Has the person become unwell in recent days?	Contact name				Horse Na	ame:	
Exposure Assessment Form Public Health Unit	First name			firmed	Anim	al Case)	
Completed by:							
BACKGROUND: This contact history and exposure form is to document interviews with contacts of confirmed Hendra horses, enable qualitative estimates of cooperate and to holp plan management. The form, especially dements of the exposure assessment, is based on current knowledge of Hendra virus transmission. The document will be reviewed and revised regularly in light of new evidence. Explanatory notes for this form are available on page 10. This form should be used with everyone who was within 5m of the horse and: touched or handled the horse during this time; or participated in veterinary procedures; or lot exposure to equine body fluids e.g., respiratory dioplets or blood. It can also be administered to people with indirect exposures, where a sperior field. Complete a set of the relevant pages for each confirmed horse. CONTACT DETAILS: UR No: Name: First name			Pu	blic Healtl	n Unit	Outbreak ID:	
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in veterinary procedures; or felt exposure to equine body fluids e.g. respiratory droplets or blood. It can also be administered to people with indirect exposures, where appropriate. Complete a set of the relevant pages for each confirmed horse. CONTACT DETAILS: UR No:	Explanatory notes for this form	n are available on	page 10.				
CONTACT DETAILS:	in veterinary procedures; or felt ex	•				ŭ i	
Name:	Complete a set of the relevant page	ges for each confirme	ed horse.				
Date of birth:	CONTACT DETAILS:				UR No:		
Date of birth:	Name:						
Name of parent/carer: Aboriginal		First name			,	Surname	
Aboriginal Torres Strait Islander Aboriginal & Torres Strait Islander Non-Indigenous Unknown		· ·					
English preferred language:	·						
Permanent address: Postcode:	☐ Aboriginal ☐ Torres St	rait Islander	Aboriginal & T	orres Strait	Islander	☐ Non-Indigenous ☐ Unknown	
Postcode: Home tel: Mob: Email:			, ,			• •	
Home tel:							
Occupation: Work telephone: Temporary address (if different from permanent address): Postcode: Telephone: Mob: Email: General Practitioner: Dr Address: Postcode: Telephone: Fax: Email: MEDICAL DETAILS: Has the person become unwell in recent days? Yes No Onset date: Meurological Other - specify Immunocompromised: Yes No Unknown Details: Known allergies: Yes No Unknown Details: Chronic illness: Yes No Unknown Details: Current medications: Other significant history: INFECTED HORSE DETAILS:							
Temporary address (if different from permanent address): Postcode: Telephone:							
Telephone:	·					•	
General Practitioner: Dr Address: Postcode: Telephone: Fax: Email: MEDICAL DETAILS: Has the person become unwell in recent days? Yes No Onset date: Other – specify Immunocompromised: Yes No Unknown Details: Known allergies: Yes No Unknown Details: Chronic illness: Yes No Unknown Details: Current medications: Other significant history: INFECTED HORSE DETAILS:						Postcode:	
Address: Postcode: Telephone: Fax: Email:	Telephone:	Mob:			Email:		
Telephone: Fax: Email: MEDICAL DETAILS: Has the person become unwell in recent days? Yes No Onset date: Onset date:							
MEDICAL DETAILS: Has the person become unwell in recent days?							
Has the person become unwell in recent days?	reiepnone:	Fax:			Email:		
Systemic Respiratory Neurological Other – specify Immunocompromised: Yes No Unknown Details: Known allergies: Yes No Unknown Details: Chronic illness: Yes No Unknown Details: Current medications: Other significant history:	MEDICAL DETAILS:						
Immunocompromised:	Has the person become unwell	in recent days?	☐ Yes ☐	No		Onset date:/	
Known allergies:	☐ Systemic ☐ Respiratory	☐ Neurological	☐ Other – <i>sp</i>	ecify			
Chronic illness:	Immunocompromised:	☐ Yes ☐ No	□ Unknown	Details:			
Current medications: Other significant history: INFECTED HORSE DETAILS:	Known allergies:	□ Yes □ No	☐ Unknown	Details:			
Other significant history: INFECTED HORSE DETAILS:	Chronic illness:	☐ Yes ☐ No	☐ Unknown	Details:			
INFECTED HORSE DETAILS:	Current medications:						
	Other significant history:						
	INFECTED HORSE DETAILS						
						ID No	

Location: ID No.

