The Epidemiology of Thoroughbred Racehorses Entering and Leaving the Victorian Racing Industry



Courtesy of the www.punters.com.au

Prepared by **Dr. Meredith L Flash BVSc, CMAVA, Cert IVAS** for Racing Victoria Limited

October 31st, 2014

The Epidemiology of Thoroughbred Racehorses Entering and Leaving the Victorian Racing Industry



Objectives:

To determine the racing career profile and exit statistics for a thoroughbred foal crop. Investigate the traceability of horses exiting the Victorian racing industry.

Methods:

The racing and training records for the 2005 Victorian foal crop were analysed to determine the number of horses entering the racing industry. A phone survey of responsible persons and database searches were used to determine the exit data for the same foal crop.

Results:

Of the 4115 foals born in Victoria in 2005, 3039 (74%) entered training with 2672 (65%) starting in a race anywhere. Exit survey data was available from 1558 horses that had previously entered training, of which 86.4% (95% CI, 84.6-88.1%) were alive at the time of their exit from the racing industry. Some of these horses were still racing [105 (6.7%)] or had left the racing industry and were re homed [689 (44%)], were being used for breeding [367 (23.6%)], were sold interstate or overseas [69 (4.4%)], or were unknown 116 (8.0%).

Introduction

The racing industry is a multi billion dollar industry, employs hundreds of thousands of people and is a major contributor to the Australian economy¹. This study follows the 2005 Victorian foal crop through their racing careers and into retirement from the racing industry. The racing industry has a strong interest in caring for its most valued assets, the racing thoroughbred. As part of looking after that interest, the racing industry has supported research into improving the health and safety of horses while racing.

Researchers have previously attempted to quantify how individual injuries and conditions affect the racing industry, the losses caused by these conditions was termed wastage. The term wastage as it is used in veterinary research is a loss of product or productivity ². Wastage used specifically in terms of animal production for the thoroughbred racing and breeding industries in previous studies; includes failure to conceive, loss of training days and reduced number of racing opportunities ^{3,4,5}. Unfortunately the generic definition of 'wastage', as the avoidable loss of something valuable⁶ or 'the horses who are prematurely discarded from the racing industry'⁷ is how the term is described in the public arena. While a great deal of research has gone into reasons for horses leaving the racing industry, little research has been done to determine where they go when exiting the industry. One of the aims of this research is to retrospectively look at destinations of horses when exiting the racing industry. The reason for leaving the racing industry was not examined and has been well documented in previous studies ^{3,4,8-10}.

Material and methods

The Australian Stud Book (ASB) provided a list of horses that were foaled in Victoria in 2005. Arion Pedigrees was used to determine if a horse raced and the location of the last start¹¹. Horses were also grouped into named and unnamed if they had not started in a race. The horses with a last start located outside Victoria were excluded from the exit survey. The microchip numbers for horses that had a last start in Victoria and all un-raced horses were used to identify the destinations for horses exiting the racing industry in Victoria.

The majority of pleasure and performance horse organisations do not currently have registration databases that require microchips to identify horses, making it difficult to determine if horses leaving the racing industry have been re-homed to non-racing careers. The majority of pleasure horses are not registered with any specific organisation. The lack of records available to track microchip information for these horses, meant that database searches alone were not sufficient to trace the horses in the study. A phone survey was also conducted to capture data on horses which was not available through the database searches.

The databases used were Australian Stud Book, Racing Information Services Australia (RISA), Zoetis Hendra Vaccination database and Equestrian Australia database. Thoroughbred horses registered from 2003 are required to be microchipped. The microchip data was an effective way to search the aforementioned databases. The Australian Stud Book and RISA provided information on horses that were overseas, deceased or used for breeding thoroughbreds. The Zoetis Hendra Vaccination database was launched in November 2012 along with the launch of the Hendra vaccine. The launch of this website was within 10 months of the start of the research project; horses who were up to date with their vaccination status would have received a vaccine booster within four months of the study start date. Equestrian Australia (EA) was able to give a list of all thoroughbreds registered for the 2013/2014 financial year. Equestrian Victoria was also able to provide a list of all thoroughbreds that had been registered in the last 10 years.

