Development of a Standardized Peripheral Nerve Block Procedure Note Form

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Objectives: Despite the tremendous growth of peripheral nerve blocks, no standard format exists to document their performance. Our objective was to create a peripheral nerve block form based on key elements of literature evidence and on our own group consensus.

Results: We describe the process and results of our multi-institutional effort to construct a standardized peripheral nerve block procedure form.

Conclusion: A form was developed to help meet the medical, legal, and billing requirements of documentation consistent with the performance of peripheral nerve block. *Reg Anesth Pain Med 2005;30:67-71.*

Key Words: Regional anesthesia, Peripheral nerve block, Procedure note, Documentation, Medical record.

The practice of peripheral nerve block (PNB) is growing in several ways. First, wide arrays of techniques and multiple approaches to each plexus and nerve in the body are being employed by the skilled practitioner. Each technique and approach has its own clinical utility, risk, and benefit. Second, the equipment used to localize nerves and achieve neural block has become increasingly specialized and technically sophisticated. Third, several local anesthetics and multiple adjuvants are available for injection. Fourth, PNB is used more frequently by a growing number of practitioners with disparate skills and varying degrees of knowledge relative to documentation of PNB.

Although the use of PNB have grown, our ability to easily document PNB procedures has not. Despite practical complexities, most practitioners document PNB procedures in a limited space on their institution's anesthesia record. Often, this record has been designed for the purpose of documenting general anesthesia, not PNB. While the space for documenting PNB on records is limited, the importance of the documentation extends beyond making a record for medical-care purposes alone. In today's health-care environment, every part of the patient record must serve to establish a legal record and a compliance record for billing practices and to meet the demands of regulatory agencies.

We, therefore, pooled the collective expertise of individuals from several North American academic institutions. This expertise includes routine clinical practice of regional anesthesia, development of equipment and practices, medical legal consultation, familiarity with billing and regulatory compliance, and our individual experiences with development of PNB procedure notes at our own institutions.

Methods

A search for pertinent articles on the medical database PUBMED (http://www.ncbi.nlm.nih.gov) was made. Key words used for the search were "peripheral nerve block," "anesthesia record," "doc-

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Accepted for publication November 3, 2004.

Presented in part at the Spring Meeting of the American Society of Regional Anesthesia and Pain Medicine, San Diego, CA, April 4-6, 2003, and Orlando, FL, March 11-14, 2004.

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1098-7339/05/3001-0008$30.00/0
doi:10.1016/j.rapm.2004.11.001

Table 1. Key Elements to a Standardized Peripheral Nerve Block Note Form

Number	Elements of Patient Care	Literature Support*	Reference
1	Approach used	A	1
2	Patient condition	B	2
3	Indication for block under spinal, epidural, or general	B	2
4	Aseptic agent used	A	3
5	Patient position	C	
6	Needle design: tip manufacturer, length, gauge	B	4
7	Technique of injection through needle or catheter	B	5
8	Depth of catheter insertion	B	5
9	Technique of needle localization	B	1
10	Description of the quality of paresthesia	B	6
11	Description of the motor response	A	1
12	Type and quantity of sedation given	A	7
13	Minimal current and current duration	A	8
14	Needle depth before injection	B	8
15	Local anesthetic(s) used, concentration, and volume	A	9
16	Epinephrine dose used	A	9
17	Adjuncts used	A	10
18	Note of incremental injection and monitoring	A	11
19	Note of aspiration and action taken	A	11
20	Note of test dose and action taken	A	11
21	Note of monitoring for pain on injection and action taken	A	8
22	Note of monitoring for resistance on injection and action taken	A	12
23	Narrative of events during the procedure	C	
24	Adequacy of block	B	7
25	Patient vital signs after the procedure	B	13
26	Patient visual analog scale pain score after the procedure	B	7
	Elements of Billing and Regulatory Compliance		
27	Name of block(s) performed	A	†
28	Patient identification	A	14
29	Side of block	A	15
30	Patient diagnosis or pain location	A	†
31	Indication for procedure	A	†
32	Request by surgeon for placement for pain management	A	†
33	Baseline patient vital signs	A	16
34	Baseline patient visual analog scale pain score	A	17
35	Date of procedure	C	
36	Procedure start and end time	A	†
37	Signature line for resident or trainee	A	†
38	Signature line for medical direction	A	†

*Level at which the literature supports that the key element has an effect on the process of clinical care, billing, or regulatory compliance. Level A = support in the literature consists of randomized controlled trials or established standard; level B = controversy in the literature generated by case report or editorial; level C = no support, expert opinion.

