

NATIONAL BLOOD SERVICE

Hospital Liaison Function

Electronic Delivery Note Information for IT suppliers and Hospitals V1 2006

1. Background

The National Blood Service (NBS) and representatives from hospitals and IT suppliers have met and discussed the use of the electronic despatch note (EDN). Following these meetings it was agreed that a document would be written to help hospital IT suppliers and hospitals to jointly develop systems which utilise the EDN message that is available from the NBS.

This document does not necessarily reflect the views of all hospitals, in particular not all hospitals wish to reconcile blood products immediately on receipt, however the document does provide a basis for developing systems to incorporate the EDN into hospital laboratory systems.

Details of the EDN message are published in the Guidelines for UK Blood Transfusion Services. An expanded format can be found in appendix 1 and an example of an EDN can be found on www.blood.co.uk/hospitals.

2. Registering for use of the EDN message

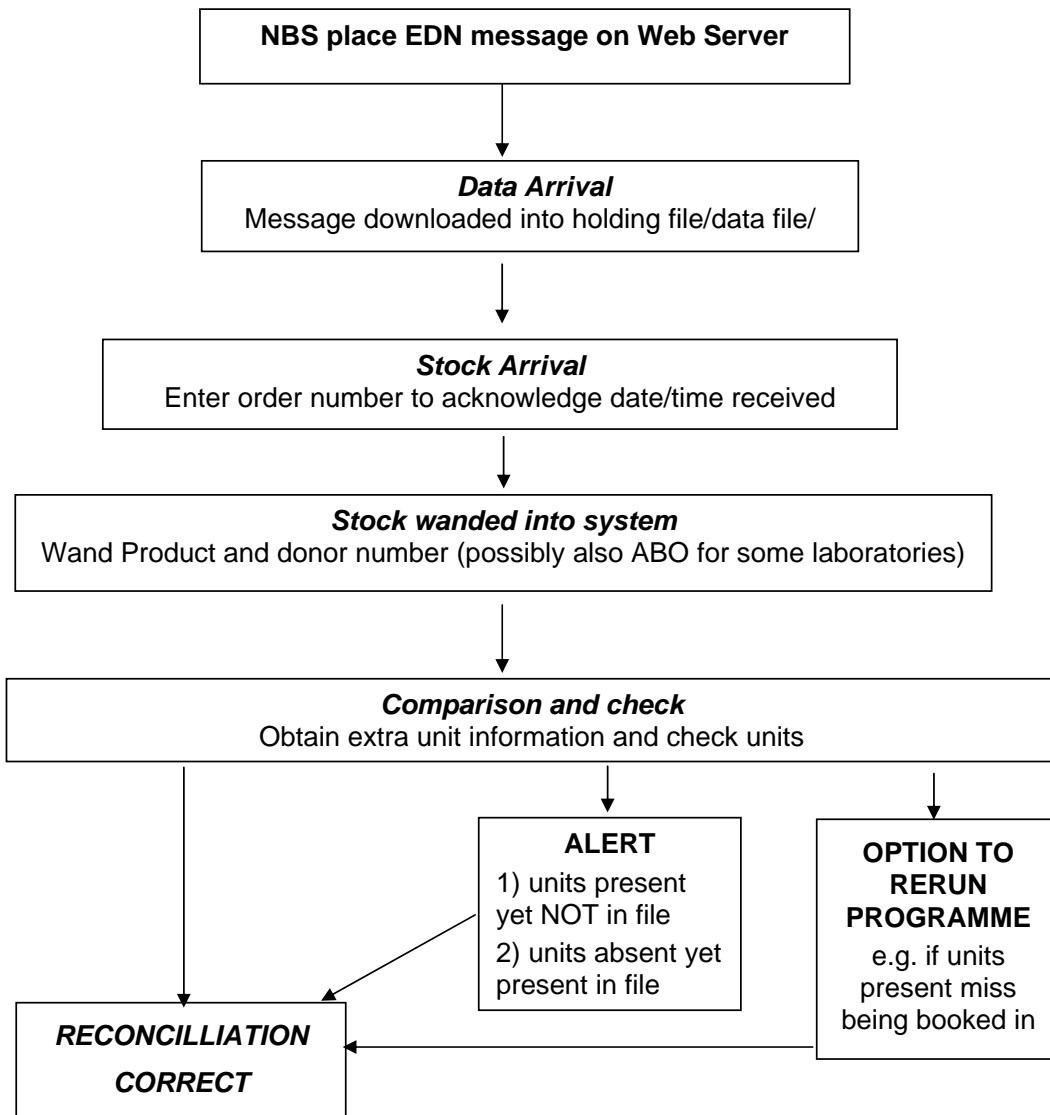
- Check that your Laboratory Information System (LIS) software has EDN functionality. If not, discuss with your supplier so that your system can be developed as outlined in sections 3 and 4.
- If your LIS does have EDN functionality make sure that it has been implemented in your lab.
- Contact the Blood Stocks Management Scheme Office (details in page footer) to register to access your EDN message. You will be provided with a file location where the EDN message will be placed and a user name and password to access to location.

