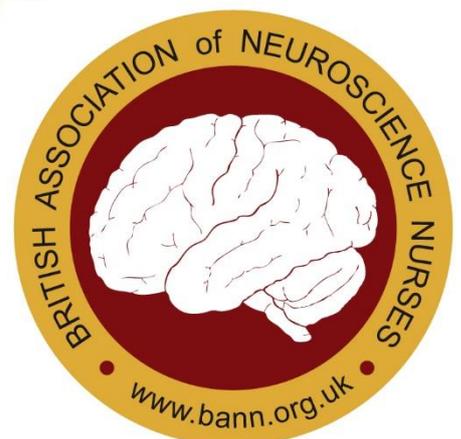


# Benchmark No. 12

## Management of People with Pituitary Dysfunction

2<sup>nd</sup> Edition

**British Association of  
Neuroscience Nurses**



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## Management of People with Pituitary Dysfunction (2<sup>nd</sup> Edition)

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First PDF edition printed 2011 in the United Kingdom. This second edition PDF printed 2022 in the United Kingdom. A catalogue record for this book is available from the British Library.

ISBN 978-1-911059-22-6

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Published by the British Association of Neuroscience Nurses

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Designed and Set by the British Association of Neuroscience Nurses

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Printed in the United Kingdom

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## History

The Neuroscience Nursing Benchmarking Group (NNBG) was established in the 1990`s as a result of increasing concerns over inconsistencies in practices as part of a subsidiary of BANN. The group aims to improve on the quality of care by comparing and sharing practice with each other, and set explicit standards for comparison of current practice against the ideal standard. The group is committed to searching for the best evidence related to specific areas of neuroscience practice. Membership of the group consists of representatives from neuroscience units within the UK and Ireland, together with educational colleagues from both the NHS/HSC and Higher Educational Institutes. The group is further subdivided into regions and this benchmark was developed by the North East group of the NNBG in 2007.

In 2016, the NNBG consolidated back into BANN and further information about NNBG can be found on the BANN website [www.BANN.org.uk](http://www.BANN.org.uk) .

BANN would like to acknowledge the leadership and significant contribution made by the NNBG, and all its contributors, to neuroscience nursing over the years.

## Benchmark No.12

### Management of People with Pituitary Dysfunction

#### Key Points

- A local evidence-based guideline for the nursing management of people following pituitary surgery must be available.
- A structured education programme is available for the care and management of people requiring pituitary surgery.
- Nurses must have a good understanding of pre and postoperative management of electrolyte and fluid disorders after pituitary/suprasellar tumour treatment.
- An individualised care plan will be implemented and evaluated specific to all aspects of care relating to the person's medication regime.
- Patient education is an important aspect in the management of pituitary disease. Patients must understand the impact of hormone deficit on their daily life and activities and are aware that treatment may need to be modified in the event of illness, accidents or other surgical procedures.
- All documentation, procedures and policies are reviewed every 2 years.

**FACTOR 1 – Documentation**

	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
1.0	A detailed care plan or integrated care pathway is available.	Prete et al, 2017			
1.1	Recommendations from the endocrinology team have been documented and actioned				
1.2	Baseline neurological observations and assessments are recorded and documented as per local policy.	Prete et al, 2017			
1.3	A visual acuity assessment has been performed: a) Pre-operatively to achieve a baseline of central and peripheral vision	Woodmansee et al, 2015			
1.4	A visual acuity assessment has been performed: a) Post-operatively- noting signs of blurred or double vision and peripheral field abnormalities	Pituitary Foundation, 2020			
1.5	Documentation is available to support on-going management following discharge including: a) Follow up information. b) Medication (specifically use of steroids c) Lifestyle advice	Woodward & Mestecky, 2011			