Association to horse: ☐ Owner ☐ Rider ☐ Stablehand ☐ Vet ☐ Farrier ☐ Other – specify Surveillance of Notifiable Conditions – Hendra Virus

20 October 2011

1 of 10

Contact name		Horse Name:				
First ri	ame	Surname				
EXPOSURE PERIOD:						
Onset of horse illness:	/ Time, if k	knownam/pm				
Infectious period for horse:		to gns minus 72 hours)		Date:/ Date of carcass disposal)		
Location of exposure: ☐ Infected property ☐ Elsewhere – <i>specify</i>						
Has contact ceased? ☐ Yes ☐ No						

EXPOSURE ASSESSMENT

1. EXPOSURE ASSESSMENT – GENERAL DESCRIPTION OF EXPOSURES

NOTES FROM CONVERSATION WITH CONTACT

Indicate that from here, the interview will consist of two more parts. First, you will ask the contact to describe in their own words their contact with each horse. You will then ask a series of questions to explore the exposures in detail in the second part. Make notes that you can highlight or refer back to. Try to capture the nature, magnitude, proximity, duration and frequency of exposures to body fluids. Include details of dates and times. Complete a separate page for each horse if necessary.

Vet specific questions: Can you describe exactly how you examined the horse and what procedures you did? Did you palpate the gums? What samples did you take? What did you do with the syringes and tubes? Did you use any disinfectants? Which? When do you think the horse developed signs of Hendra infection? Do you think any of the other horses on the property have been at risk from this horse?

Property owner/horse owner/primary horse handler specific questions: When do you think the horse developed signs of Hendra infection? Do you think any of the other horses on the property have been at risk from this horse? Are there any other people who may have visited the property or touched the horse across the fence?

COMMENTS:

2. EXPOSURE ASSESSMENT - QUESTIONNAIRES

This section includes three questionnaires, allowing focus on three different aspects of contact with the horse during its illness:

- General horse handling: Administer this questionnaire to anyone who undertook activities such as patting, feeding, and grooming, and cleaning stables.
- Procedures: Administer this questionnaire to anyone who performed or assisted with procedures such as taking blood or other specimens, veterinary examinations and procedures.
- Terminal event: Covers the period of the horse's final event (death by illness or euthanasia).

EXPOSURE ASSESSM 1 column per encou	ENT – GENERAL HORSE HAND	LING DURING INFECTIOUS PE	RIOD
Date of activity	Date/	Date/	Date/
Activity	□ Walked horse on lead □ Held head/other body part □ Patted horse □ Groomed horse □ Inserted bit □ Kissed muzzle □ Kiss to body □ Cleaned horse equipment □ Cleaned stable □ Was within 5m but didn't touch horse □ Other	□ Walked horse on lead □ Held head/other body part □ Patted horse □ Groomed horse □ Inserted bit □ Kissed muzzle □ Kiss to body □ Cleaned horse equipment □ Cleaned stable □ Was within 5m but didn't touch horse □ Other	□ Walked horse on lead □ Held head/other body par □ Patted horse □ Groomed horse □ Inserted bit □ Kissed muzzle □ Kiss to body □ Cleaned horse equipment □ Cleaned stable □ Was within 5m but didn't touch horse □ Other
 How long did this activity last? How close was their face to the horse? How long? Horse behaviour & signs 	1. Time spent with horse mins / hours 2. metres mins 3.	1. Time spent with horse mins / hours 2. metres mins 3.	Time spent with horse mins / hours metres min
1. Did you get horse body fluid on you? 2. Where? 3. Exposure to horse's equipment or stable contents	1.	1.	1. Yes No Unknow Respiratory secretions Saliva Blood Urine Faeces Foaling fluids Other Discounting fluids Other Broken skin face hands other Discounting fluids Other O
Were you using any protective equipment?	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mas ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.
How and when did you clean up? (e.g. hand hygiene 5 mins after; shower and changed clothes 4 hrs after)			