†Rosenquist RW, Williams BA. Optimizing Billing and Compliance. Syllabus from the 2004 Annual Spring Meeting of the American Society of Regional Anesthesia and Pain Medicine, Orlando FL. Pages 333–341.

umentation," and "procedure note." Sixteen articles were found, none of which described the development of a standardized PNB procedure note form.

Existing PNB procedure notes were collected from the institutions of the authors and examined critically by the group. Over the course of several meetings and discussions, plans were made to direct our efforts specifically toward developing a procedure note for PNB in particular (as opposed to neuraxial anesthesia and postoperative analgesia consultation notes).

The authors compiled a list of "key elements" to satisfy the medical, legal, billing, and regulatory goals of a standardized procedure note. The authors characterized each key element on the basis of the level of support for the clinical utility of the key element available in the literature. Level A support is characterized by randomized controlled trials in the literature or documented standards demonstrating that a clinician's choice in the application of the element is likely to have a direct impact on clinical care. Level B support is characterized by editorials or case reports that have introduced controversy in the literature. Level C support is characterized by a lack of controversy or no literature support. Our expert consensus is that all these elements are important.

After five major revisions, the procedure note was presented for review to the medical records

Anesthesiology Procedure Note

PERIPHERAL NERVE BLOCKADE

Peripheral Nerve Block(s) performed

Patient Name

Medical Record #

Age Sex

(Patient name plate stamp)

Approach: _____ ☐ **Left** ☐ **Right** side confirmed

Indication: ☐ Analgesia ☐ Surgical anesthesia Dx/pain location:_____

☐ Specifically requested for management of pain by Dr. _____

Date: ____/____/20____ **Start time** (:) **End time** (:)

Pt Condition: **Intitial BP:**____/____ **HR:** ____ **VAS Pain score: 0 1 2 3 4 5 6 7 8 9 10**

☐ awake ☐ sedate with meaningful contact maintained

☐ PNB performed under spinal / epidural / general anesthesia. Indication: _____

Preparation: ☐ povidone-iodine ☐ chlorhexidine ☐ iodophor/isopropyl ☐ alcohol ☐ drape

Position: ☐ supine ☐ prone ☐ LLD ☐ RLD ☐ sitting

Needle(s): ☐ short-bevel ☐ Tuohy ☐ long-bevel ☐ pencil-tipped

Manufacturer, length, gauges: _____

Technique: ☐ injection through needle ☐ catheter placement **(depth at skin_____cm).**

☐ nerve stimulation ☐ infiltration ☐ ultrasound

☐ paresthesia. describe quality of paresthesia :_____

Motor response or paresthesia obtained	mA	mS	depth (cm)

Sedation Given	mg/mcg
Midazolam	
Fentanyl	

Injectate: ☐ **bupivacaine** ☐ **ropivacaine** ☐ **mepivacaine** ☐ **lidocaine** ☐ **2-CP**

Concentration (%)	Volume (ml)	Adjunct	Epinephrine
			☐ **1/___00,000**
			☐ not used

Narrative: Injection was made incrementally with constant monitoring and aspiration every _____ ml's.

		Action Taken
Blood aspirated:	☐ no	☐ yes
Intravenous test using epinephrine:	☐ negative	☐ positive
Pain on injection noted:	☐ no	☐ yes
Resistance on injection	☐ normal	☐ high

Events: ☐ none: easy and well tolerated ☐ difficult:

Success: ☐ complete ☐ partial ☐ failed ☐ aborted ☐ a full evaluation is pending

Pt Condition: **Post BP:**____/____ **HR:** ____ **VAS Pain score: 0 1 2 3 4 5 6 7 8 9 10**

☐ The procedure was performed by _____(sign). I was present and medically directed.

