Appendix 1

Stavanger/Tromsø, 1 Sepember 2009

- "Hospital"
- "Department"
- "Contact"
- "Address I"
- "Address_II"

Prehospital maternity care and accompaniment service

Questionnaire for Norway's 53 maternity institutions

We are three healthcare workers with a common interest in prehospital maternity care and different professional backgrounds. Our experience is that maternity care outside of hospitals varies in organisation, practical solutions and extent. There is little documentation concerning this service. We are therefore asking you to help by answering this questionnaire. The questionnaire has been sent to you as the senior midwife at the institution. It is quite possible that it would be easiest for the midwife in the maternity department to answer the questionnaire. In the event, we hope that you will delegate the task of answering the questionnaire to the most suitable person. If the institution has more than one maternity unit, we request a joint response for all units. A similar form has been sent to Norway's municipal midwives.

The objective of this survey is to determine the extent of prehospital maternity care and accompaniment service provided by all Norway's maternity institutions and in all municipalities in Norway.

We initially want figures from 2008.

If it is not possible to obtain exact figures, we request figures based on your experience.

Questions concerning the survey may be sent to: Signe Egenberg, signe.egenberg@lyse.net tel. 90767639. Please return completed questionnaires in the stamped, addressed envelope.

Thank you in advance for your kind cooperation!

Yours sincerely

Signe Egenberg Educational Midwife, Stavanger University Hospital Project manager:

Stein Atle Puntervoll

Anaesthetics Nurse/Rescueman, Norwegian Air Ambulance / CHC Norway spuntervoll@chc.ca

Pål Øian

Head Consultant of Department of Obstetrics and Gynaecology/Professor, University Hospital of Northern Norway pal.oian@unn.no

"Hospital" STATISTICS

1.			
Number of births at your maternity in	stitution in 2008	:	
Number of turnouts with midwife from 2008:	n your institution	to women in lal	oour in
Number of turnouts with gynaecologi labour in 2008:	st from your inst	titution to wome	n in
Number of turnouts/births in transposition with midwives from your department	-	home births out	side institutions
Turnout with:	No. Turnouts	Number of births at home	Number of births during
Ambulance		at nome	transportation
Ambulance boat			
Air ambulance – Doctor's car			
Air ambulance - Helicopter			
Air ambulance – Ambulance plane			
Rescue helicopter			
Private car			
3. Accompaniment service provided b	y local municipa	ıl midwives:	
Number of arrivals at your maternity local municipal midwives in 2008:	institution of pa	atients accompa	inied by
How many municipalities are there in institution?	the catchment	area of the mate	ernity
How many of these municipalities ha concerning an accompaniment service		tten agreement	
4. Which municipalities have organise hospital?	d a support serv	vice with accomp	paniment to

"Hospital"			

ORGANISATION 5. Is there a formally organised accompaniment service at your institution? ☐ Yes ☐ No If yes, it will be very useful if you could append the written guidelines for the accompaniment service, requirements regarding turnout time, written cooperation agreements, including any intermunicipal agreement, insurance scheme, financial compensation, arrangement for return transportation for midwife etc. All information will be treated as confidential and will not be disclosed. If no, - who provides an accompaniment service and takes care of deliveries in the municipalities where midwives do not accompany patients to maternity institutions? (More than one cross is possible) ☐ Air ambulance doctor ☐ Ambulance personnel ☐ GP/A&E ☐ Others: 6. If your maternity institution does **not** have a formally organised accompaniment service, why not? (More than one cross is possible) ☐ The municipalities provide the accompaniment service Our maternity institution provides the service, but it is not formalised and we improvise each time. ☐ There is a need, but there is no budget for an accompaniment service ☐ Not enough midwives at our institution ☐ There is no need for an accompaniment service

"Hospital"