**FACTOR 2 – Protocol**

	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
2.0	Post-operative instructions are available that includes: a) Fluid balance b) Criteria for requesting serum and urine osmolality c) Monitoring of urea and electrolytes (at least daily) d) Prescription and administration of DDAVP e) Visual field acuity f) Management of epistaxis g) Removal of nasal packs (if appropriate) h) Administration of steroids i) Blood Glucose monitoring whilst taking steroids j) Change of taste > CSF leak	Prete et al, 2017  Woodmansee et al, 2015  Cheng, 2017 Pituitary.org.uk, 2020)			
2.1	Neurological observations and vital signs are recorded post-operatively	NEWS2, 2017			
2.2	The nasal bolster (if applicable), is monitored for the type and volume of drainage	Cheng et al, 2017			
2.3	Fluid balance charts are completed clearly and accurately	Kristof et al 2009			
2.4	Polyuria should act as a trigger indicator for the possible development of diabetes insipidus	Kristof et al, 2009			
2.5	Where Diabetes Insipidus is suspected, bloods are obtained for U&Es, urine and serum osmolarity	Woodmansee et al, 2015			
2.6	Patient should be informed of nasal hygiene care	Pituitary Foundation, 2020			
2.7	The patient is observed for signs of meningitis including:- a) Signs of a CSF leak b) Raised temperature c) Headache d) Vomiting & nausea e) Agitation, drowsiness or confusion	Woodward & Mastecky, 2011 NEWS2, 2017			

**FACTOR 3 – Education**

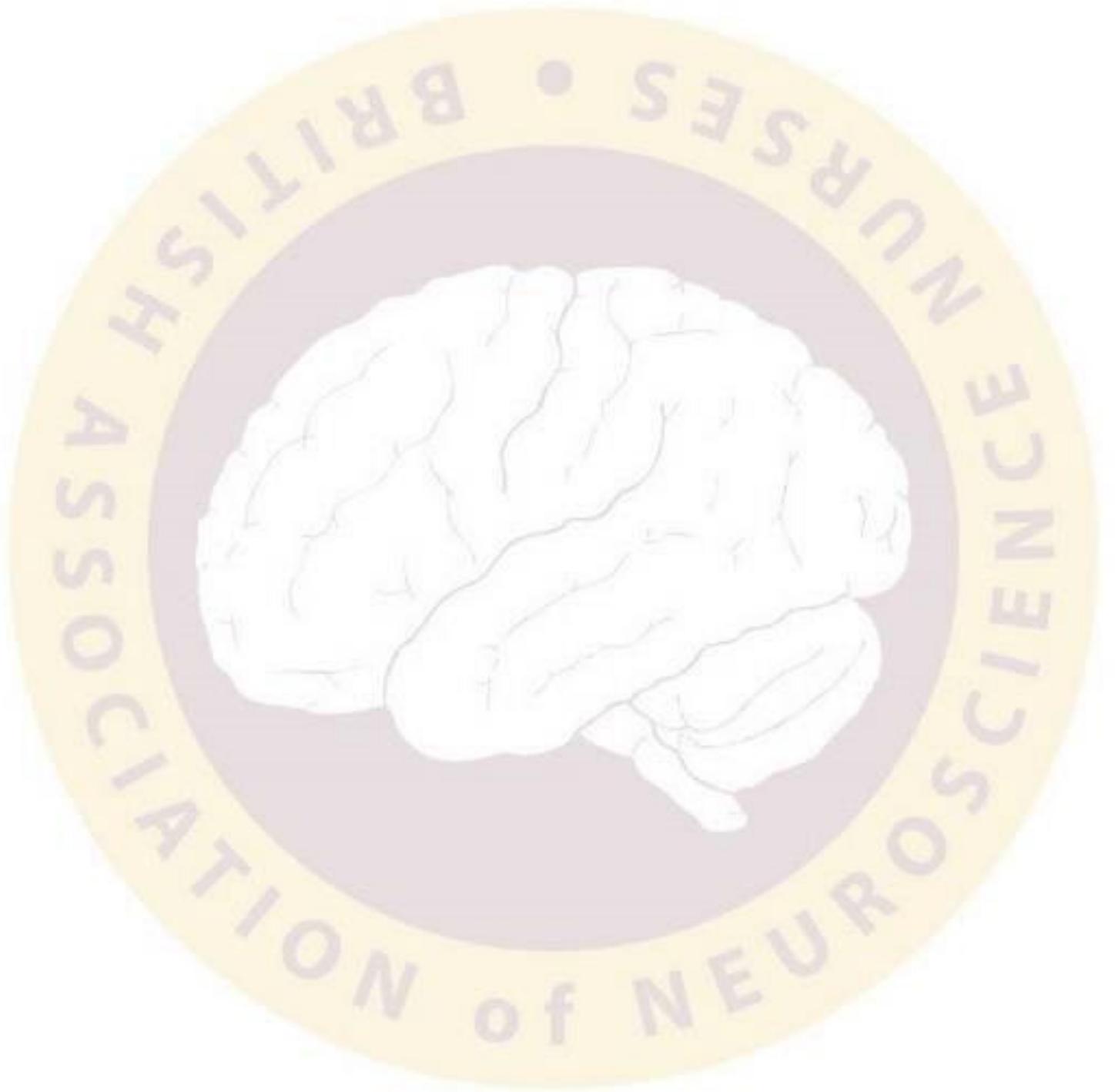
	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
3.0	<p>A structured education programme is available for the care of patients requiring pituitary surgery including:</p> <ul style="list-style-type: none"> <li>a) A basic knowledge of the anatomy of the pituitary gland and the surrounding structures</li> <li>b) An understanding of the impact of changing body image on psychological welfare of the patient</li> <li>c) Management of post-operative epistaxis</li> <li>d) Importance of a strict fluid balance (cumulative balance/specific gravity)</li> <li>e) An understanding of fluid and electrolytes to include SIADH and cerebral salt wasting</li> <li>f) Recognising signs of fluid overload, hyponatraemia and hypernatraemia</li> <li>g) An understanding of the importance of blood glucose monitoring whilst on steroids therapy</li> <li>h) Calculation and administration of Synthetic A.D.H, desmopressin (DDAVP) nasal, I.M/IV/SC, oral</li> <li>i) An understanding of the underlying mechanism that may contribute to visual loss</li> <li>j) Recognise the signs and symptoms of CSF rhinorrhea (present in 5-15% of patients)</li> <li>k) Collection of nasal CSF sample</li> <li>l) Management of lumbar drains (in the event of CSF leak)</li> <li>m) An awareness of the presenting signs and management of Pituitary Apoplexy'</li> </ul>	<p>Mestecky, 2010</p> <p>Pituitary Foundation, 2020</p> <p>Wen, 2013</p> <p>Adriani <i>et al</i> 2020.</p> <p>Woodward <i>et al</i>, 2011</p> <p>Guo <i>et al</i>, 2019</p> <p>Bagga &amp; Sinha, 2017</p> <p>Hickey and Strayer (2019)</p>			