For the phone survey, a responsible person was identified for all groups of horses. A responsible person (RP) could be a trainer, owner(s) or breeder. The RISA database was used to compile contact details for the responsible persons. A phone survey of the RP's was conducted. A script was developed, identifying the researcher, the horse (by name and/or breeding) and requesting the RP to identify if the horse was still racing (for those that raced), deceased, used for breeding or was retired to a non racing home. If retired to a non racing home, the RP was asked to further classify the type of home. This research aims to better describe where horses go when leaving the racing industry, the reasons horses leave the racing industry are well described in previous research and were not investigated here.

If the first RP was not contactable or did not have knowledge of where the horse went upon retirement from the racing industry, a second RP was identified and contacted. Two attempts were made to contact the responsible person(s), before classifying the horse as 'Owners Not Contactable'.

Study Population

Previous research has used a variety of study populations such as horses from conception to four years of age, yearling sale catalogues, horses already residing in a racing stable both raced and unraced ^{3,4,8,9}. This study proposed to capture information about the broader population of racing thoroughbreds to get a more complete picture of how horses move through the Victorian industry as a whole. Only horses that had their last race start in Victoria or had not raced were included in the phone survey and exit results. Victoria produced 22.1% (4115) of the 18,592 foals born in the 2005 Australian Thoroughbred breeding season¹².

Results

Entering the racing industry

The Australian Stud Book supplied the list of registered thoroughbred horses that were foaled in Victoria during the 2005 breeding season. In total, 4115 horses, 2048 male and 2068 female were born in Victoria in 2005. There was no statistical difference between females and males, if geldings and colts were considered together (P-Value = 0.77) One-Sample Test for Binomial Proportion, that the proportion 0.498 differs from 0.5 (n=4115); (95% CI: 48.2, 51.3).

Victorian Foal Crop = 4115				
Males =	2048	Females		
Colt	Gelding	Filly		
703	1345	2068		

Data provided by ASB and RISA (colt vs gelding).

Of the 4115 foals born in 2005, 3303 (80.3%) were registered (named). This was higher than the national average (72.9%) for the 2005 foal crop. This study looked at the number of horses that entered training, in an attempt to show the true scope of horses involved in the racing industry. Of the 4115, foals born in Victorian in 2005, 3036 (73.8%) were recorded as having entered training. A horse was classified as having officially entered training if it had started in a race (verified by Arion Pedigrees) or if a stable return (SR), barrier certificate (BC) or official trial (OT) had been lodged with the Racing Services Bureau (RSB). Gaps in industry statistics have been identified with no records available for horses that entered training without racing¹⁰. The implementation of Australian rule of racing governing



stable returns (AR.54.1) in 2005 assisted with closing those gaps¹³. The number of horses that officially entered training in this study was most likely under reported, because at the time this group of horses was racing, AR.54.1 had only been recently implemented.



Horses that had at least one race start in Australia and overseas, accounted for 88% of the 3036 horses that officially entered training and 65% of the 4115 foals in the total study population. This is more than double the proportion estimated from a previous study that only 300 of 1000 thoroughbred foals race⁸. Other studies reported the proportion of horses to enter training to be between 50-80% ^{3,4,8}. This may be reflective of study population, with Jeffcott's (50%) study cohort being selected from a randomised group of foals and the other two studies (80%) selecting from yearling sales catalogues. The higher percentage of horses that raced with study cohorts from sale catalogues may reflect the extra investment or the superior quality of horses

purchased at yearling sales and doesn't include the increased losses found in horses under 12 months of age ^{4,8}.

A significantly greater proportion of the 4115 foals started racing as 3 year olds (34.9%) compared to those that started racing as 2 year olds (13.3%). This was significantly different to previous studies that reported that a greater number of horses had their first race start as two year olds^{4,8}. The national average for horses starting their first race as 2 year old (16.2%) is also slightly higher¹⁴. More males (53.8%) than females (46.2%) raced out of the 2643 horses with verifiable race records born in Victoria in 2005, if colts (10.5%) and geldings (43.3%) are considered together. In agreement with the two Australian studies, a larger percentage of females were un-raced^{4,8}. In all seasons, a greater number of males started racing, if colts and geldings were considered together.

