VF, SQTs, Brugada syndrome	Severe sinus node disease (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); severe intraventricular conduction disturbances; previous myocardial infarction; CAD; HF; reduced LVEF; hypotension; inherited Long QT Syndrome; concomitant treatments associated with QT interval prolongation.
Ranolazine (IB)	750–2000	Dizziness, nausea, constipation, hypotension, gastrointestinal disturbance, headache, rash, sinus bradycardia, QT prolongation.	LQTS3 ^b	Severe sinus bradycardia and sinus node disease; severe HF; inherited Long QT Syndrome (other than LQTS3); concomitant treatments associated with QT interval prolongation.

Sotalol (III)	160–320	As for other beta-blockers and TdP.	VT, (ARVC):	Severe sinus bradycardia and sinus node disease (unless a pacemaker is present); AV conduction disturbances (unless a pacemaker is present); severe HF; Prinzmetal's angina; inherited LQTS; concomitant treatments associated with QT interval prolongation.
Verapamil (IV)	120–480	Negative inotrope (especially in patients with reduced LVEF), rash, gastrointestinal disturbance, hypotension, sinus bradycardia, AV block, VT.	LV fascicular tachycardia	Severe sinus bradycardia and sinus node disease (unless a pacemaker is present); severe AV conduction disturbances (unless a pacemaker is present); acute phase of myocardial infarction (avoid if bradycardia, hypotension, left ventricular failure); HF; significantly reduced LVEF; atrial flutter or fibrillation associated with accessory conducting pathways (e.g. WPW syndrome).

AF = atrial fibrillation; ARVC = arrhythmogenic right ventricular cardiomyopathy; AV = atrio-ventricular; CAD = coronary artery disease; CPVT = catecholaminergic polymorphic ventricular tachycardia; HF = heart failure; LQTS3 = long QT syndrome type 3; LQTS = long QT syndrome; LV = left ventricle/ventricular; LVEF = left ventricular ejection fraction; PVC = premature ventricular complex; SQTs = short QT syndrome; TdP = Torsade de Pointes; VF = ventricular fibrillation; VT = ventricular tachycardia; WPW = Wolff–Parkinson–White.

^aAdult drug doses are quoted in this table.

^bRanolazine is only approved for the treatment of chronic stable angina. Note that other doses may apply in special conditions.

^cSotalol has been indicated for ARVC but its use has been questioned.

N.B. Devices such as Implantable Cardioverter Defibrillator (ICDs) are used for the management of ventricular arrhythmia.

The following drugs (from the list above) are listed on the PAD for arrhythmia, with their associate Traffic Light Status (and date of decision):

[Amiodarone - Arrhythmias](#)

Currently amber star (March 2015) but guidance issued by NHS England in June 2019 has provided advice to Clinical Commissioners indicating:

- Advise CCGs that prescribers should not initiate amiodarone in primary care for any new patient.
- Advise CCGs that if, in exceptional circumstances, there is a clinical need for amiodarone to be prescribed, this should be undertaken in a cooperation arrangement with a multi-disciplinary team and/or other healthcare professional.

<https://www.england.nhs.uk/wp-content/uploads/2017/11/items-which-should-not-be-routinely-prescribed-in-pc-ccq-guidance-v2.pdf>

This will be reviewed by the APC in August 2019.

[Atenolol - All](#) - GREEN (May 2017)

[Flecainide acetate - Arrhythmias](#) – BLUE (May 2017)

[Mexiletine - Arrhythmias](#)

Brand name(s) : *Namuscla*.

GWCCG LOCAL RECOMMENDATION – May 2019

It was agreed that mexiletine would be classified as RED on the traffic light system for all indications (licensed and unlicensed). Prescribing should be initiated and continued by a specialist clinician.

For requests received from specialists (from any provider), prescribing should be referred back to the initiating clinician to continue prescribing.

For existing patients currently receiving treatment please contact the Medicines Management Team for further advice.

[Propafenone hydrochloride - Arrhythmias](#)

Amber Star (March 2015)

Sotalol - Arrhythmias

GREEN (May 2017)

Recommendation to APC

It is proposed that the licensed Namuscla® 167mg capsules is used in the management of drug resistant mexiletine for ventricular arrhythmia:

- In new patients
- In existing patients using the licensed product Namuscla® for patients currently receiving 200mg doses of unlicensed mexiletine hydrochloride 200mg (Namuscla® 167mg is equivalent to mexiletine hydrochloride 200mg)
- Given a RED traffic light status for the following reasons:
 - It's use in this indication is off-label
 - Existing patients on "specials" formulations requiring specialist input in transferring to Namuscla®
 - Long-term ongoing specialist monitoring of toxicity
 - Access to substantially discounted price (commercially sensitive)
 - It's potential to precipitate life threatening ventricular tachyarrhythmias (see below)

The 2015 European Society of Cardiology (ESC) Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death indicate that each drug has a significant potential for causing adverse events, including pro-arrhythmia. Many marketed cardiac and non-cardiac drugs induce sinus bradycardia and AV block, some impair His–Purkinje conduction and produce AV or bundle branch block, whereas others prolong ventricular repolarization and the QT interval. **Thus anti-arrhythmic drugs may have the potential to precipitate life threatening ventricular tachyarrhythmias.**

If a RED traffic light status is assigned to Namuscla® 167mg capsules and prescribing transferred back to secondary care, should this also include patients taking lower doses of mexiletine and supplied with "specials" formulations?