☐ This is not regarded as the responsibility of our institution

Other (describe):

	ospital"				
7.	If you carry out support service with accompaniment, what sort of equipment do you take with you? (More than one cross is possible)				
-	\Box Special dedicated maternity equipment bag from the maternity department \Box Transport incubator				
-	\Box Maternity equipment bag on ambulance/ helicopter $\ \Box$ Neonatal ventilation bag/mask				
-	☐ Electronic Doppler ☐ Pinard stethoscope				
-	☐ Vacuum (Kiwi) ☐ Outlet forceps ☐ Piper's forceps				
-	☐ Cytotec tbl ☐ Bricanyl inj ☐ Adalat tbl ☐ Syntocinon inj				
-	\square Pethidine inj \square Morphine inj \square Stesolid inj \square Konakion inj				
-	Other (describe):				
8.	Are women in labour whose waters have gone offered stretcher transport in the following cases:				
	Yes, if the head was high and mobile at the last check-up				
	☐ Yes, if breech or transverse lie at last check-up				
	☐ Yes, always if the waters break				
	\square No, we don't use stretcher transport for patients whose waters break				
	Other (describe):				
9.	Who decides on the manner of transport, urgency and expertise necessary when a need is reported for transportation of a premature baby/sick neonatal born outside an institution?				
	\square The duty midwife at the maternity department \square Duty gynaecologist				
	\square Duty paediatrician \square Paediatrician at the nearest neonatal intensive care department				
	☐ Left to EMDC ☐ Handled by A&E				

☐ Handled by municipal midwife/GP

"F	lospital"	
	Other (specify):	
10	What measures and procedures are initiated on receipt of a report of a probirth / sick neonatal born outside a maternity institution?	emature
11	. Does the maternity institution have written procedures for when neonatal transportation is needed following a birth outside an institution?	
	☐ Yes ☐ No	
	If <u>ves</u> , please append the applicable procedures	
	If <u>no</u> , - do you need such procedures?	
	☐ Yes ☐ No	
	If <u>no</u> , - why not:	
12	2. Where do women in labour turn if they need accompaniment to a materni institution? (Responses should be given as percentages if possible)	ty
	Women in labour call the EMCD, which in turn contacts the maternity department:	%
	Women in labour call directly to the maternity department:	%
	Other (describe):	%
13	3. Does the maternity institution use the Norwegian Index of Medical Emerg (the Index) " when assessing the need of women in labour for transportati	
	☐ Yes ☐ No	
	If <u>yes</u> , - is the Index found to be useful and relevant?	
	☐ Yes ☐ No	
	If no why not?	

"Hospital"

"Hospital" 14. If someone reports a need for accompaniment by a midwife from the institution, may the resulting weakened emergency preparedness at the maternity institution be an argument for not turning out to a woman in labour? Estimate how often you do not turn out when a need for accompaniment is expressed, even though you might have "wished" to turn out?
No. in 2008
Comments:
15. If your midwives, or gynaecologists, take part in an accompaniment service, is there special training for them?
☐ Yes ☐ No
If <u>yes</u> , - what does this training include?
If <u>no</u> , - is there a need for such training?
If there is no special training, but it is needed, what should this training ideally comprise?
16. Is prehospital basic training carried out for midwives, or gynaecologists with local introduction course on ambulances/air ambulances, ambulance boats or planes?
□ Yes □ No

8

If <u>yes</u>, - is this local introduction course found to be useful and relevant?

If <u>no</u>, - why not?

☐ No

☐ Yes

"Hospital" 17. For maternity institutions without a neonatal intensive department: What sort of expertise have the staff of the maternity institution with respect to resuscitation/stabilisation of sick neonates/prematures before transportation to neonatal intensive care? ☐ Course in neonatal rescuscitation ☐ Advanced paediatric life support (APLS) ☐ Paediatric life support (PLS) Other: □ No specialised expertise If no specialised expertise, what sort of expertise do you need? Specify: 18. Are courses in acute maternity assistance organised by your maternity institution? ☐ Yes □ No If yes, - what sort of topics are included in these courses? ☐ Shoulder dystocia ☐ Breech delivery ☐ Vacuum ☐ Umbilical cord prolapse ☐ Haemorrhage □ Neonatal resuscitation ☐ Cardiopulmonary resuscitation on pregnant women ☐ Other:.....