EXPOSURE ASSESSMI e 1 column per encoul		NFECTIOUS PERIOD (LIVE HO	RSE)
Date of activity	Date/	Date	Date/
Activity			☐ Held head/other body portion of touch horse ☐ Held head/other body portion of touch and possible mandibular gla ☐ Intubation ☐ Endoscopy — specify ☐ Obstetric procedure ☐ Cleaned vet equipment ☐ Mouth to mouth ☐ resuscitation of foal ☐ Was within 5m but didnet touch horse ☐ Other
 How long did this activity last? How close was their face to the horse? How long? Horse behaviour & signs 	1. Time spent with horse mins / hours 2. metres mins 3.	1. Time spent with horse mins / hours 2. metres mins 3.	Time spent with horse mins / hours metres mi
1. Did you get horse body fluid on you? 2. Where? 3. Exposure to horse's equipment or stable contents	1. Yes No Unknown Respiratory secretions Saliva Blood Urine Faeces Foaling fluids Other 2. Intact skin face hands other Broken skin face hands other Eyes Mouth Clothes Since Unknown Othes Othes	1.	1. Yes No Unknown Respiratory secretions Saliva Blood Urine Faeces Foaling fluids Other 2. Intact skin face hands other Broken skin face hands other Eyes Mouth Clothes No Unknown
Were you using any protective equipment?	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 ma ☐ Face shield ☐ Goggle ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.
How and when did you clean up? (e.g. hand hygiene 5 mins after; shower and changed clothes 4 hrs after)			

Contact name Horse Name: First name Surname				
	NT – TERMINAL EVENT (imme	diately prior to death to dispo	sal of carcass)	
Use 1 column per encoul	nter	T	T	
Date of activity	Date/	Date/	Date/	
	□ Indoors □ Outdoors	□ Indoors □ Outdoors	□ Indoors □ Outdoors	
Activity	 ☐ Held head/other body part ☐ Took blood ☐ Gave drug ☐ Was within 5m but didn't touch horse ☐ Cleaned up area where horse died ☐ Cleaned vet equipment. ☐ Carcass disposal. ☐ Other 	 ☐ Held head/other body part ☐ Took blood ☐ Gave drug ☐ Was within 5m but didn't touch horse ☐ Cleaned up area where horse died ☐ Cleaned vet equipment. ☐ Carcass disposal. ☐ Other 	 ☐ Held head/other body part ☐ Took blood ☐ Gave drug ☐ Was within 5m but didn't touch horse ☐ Cleaned up area where horse died ☐ Cleaned vet equipment. ☐ Carcass disposal. ☐ Other 	
1. How long did this activity last? 2. How close was their face to the horse? How long? 3. Horse behaviour & signs	Time spent with horse mins / hours metres mins	Time spent with horse mins / hours metres mins	Time spent with horse mins / hours metres mins	
1. Did you get horse body fluid on you? 2. Where? 3. Exposure to horse's equipment or stable contents	1.	1.	1.	
Were you using any protective equipment?	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	☐ Yes ☐ No ☐ Unknown ☐ Gloves ☐ Gown ☐ Overalls ☐ Surgical mask ☐ P2 mask ☐ Face shield ☐ Goggles ☐ Sunglasses ☐ Safety glasses ☐ Prescription glasses ☐ Pow'd air purifying resp.	
How and when did you clean up? (e.g. hand hygiene 5 mins after; shower and changed clothes 4 hrs after)				