Medicine details

Name and brand name	<p>A new licensed formulation of mexiletine (brand name Namuscla®) has been launched in the UK by Lupin Pharmaceuticals. This is licensed for one indication (treating symptoms of myotonia in patients with non-dystrophic myotonic disorders)</p> <p>Mexiletine is already used for ventricular arrhythmias. The new licensed formulation contains 167mg but this is the base only and is equivalent to 200mg of mexiletine hydrochloride as indicated under section 5.1 in the Namusla SPC - <i>(Clinical Study Report refers to 200 mg dose which is the amount of mexiletine hydrochloride (corresponding to 166.62mg mexiletine base).</i></p>
Licensed indication, formulation and usual dosage	<p>Mexiletine can be used for the treatment of ventricular arrhythmias, which is an unlicensed indication. It can be administered orally in a usual loading dose of 400 mg followed by 200 to 300 mg three times daily, starting 2 to 8 hours after the loading dose. The usual</p>

	<p>maintenance dosage is 600 to 900 mg daily in divided doses; doses up to 1.2 g daily may be given.</p> <p>Manufacturer advises capsules should be swallowed whole with water, while in an upright position. If digestive intolerance occurs, capsules should be taken during a meal.</p>
<p>Summary of mechanism of action, and relevant pharmacokinetics</p>	<p>Mexiletine is a class Ib antiarrhythmic with actions similar to those of lidocaine, to which it is structurally related. It does not depress myocardial function. It works by blocking ion channels for sodium ions in muscle cells, inhibiting recovery after repolarization resulting in decreasing myocardial excitability & conduction velocity.</p> <p>Mexiletine is readily and almost completely absorbed from the gastrointestinal tract, with a bioavailability of about 90%, absorption may be delayed in situations where gastric emptying is slowed, such as acute myocardial infarction. It is metabolised in the liver to several metabolites; metabolism may involve cytochrome P450 isoenzymes CYP1A2, CYP2D6, and CYP3A4, and genetic polymorphism in relation to CYP2D6 has been identified.</p> <p>Mexiletine is excreted in the urine, mainly in the form of its metabolites with about 10% excreted unchanged; clearance is increased in acid urine.</p> <p>It is widely distributed throughout the body and is about 50 to 70% bound to plasma proteins. Mexiletine crosses the placenta and is distributed into breast milk. It has an elimination half-life of about 10 hours in healthy subjects but this may be prolonged in patients with heart disease, hepatic impairment, or severe renal impairment. Its therapeutic effect has been correlated with plasma concentrations of 0.5 to 2 micrograms/mL, but the margin between therapeutic and toxic concentrations is narrow, and severe toxicity may occur within this range.</p>
<p>Important drug interactions</p>	<p>Mexiletine undergoes extensive metabolism in the liver particularly by the cytochrome P450 isoenzymes CYP1A2 and CYP2D6, and possibly CYP3A4, and interactions may occur with other drugs metabolised by the same enzymes. Plasma concentrations of mexiletine may be reduced by hepatic enzyme inducers such as phenytoin and rifampicin; increased plasma concentrations may occur with enzyme inhibitors.</p> <p>Absorption of mexiletine may be delayed by drugs that slow gastric emptying such as opioid analgesics and atropine. The rate of absorption may be increased by metoclopramide; the extent of absorption is unaffected.</p> <p>Drugs that acidify or alkalinise the urine enhance or reduce the rate of elimination of mexiletine, respectively.</p> <p>There may be an increased risk of arrhythmias if mexiletine is used with other antiarrhythmics or with arrhythmogenic drugs.</p> <p>Mexiletine has been reported to increase theophylline concentrations.</p>
<p>Monitoring requirements</p>	<p>Manufacturer advises cardiac evaluation before starting treatment, within 48 hours of starting treatment, and during treatment</p> <p>Manufacturer advises monitor electrolytes before starting treatment and during treatment—imbalances should be corrected.</p>
<p>Prescribing</p>	<p>RED – For new patients and transfer of existing patients back to</p>

considerations	acute provider for supply due to providers being able to access the NHS England negotiated price. It could be supplied via the Homecare route.
Other considerations	Use of Namuscla® will be off-label for ventricular arrhythmia, from an MHRA perspective this preferable to using an unlicensed formulation.