☐ I performed the procedure myself. **ATTENDING MD SIGNATURE:** _____

Fig 1. Peripheral nerve block procedure note.

department of each of the authors' institutions. After this review, the note was pilot-tested in the process of clinical care for 20 patients at each of the institutions.

Results

A list of key elements is presented in Table 1.[1-17] The standardized PNB Procedure Note Form is presented in Fig 1. With review of the standardized form, minor abbreviation and margin changes were necessary to comply with each institution's hospital-based medical record's department review. With pilot implementation of these forms in the course of clinical care, additional minor changes were made.

Discussion

Our most important challenge was to develop a list of key elements of an acceptable PNB procedure note. We agreed on the 38 elements in Table 1, listed as either elements of clinical care (n = 27) or elements of billing and regulatory compliance (n = 11). All the elements agreed upon by the authors as important for legal documentation were also elements of clinical care listed in Table 1. A description of the creation of an anesthesia-related procedure note could not be found in the literature. Several publications that described surveys of anesthesia records noted space for, or narrative details regarding, regional anesthetics in 2% to 30% of standard forms that documented anesthetics.[18-20] Other publications described the development and assessment of individual anesthesia records.[21-23] These authors have developed forms for documenting anesthetics with the pooled expertise at individual[21,22] and multiple institutions.[23] Except for 2 abstracts[24,25] by authors of this manuscript, we were unable to find descriptions of the development of a regional anesthesia procedure form.

The literature does describe, however, the clinical utility of the key elements listed in Table 1. We referenced literature to support our inclusion of each key elements and documented these references in Table 1. We found three levels of literature support for the elements in our PNB procedure note. The highest level of literature support (level A) was found for key elements 1, 4, 11-13, 15-22, 27-34, and 36-38. For each of these elements, randomized controlled studies directly support the clinical utility of the key element, or standards have been described. A clinician's choice in the application of these elements will likely have a direct impact on clinical care. A lesser amount of literature support (level B) was found for key elements 2, 3, 6-10, 14, and 24-26. For these elements, some degree of controversy has been generated by case reports or editorials, or only indirect literature support was found. The group consensus favored documentation for these elements when this level of support was available. The remaining key elements make up the third group (level C) for which no literature support was found. The authors' consensus favored documentation of these elements on the basis of our collective expert opinion.

The list of elements important for clinical care is not inclusive of every element considered important to each of the authors. The list represents our consensus. For example, documentation of injection pressure during peripheral nerve block is practiced by one author but did not reach consensus by the group. Many of our existing forms included a check box for the presence of nearby resuscitation equipment. Resuscitation equipment was not included as an element because the group consensus was that although the presence of the equipment wa an important part of safe practice, documentation of it would not be likely to enhance patient care or regulatory compliance. We determined documentation of informed consent to be an important but separate issue, outside the scope of a procedure note.

Elements of billing and regulatory compliance likewise did not incorporate every element practiced by each individual. For example, we decided not to include specific procedure codes. The main reason for omitting these codes was that the list is very long. These codes can be easily derived from the documentation of the name of the procedures, diagnoses, and indications that are in themselves important elements of clinical care. Conversely, compliance elements required currently by regulatory agencies such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) have been included and appropriately referenced in Table 1. The abbreviations and wording of the PNB procedure are also in compliance with the recommendations of regulatory agencies.[26]

The standardized PNB procedure note form was developed using these elements. The format, layout, spacing, and fonts were chosen in an attempt to allow generalized use. Hopefully, the standardized form we have developed will be easily adaptable to any anesthesia practice that utilizes regional anesthesia. An electronic copy of this form can be adapted to fit your practices and institution's use from the *Regional Anesthesia and Pain Medicine* Web site (http://www2.rapm.org) or obtained from the authors.

Acknowledgment

The authors acknowledge the assistance of Richard W. Rosenquist, M.D., Department of Anesthe-

siology, University of Iowa Hospitals and Clinics, for providing copies of his institution's procedure notes.

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