Comments:

profe mate	ur experience, good essions outside the	maternity institutio o you think that co	een the maternity department and n is crucial to a good result in prehospital surses in acute obstetrics help to
	Yes	□ No	
If	yes - how do you b	oring this about?	
20. If co	urses in acute obste	etrics are not orgar	nised – is there a need for such courses?
	Yes	□ No	
l1	yes – who should b	pe invited to attend	?
-	☐ Midwives at i	nstitutions	☐ Municipal midwives
-	☐ Gynaecologis	sts	☐ Paediatricians
-	☐ General prac	titioners/ municipa	I doctors Ambulance personnel
-	Others;		
21. Com	ments to the survey	//questionnaire:	
	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	

Thank you for taking the time to answer!

"Municipality"
"Title"
"Postal address"
"Zip code" "Town"

Prehospital maternity care and accompaniment service

- Questionnaire to municipal midwives in Norway

We are three healthcare workers with a common interest in prehospital maternity care and with different professional backgrounds. Our experience is that maternity care outside of hospitals varies in organisation, practical solutions and extent. There is little documentation concerning this service. We are therefore asking you to help by answering this questionnaire. A similar form has been sent to maternity institutions in Norway.

This questionnaire is being sent to you in your capacity as municipal midwives. Since many municipal midwives have positions in more than one municipality, we would like to ask you to complete one form for each municipality you represent. If there are two or more municipal midwives in the same municipality, we would like to ask you to answer the questionnaire together.

The objective of this survey is to determine the extent of prehospital maternity care and midwife support service provided by all Norway's maternity institutions and in all municipalities in Norway.

We initially want figures from 2008.

If it is not possible to procure exact figures, we request figures based on your experience.

Questions concerning the survey may be sent to Signe Egenberg, signe.egenberg@lyse.net tel: 90767639. Please return completed questionnaires in the stamped, addressed envelope.

Thank you in advance for your kind cooperation!

Yours sincerely

Signe Egenberg
Educational Midwife, Stavanger University Hospital
Project manager:

Stein Atle Puntervoll, Anaesthetics Nurse/Rescueman, Norwegian Air Ambulance / CHC Norway spuntervoll@chc.ca Pål Øian Head Consultant, Department of Obstetrics and Gynaecology/Professor, University Hospital of Northern Norway pal.oian@unn.no

STATISTICS

1.		pality have a formally o aternity institution?	rganised service with accompaniment b	у а
	☐ Yes	□ No		
2.	If <u>yes</u> , is a midw more municipalit		ent service a collaboration between two	or
	☐ Yes	□ No		
CO	operation?		n municipalities take part in the	
	hat proportion of a ermunicipal servi		vidual municipality as part of the	
	- Municipality:		%:	
	- Municipality:		%:	
	- Municipality:		%:	
	- Municipality:		%:	
	- Municipality:		%:	
	ganised?	·	service, can you describe how it is	
lf、	use it will be of ar	cat value if you could a	nnand the written guidelines for the	

If <u>yes</u>, it will be of great value if you could append the written guidelines for the accompaniment service, requirements regarding turnout time, written cooperation agreements, including any intermunicipal agreement, insurance scheme, financial compensation, arrangement for return transportation for midwife etc. All information will be treated as confidential.

3.	If there i	-	ent to ma	iternity instit	ution, who	o qualifies for accompaniment
		Everyone	☐ As	needed		Other criteria:
4.	How ma 2008:	•	a reside	ntial addres	s in "your'	' municipality gave birth in
5.		any women in la	bour did	you accomp	oany to the	e maternity institution in
6.	How ma	any unplanned h	ome birt	hs did midw	ives atten	d in 2008?
7.		any women in la anying them to		•		ransportation in 2008, without
8.		rtation, but witho				by phone before panying them to a maternity
9.		re often conflicts	•	ties becaus	e two or m	nore women in labour need
		Yes		- If <u>yes;</u> -	number i	n 2008:
10	. Can woi	men in labour ch	noose be	etween two	or more m	aternity institutions?
			□ No			,
	If yes, w	hich:				
11	. What is	the typical trave	el time fro	om home to	maternity	institution*?
	Matern	ity institution:	M	laximum:	Minimun	n Average / Typical:
	Timo in	n hours and min				
		i ilouis allu IIIIII	นเธอ		1	

Distance in km		

Maternity institution:	Maximum:	Minimum	Average / Typical:
Time in hours and minutes:			
Distance in km:			