Age of First Start

Age	Number of Horses	Percentage of foal crop	Cumulative Percent of foal crop	Career Starts Range	Mean Career Starts	Filly	Colt	Gelding
2YO	551	13.3	13.3	1-105	24.3	267	93	191
3YO	1438	34.9	48.2	1-102	17.9	638	131*	669
4YO	495	12.0	60.2	1-83	12.0	246	43	206
5YO	125	3.0	63.2	1-39	7.8	56	9	60
6YO	30	0.7	63.9	1-36	8.3	13	2	15
7YO	4	0.1	64.0^	1-8	3.3	1	0	4

* Includes 1 Rig / detailed year by year records were not available for 30 horses that raced overseas



Age of first race start by gender

Of the 4115 foals born in Victoria in 2005 with verifiable racing records, the greatest proportion raced as 4 year olds followed closely by 3, 5, 6, 2, 7 and 8 year olds in descending order. This is compared to previous research where the highest number of total runners was 3 year olds (Bailey 1998). Compared to the national 2005 foal crop, a greater percentage of the 4115 horses in the Victorian 2005 foal crop raced as four, five, six and seven year olds (national data for 8 year olds not available). At all ages, a greater proportion of males raced compared to females.

Age	Total Runners	Percentage of 2005 VIC foal crop	Percentage of National 2005 foal crop*	Gelding	Colt	Filly
2YO	551	13.3	16.2	191	93	267
3YO	1957	47.6	45.4	851	218^	888
4YO	2007	48.8	43.2	907	212 ^	888
5YO	1461	35.5	29.5	721	155 ^	585
6YO	909	22.1	17.9	495	109	305
7YO	465	11.3	9.4	284	63	118
8YO	229	5.6	n/a	164	28	37

Number and gender of runners by age

*Figures from the ARB Fact Book 2012/201314, ^ Includes 1 Rig

Number of runners by age



Exiting the racing industry

A phone survey was conducted to determine the destinations of horses leaving the thoroughbred racing industry. Horses with a last recorded race start outside of Victoria were excluded. In total, 2800 horses were included in the exit survey. Many different types of surveys have been used in previous research. The number of respondents in this study (79.1%) was comparable with studies where the respondent was surveyed in person⁴. Most studies that utilised surveys for data collection were done on horses that were already racing and trainers were the primary person surveyed^{4,8-10}. A significant proportion of horses from previous studies have been designated as having been transferred to another trainer or returned to the owner. This study attempted to eliminate these categories by identifying and contacting alternative responsible persons (RP) until a result was known. If the destination of the horse could not be determined the outcome for the horse was classified as unknown.

A responsible person was not contactable in 20.8% of the 2800 Victorian horses included in the exit cohort. Fewer unknown and not contactable RP's results were recorded for those that officially entered training (6.7% and 9.7% compared with those that did not enter training 13.5% and 38.8% respectively) which is likely reflective of the retrospective nature of the study. Database searches have been used in several previous studies but this is the first study to the author's knowledge that attempts to use both. The combination of phone survey and database searches was used to provide a broader understanding of where horses go when leaving the racing industry.

Thoroughbred horses registered since 2003 are required by Australian racing rule, AR.16.b to be microchipped¹³. Microchip numbers have become a contemporary way of identifying horses when registering for a range of equestrian memberships. Part of this research was investigating novel ways of searching for horses that had retired from the racing industry. Microchips for the survey cohort were used to search the Zoetis Hendra Vaccination database and Equestrian Australia database for horses registered with either database during the 2013/2014 financial year. Equestrian Victoria was able to provide a list of all Thoroughbreds with microchip numbers that had been registered in Victoria. The Australian Stud Book and RISA databases were used to help to determine if the horse was being used for breeding, was deceased or had been exported.

A horse was designated as deceased by phone survey or database search of RISA or the Australian Stud Book. Horses designated as breeding were mares that had a mare return registered with the Australian Stud Book or those identified by phone survey as being served in the 2013/2014 breeding season for the first time. Horses designated as still racing were those that had raced (information provided by Arion pedigrees and RISA) or were identified by phone survey as being in race training during the 2013/2014 racing season. Horses were designated as interstate or overseas if they were privately sold to a racing home in those locations but did not race for unknown reasons. Horses were classified as re-homed if they were retired to an alternate career other than that of a thoroughbred racehorse or used for thoroughbred breeding. These alternate careers were identified by phone survey and microchip searches of the Equestrian Australia, Equestrian Victoria and Zoetis Hendra vaccination databases. Horses were classified as unknown if sold at public auction or if no further information was available after contacting the responsible person. Horses were classified as not contactable if no responsible person was able to be contacted. The most common reasons for not being able to contact a RP were inability to identify a specific RP, disconnected numbers or death of the RP.