3. Suggested process for receipt of EDN information

- A message is generated for each order placed by the hospital and is placed on a hospital specific location on the NBS web server.
- The order is despatched from the NBS to the hospital.
- The hospital receives the units and enters the order number from the tag on the NBS delivery box.
- The blood transfusion laboratory's LIS will download the specific order EDN message from the NBS web server (the LIS system should include a system to deal with message unavailability).

- The donation number and product code of each unit in the consignment must be wanded in
- The remaining information is automatically obtained from the downloaded EDN message.
- At this stage no acknowledgement receipt is required although suppliers may want to consider this function for future purposes.
- The pack number and product code of the units that have been entered into the system is compared with the unit details in the message and a reconciliation report detailing all missing and extra units should be produced.
- In the event of any errors the hospital should contact the blood centre issue department.

4. Laboratory Process flow chart



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5. Key information for LIS suppliers

- The EDN system should allow each lab to configure their hospital-specific file directory into the software. This will be of the form:

<https://www.blood.co.uk/certifiedusers/downloads/edi/A000/Issues>

where **A** is a character and **000** is a 3-digit number

- This directory will be secure and so will require a username and password to be configured into the system.
- The filename of the EDN message will relate directly to a specific order. It will be of the form:

A000000N.xfr

where **A** is a character, **000000** is a 6-digit number, and **N** is a number

A000000 is the order number.

N is a sequential number to identify multiple files - it will normally be 1

example filename: M1234561.xfr

- The LIS system is not required to move or delete the file. File archiving procedures are performed by the NBS.
- At midnight each day, all files in the directory will be moved into specific folders that indicate how old each file is. Therefore, if the EDN message associated with a particular order is *not* picked up on the day that the order was placed, the file will *not* be located in the root of the directory. The following table shows the age of the file (number of days after the order was placed) and the folder in which the file can be located.

Age of file (number of days after order)	Sub-directory name
0	/Issues/
1	/Issues/01_Day_Old/
2	/Issues/02_Days_Old/
3	/Issues/03_Days_Old/
4	/Issues/04_Days_Old/
5	/Issues/05_Days_Old/
6	/Issues/06_Days_Old/
7	/Issues/07_Days_Old/
8 or more	/Issues/08_Archive/

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6. Learning points from EDN pilot project

- There should be the facility to interrupt the programme.
- Separate locations should be considered for stock e.g. FFP freezer, Platelet incubators.
- There should be the ability to store and access the holding file.

- There should be the option to rerun the programme if a unit is not been entered but is in the EDI file. (List units NOT received but in EDI file).
- There should be an option to track a unit that is received but is not on the EDI file. (List units received but NOT in EDI file).
- There should be an option to allow comments to be entered against reconciliation failures e.g. where an extra unit has been received or a unit is missing.
- Traditional input should not be disabled in case of EDI failure.
- There should be an archiving ability to clear the holding file. Otherwise the holding file may be too large.
- There should be the ability to search on order number, pack number etc.
- There should be the ability to search on delivery type e.g. to check delivery charging.
- There should be the ability to search for specific phenotype combinations

7. Appendix

Additional information for IT suppliers on the message specification

Purpose

To expand on the information contained within the guidelines for the blood transfusion Services in the United Kingdom to enable IT suppliers to interpret NBS EDI data files

Header Record

Field	Length	Description	PULSE Definition
1	5	Line number	Incrementing number within file. For header record this will always be set to 00001.
2	10	Fixed Text	Set to fixed text 'UKBTSSTART'
3	8	Date	Date of despatch (YYYYMMDD).
4	4	Time	Time of despatch (HHMM).
5	6	Protocol Number	Set to fixed text '000001'
6	6	Source ID	This field will be formed from the PULSE 4-character location code followed by the PULSE 2-character site code. For example, in a despatch from the Lancaster site, the field will contain '9913M2'
7	6	Destination ID	This field will be formed from the PULSE 4-character location code for the customer
8	2	Checksum	Modulus 97 checksum calculated from fields 1 to 7
9	1	Terminator	Carriage return character (0D Hex)

