BNSSG Shared Care Guidance
Please complete all sections

Section 1: Heading

Drug	Cabergoline and Bromocriptine (Dopamine Agonists)
Amber ***three months***	
Indication	Licensed indications: Hyperprolactinaemic disorders Unlicensed indication: Non-functioning pituitary adenomas, Acromegaly
Speciality / Department	Endocrinology
Trust(s)	North Bristol NHS Trust
	University Hospitals Bristol NHS FT
	Weston Area Health NHS Trust

Section 2: Treatment Schedule

Usual dose and frequency of administration	Cabergoline: Adult dosage and administration: - Initially 500micrograms weekly (usually as 250micrograms twice weekly). - Increased in steps of 500micrograms every 1 month until optimal therapeutic response is achieved (increase dose following monthly monitoring of serum prolactin levels). - The usual dose is 0.25mg – 2mg weekly, usually 1 mg weekly. - Doses over 1mg weekly to be give as a divided dose - Maximum dose 4.5mg per week. - Aim to use the lowest dose of cabergoline necessary to lower prolactin level to normal. Bromocriptine: Adult dosage and administration - Initially 1.25mg daily, dose to be taken at bedtime - Increased to 1.25mg twice daily after 1 week - Increase in steps of 1.25mg every month until optimal therapeutic response is achieved (increase dose following monthly monitoring of serum prolactin levels). - The usual dose is 1.25-2.5mg twice daily. - Maximum dose 30mg per day, but doses over 7.5mg / day

	are rarely needed. - Aim to use the lowest dose of bromocriptine necessary to lower prolactin level to normal.
Route and formulation	By mouth Tablets
Duration of treatment	For patients with normal serum prolactin levels and no visible tumour remnant on MRI, dopamine agonist therapy may be tapered and discontinued after 2 years of treatment. Prolactin levels will be monitored at 3 months and annually after that. Annual monitoring to be done in primary care. Long term treatment may be required in patients whose prolactin levels do not normalise when dopamine agonist therapy is discontinued.

Section 3: Monitoring

Please give details of any tests that are required before or during treatment, including frequency, responsibilities (please state whether they will be undertaken in primary or secondary care), cause for adjustment and when it is required to refer back to the specialist.

Baseline tests - where appropriate
Initiation and baseline monitoring to be requested by the specialist at the first clinic appointment: - Baseline prolactin level - Blood pressure - Baseline transthoracic echocardiogram - Pituitary MRI
Subsequent tests - where appropriate
1. Monitoring of prolactin levels will be done according to individual patient requirements. This should be done after any change in dose of dopamine agonist therapy and at least once every 12 months when on long term treatment. The frequency of blood test monitoring will be decided by secondary care, however blood tests to be done in primary care. 2. Monitoring blood pressure after any dose increase. This should be done in primary care. 3. Transthoracic echocardiogram should be repeated approximately every 12 months, in line with the guidance and warnings issued by the British National Formularly and MHRA Drug Safety Update. However, requirement for this surveillance remains unproven in endocrine patients taking low dose dopamine agonist therapy, and accumulating evidence suggests that this may not be required in clinical endocrine practice. This will be requested by secondary care. 4. In patients with pituitary macroprolactinomas, a repeat MRI should be requested 6 to 12 months after initiating dopamine agonist therapy. This will be requested by secondary care.

Section 4: Side Effects

Please list the most common side effects and management. Please provide guidance on when the GP should refer back to the specialist.

Side effects and management	Common (may affect up to 1 in 100 patients): Abdominal pain, angina, breast pain, confusion, constipation, depression, dyspepsia, epigastric pain, gastritis, hallucinations, headache, nausea, syncope Rare (may affect up to 1 in 1000 patients): Digital vasospasm, epistaxis, hot flushers, muscle weakness,

	palpitations, paraesthesia, transient hemianopia, vomiting
Referral back to specialist	Routine review with specialist every 12 months. Please contact secondary care if the patient is intolerant of dopamine agonist therapy or develops side effects. Please contact secondary care if the prolactin level remains elevated or starts to rise.