**FACTOR 4 – Patient Information**

	STATEMENT OF BEST PRACTICE	EVIDENCE & REFERENCES	ACHIEVED	NOT ACHIEVED	VARIABLES
4.0	<p>The patient has access to written information including:-</p> <ul style="list-style-type: none"> <li>a) Pre and possible post-operative complications including possible CSF leak (change in taste), electrolyte disturbance</li> <li>b) Appropriate pain relief</li> <li>c) Prescribed medications required during times of physical and emotional stress, illness or infection</li> <li>d) The purpose of drug therapy, especially if lifelong replacement therapy is required</li> <li>e) Potential side-effects of medication including steroid therapy.</li> <li>f) Signs and symptoms of under or over-medication</li> <li>g) Signs of low-pressure headache</li> <li>h) Fluid management (chronic diabetes insipidus)</li> <li>i) Advice/emergency contact details</li> <li>j) Management of fatigue and sleep disturbances</li> <li>k) Advice related to return to work, recreation or usual sexual activities.</li> </ul>	<p>Pituitary Foundation, 2020</p> <p>Prete <i>et al</i>, 2017</p> <p>Jang <i>et al</i>, 2020</p> <p>Hickey and Strayer (2019)</p> <p>Waddle <i>et al</i>, (2019)</p> <p>Pituitary Foundation, 2020</p>			