Victorian Results*	Combined	Combined %	Entered Training	ET %	Did Not Enter Training	DNET %
Deceased(≤2yo)	423(142)	15.1 (5.1)	212	12.3	211 (142)	19.5 (13.2)
Breeding	440	15.7	367	21.3	73	6.8
Racing	105	3.8	105	6.0	0	0
Interstate/OS	106	3.8	69	4.1	37	3.5
Rehomed	881	31.5	689	39.9	192	17.9
Unknown	261	9.3	116	6.7	145	13.5
RP Not Contactable	584	20.8	167	9.7	417	38.8
Total	2800	100	1725	100	1075	100

*Horses remaining in Victoria are horses that did not start in a race and horses whose last race start was in Victoria.

The exclusion of horses where the last race start was interstate and overseas resulted in a proportional increase of horses that did not enter training from 26.1% to 38.2%, which may have produced a bias in the results. The number of RP's that were not contactable (38.8%), horses with an unknown result (13.5%) and deceased horses (19.5%) were higher compared to their counterparts (9.7%, 6.7% and 12.3% respectively) that entered training in the racing industry. Of the 2216 horses that remained in Victorian where a result was known, 79% (95% CI, 77.1-88.7%) are still racing, were sold as a racing prospect, went on as breeding stock or were retired to a non-racing home. This increased to 85.5% (95% CI, 83.6-87.2%) if only the horses had entered training.

The deceased horses in the study that remained in Victoria were evenly split between having officially entered training and not entered training. Horses 2 years old or younger that died of illness, paddock misfortune or congenital malformation made up one third of the total number of deceased horses and two thirds (67.3%) of the deceased horses for those horses that did not enter training. The difference in the results for deceased horses compared to other studies is likely due to the inclusion of these young horses ^{9, 10, 15}. Previous studies that investigated destinations of horses that left racing used horses already in racing stables and a larger proportion of the horses were still racing at time of study completion ^{9, 10, 15}.



Results for horses remaining in Victoria

The largest grouping in this category of horses was retired. Horses that retired were pursuing a variety of post-racing activities including various equestrian pursuits, pleasure riding, were kept as pets in addition to several other activities listed below.

Responses on type of home included:

- 1. Equestrian
 - Showjumper
 - Showhorse
 - · Pony Club
 - Eventing
 - · Dressage
 - · Horses on the EA database with no further information were included in this group
- 2. Pleasure riding
- 3. Pet
 - · Paddock Companion
 - · Retired with Owner/Breeder
 - · Nanny for younger horses
- · Horse remained unbroken
- 4. Broodmare for non thoroughbreds

5. Within the industry

- · Retired with the trainer- not routinely ridden
- · Lead pony in a racing stable
- 6. **Polo**
- 7. Miscellaneous
 - · Sprint racing
 - Movie
 - Research
 - · Horses identified on Zoetis database with no further information.

Type of Home	Number	Percentage
Equestrian	320	36.3
Pleasure	236	27.1
Pet	193	21.8
Broodmare (non-TB)	76	8.6
Polo	25	2.8
Miscellaneous	18	2.0
Within the industry	13	1.4
Total	881	100

Of the horses re-homed to equestrian homes the top three careers were show horses, followed by eventing horses and pony club. As single groups, pleasure horses and pets (horse retired but not ridden) were the largest. Horses that were used as broodmares for non thoroughbreds were the next largest group and the most common types of breeds or discipline they were broodmares for was Australian Riding Pony, Warmbloods or polo horses.



Discussion

The thoroughbred racing industry is a high profile sport and a major contributor to the Australian economy. Previous research has used a variety of sampling frames to select a subset of a total foal crop from which to derive results. This is the only study within Australia to date to follow all available horses from an entire foal crop from the state of Victoria over multiple race seasons. The value of using an entire foal crop to describe trends in the study population, is best seen in the larger than previously reported proportion of the foal crop that raced and the older than expected age of horses at their first race start. Importantly, this is the first report that has examined the various ways these horses exited the racing industry.