Section 5: Drug Interactions

Please list clinically significant drug interactions (eMC link please click here)

Significant Drug Interactions	• Antibacterials: plasma concentration of cabergoline increased by macrolides (increased risk of toxicity) • Antipsychotics: hypoprolactinaemic effects of cabergoline antagonised by antipsychotics • Domperidone: hypoprolactinaemic effect of cabergoline possibly antagonised by domperidone • Memantine: effects of dopanimergics possibly enhanced by memantine • Metoclopramide: hypoprolactinaemic effect of cabergoline anatagonised by metoclopramide
Reminder to ask patient about specific problems	The development of urges or cravings suggesting the development of impulse control disorders. For example, gambling, excessive spending or eating, an increase in sexual thoughts or an abnormally high sex drive.

Section 6: Contra-indications, Cautions and Special Recommendations

Please list

Contra-indications:

1. Hypersensitivity to dopamine agonists
2. History of pulmonary, pericardial and retroperitoneal fibrotic disorders
3. Evidence of cardiac valvulopathy as determined by pre-treatment echocardiography
4. Avoid in pre-eclampsia
5. History of puerperal psychosis in women

Cautions:

1. History of peptic ulcers
2. Raynaud's syndrome
3. Cardiovascular disease
4. Concomitant use with psychoactive medication and / or history of mental health disorders
5. Acute prophyria
6. Concomitant use with antihypertensives due to risk of postural hypotension post dose

Section 7: Advice to the patient

Advice for prescribing clinician to inform patient

1. To stop taking dopamine agonist if they become pregnant and to inform GP or specialist.
2. Prescriptions for dopamine agonists will now be provided by your GP and local pharmacy. Please ensure you order new prescriptions with enough time for a new supply.
3. If the dopamine agonist is stopped for any reason, please ensure you speak to your GP or specialist for specific advice.

Section 8: Responsibilities for Secondary Care

Core responsibilities
1. Initiating treatment and prescribing for the first three months 2. Undertaking the clinical assessment and monitoring for the first three months. 3. Communicate details of the above in 1 and 2 to GP within the first month of treatment. This information should be transferred in a timely manner. 4. Refer patients to GP and provide information of further action where appropriate e.g. blood test is due. 5. To provide advice to primary care when appropriate. 6. Review concurrent medications for potential interaction prior to initiation of dopamine agonist. 7. Stopping treatment where appropriate or providing advice on when to stop. 8. Reporting adverse events to the MHRA. 9. Reminder to ask patients about particular problems see section 5.
Other specific to drug
1. All decisions on dose adjustments

Section 9: Responsibilities for Primary Care

Core responsibilities
1.Responsible for taking over prescribing after the first three months 2. Responsible for the clinical assessment and monitoring after the first three months 3. Review of any new concurrent medications for potential interactions. 4. Reporting adverse events to the MHRA. 5. Refer for advice to specialist where appropriate. 6. Reminder to ask patients about particular problems see section 5.
Other specific to drug
1. Nil

Section 10: Contact Details

Name	Organisation	Telephone Number	E mail address
Fong Chau Consultant Endocrinologist	NBT	0117 4146419	fong.chau@nbt.nhs.uk
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Section 11: Document Details

Date prepared	25th October 2017
Prepared by	Dr Chloe Broughton
Date approved by JFG	November 2017
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Document Identification: Version	V1

Section 12: Collaboration

Specialists in any one discipline are encouraged to collaborate across the health community in preparing shared care guidance. Please give details

1. As contacts

Section 13: References

Please list references

1. Cabergoline (Dostinex). Summary of Product Characteristics. April 2016. Available at http://www.medicines.org.uk/emc/medicine/10003#PHARMACODYNAMIC_PROPS. Accessed on 17/08/2017.
2. British National Formularly. August 2017. Available at www.bnf.org. Accessed 17/08/2017.
3. Melmed S, Casanueva FF, Hoffman AR, et al. Diagnosis and treatment of hyperprolactinemia: an Endocrine Society clinical practice guideline. J Clin Endocrinol Metab 2011; 96:273.
4. Auriemma RS, Pivonello R, Perone Y, et al. Safety of long term treatment with cabergoline on cardiac valve disease in patients with prolactinomas. Eur J Endocrinol. 2013;169(3):359
5. MHRA Drug Safety Update. Ergot-derived dopamine agonists: risk of fibrotic reactions. October 2008. Available at https://www.gov.uk/drug-safety-update/ergot-derived-dopamine-agonists-risk-of-fibrotic-reactions Accessed on 19/09/2017.