Contact name First name Surname	Horse Name:		
3. ASSESSMENT of INFECTION CONTROL including PPE			
HAND HYGIENE (bare skin)			
Was exposed skin intact?	☐ Yes	□ No	☐ Unknown
Was hand hygiene always done after a procedure?	☐ Yes	\square No	☐ Unknown
Was hand hygiene always done after body substance exposure risk?	☐ Yes	\square No	☐ Unknown
Was hand hygiene always done after handling the horse?	☐ Yes	□ No	□ Unknown
Was hand hygiene always done after handling horse's stable contents?	☐ Yes	□ No	☐ Unknown
Summary: Was hand hygiene satisfactory?	☐ Yes	□ No	☐ Unknown
GLOVE USE			
Were gloves always worn before direct contact with horse's blood or other body substances, mucous membranes and non-intact skin?	r □ Yes	□ No	☐ Unknown
If gloves were used, which type? $\ \square$ Latex $\ \square$ Nitrile $\ \square$ O	ther - specify		☐ Unknown
Were gloves always worn before handling horse's equipment and stable of	ontents? \square Yes	□ No	☐ Unknown
Summary: Was glove use satisfactory?	☐ Yes	\square No	☐ Unknown
MASK USE			
If masks were used, which type? e.g. P2, surgical, etc			
Did the wearer of the mask have a beard or other facial hair?	☐ Yes	\square No	☐ Unknown
Did the wearer fit check the mask each time one was used?	☐ Yes	\square No	☐ Unknown
Has the wearer been fit tested for the respirator?	☐ Yes	\square No	☐ Unknown
Summary: Was mask use satisfactory?	☐ Yes	\square No	☐ Unknown
EXPOSURE SELF ASSESSMENT			
Were there any mishaps/lapses with infection control including PPE:	☐ Yes	\square No	☐ Unknown
Nature and cause of mishap – specify			
Nature of exposure e.g. route of exposure (saliva, blood, respiratory or exposure – specify			ration, activity at time
Action in response to mishap/lapse – <i>specify</i>			
Subjective overall appraisal of quality of infection control practice including	g use of appropriate PP	E:	
☐ Satisfactory ☐ Unsatisfactory			
A judgement will need to be made by a public health practitioner on exposure from breaches and/or unsatisfactory practice of infe			r about the impact
COMMENTS:			

4. SUMMARY COMMENTS FROM INTERVIEWER
e.g. John had at least 2 face to face contacts (10 mins holding horse , 35 mins doing resp. endoscopy) with extensive exposures to mucous membranes and 1 day old uncovered wound on hand to respiratory secretions and blood. No PPE used and hand hygiene of intact skin 35 mins after.
5. UNCERTAINTY ASSESSMENT BY INTERVIEWER
Relates to onset of clinical signs in the horse (and therefore presumed infectious period) and likelihood of unrecorded exposures.
e.g. Good historian. John saw horse daily in the morning. Not clear exactly when signs started but signs present and horse clearly distressed on Tuesday 10 Nov at 0800hrs. No obvious problems with horse when drove past paddock Mon 9 Nov at 1800hrs. No

Surname

Horse Name:

Contact name.....

First name

evidence or opportunities for others to have been exposed.

Contact name			Horse Name:
	First name	Surname	

6. EXPOSURE ASSESSMENT

The following exposure assessment categories are given to assist decision-making by the team. Current epidemiological evidence is that Hendra virus infection has occurred only with those exposures described below as 'High'. The period when the risk of infection from a horse is greatest is when the horse is sick. Given the advice to minimise handling sick horses and use appropriate infection control including PPE, and the limited opportunities for exposure to a sick horse due to the usually rapid disease course, the additive effect from repeated less than 'High' exposures is generally likely to be minor. However the public health practitioner, team and the panel assessments should consider the nature, number and magnitude of multiple exposures in making the 'Initial Assessment' for a specific contact. While infection from needlestick injury has not been documented, it has been included based on expert advice.