The most encouraging result of this study is that 40% of the horses that could be traced exiting the Victorian racing industry went to homes outside the thoroughbred racing and breeding industries. The horses re-homed outside of the racing industry, together with those horses that were still racing and those that went on to the thoroughbred breeding industry, made up nearly three quarters of the 2800 horses in the exit survey. The results of this study contradict the common misconception that the majority of horses are killed for pet food when leaving the racing industry⁷. The athletic versatility of thoroughbred horses is illustrated best by the wide variety of second careers they go on to perform with the majority going on to equestrian homes. Horses retired as pets or unridden horses were predominately in the care of owners and trainers who continued to look after them well into their retirement when a riding home could not be found.

Two year old racing was not as widespread as reported previously. Only a small proportion of horses had their first start as two year olds with the majority of horses in this cohort starting their racing career as three year olds. While a number of horses may enter training as two year olds only those that are physically mature enough to handle the athletic demands of racing will actually race. This study agreed with previous studies finding that horses that started as two year olds on average had more starts than their contemporaries that started in subsequent seasons. The largest proportion of the foal crop raced as four year olds. The proportion of horses racing was next largest in the three, five and six year old seasons in descending order with some of the horses from the study still racing as nine year olds. One of the advantages to doing a retrospective study was the ability to follow the majority of the cohort from birth through to retirement from racing.

The study established that two thirds of the 2005 Victorian foal crop raced in Australia and overseas. This disproves the commonly used figure that 'only 300 of every 1,000 foals race' ^{4,7,10,16-20}. Many authors have used this figure to erroneously estimate the number of horses from a foal crop that do not enter training and then insinuate that the majority of those horses would have no other alternative but be sent to the knackery. Only about a quarter of the foal crop did not enter training, 20% of which were unable to enter training because they died when 2 years or younger due to illness, paddock accident or congenital malformation.

79.1% of the 2800 horses that had their last start in Victoria or did not race were traced.

- 40.0% were re-homed to non racing homes
- 20% were breeding thoroughbreds,
- 19% were deceased,
- 5% were still racing,
- 5% were sold interstate or overseas,
- 11% had no further information when exiting the racing industry

The slight increase in the proportion of deceased horses in this study compared to previously published work was largely due to the horses being followed for a greater proportion of their life span, and the inclusion of young horses that died at two years of age or younger. One third of the deceased horses from the exit survey were young horses that died while still in the breeding industry. While fragility of young animal of any species (including humans) is well documented, further research needs to be directed towards the causes of morbidity and mortality of young horses in the first 12 months of life²²⁻²⁴.

Tracing horses after they leave the thoroughbred racing industry is difficult due to the lack of formal registration for the large proportion of pleasure horses and the privacy concerns with searching membership organisation records. Using microchips to search for horses on databases outside racing allows the researcher to collect data about horses that have left the racing industry without breaching the privacy concerns of future owners. Branding information alone is insufficient to provide unique traceable identification of individual horses as thoroughbreds, as other breeds such as the Australian Stock Horse and Australian Riding Pony societies have similar branding practices and brands to Australian racing thoroughbreds.

The requirement to have all racing thoroughbreds from 2003 onwards microchipped (AR.16) improves the ability to trace horses as they move through and exit the thoroughbred breeding and racing industries. Population based research and the proposed merging of the Australian Stud Book and Racing Information Services Australia databases will provided a better understanding of how horses enter and leave the Thoroughbred racing and breeding industries for future studies. The introduction of the retirement rule for racing thoroughbreds (AR.64JA) in August 2014 will provide more certainty around where thoroughbred racehorses go to when retiring from their racing careers. This study has delivered tangible information on some of the key areas of the racing industry and future careers paths for retired racehorses.

References:

- 1. Gordon J. The Horse Industry: contributing to the Australian economy, Rural Industries Research & Development Corporation, Canberra, ACT 2001
- 2. Blood D.C., Studdert VP, Saunders Comprehensive Veterinary Dictionary, 2nd ed. p1222, Saunders 1999
- 3. Jeffcott, L.B., Rossdale, P.D., Freestone, J., Frank, C.J. and Towers-Clark, P.F. (1982) An assessment of wastage in Thoroughbred racing from conception to 4 years of age. Equine Veterinary Journal 14, 185-198.
- 4. Bailey C.J., Wastage in the Australian Thoroughbred racing industry, Rural Industries Research & Development Corporation, ACT 1998
- 5. More S.J., (1999) A longitudinal study of racing Thoroughbreds: performance during the first years of racing *Australian Veterinary Journal* 77, 105-112
- 6. www.merriam-webster.com/dictionary/wastage
- 7. www.horseracingkills.com/about-us/frequently-asked-questions/
- 8. Bourke J.M., (1995) Wastage in Thoroughbreds, In: *Proceedings from Annual Seminar of Equine Branch, NZVA*, ED:G.Budge, Masey University, Aukland. pp 107-120
- 9. Thompson P.C., Hayek A.R., Jones B., Evans D.L. and McGreevey P.D. (2014) Number, causes and destinations of horses leaving the Australian Thoroughbred and Standardbred racing industries. Australian Veterinary Journal. 92(8), 303-11
- 10. Hayek A.R., Epidemiology of horses leaving the racing and breeding industries, University of Sydney, NSW 2004
- 11. www.arion.co.nz
- 12. Australian Racing Board 2006, Australian Racing Fact Book: A Guide to the Racing Industry in Australia 2005-2006, ARB, Australia
- 13. Australian Racing Board 2014, Australian Rules of Racing, ARB, Australia
- 14. Australian Racing Board 2013, Australian Racing Fact Book: A Guide to the Racing Industry in Australia 2012-2013, ARB, Australia
- 15. Gleelen A.,(2014) The internet age of misinformation, Breeding and Racing, Issue 117, September 2014
- 16. Chenery S.,(2013) All The Pretty Horses: "Wastage" in the thoroughbred industry, www.turfconfidential.com/2013/11/all-pretty-horses-wastage-in.html
- 17. Chenery S., (2013) They Shoot horses, don't they?, <u>www.smh.com.au/enviroment/animals/they-shoot-horses-dont-they-20130923-2u8nh.html</u>
- Wilsher S., (2006) Factors associated with failure of Thoroughbred horses to train and race. Equine Veterinary Journal. 38 (2) 113-118
- Bailey C.J., Rose, R.J., Reid, S.W.J. and Hodgson D.R. (1997) Wastage in the Australian Thoroughbred racing industry: a survey of Sydney trainers. Australian Veterinary Journal 75, 64-66.
- 20. Bailey C.J., Reid, S.W.J., Hodgson, D.R. and Rose, R.J. (1999) Factors associated with time until first race and career duration for Thoroughbred racehorses. American Journal of Veterinary Research.
- 21. http://www.horseracingkills.com/the-issues/wastage/
- 22. Galvin N.P., Corley K.T.T., (2010) Causes of disease and death tom birth to 12 months of age in the Thoroughbred horse in Ireland. Irish Veterinary Journal 63(1), 37-43
- 23. Cohen N.D., (1994) Causes of and farm management factors associated with disease and death in foals. Journal of American Veterinary Medicine Association 204(10), 1644-1651
- 24. Haas S.D., Bristol F., and Card C.E., (1996) Risk factors associated with the incidence of foal mortality in an extensively managed mare herd. Canadian Veterinary Journal 37(2), 91-95

Appendix A.

1. AR.16. Unless otherwise permitted by the Registrar of Racehorses, no horse shall be registered unless -

(a) it is branded with an identifying brand and, subject to any State legislation, with a brand that consists of a distinguishing foaling numeral over the last figure of the foaling year determined by the provisions of AR.46; and

(b) it has been implanted with a microchip in accordance with the requirements of the Registrar of Racehorses. *[replaced 1.7.05]*

- 2. AR.54. (1) The trainer of a horse must within 48 hours of its entering or leaving his stable lodge a stable return containing such information as is required by the Principal Racing Authority; provided that if such horse has been or is to be nominated for a race or official trial such stable return must be lodged immediately
- 3. AR.64JA. (1) Where a horse has been retired from racing, the Manager (as defined in AR.1) of the horse at the time of its retirement must, within one month of the horse's retirement, notify the Registrar (RISA) by lodging the relevant form prescribed by the Registrar.
- 4. AR.64J. (1) Upon the death of a horse, whether it has been included in a stable return, or has been retired, or was yet to race, the owner or trainer of the horse or their authorised agents, or any other person in charge of the horse at the time shall report the occurrence to the Stewards and the Registrar as soon as practicable.