Potential patient group (if appropriate to include)	
Brief description of disease	Life threatening ventricular arrhythmias which can lead to sudden cardiac death.
Potential patient numbers per 100,000	Patient numbers being prescribed are very small across the APC geography for VA: GWCCG – 3 patients SDCCG – 1 patient NWSCCG – 0 patients ESCCG – 0 SHCCG - 0 SASH – 1 patient RSCH – 3 patients ASPH records indicate supplies to 3 patients since Jan 2019 (but only 1 patient's supply is still active) ESTH - 3 patients (2 at St Helier and one at Epsom), all are cardiology patients for ventricular arrhythmia.
Outcomes required	Prevention of sudden cardiac death.

Equity / Stakeholder views (if relevant)	
Decisions of local Trusts DTCs and neighbouring APCs	CHMS formulary indicate – specialist only GWCCG & RSCH Joint Formulary - Indication: Arrhythmia in patients who have failed to respond to amiodarone. Licenced preparation is very expensive so all prescription has been brought back into the hospital. Ⓜ RSCH - Prescribing should be initiated and continued by a specialist clinician. For requests received from specialists (from any provider), prescribing should be referred back to the initiating clinician to continue prescribing. For existing patients currently receiving treatment please contact the

	Medicines Management Team for further advice. SASH – Have one patient who they prescribe for.
Recommendations from national / regional decision making groups	There are currently no recommendations nationally e.g NICE, SMC, AWSMG
Stakeholder views	Removed for upload to PAD

Prescribing Data

ITEMS (12 months) at presentation level

Sum of Items	Column Labels				
	CRAWLEY CCG	GUILDFORD AND WAVERLEY CCG	HORSHAM AND MID SUSSEX CCG	SURREY DOWNS CCG	Grand Total
Mexiletine HCl_Cap 100mg		12	7	1	20
Mexiletine HCl_Cap 200mg	1	18	6	2	27
Mexiletine HCl_Cap 50mg	1		17	6	24
Grand Total	2	30	30	9	71

COST (12 months) at - presentation level

Sum of Actual Cost	Column Labels				
	CRAWLEY CCG	GUILDFORD AND WAVERLEY CCG	HORSHAM AND MID SUSSEX CCG	SURREY DOWNS CCG	Grand Total
Mexiletine HCl_Cap 100mg		£3,683	£3,077	£325	£7,086
Mexiletine HCl_Cap 200mg	£130	£6,013	£2,409	£420	£8,971
Mexiletine HCl_Cap 50mg	£130		£7,398	£9,317	£16,846
Grand Total	£260	£9,696	£12,884	£10,063	£32,903

References

1. ESC 2015 Guidelines for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death:
<http://www.heartrhythmalliance.org/files/files/aa/for-clinicians/2015%20ESC%20Guidelines%20for%20the%20Management%20of%20Patients%20with%20Ventricula.pdf>
2. Pharmacology and clinical use of mexiletine. Fenster PE, Comess KA.

Pharmacotherapy. 1986 Jan-Feb;6(1):1-9.

<https://www.ncbi.nlm.nih.gov/pubmed/3513138>

Accessed 29.6.19

3. Mexiletine for control of drug-resistant ventricular tachycardia: clinical and electrophysiologic results in 44 patients. [Waspe LE](#), [Waxman HL](#), [Buxton AE](#), [Josephson ME](#). *Am J Cardiol*. 1983 Apr;51(7):1175-81

<https://www.ncbi.nlm.nih.gov/pubmed/6340451>

Accessed 29.6.19

4. Mexiletine Monograph from Martindale. Obtained from Guy's & St Thomas' NHS Foundation Trust Pharmacy Department, June 2019.



mexiletine monograph
martindale June 2019

5. BNF – Mexiletine. Accessed 30.6.19

<https://bnf.nice.org.uk/drug/mexiletine.html>

6. Electronic Medicines Compendium - Namuscla 167 mg hard capsules. Accessed 30.6.19

<https://www.medicines.org.uk/emc/product/9838>

Date: 30.6.19

Prepared by: Rachel Mackay, Associate Director of Medicines Management, GWCCG

Reviewed by: Sarah Watkin Name, Associate Director of Pharmaceutical Commissioning, SDCCG

Please provide Declarations of Interest (in last 12 months) for Author and contributors of this document. Please mark NULL if there are none.

Declaration of interest										
Date reported	Type of potential or actual conflict of interest (use a separate line for each entry if more than one)	Name of company	Drug / drug group	Your name	Your organisation (who are you representing)	Member of APC	Member of MCG	Date of interest (month)	Date of interest (year)	One off interest or on-going?
30.6.19	NULL			Rachel Mackay	GWCCG	Yes				
8.7.19	NULL			Sarah Watkin	SDCCG	Yes				

VERSION CONTROL SHEET

Version	Date	Author	Status	Comment
1.0	29.6.19	Rachel Mackay	Draft	Initial draft
2.0	04.7.19	Rachel Mackay	Draft	Draft for peer review
3.0	10.7.19	Rachel Mackay	Final Draft	Peer reviewed by Sarah Watkin prior to consultation
4.0	29.7.19	Rachel Mackay	Final draft	Comments included post consultation