^{*} We are interested in approximate figures to enable us to get an idea of the time taken to reach the maternity institution

12. Does the min winter, fe	unicipality have sperries etc.?	ecial transport ch	allenges, like road	s that are closed
	Yes	□ No		
If <u>yes,</u> what is t	he main challenge:			
13. Number of t in 2008:	oirths during transp	ortation/unplanne	ed home births in y	our municipality
Means of transport to the maternity institution:	Number of transportatione ns with midwife	Number of transportation s without midwife	Number of births during transportation with midwife	Number of births during transportation without midwife
Ambulance				
Ambulance b	oat			
Own car				
Taxi				
Other:				
•	antify the results of cipality in 2008 (unp	•	•	
- Number of uncomplicated births with healthy mother and healthy child				
- Numl	ber of neonates wit	:h Apgar <7 after	5 minutes	
- Number of premature neonates <37 weeks				
- Numl	ber of other sick ne	onates		

- No. of breech deliveries:
- Number of difficult shoulder deliveries
- Number of severe haemorrhages > 1000 ml
- Number of retained placentas
- Number of third and fourth degree tears
- Other complications
ORGANISATION
15. If you carry out accompaniment with a midwife, what sort of equipment do you take with you? (more than one cross possible)
- Own dedicated maternity equipment bag Neonatal ventilation bag/masl
- Electronic Doppler Vacuum (Kiwi) Pinard stethoscope
- ☐ Cytotec tbl ☐ Bricanyl inj ☐ Adalat tbl ☐ Syntocinon inj
- ☐ Pethidine inj ☐ Morphine inj ☐ Stesolid inj ☐ Konakion inj
Other (describe):
16. Are pregnant women whose waters have broken offered stretcher transportation in the following cases:
\square Yes, if the head was high and mobile (at the last check-up)
☐ Yes, if breech or transverse lie (at the last check-up)
☐ Yes, always if the waters break
\square No, we don't use stretcher transportation for patients whose waters break
Other (describe):
17. How are you, in your capacity as municipal midwife, involved in determining the means of transport, urgency and need for expertise in connection with the need for transportation of premature babies/sick neonates born outside an institution?

«Kom	mun	ex
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Kilde: «Kilde»

.....

		icipal personnel are ates born outside a	e involved in the transportation of in institution?	premature
	☐Municipal (ЭP		
	□Ambulance	e personnel		
	☐Others, co	mment:		
C	•	tion? – describe the	al Department premature/sick ned e means of transport, time spent,	
•				
-				
(the Index) for en	•	he Norwegian Index of Medical E assistance" when assessing the n	•
	☐ Yes	☐ No		
	If <u>yes,</u> - is the	Index found to be	useful and relevant?	
	☐ Yes	□ No		
	If <u>no,</u> - why no	ot?		
21. <i>A</i>	Are there times w	hen you have to re	efuse an expressed need for acco	mpaniment?
	☐ Yes	□ No		
	If <u>yes</u> , why:			

EXPERTISE

22. If you, as municipal midwives, take part in an accompaniment service, is there special training for this?	
☐ Yes ☐ No	
If <u>yes</u> , - what does this training include?	
If <u>no:</u> - is there a need for such training?	
23. If you have a need for more advanced specialist expertise, what should this traited ideally consist of?	iining
Who should be invited to attend in addition to municipal midwives?	
- General practitioners/ municipal doctors Ambulance personne	l
Others;	
24. Is there prehospital basic training for municipal midwives with local introduction courses for ambulances/air ambulances, ambulance boats or planes?	1
☐ Yes ☐ No	
If yes, - is this local introduction course found to be useful and relevant?	
☐ Yes ☐ No	
If <u>no</u> , - why not?	

25. Our experience is that good cooperation between the primary health service, the maternity institution and the EMDC is crucial to a good result in prehospital maternity assistance. Do you think that courses in acute obstetrics could encourage better interaction?
☐ Yes ☐ No
If <u>yes</u> , - how?:
26. Comments on the existing organisation of prehospital maternity care
27. If you need better organisational conditions for the accompaniment service, what should this change involve, ideally?
28. Comments to the survey/questionnaire:

Thank you for taking the time to answer!