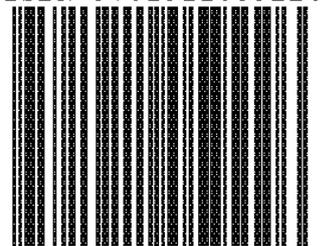
## References

- Adriani, J.R., Mustamir, N., Prihantono, P. and Faruk, M. (2020) Pituitary tumor: Presentation, diagnosis, and management using the transsphenoidal endoscopy. *International Journal of Medical Reviews and Case Reports*, 4(4); 50-55.
- Bagga VJ. Sinha S. (2017) Surgery for Pituitary Tumours (2017) *Surgery*. 35(1); 556-562.
- Cheng, Y. Xue, F. Wang, T. Ji, J., Chen, W., Wang, Z., Xu, L., Hang, C. and Liu, X. (2017) Analyses and treatments of postoperative nasal complications after endonasal transphenoidal resection of pituitary neoplasms. *Medicine*, 96(15); e6614.
- Guo, X. and Xing, B. (2019) Endocrine Outcomes after Transphenoidal Surgery for Pituitary Apoplexy and Macroadenoma: Some Concerns. *Endocrine Practice*, 25(7); 769-769.
- Jang, M., Eui Geum, O., HyangKyu, L., Eui Hyun, K. Sanghee, K. (2020) Postoperative Symptoms and Quality of Life in Pituitary Macroadenomas Patients. *Journal of Neuroscience Nursing*, 52(1); E1-E2.
- Kristof, R.A., Rother, M., Neuloh, G. and Klingmüller, D. (2009) Incidence, clinical manifestations, and course of water and electrolyte metabolism disturbances following transsphenoidal pituitary adenoma surgery: a prospective observational study. *Journal of Neurosurgery*, 111(3); 555-562.
- Hickey J. and Strayer, A.L. (2019). *The clinical Practice of Neurological and Neurosurgical Nursing (8<sup>th</sup> ed)*. Wolters Kluwer, Lippincott, Williams and Wilkins.
- Mestecky, A.M. (2010) Managing primary pituitary tumours: assessments and complications. *British Journal of Neuroscience Nursing*. 6(5); 222-226.
- National Early Warning Score (NEWS)2. (2017). Royal College of Physicians
- Pituitary.org.uk. (2020). [online] Available at: <https://www.pituitary.org.uk/media/245551/Post-Pituitary-Surgery-Fact-Sheet-docx-Final.pdf> [Accessed 10 Jan. 2020].
- Pituitary.org.uk. (2020). *Hydrocortisone*. *The Pituitary Foundation*. [online] Available at: <https://www.pituitary.org.uk/information/treating-a-pituitary-condition/hydrocortisone/> [Accessed 10 Jan. 2020].
- Prete, A., Corsello, S., and Salvatori, R. (2017) Current best practice in the management of patients after pituitary surgery. *Therapeutic Advances in Endocrinology and Metabolism*, 8(3); 33-48.
- Waddle, M., Oudenhoven, M., Farin, C., Deal, A., Hoffman, R., Yang, H., Peterson, J., Armstrong, T., Ewend, M. and Wu, J. (2019) Impacts of Surgery on Symptom Burden and Quality of Life in Pituitary Tumor Patients in the Subacute Post-operative Period. *Frontiers in Oncology*, 9; 1-7.
- Wen, Y. (2013) Managing the Patient with Transsphenoidal Pituitary Tumor Resection. *Journal of Neuroscience Nursing*, 45(2); 101-107
- Woodmansee, W. Carmichael, J. Kelly, D. and Katznelson, L. (2015) AMERICAN Association of clinical endocrinologists and American college of endocrinology disease state clinical review: postoperative management following pituitary surgery. *Endocrine Practice*, 21(7); 832-838.
- Preece, A. (2011) Common Neurosurgical Procedures. In: Woodward, S. Mestecky, AM. *Neuroscience Nursing. Evidence-Based Practice*, 317-318. Chichester, Wiley, Blackwell.



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ISBN 9781911059226



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