Administration Record

Field	Length	Description	PULSE Definition
1	5	Line number	Incrementing number within file. For administration record this will always be set to 00002.
2	1	Line Type	Set to fixed text '1'
3	12	Order No	PULSE request number left justified usually 7 characters. E.g. J123456
4	12	Dispatch No	PULSE request number as above
5	8	Date	Date of despatch (YYYYMMDD).
6	4	Time	Time of despatch (HHMM).
7	2	Checksum	Modulus 97 checksum calculated from fields 1 to 6
8	1	Terminator	Carriage return character (0D Hex)

Despatch Record

Field	Length	Description	PULSE Definition
1	5	Line number	Incrementing number within file. For the first despatch record this will always be set to 00003. The line number will increment for each stock unit on the despatch
2	1	Line Type	Set to fixed text '2'
3	15	Donation or Batch Number	ISBT128 donation number readable donation or batch number
4	9	Product Bar Code	Either a full 9 character codebar code (including start and stop) or 8 character ISBT128 product code excluding the data identifier characters.
5	2	ABO Group	Left justified
6	1	Rh factor	+, - or blank
7	8	Date Bled	YYYYMMDD.
8	8	Expiry Date	YYYYMMDD.
9	4	Expiry Time	HHMM. Only required where product life is measured in hours.
10/1	1	C phenotype	+, -, P (pos), N (neg) or blank allowed. Note: Unconfirmed results, tested this time are issued as 'P' or 'N'; confirmed results are issued as '+' or '-'; historic results are not issued.
10/2	1	c phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/3	1	E phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/4	1	e phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/5	1	Cw phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/6	1	M phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/7	1	N phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/8	1	S phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/9	1	s phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/10	1	K Phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/11	1	k Phenotype	+, -, P, N or blank allowed. See additional note on 10/1

10/12	1	Lea phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/13	1	Leb phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/14	1	Fya phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/15	1	Fyb phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/16	1	Jka phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/17	1	Jkb phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/18	1	P1 phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/19	1	A1 phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/20	1	Lua phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/21	1	Lub phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/22	1	Kpa phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/23	1	Kpb phenotype	+, -, P, N or blank allowed. See additional note on 10/1
10/24-30	7	Not used	Blank.
11	1	HLA flag	Blank
12	1	CMV	+, - or blank allowed
13	1	Irradiated	Set to fixed text 'P'. Indicates that definition should be taken from product code specification
14	10	Pla	Position = antigen content +, - or blank allowed. Not Used
15	1	IgA	'Y' (indicates that IgA information is included either in the comment field or on separate documentation.) or blank allowed. will be ammended to Y/space to fit in with SACIT guidelines
16	1	H T Haemolysin	+, - or blank allowed, will be ammended to Y/N/space to fit in with SACIT guidelines
17	1	Neonatal	Set to fixed text 'P'. Indicates that definition should be taken from product code specification
18	1	Filtered	Set to fixed text 'P'. Indicates that definition should be taken from product code specification. Fixed text will be removed as this field is no longer used

19	3	Volume	Calculated volume from pack weight
20	10	Pack Lot No.	Blank, not used
21	1	Methylene Blue	Set to fixed text 'P'. Indicates that definition should be taken from product code specification. Fixed text will be removed as this field is no longer used
22	1	Clinical Use	Y = Suitable. N= Not suitable
23	1	Issue Type	Delivery type. 'D'=routine. 'A'= ad-hoc. 'B'=blue light. 'F'=free. This differs from the SACIT standard which lists 'R' routine issue, 'S' selected uncross-matched, 'X' cross-matched and 'G' autologous. This will be discussed with SACIT
24	10	Cost code/price	Blank
25	2	Added value	Added value code.
26	30	Comment	From free text section on order line
27	2	Checksum	Modulus 97 checksum calculated from fields 1 to 26
28	1	Terminator	Carriage return character

Footer Record

Field	Length	Description	PULSE Definition
1	5	Line number	Incrementing number within file.
2	9	Fixed Text	Set to fixed text 'UKBTSTOP'
3	5	No of records	Number of records excluding header and footer records but including administrative record.
4	2	Checksum	Modulus 97 checksum calculated from fields 1 to 7
5	1	Terminator	Carriage return character