Stavanger/Tromsø, 30 January 2010

EMDC

Att. Head of EMDC

Prehospital maternity care and accompaniment service

We are three healthcare workers with a common interest in prehospital maternity care and with different professional backgrounds. Our experience is that maternity care outside of hospitals varies in organisation, practical solutions and extent. There is little documentation concerning this service. In order to improve our knowledge of this specialist area, we request that you help by answering this questionnaire. The questionnaire has been sent to all the emergency medical dispatch centres (EMDCs) in Norway. A similar questionnaire has been sent to all the maternity institutions and to the midwife service in all Norwegian municipalities.

The objective of this survey is to determine the extent and practice of prehospital maternity care. In this connection, we need more knowledge about the EMDCs' procedures, their role in providing guidance and as mediators of resources to women in labour outside maternity institutions. We would like figures and statistics from 2008, if necessary based on experience.

We hope that the survey may be a useful contribution to the discussion on how the service can be designed to meet the challenges in Report no. 12 (2008-2009) to the Norwegian Storting (parliament): *En gledelig begivenhet* [A joyous occasion], which concerns integrated pregnancy and maternity care.

The results will be published in relevant international/national journals. We believe the results will also be of socio-political interest to the media.

and Development (RAKOS), Stavanger University Hospital (SUS) and the Norwegian Midwives' Association (DNJ). Questions about the survey can be addressed to: Stein Atle Puntervoll; spuntervoll@chc.ca or tel: 90 19 50 50. Please return completed questionnaires in the stamped, addressed envelope. Thank you in advance for your kind cooperation! Yours sincerely Signe Egenberg Project Manager, Educational Midwife, Stavanger University Hospital signe.egenberg@lyse.net Stein Atle Puntervoll, Anaesthetics Nurse/Rescueman, Norwegian Air Ambulance / CHC Norway spuntervoll@chc.ca Pål Øian Head Consultant, Department of Obstetrics and Gynaecology/Professor, University Hospital of Northern Norway pal.oian@unn.no **ORGANISATION – EMDC; Cooperation with municipal midwives** 1. Who decides whether a woman who is pregnant > 24th week or in labour needs accompaniment? More than one of the below may be crossed off ☐ Maternity dept. ☐ Municipal midwife

The survey is supported by the Regional Centre for Emergency Medical Research

	□ GP	Others:		
2.			which municipalities have an ecompaniment to maternity institutions?	
	☐ Yes	□ No	☐ Don't know	
3.	Are there established patient?	procedures for w	hen a municipal midwife must accompar	ny
	☐ Yes	□ No	☐ Don't know	
	If <u>no,</u> who decides verified the patient during trans		nicipal midwife should accompany the	
4.	Are there requirements	s regarding the t	urn-out time for municipal midwives?	
	Yes: number of mi	inutes:	🗆 No	
	☐ Don't know			

ORGANISATION – EMDC: Organisation and turnout with midwife from maternity institution

5.	Who decides whether a woman who is pregnant > 24 th week or in labour needs accompaniment?		
	☐ EMDC	☐ Maternity dept.	☐ Municipal midwife
	□ GP	Others:	
6.	Is there an agreement/est institution midwives at pre	•	ning attendance by maternity
	☐ Yes	□ No	☐ Don't know
	Which maternity institution	ns, if any, have procedure	es/practice for this?
7.	Are there any written indi must turn out?	cations for when a midwi	fe from a maternity institution
	☐ Yes	□ No	☐ Don't know
	If <u>no</u> , who decides whether transportation?	er a midwife should accor	mpany the patient during

8.	Are there requirements regarding the turnout time for a institution?	a midwife from a maternity
	☐ Yes: number of minutes:	□ No
	☐ Don't know	