6.1 EXPOSURE ASSESSMENT TABLE

Nature and magnitude of exposures	Initial .	Management
	assessment by team	
No exposure to contact's dermis and/or mucous membranes	□ Nil	□ Information and reassurance□ Referred to GP□ Other
Slight to extensive exposures to contact's intact dermis on <3 occasions	□ Negligible	☐ Information and reassurance ☐ Referred to GP ☐ Other
Satisfactory and consistent use of appropriate infection control including PPE without breaches	□ Negligible	☐ Information and reassurance ☐ Referred to GP ☐ Other
Slight to extensive exposures to contact's intact dermis on 3 or more occasions	□ Low	☐ Information and reassurance☐ Referred to GP☐ Other
Slight exposures to contact's mucous membranes or uncovered wounds on 1 occasion	□ Low	☐ Information and reassurance☐ Referred to GP☐ Other
Moderate exposures to contact's mucous membranes or uncovered wounds on 1 occasion	□ Medium	□ Review of assessment by panel Date/ Panel: Panel assessment □ Information and reassurance □ Referred to GP □ Other
Extensive exposures to contact's mucous membranes and/or uncovered wounds and/or needlestick injury, on single or multiple occasions without adequate PPE e.g. kissing horse on muzzle, being drenched with oral or respiratory secretions, undertook respiratory tract procedures such as endoscopy or nasal lavage, performed or assisted with post mortem	□ High	□ Review of assessment by panel Date

Contact name First name	Surname	Horse Name:			
6. 2 INITIAL EXPOSURE ASSESSMENT and RISK ASSESSMENT by Team (+/- Panel) and UPDATES Given current epidemiological evidence that Hendra virus infection has occurred only with those exposures described above as 'High' and insufficient information is available to enable quantitative risk assessment, the term 'At significant risk' could be applied to the 'High' exposure assessment category and 'Not at significant risk' to other exposure assessment categories.					
Initial Exposure Assessment	Risk	Assessment			
Case Officer:	PHU:		Date:/		
Comments:					
Updates					
Case Officer:	Date:/				
Case Officer:	Date:/				
Case Officer:	Date:/				

Contact name			Horse Name:	
	First name	Surname		

Explanatory Notes for Hendra Exposure Assessment Form

This contact history and exposure form is to:

- document interviews with contacts of horses with confirmed Hendra virus infection
- enable qualitative estimates of exposure to assist epidemiological studies to identify the nature and magnitude of risk factors
- help plan management, especially referral for consideration of monoclonal antibody post-exposure prophylaxis.

The form is based on current knowledge of Hendra virus transmission.

A detailed history should be taken at the first interview as further information gathering may not be feasible if a contact becomes ill or otherwise unavailable for further follow up.

Multiple copies of individual pages may be needed if there are numerous exposures.

Page 1

- Sociodemographic 'Contact Details' according to NNDSS requirements; clarification that exposure has ceased.
- 'Infected horse details': some states and terrritories will have unique horse and property ID numbers.

Page 2:

- **Vet specific questions:** palpation of the gums is common practice when examining a horse; vets include detergents and soap and water in their definition of 'disinfectants'. Property owner, etc specific questions seeks to elicit 'less obvious' contacts such as visitors to property or passersby who may have patted or fed horse.
- 'Comments' section is to detail initial discussion about potential exposures.
- Who should be administered questionnaires: anyone who is likely to have had a direct exposure, as outlined on page 2. Can also be administered to people with indirect exposures where appropriate e.g. people who have cleaned out the stable of an infected horse before the stable was disinfected according to biosecurity procedures.

 NB: people administered the questionnaires but assessed as 'nil' exposure do not meet the contact definition.

Page 3, 4 and 5:

- **5m distance** is an arbitrary distance to take into account closer movements of a horse on a lead or which is agitated; this is also used in the horse handling and procedural documents.
- 'Foaling fluids': Hendra virus infection can have similar symptoms to foaling.
- 'How and when did you clean up?': a description is considered more useful to assess procedures than having tick boxes. Clean up is sometimes delayed for several hours.

Page 6:

• 'Assessment of Infection Control including PPE': terms such as 'satisfactory' use of PPE, 'slight', 'moderate' and 'extensive' exposures are acknowledged to be subjective but cannot be succinctly defined.

Page 7:

• 'Uncertainty Assessment': Vets are concerned that the time of onset may be uncertain. Some exposures may not be remembered or disclosed at initial interview.

Page 8

• 'Exposure Assessment Table': terms such as 'satisfactory' use of PPE, 'slight', 'moderate' and 'extensive' exposures are acknowledged to be subjective but cannot be succinctly defined.