ORGANISATION - Transport

9.	In the case of unplanned births outside maternity institutions, how are mother and baby transported to hospital?
	☐ Mother and child in same ambulance with neonate lying on mother's stomach
	☐ Mother and child in same ambulance with neonate lying in baby bag
	☐ Mother in one ambulance and neonate in transport incubator in second
	ambulance
	Other:
10	. What criteria determine the manner in which women in labour are transported to a maternity institution?
	More than one of the below may be crossed off
	☐ 1. We have no procedures for this
	☐ 2. Women in labour arrange transport themselves
	☐ 3. Women in labour are always offered ambulance transport
	☐ 4. Women in labour are offered ambulance transport for distances of more
	than km / minutes
	5. Women in labour are offered ambulance transport regardless of which
	municipality they live in
	☐ 6. Ambulance if waters break, if the head is reported to be high and mobile

☐ 7. Ambulance if waters break, if breech or transverse lie
☐ 8. Ambulance is always used if waters break
9. We don't use stretcher transport for patients whose waters break
☐ 10. Women in labour are offered an ambulance boat
☐ 11. Women in labour are offered an air ambulance helicopter
☐ 12. Women in labour are offered an air ambulance plane
☐ 13. Women in labour are offered a rescue helicopter
☐ 14. ☐ Other (describe):
Which 3 are the most usual?
ORGANISATION - Prematurity
11. What is the procedure for reporting premature (24-37 weeks) births?

12. Is there a transport option for preterm births?

	☐ Yes	□ No	☐ Don't know
	Is <u>yes</u> , what does it consis	st of?	
12	How is transport to the Ne	oonatal Department of pro	amatura/sick naonatas born
13	outside an institution orga		emature/sick neonates born
14	. How is transport of prema Neonatal Department at a		outside an institution to the el organised?

EXPERTISE

5.EMDC in connection with telephone communication concerning birth; who decides on the degree of urgency, red/green/yellow?			
☐ EMDC	□ м	aternity dept.	☐ Municipal midwife
☐ GP		others:	
16. Does the EMDC Medical Emerger		be familiar with th	e Norwegian Index of
☐ Yes	□ No		
17. To what extent is the transport?	s the degree of urge	ncy assessed corr	rectly at the beginning of
Midwife:	☐ Always	☐ Occasional	lly 🗆 Seldom
GP:	☐ Always	☐ Occasiona	lly ☐ Seldom
Comments:			
18. Do midwives ass	sign a degree of urg	ency that agrees w	vith the Index?
☐ Yes	☐ No	☐ Not r	relevant

If no, proposals for improvements?
19. Do ambulance personnel have the necessary expertise for providing maternity assistance during transportation?
☐ Yes ☐ No
If <u>yes</u> , how have the ambulance personnel acquired the necessary expertise?
If <u>no</u> , proposals for improvements?
STATISTICS with figures from 2008
(If exact figures are not available, approximate figures can be used)
(If there is more than one maternity institution in the EMDC catchment area, a combined figure can be used)
20. Number of requests for assistance in connection with normal birth on due date?
21. Number of requests for help in connection with women pregnant >24 weeks / < 37 weeks / birth?

22. Number of requests for help in connection with women pregnant Week 25 with threatened premature birth?	
23. Number of requests for help in connection with women pregnant in Week 38 with abdominal pains and visual disturbances?	า
24. Number of requests for help concerning mothers with serious post partum haemorrhage?	
25. Number of actions where midwives from maternity institution have turned out to women pregnant in >24th week / in labour?	
26. Number of actions where municipal midwife has turned out to women in labour?	
27. Total number of transports with women pregnant > 24 weeks / in labour to maternity institution?	
28. Number of ambulance transports with women pregnant > 24 weeks / in labour / neonates to maternity institution?	
29. Number of ambulance boat transports with women pregnant > 24 weeks / in labour / neonates to maternity institution?	
30. Number of helicopter ambulance transports with women pregnant > 24 weeks / i labour / neonates to maternity institution?	n

31. Number of air ambulance transports with women pregnant > 24 weeks / in labour / neonates?
32. Other types of transport assignments with women pregnant > 24 weeks / in labour / neonates?
33. There are no data for answering the above questions
34. Are EMDC doctors used as advisers in connection with preterm birth problems?
☐ Yes ☐ No
Other practice?
35. Experience of existing emergency preparedness and proposals for improvements: quality, cooperation, financial aspects, recruitment

36. Comments on the existing organisation of prehospital maternity care
37. Comments to the survey/questionnaire
•••

Thank you for taking the time to answer!